IAPMO IGC 119-~~2019~~2026

PUBLIC REVIEW DRAFT

Industry Standard for

Water Treatment Equipment Drain Connectors

IAPMO Standard

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Preface

This is the ~~second~~ third edition of IAPMO IGC 119, Water Treatment Equipment Drain Connectors. This Standard supersedes IAPMO IGC 119-~~1997(R2013~~2019~~)~~, Water Treatment Equipment Drain Connectors. The previous edition of this standard is: December 1997

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 August 12, 2019.

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.

(6) Although the intended primary application of this Standard is stated in its scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.

(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.*

(8) Requests for interpretation should be clear and unambiguous. To submit a request for interpretation of 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 "Request for interpretation" in the subject line:

- *(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.*

(9) IAPMO does not "approve", "rate", or endorse any item, construction, proprietary device, or activity.

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(11) Participation by federal or state agency representative(s) or person(s) affiliated with industry is not to be interpreted as government or industry endorsement of this Standard.

(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 119-~~2019~~2026
Water Treatment Equipment Drain Connectors

1 Scope

1.1 General

1.1.1 This Standard covers water treatment equipment drain connectors and specifies requirements for materials, physical characteristics, performance testing, and markings.

1.1.2 This Standard covers water treatment equipment drain connectors, which are comprised of a reducer assembly, and air gap reducer assembly or a reducer wye. The reducer assembly and the air gap reducer assembly is designed to attached to the plumbing drainage system using a drainage tee, a diversion tee or a trap adapter. Such devices are intended to provide a transition connection from an appliance or water treatment equipment to the plumbing drainage system.

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.

1.4 Units of Measurement

SI units are the primary units of record in global commerce. In this Standard, the inch/pound units are shown in parentheses. The values stated in each measurement system are equivalent in application, but each unit system is to be used independently. All references to gallons are to U.S. gallons.

2 Reference Publications

This Standard refers to the following publications and, where such reference is made, it shall be to the current edition of those publications, including all amendments published thereto.

ASTM International

ASTM D4101
Standard Classification System and Basis for Specification for Polypropylene Injection and Extrusion Materials

ASTM F409
Standard Specification for Thermoplastic Accessible and Replaceable Plastic Tube and Tubular Fittings

3 Definitions and Abbreviations

This section is reserved for later use.

4 General Requirements

4.1 Sizes

The inlet size to the reducing adapter shall be either 6.35 mm (0.25 in), 9.5 mm (0.375 in) or 12.7 mm (0.5 in) in diameter and the outlet dimension shall be either 31.75 mm (1.25 in) or 38.1 mm (1.5 in) (tubing size) in accordance with ASTM F409. Diversion tees, conventional tees or trap adapters shall comply with ASTM F409. Adapters designed for use with a conventional tee or trap adapter shall be fitted with a ring to prevent pass through the conventional tee or trap adapter.

4.2 Flow Ways

The internal flow ways of the drain connector shall be free from burrs and obstructions.

4.3 Materials

4.3.1 The materials in the conventional tee or diversion tee assembly shall be in accordance with ASTM F409.

4.3.2 The reducing adapter shall meet the minimum cell classification requirements of:
(a) ASTM F409; or
(b) PP0105G36A45440 of ASTM D4101.

4.4 Dimensions

Tubing shall meet the dimensional requirements of ASTM F409.

4.5 Joints

The joints within the diverter tee or conventional tee shall be of the slip joint type. The joints within the reducing adapter ell or wye adapter shall be either barbed, compression or quick disconnect type.

5 Testing Requirements

5.1 Dimensional Evaluation

The components shall be examined for compliance with the specifications in accordance with Section 4.

5.2 Hydrostatic Test

5.2.1 Drain Connector (except air gap type adapter)

5.2.1.1 Test Procedure

The hydrostatic test for the drain connector, except the air gap type drainage adaptershall be conducted as follows:

(a) Install the connector in accordance with manufacturer's installation instructions;
(b) Install a 152.4 mm (6 in) length of copper tubing on the inlet to the drain connector and connect it to a source of water which is capable of producing a minimum of 172.4 kPa (25 psi) pressure;
(c) Seal all additional outlets ; and
(d) Apply a water pressure of 172.4 kPa (25 psi) for a period of 5 min.

5.2.1.2 Performance Requirements

No water leakage from any connection shall be permitted.

5.2.2 Air Gap Drainage Adapter

5.2.2.1 Test Procedure

The hydrostatic test for air gap drainage adaptors shall be conducted as follows:

(a) Install the fittings in accordance with manufacturer's installation instructions into an open standpipe; and
(b) Connect a water supply line into the inlet to the fitting and supply water at 172.4 kPa (25 psi) through the fitting for a period of 5 min.

5.2.2.2 Performance Requirements

There shall be no external leakage and spraying from the device.

6 Markings and Accompanying Literature

6.1 Markings

Water treatment equipment drain connectors complying with this Standard shall be marked with the following:

(a) Manufacturer's name or trademark; and
(b) Model number or designation.

6.2 Visibility

Markings shall be permanent and legible.

6.3 Installation Instructions

Water treatment equipment drain connectors shall be accompanied by instructions for their installation, care, maintenance, and repair. Electronic means (i.e. QR codes) of installation instructions are acceptable.

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