

COMMON NON-TESTABLE BACKFLOW PREVENTION DEVICES



Air Gap

An air gap is the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or outlet supplying water to a tank plumbing fixture, or other device, and the flood level rim of the receptacle. The vertical physical separation shall be at least two times the inside diameter of the water inlet pipe above the flood rim level but shall not be less than one inch. Examples of air gaps in a plumbing system are bathtubs faucets, swimming pool fills, and sink faucets.

Intermediate Air Vent Type Backflow Preventer

The air vent type back flow preventer, also referred to as a Dual Check with Atmospheric Vent is used in low hazard areas and can be subject to continuous pressure. This device consists of two independently operating check valves separated by a chamber which can vent to the atmosphere if backflow occurs. These devices are commonly found on residential boiler systems for makeup water supply for the boiler.



Hose Bibb Vacuum Breaker (HBVB)

HBVBs consist of a check valve biased to normally closed position and an atmospheric vent valve, which is loaded to a normally open position. When the device is pressurized, the check valve will open, and the vent will close allowing water to flow through the device. In an event of a backflow condition, the check valve will close, and the vent will open allowing air into the system to prevent back siphonage. Older style outside faucets require the use of these. Some newer frost-free style outside faucets have a vacuum breaker installed next to and on top of the handle already, therefore not needing a HBVB installed. For the HBVB to operate properly, hose attachments at the outlet end must be removed or depressurized when the water supply is shut off.

Atmospheric Vacuum Breaker (AVB)

AVBs are a mechanical device which automatically air vents a pipeline to prevent back siphonage only and should not be used if back pressure can develop in the system (no downstream shut off valves or closed systems). They cannot be subject to more than 12 hours of continuous use. AVBs are commonly found on commercial dishwashers, commercial soap dispensers, and janitor slop sinks.



Air Vent Backflow Preventer for Beverage Machine Carbonators

The air vent type backflow preventer for beverage machines is used to prevent backflow of carbon dioxide gas and carbonated water into the water supply to vending machines, thus eliminating the hazardous reaction of carbon dioxide with copper tubing.