IAPMO IGC 236-20062020

DRAFT

Industry Standard for Closet Flange Extender
**IAPMO Standard**

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Contents

Preface

IAPMO Standards Review Committee

1 Scope
   1.1 Scope
   1.2 Alternative Materials
   1.3 Terminology
   1.4 Units of Measurement

2 Reference Publications

3 Definitions and Abbreviations

4 General Requirements
   4.1 Material
   4.2 Dimensions
   4.3 Workmanship
   4.4 Bolts
   4.5 Seal
   4.6 Spacers

5 Testing Requirements
   5.1 Load Test
   5.2 Impact Test

6 Markings
Preface

This is the second edition of IAPMO IGC 236, Closet Flange Extender. This Standard supersedes IAPMO IGC 236-2006, Closet Flange Extender. The previous editions of this standard are: December 2006

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 Month DD, YYYY.

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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.
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   (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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December 2006  February 10, 2020  PUBLIC REVIEW DRAFT  iv
IAPMO IGC 236-2006

Closet Flange Extender

1 Purpose Scope

1.1 Scope
The purpose of This Standard is to establish a generally acceptable performance standard for covers closet flange extenders. Its purpose is to serve as a guide for producers, distributors, architects, engineers, contractors, installers and inspectors; to promote understanding regarding materials, manufacture and installation; and to provide for identifying products that conform to this standard and specifies requirements for materials, physical characteristics, performance testing, and markings.

1.2 Alternative Materials
The provisions requirements of this Standard are not intended to prevent the use of any alternate alternative materials or methods of construction provided that any such alternate alternatives meets the intent and requirements of this document and changes are amended to 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 Scope
2.1 This standard covers physical requirements and tests for types of materials, thickness, dimensions and other significant properties in addition to general description of materials used.
32 Reference Standards Publications

3.1 All standards referenced herein shall be the current edition of that standard. 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 D2412
Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading

ASTM D2444
Standard Practice for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)

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

UPC
Uniform Plumbing Code

3 Definitions and Abbreviations
This section is reserved for later use.

4 General Requirements

4.1 Material
Extenders and spacers shall be made of a virgin Polypropylene (PP) compound having a minimum cell classification of PP0359 per in accordance with ASTM D4101 with a minimum wall thickness of 1/8 inches 3.175 mm (1/8 in).

4.1.1 Other parts of the fitting shall be made of approved corrosion resisting material.

4.2 Extenders shall be manufactured so as not to restrict the flow capacity of the drainage line, offer abnormal obstruction to flow, produce excessive turbulence, or have an excessive body ledge or shoulder.

4.34.2 Dimensions

4.2.1 The closet flange extender shall comply with the requirements contained in Section 704.4.1 of in accordance with the Uniform Plumbing Code (UPC). The outlet of the fitting shall be sized in accordance with the manufacturer's specifications.
4.2.2 The extension sleeve of the extender shall provide a sleeve sized to accommodate the inside dimension of the closet flange and create a smooth transition through piping system.

4.4.3 Workmanship
The inside and outside surface of the fittings shall be free of cracks, holes, blisters, voids, foreign inclusions, or other defects that are visible to the naked eye and that may effect the wall integrity or restrict the flow to the drainage line.

4.5.4 Bolts
When provided, nuts, bolts and other fasteners shall be made from the following material:
(a) Copper alloys with a minimum copper content of 56%; or
(b) Stainless steel alloys of the 300 or 400 series

4.6.5 Seal
Industry standard wax rings or 1.6 mm (1/16" in) thick gasket made from either a neoprene rubber having a 40-50 durometer or neoprene/EPDM closed cell sponge rubber with a density of 216.2 kg/m³ (13.50 pcf-lbf/ft³) and compression deflection of 62 – 90 kPa (9 – 13 psi), shall be used in accordance with manufacturer's installation instructions to provide a gas and water tight seal between the pre-existing closet flange and the toilet flange extender.

4.7.6 Spacers
Spacers shall be used to adjust the height of the extender to the finish floor level.

5 Testing Requirements

5.1 Load Test

5.1.1 Test Procedure
The load test shall be conducted as follows:
Apply the test in accordance with the test procedure of ASTM D2412;
Use a minimum 6.35 mm (1/4 in) thick spacer underneath the ring of the extender to create a flat surface; and
Apply a minimum load of 11 kN/m (750 lbf/ft) of centerline length.

5.1.2 Performance Requirements
Individual extenders unassembled shall withstand a minimum the applied load of 750 lbf/ft (11 kN/m) of centerline length without visible evidence of failure when tested in accordance with ASTM D2412. The use of a minimum 1/4" thick spacer underneath the ring of the extender shall be used to create a flat surface.
5.2 Impact Test

5.2.1 Test Procedure

The impact test shall be conducted as follows:
(a) Apply the test in accordance with the test procedure of ASTM D2444;
(b) Use a minimum 6.35 mm (1/4 in) thick spacer underneath the ring of the extender to create a flat surface;
(c) Apply individual extenders unassembled shall meet a minimum impact of 20 ft-lbf (27 J) (27 J (20 lbf-ft) when tested in accordance with ASTM D2444 at 73°F (23°C) (23°C (73°F) using a 12-lb (5-kg) 12 lb) Tup C and Holder B2; and
(d) Apply the test to only 10 samples shall be tested. The use of a minimum 1/4" thick spacer underneath the ring of the extender shall be used to create a flat surface.

5.2.2 Performance Requirements

Individual extenders unassembled shall withstand the applied impact without visible evidence of failure.

6 Markings and Accompanying Literature

6.1 Closet flange extenders complying with this Standard shall be permanently and legibly marked with the following:
(a) Manufacturer's name or trademark, or both;
(b) Model number; and
(c) Symbol PP.