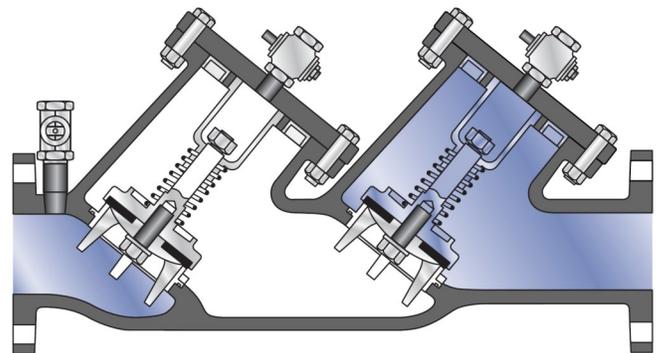


## DC: Double Check Valve



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

Double check valve.



### **Mechanical Description:**

An assembly composed of two independently acting, approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

### **Applications:**

Fire connections, food industry, and containment protection for consecutive water systems. This assembly shall only be used to protect against a non-health hazard (i.e., pollutant).

### **Limitations:**

The double check is a closed system with no way to observe whether the internal check valves are functioning properly or if debris is impeding full closure. This presents two problems: (1) The only method for detecting if the internal check valves are functioning properly is to have a qualified professional conduct a full test, and (2) no remedy exists in the event of a malfunction of the valve closures.

### **Installation Guidelines:**

Must be installed where access for testing is feasible, safe and while in service. Supplied valves are part of the approved assembly.

### **Protection:**

A double check valve is designed to protect against backsiphonage and backpressure, though protection is questionable, see Limitations above.

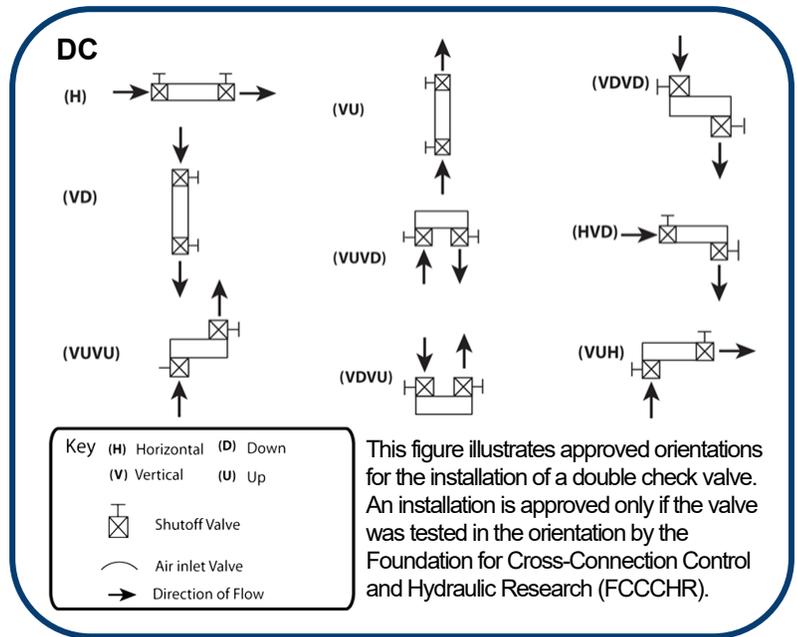
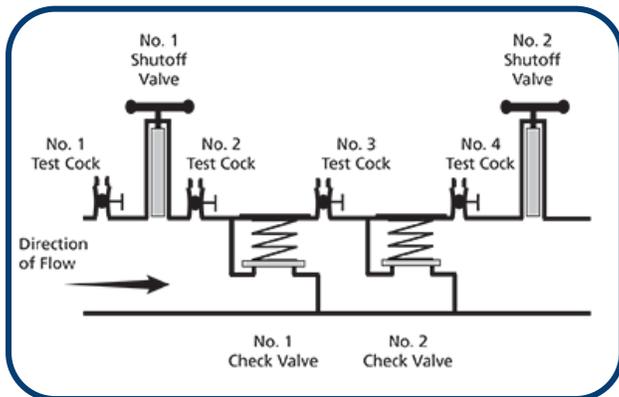
### **Hazard Rating:**

Non-health hazards.

### **Pressure Condition:**

Assembly may be subjected to continuous pressure.

# 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>