



Summary of Substantive Changes between the 2015 and the 2020 edition of
ASSE 1002/ASME A112.1002/CSA B125.12
“Anti-Siphon Fill Valves for Water Closet Tanks”

Presented to the IAPMO Standards Review Committee on September 15, 2020

General: The changes to this standard should not have an impact on currently listed products. The significant change is:

- Clarified requirements for bowl refill tube and added a note for closet tanks with integrated antisiphon fill valve to comply with ASME A112.19.2/CSA B45.1 (see Section 3.3)

Section 2, Reference publications and definitions:

ASME (American Society of Mechanical Engineers)/CSA Group

ASME A112.18.1-~~2012~~[2018](#)/CSA B125.1-~~12~~[18](#)

Plumbing supply fittings

ASME A112.19.2-~~2013~~[2018](#)/CSA B45.1-~~13~~[18](#)

Ceramic plumbing fixtures

ASME (American Society of Mechanical Engineers)

ASME B1.1-2003 (~~R2008~~) ([R2018](#))

Unified Inch Screw Threads, (UN and UNR Thread Form)

ASSE International

ASSE Plumbing Dictionary, Sixth Edition, ~~2009~~[2007](#)

Section 3, Design and general requirements: Clarified requirements for bowl refill tube and added a note for closet tanks with integrated antisiphon fill valve as follows:

3.3 Bowl refill tube

3.3.1 Installed position

The bowl refill tube, when supplied, shall be sufficiently rigid to maintain its installed position.

3.3.2 Retrofit devices only

~~If a clip or other~~ The means is used to secure of securing the bowl refill tube to the overflow tube, it shall not obstruct a cross-sectional area of the tank overflow tube by more than 20 mm² (0.031 in²).

Note: When a water closet tank is equipped with an anti-siphon fill valve as original equipment, the required overflow performance is determined in accordance with ASME A112.19.2/CSA B45.1.



Section 4.6.2.3, Procedure to determine the critical level location for a device without a CL mark:
Clarified testing procedure as follows:

4.6.2.3.2 Procedure to determine the critical level location

The critical level location shall be determined as follows:

- a) Lower the water level in the tank to 3.00 ± 0.25 mm (0.12 ± 0.01 in) below the
 - i) atmospheric vent(s), in the case of fill valves with vacuum-breakers; or
 - ii) water discharge opening, in the case of fill valves with air-gaps.
- b) Apply a vacuum of 85 ± 4 kPa (25.0 ± 1 inHg) to the specimen while the water level in the tank is gradually lowered at a rate of ≤ 5 mm/30 s (0.2 in/30 s).
- c) ~~Mark~~ **Record** the elevation at which backsiphonage ceases (BB in Figure 3).
- d) Lower the water level to $25 +0 -2.5$ mm ($1 +0 -0.1$ in) below mark BB.
- e) Apply a vacuum of 85 ± 4 kPa (25.0 ± 1 inHg) to the specimen as the water level in the test tank is gradually raised at a rate of ≤ 5 mm/30 s (0.2 in/30 s).
- f) ~~Mark~~ **Record** the elevation at which backsiphonage begins (AA in Figure 3).
- g) Determine the lower elevation (AA or BB) as the critical level.
- h) If water fails to appear in the sight glass, the device shall be installed as shown in Figure 2 and tested according to the procedure specified in Clause 4.6.2.2.2 and retested to meet the requirements of Clause 4.6.2.3.

Figure 2, Anti-siphon fill valve test assembly: Footnote was added as follows:

Note: [This Figure denotes the relative positions of the components in the set-up.](#)