



**Summary of Substantive Changes  
between the 2009(R2014) and 2020 editions of  
ASME A112.18.8 “Sanitary Waste Valves for Plumbing Drainage Systems”**

**Presented to the IAPMO Standards Review Committee on December 7, 2020**

**General:** The changes to this standard may have an impact on currently listed products. The significant changes are:

- Expanded the scope to allow connection to ABS and PVC piping (see Section 2.5)
- Increased test pressure rating and added a retest requirement for the one-way sealing performance of the valve test, and added a note to clarify failure parameters for the recovery from an excess back pressure (inversion) condition (see Sections 3.2, and 3.4)

Title Changed as follows: ~~In-Line~~ Sanitary Waste Valves for Plumbing Drainage Systems

Section 1.3, References: The following referenced standards were added or revised as follows:

[ANSI/ASSE 1051-2009, Individual and Branch Type Air Admittance Valves for Plumbing Drainage Systems](#)  
[ASTM D2661, Standard Specification for Acrylonitrile-Butadiene-Styrene \(ABS\) Schedule 40 Plastic Drain, Waste, and Vent Pipe Fittings](#)

[ASTM D2665, Standard Specification for Poly\(Vinyl Chloride\) \(PVC\) Plastic Drain, Waste, and Vent Pipe and Fittings](#)

Section 2, General Requirements: Expanded the scope to allow connection to ABS and PVC piping as follows:

**2.5 Valve Outlet**

The valve outlet shall have a connection that is compatible with tubing ~~manufactured to~~ or pipe complying with [ASTM F409](#), [ASTM D2661](#), or [ASTM D2665](#) or threaded connections complying with ASME A112.18.2/CSA B125.2.

Section 3, Testing: Increased test pressure rating and added a retest requirement for the one-way sealing performance of the valve test, and added a note to clarify failure parameters for the recovery from an excess back pressure (inversion) condition as follows:

**3.2 One-Way Sealing Performance of the Valve**

**3.2.1 Test Apparatus.** The test apparatus is as follows:

- (a) length of 1/4 in. (6 mm) bore rubber tubing
- (b) tee-junction suitable for use with the rubber tubing
- (c) u-tube manometer with a range of 0 in. (0 mm) to ~~51~~ 46 in. (152 mm) of water, gage
- (d) reducer to enable the rubber tube to be connected to the outlet of the valve

**3.2.2 Test Method.** Prime the valve by running a gallon of water through the valve to waste. Connect the rubber tubing through the reducer to the outlet of the valve. Connect the other end of the tube to the tee-junction, one leg of which is connected to the u-tube manometer and the remaining leg to another length of tubing. Apply air pressure to the free end of the tubing until a pressure of ~~51~~ 24 in. (~~102~~ mm) of water, gage, is registered on the u-tube manometer. Clamp the end of the tube and maintain pressure for ~~10~~ 20



sec. Release the pressure and leave the valve and equipment in situ for a minimum of 48 hr, then retest under the same conditions but omit the water priming stage.

**3.2.3 Performance Requirements.** The valve shall retain a seal under a back pressure, equivalent to 24 in. (51102 mm) of water, gage, for 1020 sec on both the initial test (with valve primed) and the retest.

### **3.3 Airway Flow Rate**

**3.3.1 Test Method.** The airway flow rate test shall be performed in accordance with ANSI/ASSE 1051-2009, paras. ~~3.3.2~~ 3.2.2 through ~~3.3.4~~ 3.2.3.

**3.3.2 Performance Requirements.** The maximum opening pressure of the device shall meet the requirements of ANSI/ASSE 1051-2009, para. 3.2.4. The measured airflow rate shall be at least 1 ft<sup>3</sup>/min (0.47 L/s) in accordance with the requirements for 1 1/4-in. and 1 1/2-in. drainage systems in ANSI/ASSE 1051-2009, para. 1.2.3 and Table 1.

### **3.4 Recovery From an Excess Back Pressure (Inversion) Condition**

**3.4.1 Test Method.** ~~Insert~~ Fit the valve to be tested to a standard sink and connect the arrangement of pipe work shown in Figure 3.4.1-1 to the outlet of the valve. Close valve at point B. Slowly open valve C until the bladder inverts and water flows into the sink. Record the pressure at the point of inversion. Close valve C; open valve B. Insert the sink plug and fill the sink with water to level A.

NOTE: Failure of the bladder to invert shall not constitute a failure of the test or a reason to stop the test.

**3.4.2 Performance Requirements.** When the sink plug is removed, the sink ~~must~~shall completely drain. At the completion of the test in para. 3.4.1, the valve shall be tested in accordance with paras. 3.1 and 3.2. Failure to achieve the performance parameters prescribed in paras. 3.1 and 3.2 shall be cause for rejection of the valve.