



**Summary of Substantive Changes  
between the 2001 and 2016 editions of  
ASME A112.6.3 “Floor and Trench Drains”**

**Presented to the IAPMO Standards Review Committee on June 13, 2016**

**General:** The changes to this standard will likely have an impact on currently listed products. The substantive changes are:

- Clarified the scope of the standard (see Section 1.1).
- Removed the definition and figures for shower drains (see Section 1.6 and Figures 3 and 4)
- Revised the requirements for materials, moved the minimum thickness requirement to new section 2.4, updated the referenced standards, and clarified the allowable alloys (see Sections 2.1 and 2.4).
- Changed the requirements for coatings from general requirements specified directly in the standard to compliance with section 5.2 of ASME A112.18.1/CSA B125.1 (see Section 2.2).
- Clarified that weep holes are optional, removed the requirement to include a minimum of three weep holes and added a requirement for the minimum combined area of the weep holes (see Section 2.3).
- Added a requirement for the drain body sump thickness of 3.96 mm (0.156 in.) (see Section 2.4).
- Clarified that trap primer attachments are allowable on floor drains (see Section 2.7).
- Bolts and Fasteners: Reduced the requirement for bolts and fasteners used for cast iron or copper alloy drains from 5/16 to 1/4 in. (see Section 3).
- Added allowance of gasketed and butt-welded connections for bottom and side outlets (see Section 4.2).
- Added requirements for butt-weld connections and included an additional alternate standard, ASME A112.3.1, for compliance of gasketed joints (see Section 4.3).
- Changed the allowable grate free area dimensions for floor drains specified in Table 4 and removed an allowance for grate openings that permit entrance of debris (see Section 5 and Table 4)
- Added a method of determining category, brittle or ductile, for drains made of composite materials. Clarified the requirement for assigning a loading classification to grates and covers and the test procedure for grate loading (see Section 6).
- Revised the weathering testing requirements for plastic drains (see Section 7)
- Added a requirement that markings shall be permanent (see Section 8)
- Added new informative Appendix A, Optional Features and Drain Variations, formerly Section 7, Variations

Section 1.1, Scope: Clarified the limit of the scope of products covered by this standard as follows: *This Standard ~~establishes design requirements for covers~~ floor, area, adjustable floor, and trench drains that are used inside of, or outside and immediately adjacent to, building structures. ~~that are typically nonresidential. It includes~~ This Standard specifies design requirements, definitions, nomenclature, outlet types and connections, grate-free area, top loading classifications, materials and finishes, ~~and variations in product design.~~ Seam-welded, socket type, stainless steel fabricated drains are covered in ASME A112.3.1.*



Section 1.6, Definitions: Removed the definition of shower drain as follows:

~~*drain, shower: a manufactured receptor designed to receive and convey the water in a built-up or pre-fabricated shower (see Figs. 3 and 4).*~~

Section 2, General Requirements:

Section 2.1, Materials: Revised the requirements for materials, removed the minimum thickness, updated the referenced standards, and clarified the allowable alloys.

Former Section 2.2, Shower Drains: Removed specific requirements for shower drains as follows:

~~*2.2.1 Strainers. Shower drain strainers shall be stainless steel 300-series alloy with a minimum thickness of 0.050 in. (1.3 mm). The Strainer shall be of the snap-on type or screw fastened. The minimum waterway area of strainers shall be equal to the area of a 2 in. pipe [3.1416 in.<sup>2</sup> (2027 mm<sup>2</sup>)].*~~  
~~*2.2.2 Crown/Collar. A24 gauge corrosion-resistant crown and/or collar of 1/4 in. brass ring shall be required between the strainer and cast iron bodies.*~~

Section 2.2 Coatings: Changed the requirements for coatings from general requirements specified directly in the standard to compliance with section 5.2 of ASME A112.18.1/CSA B125.1.

Section 2.3 Weep Holes: Clarified that weep holes are optional, removed the requirement to include a minimum of three weep holes and added a requirement for the minimum combined area of the weep holes as follows:

*Weep holes may be provided at the option of the manufacturer. When provided, weep hole(s) in bodies shall have be a minimum of three in number and shall be a combined (i.e., total) area of 24 mm<sup>2</sup> (0.037 in.<sup>2</sup>) and a smallest dimension of at least 3.2 mm (0.125 in.) (3.2 mm) in diameter.*

Section 2.4, Drain Body Thickness: Added a requirement for the drain body sump thickness of 3.96 mm (0.156 in.) as follows:

*The minimum thickness for drain body sumps shall be 3.96 mm (0.156 in.).*

Section 2.7, Trap Primers: Clarified that a trap primer attachments are allowable on floor drains as follows:

*Floor drains may have a means of attaching a trap primer to it.*

Section 3, Bolts and Fasteners: Reduced the requirement for bolts and fasteners used for cast iron or copper alloy drains from 5/16 to 1/4 in. as follows:

~~*Bolts and fasteners for cast iron or copper alloy drains shall be a minimum of 5/16 in. NC. Bolts and fasteners for plastic used to connect clamp collars, frames, or drain flanges to the bodies of drains shall be minimum of at least 1/4 in. National Coarse (NC).*~~

Section 4.2, Outlet Connections: Added allowance of gasketed and butt-welded connections for bottom and side outlets as follows:

*4.2.1 3-1.1 Connections for bottom outlets shall be threaded, inside caulk, spigot hubless (no-hub), gasketed, butt-welded, or solvent-cement welded. with centerline of outlet vertical. (see Fig. 6.)*



~~4.2.2~~ ~~3.1.2~~ Connections for side outlets and side outlets with integral traps shall be threaded, hub (outside caulk), spigot-hubless (no-hub), gasketed, butt-welded, or solvent-cement welded with centerline of outlet horizontal. (see Fig. 7.)

~~3.1.3 side outlet with integral trap. threaded, hub (outside caulk), spigot, hubless or solvent welded with centerline of outlet horizontal, and with P trap integral with drain body sump. (See Fig. 8.)~~

Section 4.3, Outlet Connection Types: Added requirements for butt-weld connections and included an additional alternate standard for compliance of gasketed joints, ASME A112.3.1 as follows:

~~4.3.6~~ ~~3.2.6~~ O-ring or Gasketed Joints. O-rings for gasketed joints shall comply with the applicable requirements of ASME A112.3.1, ASTM C 564, ASTM C 1440, or CSA B602.

4.3.7 Buttweld. Ends intended for butt-welding shall comply with ASME B16.25.

Section 5, Top Dimensions — Grate-Free Area: Changed the allowable grate free area dimensions for floor drains specified in Table 4 and removed an allowance for grate openings that permit entrance of debris as follows:

~~5.1~~ ~~4.2~~ Open Grate-Free Area Requirements for Various Classifications of Drains  
Opening Grate-free areas requirements for floor and trench drains shall be as specified shown in Table 4.

~~5.2~~ ~~4.3~~ Grate Openings in Top Grates  
Openings shall be any geometric shape. Grate openings shall be sized to exclude debris and support accommodate the anticipated loads, traffic. When drainage requirements dictate openings that would permit entrance of debris, a sediment bucket shall be installed in the drain body sump to intercept this debris.

Section 6, Loading Test – Classification and Test Procedure: Added a method of determining category, brittle or ductile, for drains made of composite materials. Clarified the requirement for assigning a loading classification to grates and covers and the test procedure for grate loading.

Former Section 7, Variations: Moved to Appendix A.

Section 7, Weathering Testing: Revised the weathering testing requirements for plastic drains as follows:

7.1 Plastic floor drains and related components, intended for exposure to outside elements, shall be tested for weathering in accordance with the methodology contained in ASTM G152 or ASTM G153 ASTM-G-23, or accelerated weathering tests in accordance with Cycle B specified in ASTM D4329 test cycle B (i.e., accelerated weathering). The test samples specimens shall be cut from the finished product or molded from the same material used to manufacture the finished product. The test duration shall be conducted for a minimum of at least 2,000 hr. After

7.2 At the conclusion of the test, the

- (a) tensile strength shall be no less than a minimum at least 90% of its original value; and
- (b) the hardness shall not be at least less than 20% of its original value.

Section 8, Markings: Added a requirement that markings shall be permanent as follows:

The floor Drains complying with this Standard shall be marked with the manufacturer's name or trademark. Markings shall be permanent, legible, and visible after installation.



Table 4, Grate-Free Area Requirements for Drains: Reorganized and revised table to remove specific requirements for Area and Trench Drains (subject to rainfall), and Shower Drains. Include requirements for Floor and Trench Drains (Subject to Rainfall) and All Other Drains.

The title of the following figure was revised

Figure 3 Adjustable Top Floor Drain ~~for Built-Up Shower~~ — Nomenclature

The following figure was removed:

~~Figure 4 Drain for Prefabricated Shower~~ — Nomenclature

Non-mandatory Appendix A, Optional Features and Drain Variations: Moved the descriptions, of optional features available for use with drains, formerly specified in Section 7, Variations and Figure 9 to informative appendix A.