



**Summary of Substantive Changes
between
ASME A112.4.2-2009, “Water Closet Personal Hygiene Devices”, and
and
ASME A112.19.4.2-2015/CSA B45.16-15, “Personal hygiene devices for water
closets”**

Presented to the IAPMO Standards Review Committee on February 8, 2016

General: This is the first edition of the harmonized standard ASME A112.4.2/CSA B45.16, which replaces ASME A112.4.2-2009 and which had significant formatting and editorial changes. In addition, technical changes were incorporated in this standard which may have an impact on currently listed products. The substantive technical changes are:

- Added requirements for stainless steel water closets (see Section 4.1)
- Added an installation requirement for atmospheric vacuum breakers that are not marked with the critical level (see Section 4.2).
- Changed the number of cycles required for hygiene devices with multiple bidet sprayers (see Section 5.4)
- Removed the duration of activation of 5 s for the self-cleaning function of the bidet sprayer (see Section 5.7)

Section 3, Definitions: Removed the definitions of concealed and self-cleaning as follows:

~~*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.*~~

Section 4.1, General requirements: Added requirements for stainless steel water closets and updated the requirements for plastic and ceramic water closets as follows:

~~*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.*~~

4.1 Water closets

Water closets shall comply with ASME A 112. 19.2/CSA B45. 1, ASME A 112. 19.3/CSA B45.4, or CSA B45.5/IAPMO ZI 24, as applicable



Section 4.2, Backflow prevention: Added an installation requirement for atmospheric vacuum breakers that are not marked with the critical level as follows:

~~2.1~~ 4.2 Backflow Protection

4.2.1

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

4.2.2

When used, atmospheric vacuum breakers shall

(a) complying with ~~para. 3.5.1~~ Clause 5.5.1; and

(b) shall be installed in accordance with manufacturer's instructions, with the

(i) critical level located not less than ~~1 in. (25.4 mm)~~ 25 mm (1 in) above the flood level fixture-rim.

(ii) lowest point located not less than 25 mm (1 in) above the flood level rim, when the critical level is not marked.

Section 4.3 Electrical components: Include the allowance for electrical components to comply with the applicable CSA standards as follows:

~~2.2~~ 4.3 Electrical Components

Units Personal hygiene devices with electrical features or components shall comply with UL 1431, CSA C22.2 No. 68, or CSA C22.2 No. 64.

Section 5.4 Bidet sprayer life cycle test: Changed the number of cycles required for hygiene devices with multiple bidet sprayers as follows:

~~3.4.15.4.1~~ Test Method procedure

The life cycle test shall be conducted as follows:

...

(c) Operate the ~~sprayer~~ specimen 75,000 times.

(i) At each cycle, the ~~retractable bidet~~ sprayer shall fully extend and then fully retract.

(ii) For ~~units specimens~~ with multiple ~~bidet~~ sprayers, ~~each sprayer shall complete 75,000 cycles the anterior (front) sprayer shall be tested for 50,000 cycles and the posterior (rear) sprayer shall be tested for 25,000 cycles.~~

Section 5.5, Atmospheric vacuum breaker test: Include the allowance for testing in accordance with the applicable CSA standards as follows:

~~3.5.1.1~~ 5.5.1 Test Method procedure

The Vacuum breakers shall be tested ~~for back siphonage~~ in accordance with ~~para. 2.9 (water rise test) of ASSE 1001~~ or CSA B64.1.1.

~~3.5.1.2~~ 5.5.2 Performance Criterion requirements

Water ~~rise~~ in the sight tube shall ~~be no not rise~~ more than ~~1/2 in. (12.7 mm)~~ 13 mm (0.5 in).



Section 5.7, Bidet sprayer self-cleaning test: Removed the duration of activation of 5s for the self-cleaning function as follows:

~~3.6.1~~ 5.7.1 Test ~~Method~~ procedure

...

~~(d) After the lines have been drawn,~~Release the bidet sprayer and allow it to retract into its off position.

~~(e) Cycle the sprayer.~~ The bidet sprayer self-cleaning function shall be actuated two times on-and-off.

~~(f) Leave the sprayer on for 5 sec and then off for 5 sec, and repeat one more.~~Inspect and record any lines remaining.