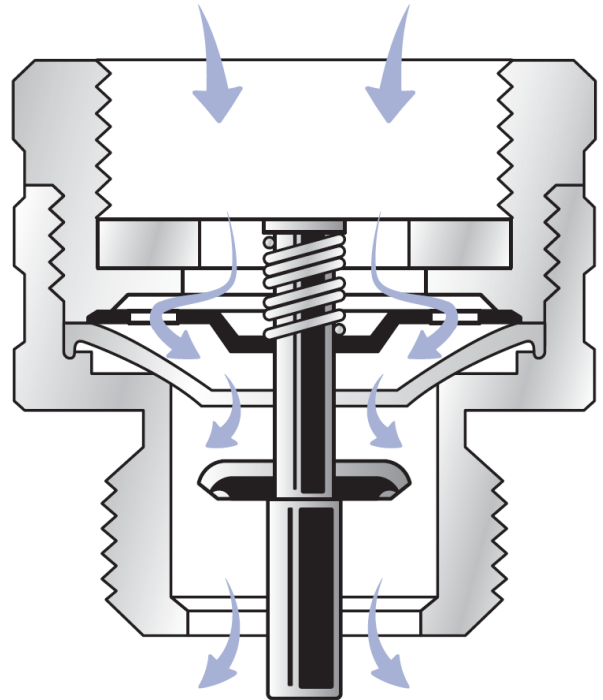


HBVB: Hose Bibb Vacuum Breaker



*Example for illustrative purposes only.
Valves differ by model and manufacturer.*



Mechanical Description:

These small devices are a specialized application of the atmospheric vacuum breaker and consist of a spring-loaded check valve that seals against an atmospheric outlet when water supply pressure is turned on. When the water supply is turned off, the device vents to atmosphere, thus protecting against backsiphonage conditions.

Applications:

Hydrants, hose lines, sill cocks, irrigation systems, industrial systems and agricultural systems, and isolation protection.

Limitations:

An atmospheric vacuum breaker does not protect against backpressure and will fail to operate properly if there is a shut-off valve installed downstream.

Installation Guidelines:

Attached to sill cocks and connected to outlets such as garden hoses, slop sink hoses. Manual drain options are available, together with tamper-proof versions.

Protection:

An atmospheric/hose bib vacuum breaker is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.

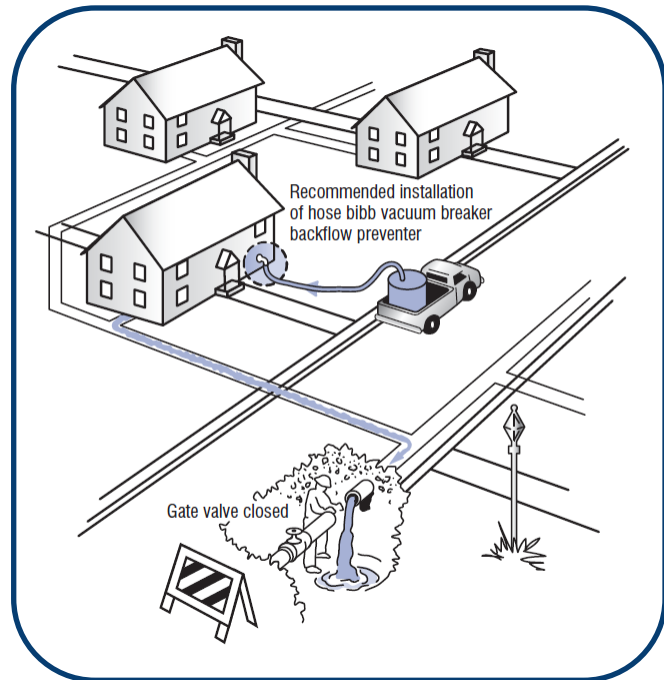
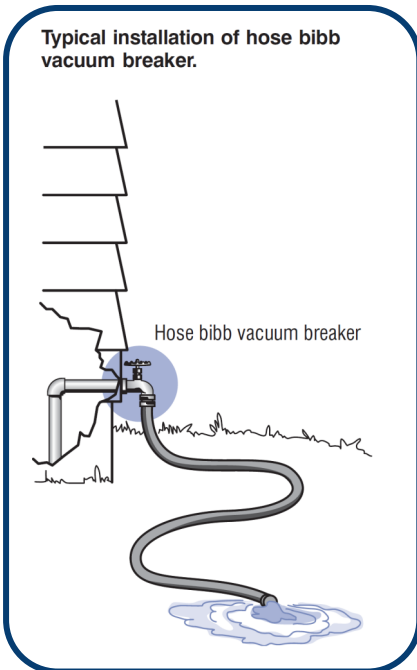
Hazard Rating:

Health hazards and non-health hazards.

Pressure Condition:

Device may not be subjected to continuous pressure, may only be used for twelve hours out of any twenty-four-hour period and may have no shutoff valves downstream.

Hydraulics, Orientation and Rule Requirements



Requirements for Public Water Supplies:

As mandated by the federal Safe Drinking Water Act, water suppliers are responsible for ensuring that the water they supply meets federal primary drinking water regulations and is delivered to consumers without compromising water quality due to its distribution system. Water utilities may want to implement a cross connection program to stave off any problems that could occur.

Mechanical backflow preventers have internal seals, springs, and moving parts that are subject to fouling, wear, or fatigue. Also, mechanical backflow preventers and air gaps can be bypassed. Therefore, all backflow preventers have to be tested periodically to ensure that they are functioning properly. A visual check of air gaps is sufficient, but mechanical backflow preventers have to be tested with properly calibrated gauge equipment by a certified individual.

Administrative Rules of Montana:

17.38.305 CROSS-CONNECTIONS: REGULATORY REQUIREMENTS

(1) A cross-connection on a public water supply system must be eliminated by the disconnection of the cross-connection whenever reasonably practicable. Whenever elimination of a cross-connection is not reasonably practicable and the cross-connection creates a health or non-health hazard, the hazard must be eliminated by the insertion into the piping of an approved backflow prevention assembly or device.

Additional Resources:

Administrative Rules of Montana: Cross-Connections in Drinking Water 17.38.301—312 <http://www.mtrules.org>

American Backflow Prevention Association <https://abpa.site-ym.com/>

Environmental Protection Agency Cross Connection Control Manual (2003) <http://nepis.epa.gov>

Foundation for Cross-Connection Control and Hydraulic Research <https://fccchr.usc.edu/introduction.html>

Montana Department of Environmental Quality

Public Water Supply Bureau

Telephone: (406) 444-4400

Website: <http://deq.mt.gov/water/drinkingwater>

DEQ Contacts: <https://directory.mt.gov/govt/state-dir/agency/deq>