

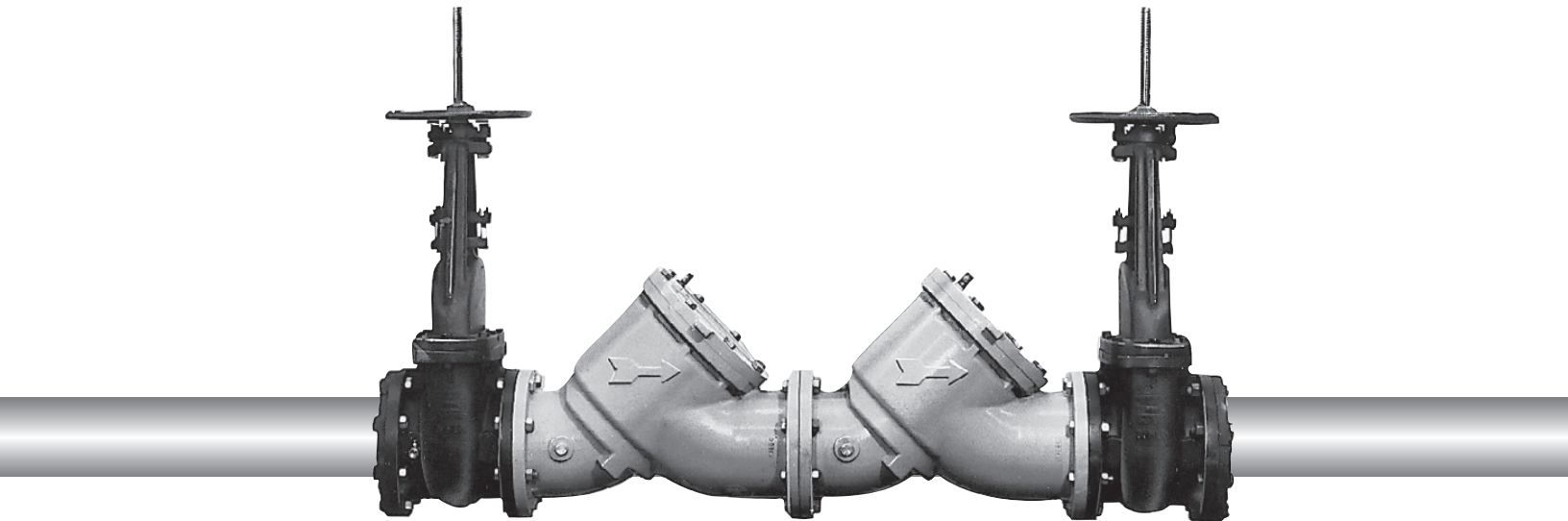
# Series

## 709/709DCDA

Double Check Valve Assemblies  
Double Check Detector  
Assemblies

Sizes: 2 1/2" – 10" (65-250mm)

- Installation
- Repair Kits
- Service
- Maintenance



Watts 8" (200mm) 709

**IMPORTANT:** Inquire with governing authorities for local installation requirements.

**NOTE:** For Australia and New Zealand, line strainers should be installed between the upstream shutoff valve and the inlet of the backflow preventer.

Its important that this device be tested periodically in compliance with local codes, but at least once per year or more as service conditions warrant. If installed on a fire sprinkler system, all mechanical checks, such as alarm checks and backflow preventers, should be flow tested and inspected internally in accordance with NFPA 13 and NFPA 25.

# Basic InstallationInstructions

Watts Series 709 Double Check Valve may be installed in either a vertical or horizontal position.

Install valve in the line with arrow on valve body pointing in the direction of flow.

They should always be installed in an accessible location to facilitate testing and servicing.

Pipe lines should be thoroughly flushed to remove foreign material before installing the unit. A strainer should be installed as shown, ahead of backflow preventers to prevent discs from unnecessary fouling.

**CAUTION:** Do not install with strainer when backflow preventer is used on seldom-used water lines which are called upon during emergencies, such as fire sprinkler lines, etc.

It is important that Series 709 be tested periodically in compliance with local codes, but at least once a year or more often, depending upon system conditions.

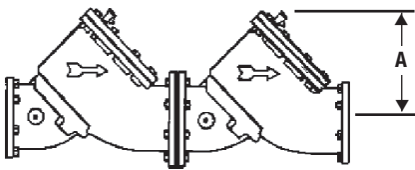
## Indoor Installations

For indoor installations, it is important that the valve be easily accessible to facilitate testing and servicing.

## Outdoor Installations

In area where freezing conditions do not occur, Series 709 can be installed outside of a building. The most satisfactory installation is above ground and should be installed in this manner whenever possible.

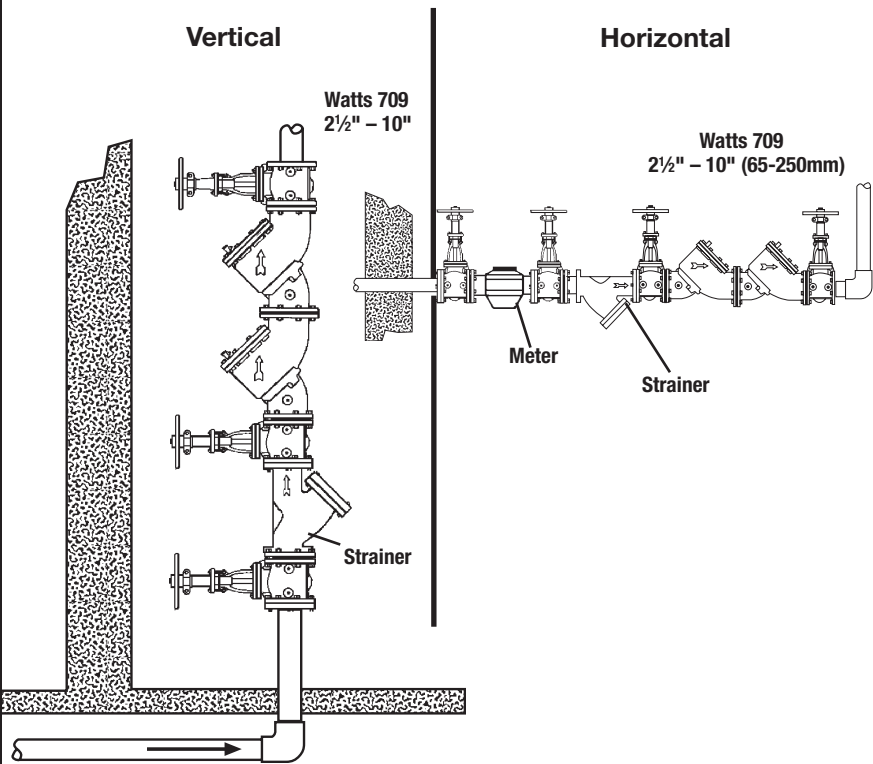
It is generally recommended that backflow preventers never be placed in pits unless absolutely necessary and then only when approved by local codes. In such cases, a modified pit installation is preferred or an insulated above ground insulated enclosure.



Clearance Required for Servicing

	mm	A	mm
2½" – 3"	65-80	10"	300
4	100	15"	450
6	150	15"	450
8	200	23"	680
10	250	25"	750

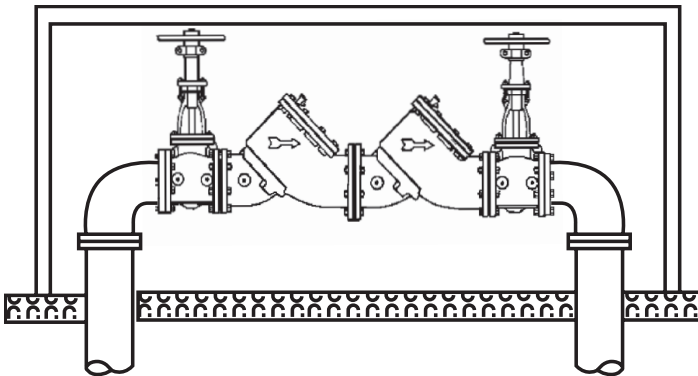
## Indoor Installations



For indoor installations, it is important that the valve be easily accessible to facilitate testing and servicing.

## Outdoor Installations

### Above Ground in Insulated Enclosure

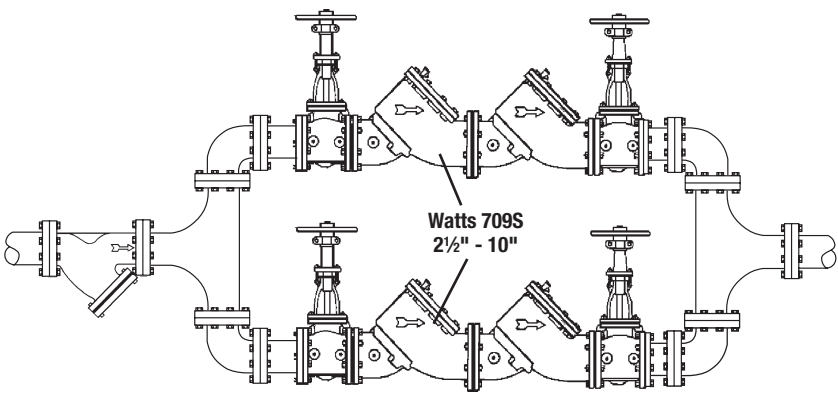


# Basic InstallationInstructions(cont.)

## Parallel Installations

Two or more Series 709 devices may be piped in parallel (where approved) to serve a large supply pipe main. This type of installation is employed whenever it is vital to maintain a continuous supply of water where interruptions for testing and servicing would be unacceptable. It also has the advantage of providing increased capacity where needed beyond that provided by a single valve.

For two valve installations the total capacity of the devices should equal or exceed that required by the system. Capacity table shows the size of the No. 709 devices required to meet a certain capacity. The quantity of devices used in parallel should be determined by the engineer's judgement based on the operating conditions of a specific installation.



Capacity Required for System

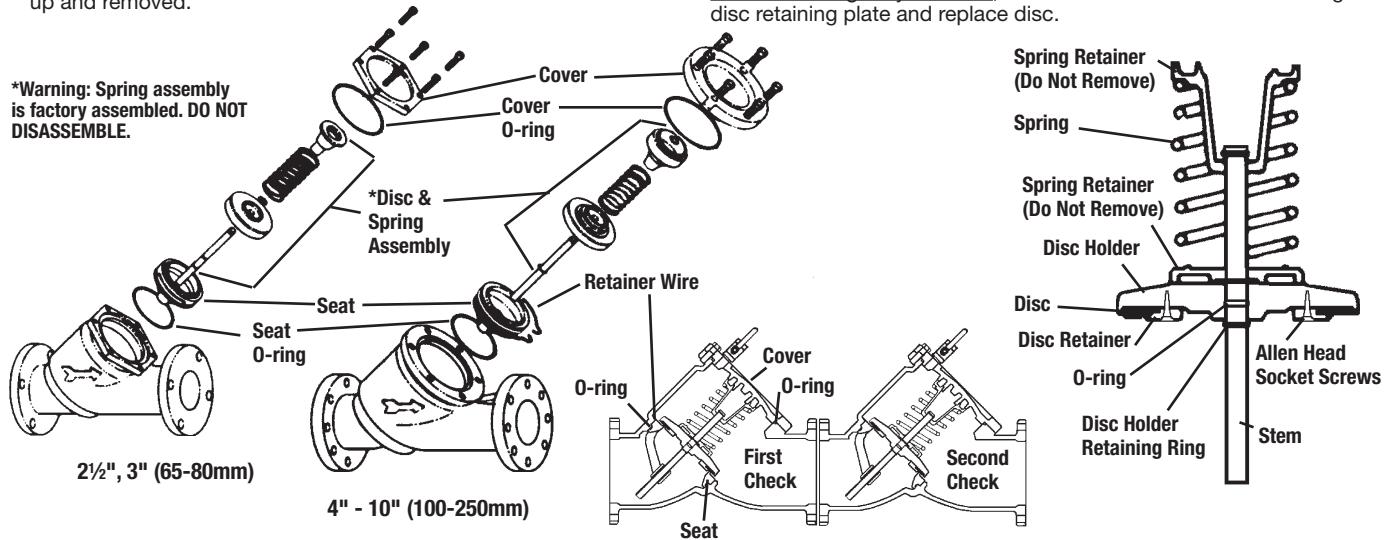
450 GPM	640GPM	1000GPM	2000GPM	3000GPM	5000GPM
Two 2 1/2" Devices	Two 3" Devices	Two 4" Devices	Two 6" Devices	Two 8" Devices	Two 10" Devices

Table shows total capacity provided with dual valve installations of various sizes.

## Service, Replacement Parts and Maintenance 2 1/2" – 10" (65-250mm)

1. Remove hatch cover bolts. **NOTE:** The 709 is designed so that, when the bolts are backed off 1/2", all the spring load is released from the cover and retained by the check module. **CAUTION: Be sure to verify this before removing all the bolts.**
2. Lift check valve module straight out, taking care not to hit and damage seat ring.
3. The seat ring may be removed and replaced by pulling out the two wire retainers. The wire retainers are 10" long. One is drawn out clockwise and the other is drawn out counterclockwise.
4. With the retainer wires removed, the seat ring can be lifted straight up and removed.

**CAUTION:** The check valve disc and spring assembly are in compression. The spring load is captured by the two spring retainers and the stem. The spring retainers are **not** to be removed for servicing. If there is a need to replace the spring, spring retainer or stem, replace the disc and spring assembly. If the disc holder has been damaged by freezing or severe water hammer, it can be replaced in the field. Remove the disc holder retaining ring and slide the disc holder off the stem. Remove the o-ring from the stem and replace with a new one. Apply grease to the o-ring and slide the new disc holder into place. Reinstall the retaining ring. **NOTE:** The disc holder should not be removed when servicing only the disc, remove allen head screws holding the disc retaining plate and replace disc.



### 709 2 1/2" – 10" (65-250mm)

EDP No.	Kit No.	Size	
First or Second Check Kits		in	mm
0887900	RK 709 CK4	2 1/2 – 3	65-80
0887901	RK 709 CK4	4	100
0887902	RK 709 CK4	6	150
0887903	RK 709 CK4	8	200
0887904	RK 709 CK4	10	300

Kit includes: Disc & spring assembly and Cover O-ring.

#### Rubber Parts (for one check)

0887905	RK 709 RC4	2 1/2 – 3	65-80
0887906	RK 709 RC4	4	100
0887907	RK 709 RC4	6	150
0887908	RK 709 RC4	8	200
0887909	RK 709 RC4	10	250

Kit includes: Disc and Cover O-ring.

#### Complete Rubber Parts

0887915	RK 709 RT	2 1/2 – 3	65-80
0887916	RK 709 RT	4	100
0887917	RK 709 RT	6	150
0887918	RK 709 RT	8	200
0887919	RK 709 RT	10	250

Kit includes: Two discs and Two Cover O-rings.

#### Seat Kits

0887910	RK 709S	2 1/2 – 3	65-80
0887911	RK 709S	4	100
0887912	RK 709S	6	150
0887913	RK 709S	8	200
0887914	RK 709S	10	250

Kit includes: Seat, Seat o-ring, Retainer Wire and Cover O-ring.