

IAPMO IGC 354-2022



Industry Standard for

**Expandable Pressure Pipe Renewal Systems
Employing Polyethylene Terephthalate
(PET)**



IAPMO Standard

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Preface

This is the fifth edition of IAPMO IGC 354, Expandable Pressure Pipe Renewal Systems Employing Polyethylene Terephthalate (PET). This Standard supersedes IAPMO IGC 354-2021, Expandable Pressure Pipe Renewal Systems Employing Polyethylene Terephthalate (PET). The previous editions of this standard are: October 2021, October 2020, August 2019, and January 2020

This Standard was developed by the IAPMO Standards Review Committee (SRC) in accordance with the policies and procedures regulating IAPMO industry standards development, Policy S-001, Standards Development Process. This Standard was approved as an IAPMO Industry Standard on February 7, 2022.

Notes:

- (1) *The use of the singular does not exclude the plural (and vice versa) when the sense allows.*
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- (3) *This standard was developed using an open process and in accordance with IAPMO Standards Policy S-001, Standards Development Process, which is available on the IAPMO Standards website (www.IAPMOstandards.org).*
- (4) *During its development, this Standard was made available for public review, thus providing an opportunity for additional input from stakeholders from industry, academia, regulatory agencies, and the public at large. Upon closing of public review, all comments received were duly considered and resolved by the IAPMO Standards Review Committee.*
- (5) *This Standard was developed in accordance with the principles of consensus, which is defined as substantial agreement; consensus implies much more than a simple majority, but not necessarily unanimity. It is consistent with this definition that a member of the IAPMO Standards Review Committee might not be in full agreement with all sections of this Standard.*
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- (7) *IAPMO Standards are subject to periodic review and suggestions for their improvement will be referred to the IAPMO Standards Review Committee. To submit a proposal for change to this Standard, you may send the following information to the International Association of Plumbing and Mechanical Officials, Attention Standards Department, at standards@IAPMOstandards.org or, alternatively, at 4755 East Philadelphia Street, Ontario, California, 91761, and include "Proposal for change" in the subject line:*
 - (a) *standard designation (number);*
 - (b) *relevant section, table, or figure number, as applicable;*
 - (c) *wording of the proposed change, tracking the changes between the original and the proposed wording;*
and
 - (d) *rationale for the change.*
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 - (a) *the edition of the standard for which the interpretation is being requested;*
 - (b) *the definition of the problem, making reference to the specific section and, when appropriate, an illustrative sketch explaining the question;*
 - (c) *an explanation of circumstances surrounding the actual field conditions; and*
 - (d) *the request for interpretation phrased in such a way that a "yes" or "no" answer will address the issue.*
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- (12) Proposals for amendments to this Standard will be processed in accordance with the standards-writing procedures of IAPMO industry standards development, Policy S-001, Standards Development Process.*

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IAPMO IGC 354-2022

Expandable Pressure Pipe Renewal Systems Employing Polyethylene Terephthalate (PET)

1 Scope

1.1 General

- 1.1.1** This Standard covers expandable pressure pipe renewal systems employing polyethylene terephthalate (PET) intended for use in water supply pipes ranging from DN 15 to 50 (1/2 to 2 NPS) and specifies requirements for materials, physical characteristics, performance testing, and markings.
- 1.1.2** Polyethylene terephthalate (PET) pipe renewal systems covered by this standard are intended for application in various pipe materials including but not limited to lead, copper, galvanized iron, steel, and plastic.
- 1.1.3** The pipe renewal is achieved by forming a thin-walled layer close-fitting to the interior of the existing pipe.
Note: Information on the pipe renewal system, the installation of the pipe and the manufacture and quality assurance of the pipe, is provided in the Informative Appendices A, B and C respectively.
- 1.1.4** This Standard covers expandable pressure pipe renewal systems employing polyethylene terephthalate (PET) and does not cover cured in place, pulled in place, pipe bursting, internal pipe epoxy lining or any other pipe lining systems.

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 Terminology

In this Standard,

- (a) “shall” is used to express a requirement, i.e., a provision that the user is obliged to satisfy to comply with the Standard;
- (b) “should” is used to express a recommendation, but not a requirement;
- (c) “may” is used to express an option or something permissible within the scope of the Standard; and
- (d) “can” is used to express a possibility or a capability.

Notes accompanying sections of the 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 can be written as requirements.