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A Backflow Preventer's Purpose What is a Backflow Preventer?

The word **Backflow** means the undesirable reversal of flow of a liquid, steam, or suspended solid into the potable water supply. A **backflow preventer** is designed to keep this from happening. The point at which a potable water system connects with a non-potable water system is called a **cross connection**. In the SK humidifiers, the cross connection is inside the water supply piping assembly.

The simplest way to provide backflow prevention is to provide an air gap. An air gap is simply an open vertical space between any device that connects to a plumbing system and any place where non-potable water can collect. A simple air gap has no moving parts, other than the flowing water.

Alternatively, a specialized backflow preventer valve may be installed at strategic locations in the plumbing system wherever there is a risk of contaminated fluids entering the water supply pipe. These valves are used in areas that do not have sufficient vertical clearance or physical space to permit the installation of an air gap, or when pressurized operation or other factors rule out the use of an air gap.

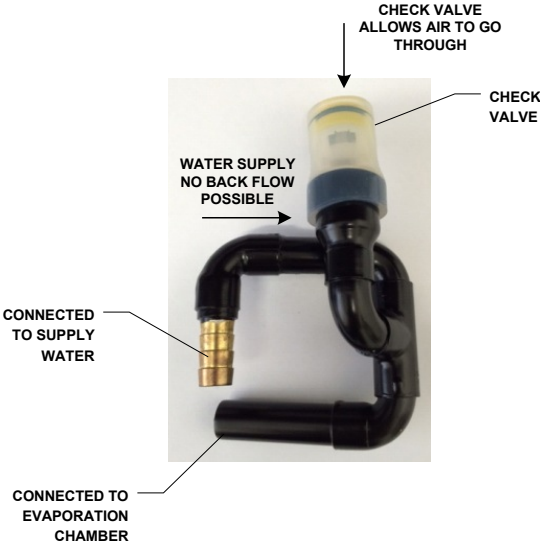
One of these alternate solutions is an atmospheric vacuum breaker (AVB); it is the simplest backflow preventer. If a siphon attempts to form, the pressure in the "upstream side" of the AVB is reduced to below atmospheric pressure, which causes the check valve to drop and allows air to enter the system, breaking the siphon.

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Most of the SK humidifiers (SKE4, SK300, SKE, SKG, SKS and SKV series) are designed with an AVB in the water supply line, inside of the humidifier. The SKR residential humidifier has an air gap as a backflow prevention device and the SKH is equipped with check valves in the pump station.



Water piping configuration