## TABLE 603.2 BACKFLOW PREVENTION DEVICES, ASSEMBLIES, AND METHODS

			DEGREE	OF HAZARD		
DEVICE, ASSEMBLY, OR METHOD <sup>1</sup>	APPLICABLE STANDARDS	POLLUTION (LOW HAZARD)		CONTAMINATION (HIGH HAZARD)		INICTALI ATIONI2.3
		BACK- SIPHONAGE	BACK- PRESSURE	BACK- SIPHONAGE	BACK- PRESSURE	INSTALLATION <sup>2,3</sup>
Air gap	ASME A112.1.2	X		X		See Table 603.3.1 in this chapter.
Air gap fittings for use with plumbing fixtures, appliances, and appurtenances	ASME A112.1.3	X		X		Air gap fitting is a device with an internal air gap, and typical installation includes plumbing fixtures, appliances, and appurtenances. The critical level shall not be installed below the flood level rim.
Atmospheric vacuum breaker (consists of a body, checking member and atmospheric port)	ASSE 1001 or CSA B64.1.1	X		X		Upright position. No valve downstream.  Minimum of 6 inches or listed distance above all downstream piping and flood level rim of receptor. <sup>4,5</sup>
Antisiphon fill valve (ballcocks) for gravity water closet flush tanks and urinal tanks	ASSE 1002/ ASME A112.1002/ CSA B125.12	X		X		Installation of gravity water closet flush tank and urinal tanks with the fill valve installed with the critical level not less than 1 inch above the opening of the overflow pipe. <sup>4,5</sup>
Vacuum breaker wall hydrants, hose bibbs, freeze resistant, automatic draining type	ASSE 1019 or CSA B64.2.1.1	X		X		Installation includes wall hydrants and hose bibbs. Such devices are not for use under continuous pressure conditions (means of shutoff downstream of device is prohibited). <sup>4,5</sup>
Hose connection vacuum breakers	ASSE 1011	X		X		Such devices are not for use under continuous pressure conditions. No valve downstream. <sup>4,6</sup>
Hose connection back- flow preventers	ASSE 1052	X		X		Such devices are not for use under continuous pressure conditions. <sup>4,6</sup>
Dual check backflow preventer wall hydrants, freeze resistant	ASSE 1053	X		X		Such devices are not for use under continuous pressure conditions. <sup>4</sup>
Freeze resistant sanitary yard hydrants	ASSE 1057	X		X		Such devices are not for use under continuous pressure conditions. <sup>4</sup>
Backflow preventer for Carbonated Beverage Dispensers (two inde- pendent check valves with a vent to the atmos- phere)	ASSE 1022	X				Installation includes carbonated beverage machines or dispensers. These devices operate under intermittent or continuous pressure conditions.
Spill-Resistant Pressure Vacuum Breaker (single check valve with air inlet vent and means of field testing)		X		X		Upright position. Minimum of 12 inches or listed distance above all downstream piping and flood-level rim of receptor. <sup>5</sup>
Double Check Valve Backflow Prevention Assembly (two independent check valves and means of field testing)	ASSE 1015; AWWA C510; CSA B64.5 or CSA B64.5.1	X	X			Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at the bottom for maintenance. May need platform/ladder for test and repair.  Does not discharge water.

**TABLE 603.2** BACKFLOW PREVENTION DEVICES, ASSEMBLIES, AND METHODS (continued)

			DEGREE	OF HAZARD		
DEVICE, ASSEMBLY, OR METHOD <sup>1</sup>	APPLICABLE STANDARDS	POLLUTION (LOW HAZARD)		CONTAMINATION (HIGH HAZARD)		INSTALLATION <sup>2,3</sup>
		BACK- SIPHONAGE	BACK- PRESSURE	BACK- SIPHONAGE	BACK- PRESSURE	INSTALLATION
Double Check Detector Fire Protection Backflow Prevention Assembly (two independent check valves with a parallel detector assembly con- sisting of a water meter and a double check valve backflow prevention assembly and means for field testing)	ASSE 1048	X	X			Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at the bottom for maintenance. May need platform/ladder for test and repair. Does not discharge water. Installation includes a fire protection system and is designed to operate under continuous pressure conditions.
Pressure Vacuum Breaker Backflow Prevention Assembly (loaded air inlet valve, internally loaded check valve and means for field testing)	ASSE 1020 or CSA B64.1.2	X		X		Upright position. May have valves downstream. Minimum of 12 inches above all downstream piping and flood-level rim of the receptor. May discharge water.
Reduced Pressure Principle Backflow Prevention Assembly (two independently acting loaded check valves, a differential pressure relief valve and means for field testing)	ASSE 1013; AWWA C511; CSA B64.4 or CSA B64.4.1	X	X	X	X	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at the bottom for maintenance. May need platform/ladder for test and repair. May discharge water.
Reduced Pressure Detector Fire Protection Backflow Prevention Assembly (two independently acting loaded check valves, a differential pressure relief valve, with a parallel detector assembly consisting of a water meter and a reduced-pressure principle backflow prevention assembly, and means for field testing)	ASSE 1047	X	X	X	X	Horizontal unless otherwise listed. Access and clearance shall be in accordance with the manufacturer's instructions, and not less than a 12 inch clearance at the bottom for maintenance. May need platform/ladder for test and repair. May discharge water. Installation includes a fire protection system and is designed to operate under continuous pressure conditions.

For SI units: 1 inch = 25.4 mm

Notes:

See the description of devices and assemblies in this chapter.
 Installation in pit or vault requires previous approval by the Authority Having Jurisdiction.
 Refer to the general and specific requirement for installation.

<sup>&</sup>lt;sup>4</sup> Not to be subjected to operating pressure for more than 12 hours in a 24 hour period.

For deck-mounted and equipment-mounted vacuum breaker, see Section 603.5.13.

Shall be installed in accordance with Section 603.5.7.