

ASME A112.19.12-2000

**WALL MOUNTED AND
PEDESTAL MOUNTED,
ADJUSTABLE AND
PIVOTING LAVATORY AND
SINK CARRIER SYSTEMS**

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**



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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

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FOREWORD

In 1990, the Americans With Disabilities Act passed in Congress. This Act was intended to increase the accessibility of building elements to those who have limitations in physical ability. As a result of the technological response to the need for greater adaptability of plumbing components for accessibility purposes, this Standard and others are being prepared by the ASME Standards Committee A112, Standardization of Plumbing Materials and Equipment.

This Standard relates to performance requirements for movable and pivoting lavatory and sink carrier systems. Such systems allow the user to adjust the location of a lavatory or sink upwards and downwards, from side-to-side, and/or front-to-back in order to maximize the ease of use of the fixture. Some products also pivot to allow greater ease of fixture use. The performance tests within this document were determined to be commensurate with normal fixture use.

This Standard was based on a standard that was developed by an ad hoc Committee of the International Association of Plumbing and Mechanical Officials (IAPMO). It was subsequently referred to the ASME A112 Committee for the development of an American National Standard.

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

This Standard was approved as an American National Standard on June 7, 2000.

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Standardization of Plumbing Materials and Equipment

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PROJECT TEAM 19.12 — MOVABLE LAVATORY SYSTEMS

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WALL MOUNTED AND PEDESTAL MOUNTED, ADJUSTABLE AND PIVOTING LAVATORY AND SINK CARRIER SYSTEMS

1 GENERAL

1.1 Scope

This Standard establishes physical, mechanical, material, testing, marking, and documentation requirements for wall mounted and pedestal mounted adjustable and pivoting lavatories and sink carrier systems intended to facilitate use by individuals who have impaired physical mobility.

The use of alternate materials or methods are permitted, provided the proposed material and method complies with the performance requirements and 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.

In this Standard, gallons (U.S. liquid) per minute is abbreviated gpm.

1.3 Reference Standards

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

ANSI Z124.3, Plastic Lavatories

Publisher: International Association of Plumbing and Mechanical Officials (IAPMO), 20001 South Walnut Drive, Walnut, CA 91789

ASME A112.18.6, Flexible Water Connectors

ASME A112.19.1M, Enameled Cast Iron Plumbing Fixtures

ASME A112.19.2M, Vitreous China Plumbing Fixtures
ASME A112.19.3M, Stainless Steel Plumbing Fixtures
(Designed for Residential Use)

ASME A112.19.4M, Porcelain Enameled Formed Steel Plumbing Fixtures

ASME A112.19.9M, Non-Vitreous Ceramic Plumbing Fixtures

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016; Order Department, 22 Law Drive, Box 2300, Fairfield, NJ 07007

ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities

Publisher: International Codes Council (ICC), 5203 Leesburg Pike, Falls Church, VA 22041

2 GENERAL REQUIREMENTS

2.1 Adjustable and Pivoting Lavatory and Sink Carrier Systems

Adjustable and pivoting lavatory and sink carrier systems shall consist of a wall-mounted or pedestal-mounted carrier with a height adjustment and/or a lateral adjustment mechanism and/or pivoting adjustment, a lavatory or sink that complies with the dimensional requirements of ICC/ANSI A117.1, or other ASME cited standards, a flexible waste system, and a means to supply water to the fixture. The flexible waste system shall:

- (a) provide drainage of the fixture;
- (b) protect the building from sewer gas; and
- (c) be serviceable and accessible.

2.2 Carrier

The wall-mounted or pedestal-mounted carrier shall provide the necessary means for mounting the lavatory or sink with an adjustable mechanism to position the fixture either vertically, laterally, or vertically and laterally or allow the fixture to pivot up and down.

2.3 Lavatory Fixtures

Lavatory fixtures and flexible water supply connectors shall comply with a product standard listed below, as applicable:

ANSI Z124.3, Plastic Lavatories

ASME A112.18.6, Flexible Water Connectors

ASME A112.19.12-2000

ASME A112.19.1M, Enameled Cast Iron Plumbing Fixtures

ASME A112.19.2M, Vitreous China Plumbing Fixtures

ASME A112.19.3M, Stainless Steel Plumbing Fixtures

ASME A112.19.4M, Porcelain Enameled Formed Steel Plumbing Fixtures

ASME A112.19.9M, Non-Vitreous Ceramic Plumbing Fixtures

ICC/ANSI A117.1, Accessible and Usable Buildings and Facilities

2.4 Flexible Waste System

The trap seal provided by the flexible waste system shall be a minimum of 2 in. (50 mm) and a maximum of 9 in. (229 mm) in depth, when evaluated in accordance with para. 3.2. Materials used in the construction of the flexible waste system shall be either metallic, plastic, or other elastomer, which complies with the requirements of para. 3.2.

2.4.1 Water Tightness. The flexible waste system shall be water tight and shall not leak when tested in accordance with para. 3.2.2.

2.4.2 Flow Test. The flexible waste system shall carry waste water at a rate sufficient to ensure scouring of the trapway when tested in accordance with para. 3.2.3.

2.5 Flexible Water Supply Connectors

Flexible water supply connectors shall comply with ASME A112.18.6.

3 TESTING

3.1 Adjustable and Pivoting Lavatory and Sink Carrier Systems

3.1.1 Load Testing

3.1.1.1 Test Method. The movable lavatory system shall be installed in accordance with the manufacturer's instructions. A vertical load of 250 lb (113.4 kg) shall be applied on the top front of the lavatory or sink fixture rim for a period of 15 min, in both its highest and lowest positions. When lateral adjustments are provided, the test shall be conducted to apply the greatest load to the carrier. After application of the required load, the assembly shall be inspected for damage.

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3.1.1.2 Performance Requirement. The assembly shall demonstrate no sign of damage during and after the application of the load.

3.1.2 Vertical Adjustment

3.1.2.1 Test Method. The assembled system shall be operated throughout its full range of vertical adjustment and the travel shall be measured.

3.1.2.2 Performance Requirement. The carrier shall provide a vertical adjustment of not more than 12 in. (300 mm).

3.2 Flexible Waste System

3.2.1 Trap Seal

3.2.1.1 Test Method. The wall mounted or pedestal mounted adjustable lavatory or sink carrier system and flexible waste system shall be installed in accordance with the manufacturer's instructions. The lavatory shall be positioned at its minimum adjustable height and the depth of seal shall be measured. The lavatory or sink shall then be raised to its maximum height and the depth of seal shall again be measured. After measuring the height difference caused by vertical adjustment, the measurement of the trap seal of the extremes in the lateral fixture movement shall also be measured.

3.2.1.2 Performance Requirement. The trap seal depth shall not be less than 2 in. (50 mm) and not greater than 9 in. (230 mm) at any position.

3.2.2 Hydrostatic Pressure Test

3.2.2.1 Test Method. The outlet of the drain shall be plugged at the stub out connection. The flexible waste system shall be slowly filled with water, allowing all air to escape. The inlet of the flexible waste system shall then be capped, allowing for a means to apply a hydrostatic pressure of 25 psig (170 kPa gauge), which shall be maintained for a period of 60 min.

3.2.2.2 Performance Requirements. The filled assembly shall not leak during the test time period.

3.2.3 Flow Test

3.2.3.1 Test Method. The lavatory shall be positioned at its minimum adjustable height. A water supply shall be adjusted to supply water through the lavatory faucet at a rate of 7.1 gpm (27 L/min). Elapsed time shall be measured from the onset of flow into the lavatory.

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3.2.3.2 Performance Requirement. The fixture shall drain for a minimum of 5 min without overflowing the flood rim of the fixture.

3.2.4 Flexible Supplies. Flexible supplies, when provided by the manufacturer, shall comply with ASME A112.18.6.

3.2.5 Aging Test

3.2.5.1 Test Method. To test for change in tensile strength and elongation of flexible drain hose due to aging at atmospheric pressure and elevated temperature, age a 35 in. (889 mm) test specimen at a temperature of $140 \pm 3.6^{\circ}\text{F}$ ($60 \pm 2^{\circ}\text{C}$) for 166 hr.

3.2.5.2 Performance Requirement. After the exposure, examine the test specimen for surface cracks under 2X magnification. Presence of any cracking shall

be cause for failure. In addition, perform the Hydrostatic Pressure Test (para. 3.2.2).

4 MARKING AND INSTRUCTIONS**4.1 Marking**

Each wall mounted or pedestal mounted adjustable lavatory or sink carrier system shall be marked with the following:

(a) manufacturer's name or trademark permanently applied and visible after installation;

(b) model number.

4.2 Instructions

Installation and owner/user instructions shall be supplied with the system, including minimum requirements for structural support for wall-mounted systems.

ASME STANDARDS RELATED TO PLUMBING

Air Gaps in Plumbing Systems.....	A112.1.2-1991(R1998)
Performance Standard and Installation Procedures for Stainless Steel Drainage Systems for Sanitary, Storm, and Chemical Applications, Above and Below Ground.....	A112.3.1-1993
Water Heater Relief Valve Drain Tubes.....	A112.4.1-1993(R1998)
Plastic Fittings for Connecting Water Closets to the Sanitary Drainage System.....	A112.4.3-1999
Floor-Affixed Supports for Off-the-Floor Plumbing Fixtures for Public Use.....	A112.6.1M-1997
Backwater Valves.....	A112.14.1-1975(R1998)
Plumbing Fixture Fittings.....	A112.18.1-2000
Performance Requirements for Backflow Protection Devices and Systems in Plumbing Fixture Fittings.....	A112.18.3M-1996
Flexible Water Connectors.....	A112.18.6M-1999
Deck Mounted Bath/Shower Transfer Valves With Integral Backflow Protection.....	A112.18.7-1999
Enameled Cast Iron Plumbing Fixtures.....	A112.19.1M-1994(R1999)
Vitreous China Plumbing Fixtures.....	A112.19.2M-1998
Stainless Steel Plumbing Fixtures (Designed for Residential Use).....	A112.19.3M-1987(R1996)
Porcelain Enameled Formed Steel Plumbing Fixtures.....	A112.19.4M-1994(R1999)
Trim for Water-Closet Bowls, Tanks, and Urinals.....	A112.19.5-1999
Hydraulic Performance Requirements for Water Closets and Urinals.....	A112.19.6-1995
Whirlpool Bathtub Appliances.....	A112.19.7M-1995
Suction Fittings for Use in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Whirlpool Bathtub Appliances.....	A112.19.8M-1987(R1996)
Non-Vitreous Ceramic Plumbing Fixtures.....	A112.19.9M-1991(R1998)
Dual Flush Devices for Water Closets.....	A112.19.10-1994
Wall Mounted and Pedestal Mounted, Adjustable and Pivoting Lavatory and Sink Carrier Systems.....	A112.19.12-2000
Floor Drains.....	A112.21.1M-1991(R1998)
Roof Drains.....	A112.21.2M-1983
Hydrants for Utility and Maintenance Use.....	A112.21.3M-1985(R1995)
Cleanouts.....	A112.36.2M-1991(R1998)

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