

ASME A112.4.2-2009
[Revision of ASME A112.4.2-2003 (R2008)]

Water Closet Personal Hygiene Devices

AN AMERICAN NATIONAL STANDARD



**The American Society of
Mechanical Engineers**



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FOREWORD

The ASME A112 Standards Committee organized Project Team 4.2 to develop an American National Standard for the evaluation of products covered under the scope of IAPMO PS 93-95, Water Closet Seats with Spray.

This Standard is written to give freedom to the manufacturer in design and technology to produce products, whether completely mechanical in nature or incorporating electronically controlled features, with good engineering practices for the protection of public health.

The Project Team met on May 27, 1998, in Hoboken, New Jersey to begin the work. This Standard is the culmination of those efforts.

In this edition, the Scope has been revised to include cold and/or hot water. Other minor editorial changes also have been made to this edition.

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.

This revision was approved as an American National Standard on May 1, 2009.



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

Proposing Revisions. Revisions are made periodically to the 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.

Proposing a Case. Cases may not be issued for the purpose of providing alternative rules when justified, to permit early implementation of an approved revision when the need is urgent, or to provide rules not covered by existing provisions. Cases are effective immediately upon ASME approval and shall be posted on the ASME Committee Web page.

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Interpretations. Upon request, the A112 Committee will render an interpretation of any requirement of the Standard. Interpretations are only 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 schedules meetings as needed, which are open to the public. Persons wishing to attend any meeting should contact the Secretary of the A112 Standards Committee. The A112 home page contains information on future meeting dates and locations.



WATER CLOSET PERSONAL HYGIENE DEVICES

1 GENERAL

1.1 Scope

This Standard establishes general and performance requirements, test methods, and marking requirements for bidet sprays and other optional features as applied to water closets, water closet seats, and other retrofit devices. Products covered by this Standard are intended to be supplied with cold and/or hot water.

The provisions of this Standard are not intended to prevent the use of any alternate material or method 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 in 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. The latest issue shall apply.

ANSI Z124.4, Plastic Water Closet Bowls and Tanks

ANSI Z124.5, Plastic Toilet (Water Closet) Seats

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

ASME A112.19.2M, Vitreous China Plumbing Fixtures¹

Publisher: The American Society of Mechanical Engineers (ASME), Three Park Avenue, New York, NY 10016-5990; Order Department: 22 Law Drive, P.O. Box 2300, Fairfield, NJ 07007-2300 (www.asme.org)

ASSE 1001, Performance Requirements for Atmospheric Type Vacuum Breakers¹

Publisher: American Society of Sanitary Engineering (ASSE), 901 Canterbury Road, Westlake, OH 44145 (www.asse-plumbing.org)

UL 1431, Standard for Personal Hygiene and Health Care Appliances

Publisher: Underwriters Laboratories Inc. (UL), 333 Pfingsten Road, Northbrook, IL 60062-2096 (www.ul.com)

¹ May also be obtained from the American National Standards Institute, 23 West 43rd Street, New York, NY 10036.

1.4 Definitions

bidet spray: a water washing feature intended for genital and perineal cleanliness.

concealed: the position of the featured device, when retracted, in order to prevent soiling by the user.

self-cleaning: in the case of bidet spray sprayers, sprayers whose exterior surface is flushed with flowing water at the end of each cycle shall be considered self-cleaning. The self-cleaning function shall occur automatically during the operating cycle or it shall be initiated manually by the user.

2 GENERAL REQUIREMENTS

2.1 Backflow Protection

Each unit that is intended for connection to the potable water supply shall be equipped with a backflow prevention device.

Vacuum breakers complying with para. 3.5.1 shall be installed in accordance with manufacturer's instructions, with the critical level located not less than 1 in. (25.4 mm) above the flood level fixture rim.

2.2 Electrical Components

Units with electrical components shall comply with UL 1431.

2.3 Vitreous China Water Closets

Vitreous china water closets shall comply with ASME A112.19.2M.

2.4 Plastic Water Closets

Plastic water closets shall comply with ANSI Z124.4.

2.5 Plastic Toilet Seats

Plastic toilet seats shall comply with ANSI Z124.5.

2.6 Sprayers

Sprayers shall be fully retractable, self-cleaning, and concealed when not in use.

2.7 Water Closets With Bidet Spray

When the sprayer is located in a concealed channel below the water closet flood level rim, the channel and sprayer shall be flushed with water during the operating cycle of the bidet spray. The sprayer shall not be subject to contamination in its retracted position. In its retracted

