



Chemical Dispensers at Mop Sinks

Mop/utility sinks are installed in all food service establishments. Most mop sinks are equipped with an integral atmospheric vacuum breaker (AVB, pictured right). AVB's can look like bells or disks located on the faucet. AVB's are designed to protect against back-siphonage, preventing pollutants and contaminants from entering the water supply. Back-siphonage is defined as a vacuum/pulling force that occurs when the pressure in the water supply drops below zero (less than atmospheric pressure) and the adjacent non-potable (non-drinkable) source is drawn/siphoned into the potable (drinkable) supply. Back-siphonage can occur if there is a break in the water line, when all the water in the building is turned off, and can even occur with water flowing at a high velocity within a pipe.



Atmospheric vacuum breakers cannot be subjected to continuous pressure. The maximum time of subjecting an AVB to continuous pressure is 12 hours. Shutoff valves should not be installed downstream (further from the water supply) from the AVB. Shutoff valves can create backpressure, which AVB's are not designed to protect against. Backpressure is a pushing force that occurs when both systems (potable and non-potable) are under pressure but the non-potable system has a greater pressure than the potable system. This pressure differential pushes the contaminant or pollutant into the potable water system.



Chemical dispensers are commonly installed at mop sinks for easy access to cleaning chemicals. Most times, the chemical dispensers are installed above the faucet and attached to the faucet with a hose, whether with a y-splitter with shutoffs or not. Elevated piping (the installation of the dispenser above the faucet) can cause backpressure, which in turn, puts pressure on the AVB. Y-splitters with shutoff valves installed on the end of the faucet may also cause backpressure if left on and the shutoffs are used. A cross connection between the hot and cold water may be created. This backpressure or leaving the water on for more than 12 hours can cause the AVB to stop working correctly and chemicals, non-potable water, or other potential contaminants may end up in the drinking water supply.

Almost all chemical dispensers have internal air gaps or breaks in pipes in the dispenser, but if the air gap occurs after a shutoff valve, the AVB would be out of compliance.

Chemical dispensers should meet ASSE Standard 1055B and have an internal air gap. Chemical dispensers should be lowered below the AVB. Shutoff valves (y-splitters) should be removed. Chemical dispensers should be plumbed with a dedicated line.