ASME A112.6.7-2010
(Revision of ASME A112.6.7-2001)

Sanitary Floor Sinks

REAFFIRMED 2015

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AN AMERICAN NATIONAL STANDARD

The American Society of
Mechanical Engineers

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AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers
Three Park Avenue • New York, NY • 10016 USA

Date of Issuance: February 11, 2011

This Standard will be revised when the Society approves the issuance of a new edition. There will be no addenda issued to this edition.

ASME issues written replies to inquiries concerning interpretations of technical aspects of this Standard. Periodically certain actions of the ASME A112 Committee may be published as Cases. Cases and Interpretations are published on the ASME Web site under the Committee Pages at http://cstools.asme.org as they are issued.

The American Society of Mechanical Engineers
Three Park Avenue, New York, NY 10016-5990

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FOREWORD

The American National Standards Committee A112 was organized on July 27, 1955 for the purpose of standardization of plumbing materials and equipment. The first organizational meeting was held on July 22, 1958. At the meeting on May 1, 1964, Panel No. 21 was created to establish standards for roof drains, floor drains, backwater valves, and other drainage specialties. Its scope was as follows: The recommendation of suitable existing standards in cooperation with interested sponsors, or the development of adequate new standards as needed for roof drains, floor drains, and other drains as used or installed in plumbing systems.

The A112 Committee, undergoing a number of organizational changes over the years, is currently identified as ASME A112 Standards Committee. A112 Panel 21 Working Groups, with the responsibility for drainage products were reorganized as Project Teams with sanitary floor sinks assigned to Project Team 6.7. The project team met twice for the purpose of developing this Standard, including criteria from the International Association of Plumbing and Mechanical Officials (IAPMO) product standards PS-62, PS-83, and PS-84.

Suggestions for improvement of this Standard are welcome. They should be sent to The American Society of Mechanical Engineers, Attn: Secretary, A112 Standards Committee, Three Park Avenue, New York, NY 10016-5990.

This Standard was approved as an American National Standard on October 19, 2010.

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Standardization of Plumbing Materials and Equipment

(The following is the roster of the Committee at the time of approval of this Standard.)

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General. ASME Standards are developed and maintained with the intent to represent the consensus of concerned interests. As such, users of this Standard may interact with the Committee by requesting interpretations, proposing revisions, and attending Committee meetings. Correspondence should be addressed to:

Secretary, A112 Standards Committee
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Proposing Revisions. Revisions are made periodically to this 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 edition, the paragraph number(s), the proposed wording, and a detailed description of the reasons for the proposal including any pertinent documentation. When appropriate, proposals should be submitted using the A112 Project Initiation Request Form.

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Interpretations. Upon request, the Committee will render an interpretation of any requirement of their Standards. Interpretations can only be rendered in response to a written request sent to the Secretary of the A112 Standards Committee.

The request for 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.
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. 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 this format will be rewritten in this format by the Committee prior to being answered, which may inadvertently change the intent of the original request.

ASME procedures provide for reconsideration of any interpretation when or if additional information that might affect an interpretation is available. Further, persons aggrieved by an interpretation may appeal to the cognizant ASME Committee or Subcommittee. ASME does not "approve," "certify," "rate," or "endorse" any item, construction, proprietary device, or activity.

Attending Committee Meetings. The A112 Standards Committee regularly holds meetings, which are open to the public. Persons wishing to attend any meeting should contact the Secretary of the A112 Standards Committee.

SANITARY FLOOR SINKS

1 GENERAL

1.1 Scope

This Standard applies to sanitary floor sinks and includes requirements for material, construction, inspection, testing, and marking. The provisions of this Standard are not intended to prevent the use of any alternate materials or methods of construction, provided any such alternate meets the intent of this Standard.

1.2 Units of Measurement

Values are stated in U.S. Customary units and the International System of Units (SI). The U.S. Customary units shall be considered as the standard.

1.3 References

The following documents form a part of this Standard to the extent specified herein. Unless otherwise specified, the latest edition shall apply.

ASME A112.6.3-2001, Floor and Trench Drains

ASME A112.18.1/CSA B125.1-05, Plumbing Fixture Fittings

ASME A112.18.2/CSA B125.2-05, Plumbing Fixture Waste Fittings

ASME A112.19.1/CSA B45.2-08, Enameled Cast Iron and Enameled Steel Plumbing Fixtures

ASME A112.19.3/CSA B45.4-08, Stainless Steel Plumbing Fixtures

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2900, Fairfield, NJ 07007-2900 (www.asme.org)

ASTM A 888, Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications

ASTM D 522, Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings

ASTM D 523, Standard Test Method for Specular Gloss

ASTM D 1784, Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds

ASTM D 2665, Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings

American Society for Testing and Materials (ASTM International), 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 (www.astm.org)

IAPMO/ANSI Z124.6-2007, Plastic Sinks

Publisher: International Association of Plumbing and Mechanical Officials (IAPMO), 5001 East Philadelphia Street, Ontario, CA 91761-2816 (www.iapmo.org)

1.4 Floor Sink

As covered in this Standard, a floor sink is a receptor drain that is designed and installed for the purpose of draining indirect waste to the sanitary drainage system.

2 GENERAL REQUIREMENTS

2.1 Materials

2.1.1 Enameled and Epoxy-Coated Cast Iron Floor Sink. The enameled and epoxy-coated cast iron floor sink shall conform to the general requirements outlined in ASME A112.19.1/CSA B45.2-08, Section 4, and surface shall be examined for blemishes in accordance with para. 5.2.

2.1.2 PVC Plastic Floor Sinks. PVC floor sinks shall be made of a single PVC virgin compound except as provided in para. 2.1.2.1, and shall conform to the requirements specified in ASTM D 1784 for a PVC 12454 compound. The PVC plastic floor sinks shall conform to the general requirements outlined in IAPMO/ANSI Z124.6-2007, Section 2 and workmanship and finish in Section 3.

2.1.2.1 Reworked Plastic. Clean, reworked plastic generated from the manufacturer's own PVC 12454 products may be used provided the floor sinks produced meet the requirements of this Standard.

2.1.3 Stainless Steel Floor Sinks. The stainless floor sink shall conform to the general requirements outlined in ASME A112.19.3/CSA B45.4-08, Section 4, and surface shall be examined for blemishes in accordance with para. 5.1.

2.2 Epoxy Coating

The visible surface after installation of each floor sink shall be acid-resisting epoxy, thoroughly fused to the cast iron base. It shall be free from flaws that may affect the appearance or serviceability of the floor sink. The epoxy surface shall meet the requirements of ASME A112.19.1/CSA B45.2-08, para. 4.1.2 when evaluated for surface defects in accordance with para. 5.2.

2.2.1 Surface Epoxy. The surface epoxy, visible after installation, shall be glossy to the extent that it will have a 60 deg (1.05 rad) specular gloss of not less than 60 when tested in accordance with para. 5.2.

2.2.2 Epoxy Thickness. The thickness of the epoxy coating, as measured on a flat surface at least 1 in. (25 mm) from any edge shall be not less than 4 mils (0.1 mm).

2.2.3 Acid Resistance. The epoxy coating shall be acid resisting when tested in accordance with para. 5.3.

2.2.4 Epoxy Flexibility. The epoxy shall be flexible when tested in accordance with para. 5.4.

2.3 Detail Requirements

2.3.1 Floor Sink Drain Body. The drain body shall be smooth with rounded corners to eliminate bacterial catching surfaces. Drains and other waste-fitting components shall comply with ASME A112.18.2/CSA B125.2-05.

2.3.2 Strainers and Grates. The strainers and grates shall be accessible and removable for cleaning and maintenance. The grates must be aligned properly and fastened by accompanying screws, unless floor sink design is for loose set installation.

2.3.3 Open Area. The grates and strainers shall comply with the open area requirements of ASME A112.6.3-2001.

2.3.4 Screws. All screws shall be made of corrosion-resistant material.

2.3.5 Dimensions. PVC floor sink dimensions shall conform to the socket and spigot dimensions as specified in ASTM D 2665.

2.3.6 Top Loading. Top loading classifications for grates shall be in accordance with ASME A112.6.3-2001.

2.4 Fixture Fittings

Factory-supplied supply fittings shall comply with ASME A112.18.1/CSA B125.1-05.

2.5 Fixture Waste Fittings

Factory-supplied waste fittings shall comply with ASME A112.18.2/CSA B125.2-05.

3 FLOOR SINK TYPES AND SIZES

3.1 Illustrations

The floor sink type and sizes illustrated in Figs. 1 through 4 are commonly cast iron and Figs. 5 through 7 are commonly PVC, but other type materials may be provided. Those illustrated represent a selection for ordinary types and may be provided with a variety of tops. Top grates shall meet the requirements of ASME A112.6.3-2001.

3.2 Floor Sinks Without Anchor Flanges

Floor sinks without anchor flanges are for use where anchoring or clamping of a waterproof membrane is not required.

3.3 Floor Sinks With Anchor Flanges

Floor sinks with anchor flanges are for use where anchoring or clamping of a waterproof membrane is required. The membrane is to be secured to the anchor flange with flange clamps. Provisions shall be made in the drain body for weepholes. They shall be cast in the cast iron body and drilled in the PVC body, if necessary (see Figs. 5 through 7).

3.4 Grate Configurations

Grate configurations shall be either full, $\frac{3}{4}$, or $\frac{1}{2}$ design. See Figs. 8 through 10. Direction of slots may vary depending on the manufacturer.

4 OUTLET SIZE AND CONNECTION

Outlet size and connections shall be in accordance with ASME A112.6.3-2001 and/or ASTM A 888. PVC shall also be in accordance with ASTM D 2665.

5 TESTING

5.1 Enameled Cast Iron Floor Sinks

Enameled cast iron floor sinks shall meet the requirements of ASME A112.19.1/CSA B45.2-08.

5.2 Specular Gloss of the Epoxy Coating

The specular gloss of the epoxy shall be determined in accordance with ASTM D 523 for 60 deg (1.05 rad).

5.3 Acid Test for the Epoxy Coating

The acid test for the epoxy coating shall be a fresh solution made of one part citric acid crystals to ten parts water by weight applied to the surface of the epoxy coating for 15 min, at the end of which period, after washing and drying, there shall be no loss of epoxy. The floor sink and acid solution shall have been stored for not less than 3 hr immediately preceding the test in an atmosphere of 80°F ± 10°F (26.67°C ± 5.55°C). The test shall be applied to a clean area, in a pool of several drops, and covered with a watch glass to hold the solution in place.

5.4 Flexibility of the Epoxy

The flexibility of the epoxy shall be in accordance with ASTM D 522, 180 deg around a $\frac{1}{4}$ in. (6.4 mm) mandrel.

5.5 PVC Plastic Floor Sinks

PVC plastic floor sinks shall meet the requirements of ASME A112.6.3-2001, Section 8.

5.6 Stainless Steel Floor Sinks

Stainless steel floor sinks shall meet the requirements of ASME A112.19.3/CSA B45.4-08, Section 5.

6 MARKING AND IDENTIFICATION

Floor sinks shall be marked with the following and shall be visible after installation when the markings are not detrimental to the finish or appearance:

(a) manufacturer's name or trademark

(b) model number

Fig. 1 Floor Sink

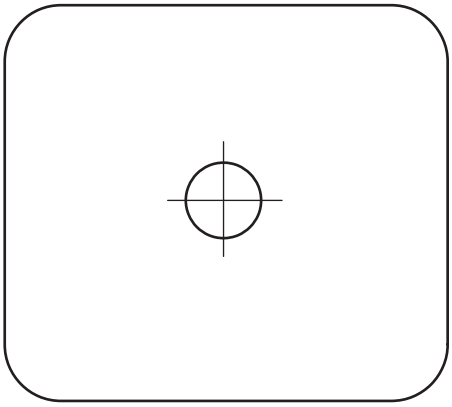


Fig. 2 Floor Sink With Seepage Flange

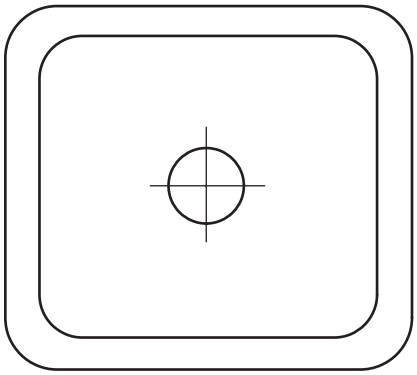


Fig. 3 Round Floor Sink

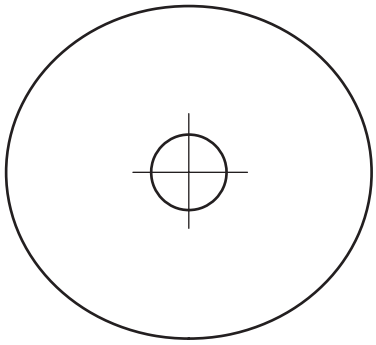


Fig. 4 Round Floor Sink With Seepage Flange

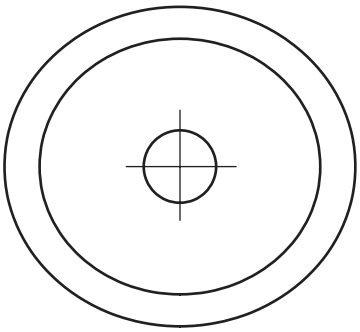


Fig. 5 Flanged Floor Sink

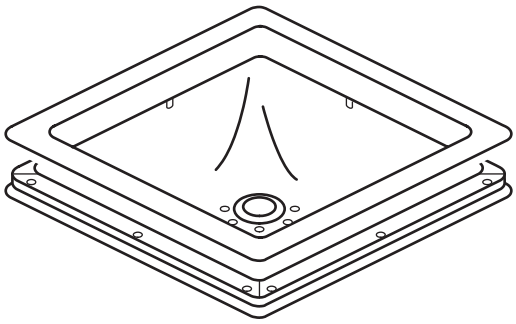


Fig. 6 Flangeless Floor Sink

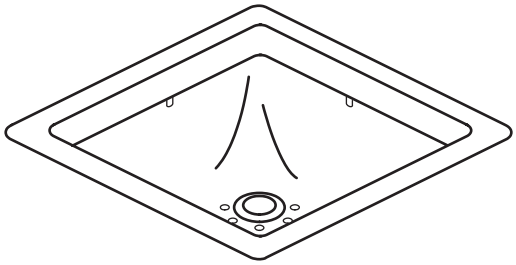
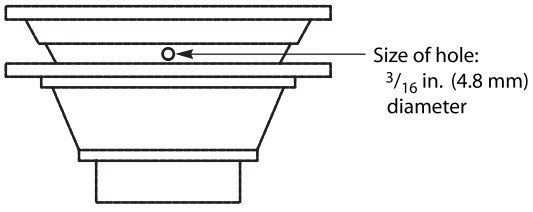


Fig. 7 Floor Sink With Waterproof Membrane



GENERAL NOTE: When using a waterproof membrane, drill holes on the floor sink body (where indicated) before installing the floor sink to the piping system.

Fig. 8 Full Grate

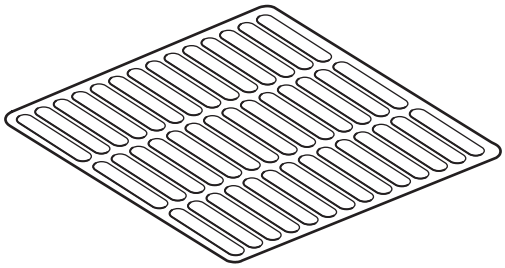


Fig. 9 Three-Quarter Grate

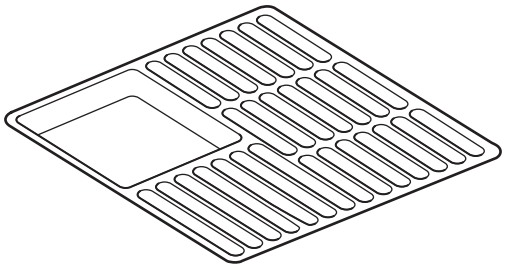
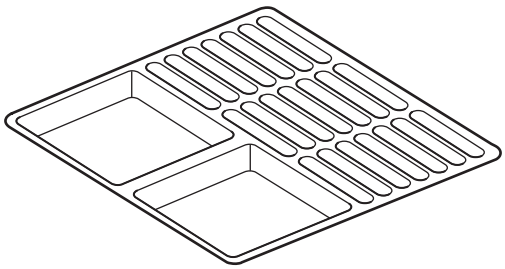


Fig. 10 Half Grate



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