

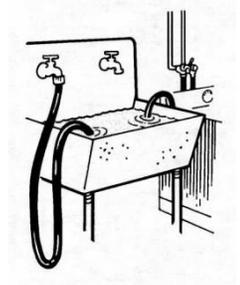
Backflow Prevention Frequently Asked Questions

What is backpressure backflow?

Backpressure backflow is the reversal of normal flow in the system which is due to an increase in the downstream pressure that becomes greater than that of the supply pressure. This issue could arise in heating systems, elevated tanks and pressure-producing systems as this could create a higher downstream pressure exceeding supply pressure.

What is back-siphonage?

Back-siphonage is the reversal of flow in a system which is created by a vacuum or negative pressure in the piping. This issue can occur when there is a stoppage in the water supply due to repairs, breaks in the main, fire-fighting, etc.



What is a cross connection?

A cross connection is an arrangement of piping line that could allow potable water supply to become connected to a line that contains a contaminant. Examples of a cross connection could be a garden hose connected to a service sink with the other end submerged in detergent, topping up or filling up a swimming pool, supply lines to boilers, and supply lines connected to bottom-fed tanks. The most common form of a cross connection is the garden hose as it could be easily connected to potable water and used in dangerous applications such as applying chemicals (fertilizer) or pressure washing a car/house.

What is meant by degree of hazard?

The degree of hazard is a determination of whether or not the building in question has the potential to develop toxic (health hazard) or non-toxic (non-health hazard) non-potable water.

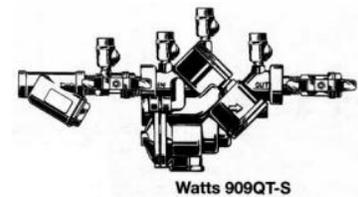


What is the difference between a non-toxic and toxic substance?

A non-toxic substance is one that may cause a non-health hazard, is a nuisance or objectionable. This could be a source of food such as sugar or pop. A toxic substance is any gas, liquid or solid that when mixed with the water supply could have the potential to be a danger to the health and well-being of the consumer. An example of this could be with treated boiler water.

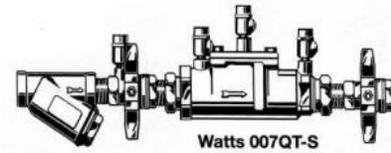
Where is a Reduced Pressure Principle (RP) Backflow Preventer used?

The RP is commonly used on all direct connections that could be subjected of back-siphonage and backpressure and has the possibility of contamination. A RP is used when the non-potable source is considered more of a contaminant than pollutant. These backflow preventers are used as main line protection to protect municipal water supply. They can also be used on branch line applications where non-potable fluids could constitute as a health hazard. Examples of this are commercial garbage disposal systems, industrial boilers and boiler feed lines.



Where is a Double Check Valve (DC) Assembly used?

The DC is commonly used as protection of all direct connections where unknown materials could enter the potable supply and could be a nuisance such as air, food, steam and other materials that would not constitute a health hazard. A DC is commonly used when the degree of hazard is low which could mean that the non-potable source is polluted and not contaminated.



Where is an Atmospheric Vacuum Breaker (AVB) used?

An AVB is used on most inlet type water connections which have no concern for back-pressure. This could be low inlet feeds to sources of toxic and non-toxic substances, valve outlets, hose attachment fixtures, commercial dishwashers and lawn-sprinkler systems. An AVB is to be installed on the discharge side of the last control valve and installed above the usage point, an AVB cannot be used under continuous pressure.



Where is a Pressure Vacuum Breaker (PVB) used?

A PVB is normally used to be the protection for connections to non-potable systems where back-pressure is not a concern. The PVB must be installed above the usage point as they could be used under continuous supply pressure. A PVB should not be subjected to back-pressure and has similar applications to AVB's except they can be used under continuous pressure.



What are the regulations regarding cross connections?

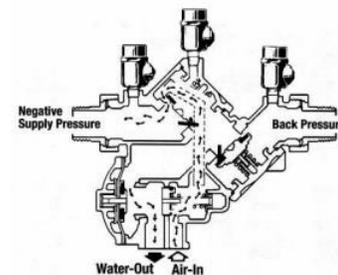
It is required that no cross connections are allowed in installation unless it is protected properly by an approved backflow preventer. If you are deemed to be a hazardous location due to the type of activities going on at your property, a backflow preventer will be required.

What are the benefits of a strainer upstream to the backflow preventer?

The benefit of a strainer is that it allows for the protection of the check valves of the backflow preventer from debris which could normally flow through the line. Not only would a strainer protect the valve, but it also eliminates any fouling and avoids any subsequent maintenance and shutdown. The use of a strainer is very common with PVB backflow preventers as there is a negligible amount of pressure drop from the strainer.

What may cause the reduced pressure principle (RP) backflow preventer to leak?

The leaking that is attributed to a RP backflow preventer is normally due to debris or foreign matter becoming stuck in the seating area of either the first or second check valve. This can usually be resolved through flushing the valve which will dislodge any loose debris. It is important to note that the RP backflow preventers do require periodic testing to ensure it is working properly.



What is potentially dangerous about an unprotected hose bib?

The role of the hose bib is to allow for easy attachment of a hose for outdoor watering purposes. This can be dangerous as these hoses can be left submerged in swimming pools, chemical sprayers can be left attached to the hoses and are often left on the ground which could lead to contamination with fertilizer, cess-pools and other garden chemicals.

What type of certification is required to install and test a backflow preventer?

In accordance to the Atlantic Canada Water and Wastewater Association, only testers with the CCC Tester Certification from a recognized Cross Connection Control (CCC) program will have the ability to test and install backflow preventers in compliance with the Town of Antigonish regulations.