ASME A112.6.7-2001

ENAMELED AND EPOXY COATED CAST IRON AND PVC PLASTIC SANITARY FLOOR SINKS

AN AMERICAN NATIONAL STANDARD

The American Society of Mechanical Engineers

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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 Standards Committee A112. 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 (IAMPO) product standards PS-62, PS-83, and PS-84.

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

This Standard was approved as an American National Standard on January 17, 2001.

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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 effect the appearance or serviceability of the floor sink. The epoxy surface shall be examined for blemishes in accordance with Section 6 of ASME A112.19.1.

2.2.1 Surface Epoxy. The surface epoxy, visible after installation, shall be glossy to the extent that it will have a 1.05 rad. (60 deg.) 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 not be 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 for PVC

All floor sinks plastic parts shall be of PVC material.

2.3.1 PVC Floor Sinks. All PVC floor sinks shall be made of a single PVC virgin compound except as provided in para. 2.3.2 and shall conform to the requirements specified in ASTM D 1784 for a PVC 12454 compound.

2.3.2 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.

2.3.3 Grates. The grates must be aligned properly and fastened by accompanying screws, unless floor sink design is for loose set installation.

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 Open Area. The grates and strainers shall comply to the open area requirements of ASME A112.21.1.

2.3.7 Top Loading. Top loading classifications for grates shall be in accordance with ASME A112.21.1.

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 variey of tops. Top grates shall meet the requirements of ASME A112.21.1.

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, $^{3}/_{4}$, or $^{1}/_{2}$ 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 A112.21.1 and/or ASTM A 888. PVC shall also be in accordance with ASTM D 2665.

5 TESTING

5.1 Enameled Cast Iron Floor Sink

Enameled cast iron floor sinks shall be subjected to the tests outlined in Section 7, ASME A112.19.1, with the exception of the Lavatory Overflow Test (para. 7.5).

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5.2 Specular Gloss of the Epoxy Coating

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

5.3 Acid Test for the Epoxy Coating

The acid test for the epoxy coating shall be a fresh solution made of one (1) part citric acid crystals to ten (10) parts water by weight applied to the surface of the epoxy coating for 15 minutes, 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 $^1/_4$ in. (6.4 mm) mandrel.

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; and

(b) Model number

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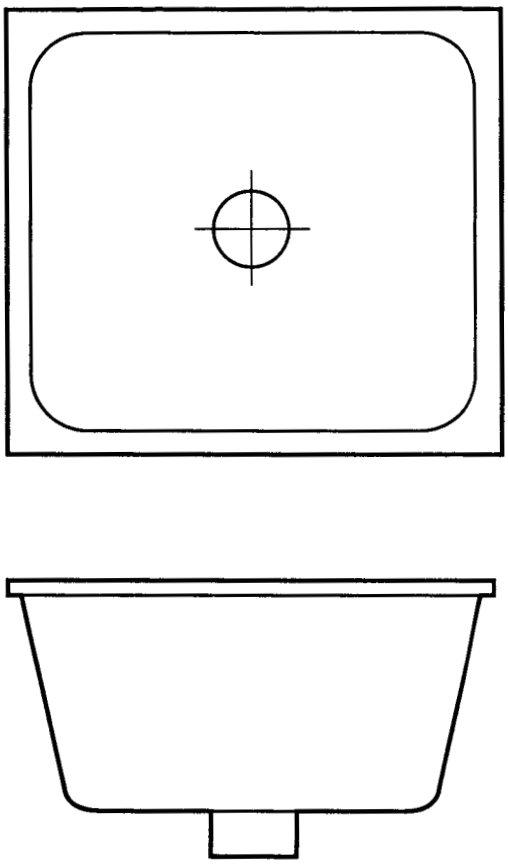


FIG. 1 FLOOR SINK

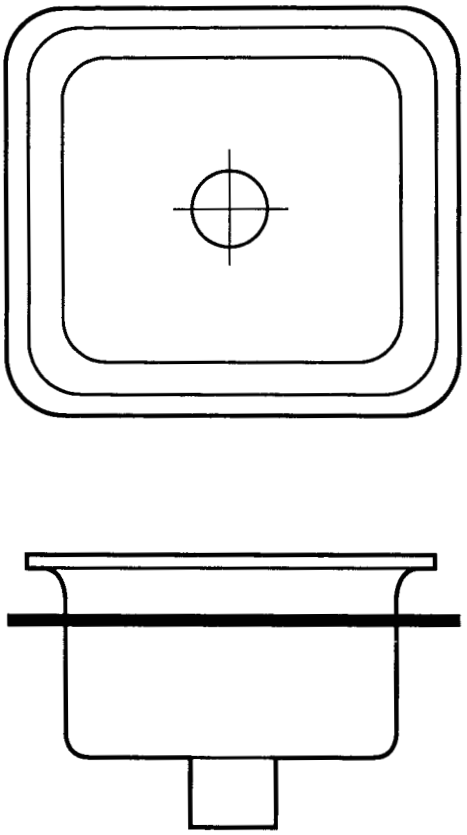


FIG. 2 FLOOR SINK WITH SEEPAGE FLANGE

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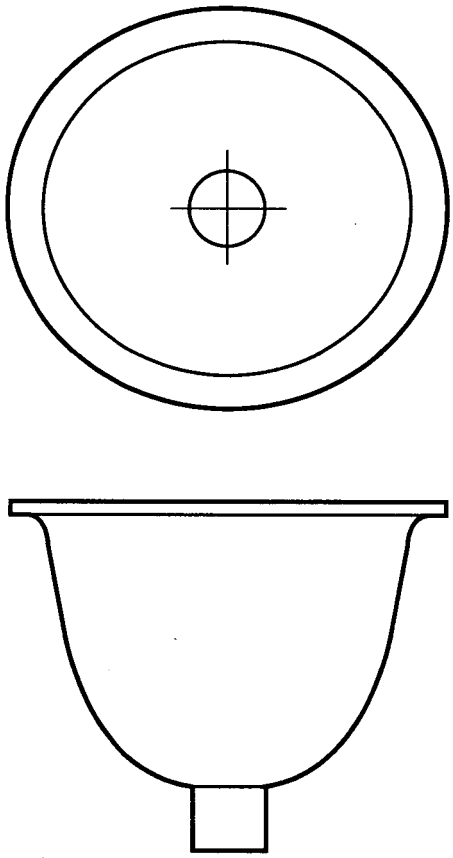


FIG. 3 ROUND FLOOR SINK

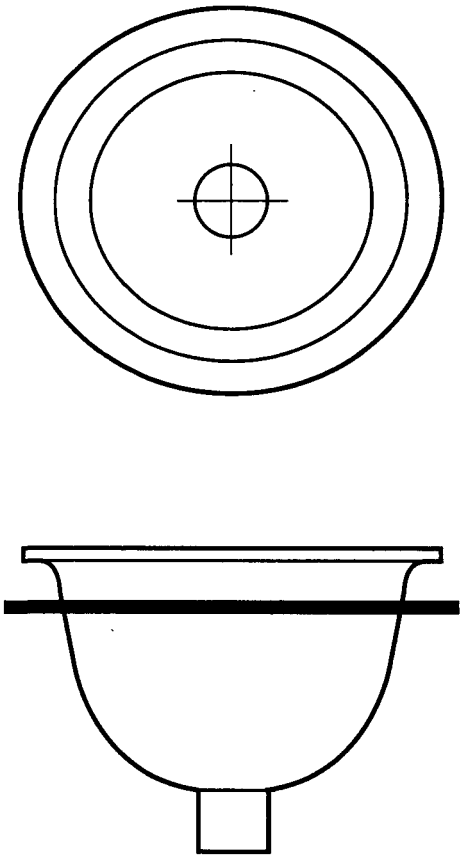


FIG. 4 ROUND FLOOR SINK WITH SEEPAGE FLANGE

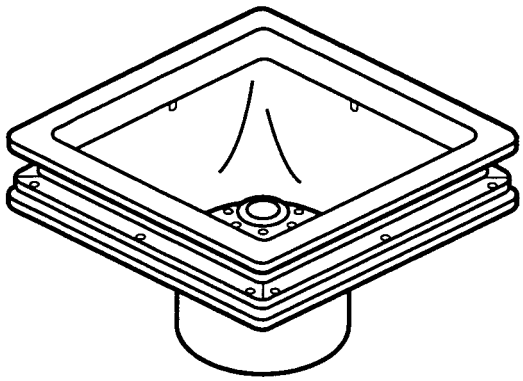


FIG. 5 FLANGED FLOOR SINK

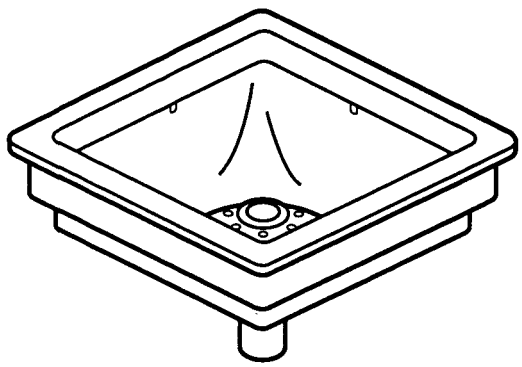
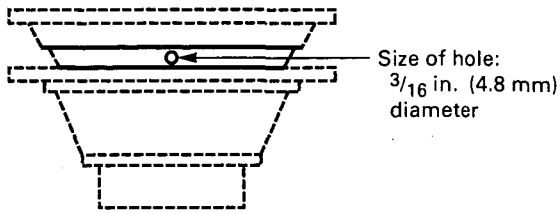


FIG. 6 FLANGELESS FLOOR SINK

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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. 7 FLOOR SINK WITH WATERPROOF MEMBRANE

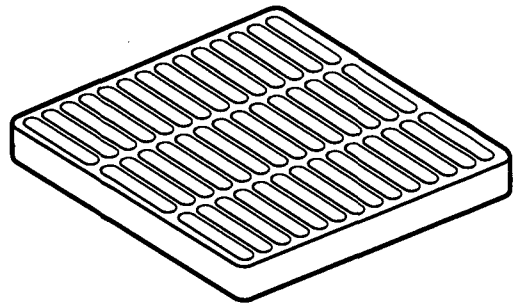


FIG. 8 FULL GRATE

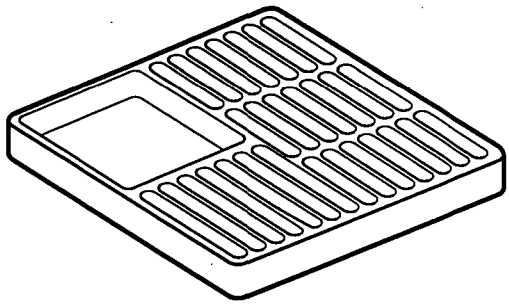


FIG. 9 THREE QUARTER GRATE

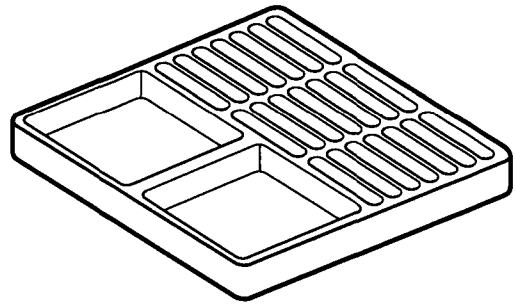


FIG. 10 HALF GRATE

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