

ASME A112.4.4-2017

# Plastic Push-Fit Drain, Waste, and Vent (DWV) Fittings

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AN AMERICAN NATIONAL STANDARD



The American Society of  
Mechanical Engineers

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Mechanical Engineers**

Two Park Avenue • New York, NY • 10016 USA

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## FOREWORD

The initial work on ASME A112.4.4, Plastic Push-Fit Drain, Waste, and Vent (DWV) Fittings, was undertaken with the International Association for Plumbing and Mechanical Officials (IAPMO) and NSF International. The work with IAPMO and NSF International formed the basis for this Standard.

This Standard was developed as a consensus standard to establish the minimum material and physical characteristics and performance requirements for push-fit fittings used in DWV systems. While standards for push-fit fittings for other applications previously existed, prior to publication of this Standard, there were no relevant standards for push-fit fittings for DWV applications.

This Standard was approved by the American National Standards Institute on May 25, 2017.

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Secretary, A112 Standards Committee  
The American Society of Mechanical Engineers  
Two Park Avenue  
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<http://go.asme.org/Inquiry>

**Proposing Revisions.** Revisions are made periodically to the Standard to incorporate changes that appear necessary or desirable, as demonstrated by the experience gained from the application of the Standard. Approved revisions will be published periodically.

The Committee welcomes proposals for revisions to this Standard. Such proposals should be as specific as possible, citing the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal, including any pertinent documentation.

**Proposing a Case.** Cases may be issued to provide alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee Web page.

Requests for Cases shall provide a Statement of Need and Background information. The request should identify the Standard and the paragraph, figure, or table number(s), and be written as a Question and Reply in the same format as existing Cases. Requests for Cases should also indicate the applicable edition(s) of the Standard to which the proposed Case applies.

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Requests for interpretation should preferably be submitted through the online Interpretation Submittal Form. The form is accessible at <http://go.asme.org/InterpretationRequest>. Upon submittal of the form, the Inquirer will receive an automatic e-mail confirming receipt.

If the Inquirer is unable to use the online form, he/she may mail the request to the Secretary of the A112 Standards Committee at the above address. The request for an interpretation should be clear and unambiguous. It is further recommended that the Inquirer submit his/her request in the following format:

Subject: Cite the applicable paragraph number(s) and the topic of the inquiry in one or two words.  
Edition: Cite the applicable edition of the Standard for which the interpretation is being requested.  
Question: Phrase the question as a request for an interpretation of a specific requirement suitable for general understanding and use, not as a request for an approval of a proprietary design or situation. Please provide a condensed and precise question, composed in such a way that a "yes" or "no" reply is acceptable.  
Proposed Reply(ies): Provide a proposed reply(ies) in the form of "Yes" or "No," with explanation as needed. If entering replies to more than one question, please number the questions and replies.  
Background Information: Provide the Committee with any background information that will assist the Committee in understanding the inquiry. The Inquirer may also include any plans or drawings that are necessary to explain the question; however, they should not contain proprietary names or information.

Requests that are not in the format described above may be rewritten in the appropriate format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

Moreover, ASME does not act as a consultant for specific engineering problems or for the general application or understanding of the Standard requirements. If, based on the inquiry information submitted, it is the opinion of the Committee that the inquirer should seek assistance, the inquiry will be returned with the recommendation that such assistance be obtained.

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# Plastic Push-Fit Drain, Waste, and Vent (DWV) Fittings

## 1 INTRODUCTION

### 1.1 Scope

This Standard covers reversible push-fit drain, waste, and vent (DWV) fittings intended for quick assembly of IPS Schedule 40 series PVC and ABS DWV plastic pipe and fittings for applications above- and belowground at temperatures from 32°F to 140°F (0°C to 60°C), and specifies requirements for materials, physical characteristics, performance testing, and markings.

Notes accompanying sections of this Standard do not specify requirements or alternative requirements; their purpose is to separate explanatory or informative material from the text. Notes to tables and figures are considered part of the table or figure and are requirements.

### 1.2 Alternative Materials

The requirements of this Standard are not intended to prevent the use of alternative materials or methods of construction, provided such alternatives meet the intent and requirements of this Standard.

### 1.3 Units of Measurement

Where values are stated in U.S. Customary units and the International System of Units (SI), the U.S. Customary units shall be considered the standard.

### 1.4 Patents

There is a possibility that compliance with this Standard may require use of an invention covered by patent rights. By publication of this Standard, no position is taken with respect to the validity of any such claim(s) or of any patent rights in connection therewith. If a patent holder has filed a statement of willingness to grant a license under these rights on reasonable and non-discriminatory terms and conditions to applicants desiring to obtain such a license, then details can be obtained from ASME.

### 1.5 Reference

This Standard references the following publications, and where such reference is made, it shall be to the latest edition including all amendments published thereto.

- ASTM A240/A240M, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- ASTM D1784, Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds

- ASTM D2122, Standard Test Method for Determining Dimensions of Thermoplastic Pipe and Fittings
  - ASTM D2444, Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
  - ASTM D2665, Standard Specification for Poly(vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
  - ASTM D3212, Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
  - ASTM D3311, Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns
  - ASTM D3965, Standard Classification System and Basis for Specifications for Rigid Acrylonitrile-Butadiene-Styrene (ABS) Materials for Pipe and Fittings
  - ASTM F477, Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
  - ASTM F913, Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
- Publisher: American Society for Testing and Materials (ASTM International), 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 (www.astm.org)

### 1.6 Definitions and Abbreviations

**1.6.1 Definitions.** The following definitions shall apply in this Standard:

*can*: expresses a possibility or a capability.

*IPS Schedule 40 Series*: pipe produced to an iron pipe outside diameter with a Schedule 40 wall thickness.

*may*: expresses an option or something permissible within the scope of this Standard.

*push-fit fitting*: a fitting with a push-on joint type with an elastomeric gasket providing a compressive force against the spigot and socket after assembly to provide a permanent seal.

*reversible*: able to be reversed; having the ability to be removed and reused.

*Schedule*: a pipe-size system (outside diameter and wall thickness) originated by the iron-pipe industry.

*shall*: expresses a requirement, i.e., a provision that the user is obliged to satisfy to comply with this Standard.

*should*: expresses a recommendation but not a requirement.

**1.6.2 Abbreviations.** The following abbreviations shall apply in this Standard:

ABS = acrylonitrile-butadiene-styrene