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ASME A112.6.3-2001
(Revision and Redesignation of ASME A112.21.1M-1991)

FLOOR AND TRENCH DRAINS

AN AMERICAN NATIONAL STANDARD



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A N A M E R I C A N N A T I O N A L S T A N D A R D

FLOOR AND TRENCH DRAINS

ASME A112.6.3-2001
(Revision and Redesignation of ASME A112.21.1M-1991)

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FOREWORD

The American National Standards Committee A112 was established on July 27, 1955 for the purpose of standardizing plumbing materials and equipment. Its first organizational meeting was held on July 22, 1958, and Panel No. 21 was created on May 1, 1964 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 committee has since been reorganized as an ASME Standards Committee.

The ASME A112 Committee was restructured in 1998 in accordance with the ASME Redesign Process, and Panel 21 Working Group 1 became Project Team 6.3. The Project Team met twice to update this Standard, which now includes criteria from the International Association of Plumbing and Mechanical Officials (IAPMO) Product Standards PS 4 and PS 16.

Suggestions for improvement of this Standard are welcome. They should be sent to the American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.

This revision and redesignation of ASME A112.21.1M-1991 was approved as an American National Standard on May 4, 2001.

ASME STANDARDS COMMITTEE A112 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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FLOOR AND TRENCH DRAINS

1 GENERAL

1.1 Scope

This Standard establishes design requirements for 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 definitions, nomenclature, outlet types and connections, grate-free area, top loading classifications, materials and finishes, and variations in product design.

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 Illustrations

The illustrations (figures) included in this Standard are intended only to describe and portray typical floor and trench drain types and are not intended to restrict design or to be used for specification purposes.

1.4 Reference Standards

The following documents form a part of this Standard to the extent specified herein (the latest issue shall apply):

- ASTM A 48, Grey Iron Castings
- ASTM A 74, Cast Iron Soil Pipe & Fittings
- ASTM A 307, Carbon Steel Externally Threaded Fasteners
- ASTM A 536, Ductile Iron Castings
- ASTM A 563, Carbon and Alloy Steel Nuts
- ASTM A 888, Hubless Cast Iron Sanitary Systems
- ASTM B 16, Free Cutting Brass Rod, Bar and Shapes for Use in Screw Machines
- ASTM B 584, Copper Alloy Sand Castings for General Applications
- ASTM C 564, Rubber Gaskets for Cast Iron Soil Pipe and Fittings
- ASTM C 584, Copper Alloy Sand Castings for General Applications
- ASTM D 1248, Polyethylene Plastic Molding & Extrusion Materials

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

ASTM D 2661, Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe and Fittings

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

ASTM D 3965, Rigid Acrylonitrile-Butadiene-Styrene (ABS) Compounds for Pipe and Fittings

ASTM D 4066, Nylon Injection and Extrusion Materials

ASTM D 4101, Propylene Plastic Injection and Extrusion Materials

ASTM F 628, Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe with a Cellular Core

ASTM G 23, Practice for Operating Light- and Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Non-Metallic Materials

Publisher: American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

ASME B1.20.1, Pipe Threads, General Purpose (Inch)

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990

1.5 Definitions

area, grate-free: total area of the drainage openings in the grate.

area, open: see *area, grate-free*.

blow hole: a hole in casting due to air or gas in the metal or mold.

cold shut: casting defects formed when two streams of metal become so cold that they do not fuse upon meeting, creating an incomplete casting.

drain, adjustable floor: a floor drain designed for use in finished floor areas, including showers, with an adjustable strainer and grate and a seepage flange on the body.