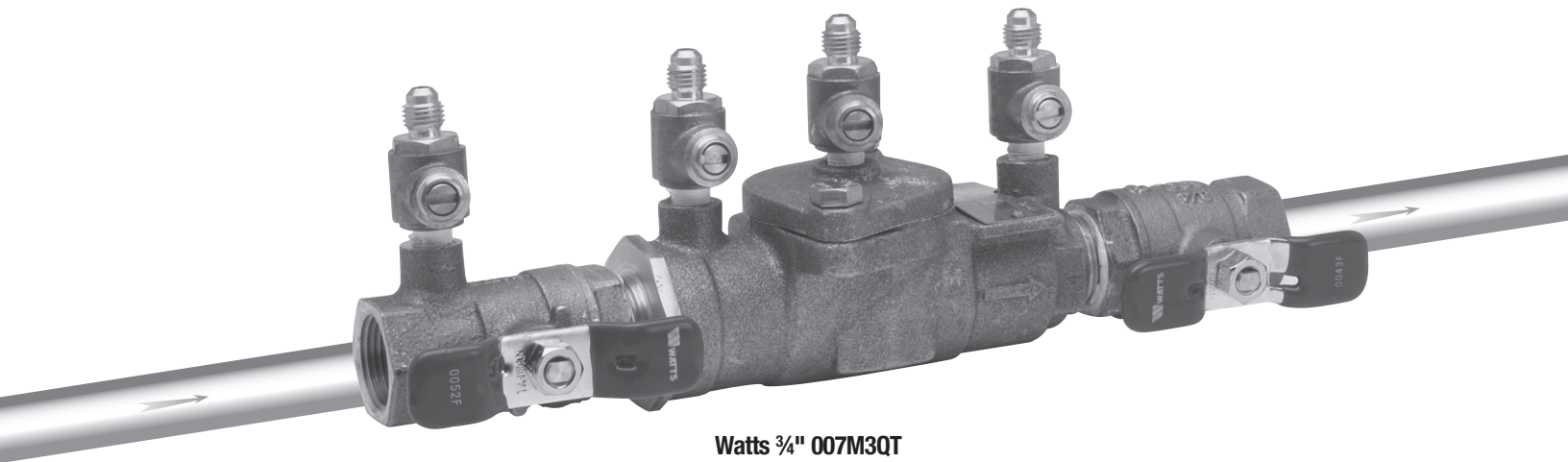


Series 007

Double Check Valve Assembly

Sizes: 1/2" – 3"

- Installation
- Service
- Repair Kits
- Maintenance



Watts 3/4" 007M3QT

IMPORTANT: Inquire with governing authorities for local installation requirements.

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

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WATTS®

Installation Instructions

Series 007 Double Check Valve Assemblies

Indoors- Figure 1

Check local codes for installation requirements. Pipe lines should be thoroughly flushed to remove foreign material before installing the unit. A strainer should be installed as shown, ahead of backflow preventer to prevent disc from unnecessary fouling. Install valve in the line with arrow on valve body pointing in the direction of flow.

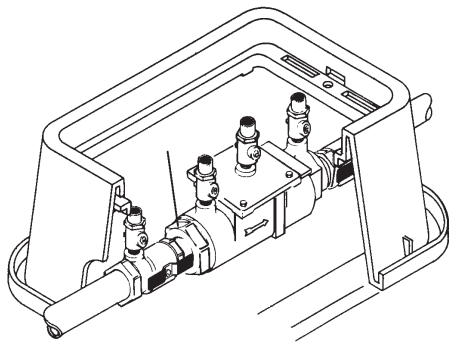
For indoor installations, it is important that the valve be easily accessible to facilitate testing and servicing. Do not install in a concealed location.

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 007 be tested periodically in compliance with local codes, but at least once a year or more often depending upon system conditions. Regular inspection, testing and cleaning assures maximum life and proper product function.

NOTE: Fire Protection System Installations

The National Fire Protection Agency (NFPA) Guidelines require a confirming flow test to be conducted whenever a "main line" valve such as the shutoff valves or a backflow assembly have been operated. Certified testers of backflow assemblies must conduct this test. The trim valves of the confirming flow test. When the test is completed the trim valves must be returned to a fully open position.



Meter Box Installation

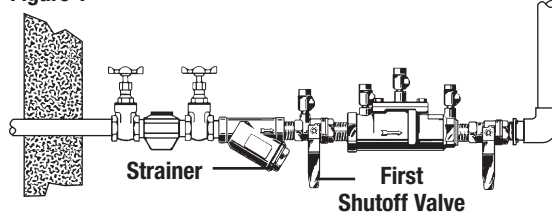
Parallel- Figure 3

Two or more Series 007 smaller size valves may be piped in parallel (where approved) to serve a larger 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 and permits testing or servicing of an individual valve without shutting down the complete line.

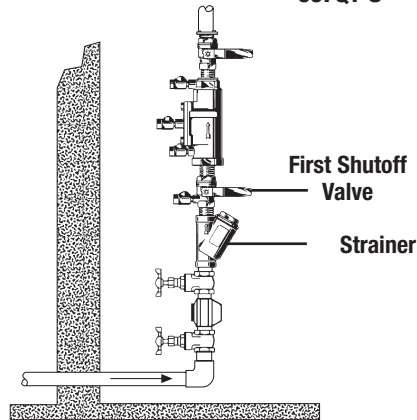
For two valve installations the total capacity of the devices should equal or exceed that required by the system.

The quantity of valves used in parallel should be determined by the engineers judgement based on the operating conditions of a specific installation.

Figure 1



007QT-S



007QT-S Vertical flow-up or vertical flow-down installation (flow-up shown)

Figure 2

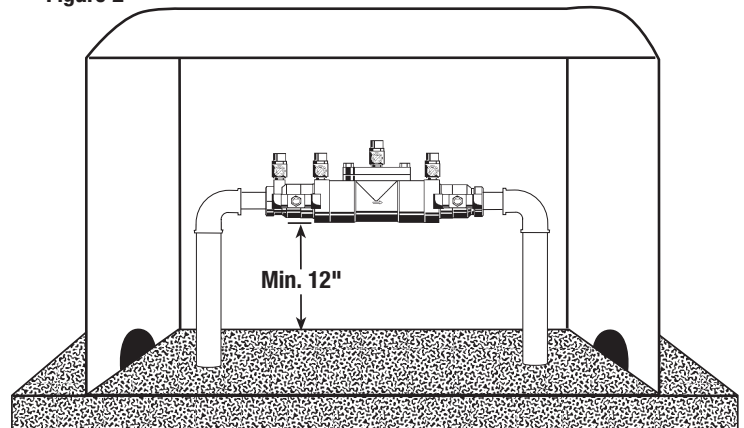
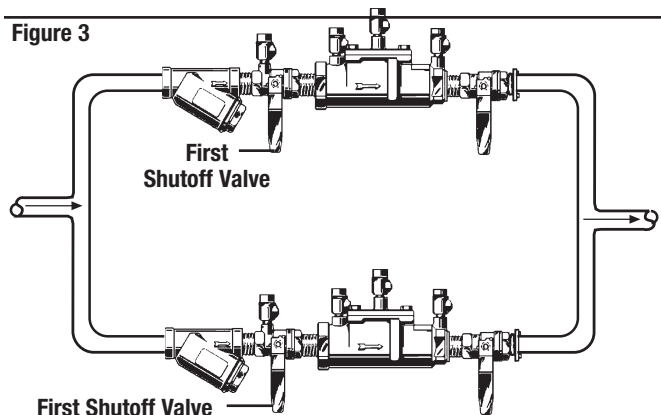


Figure 3



007QT-S

Service, Replacement Parts and Maintenance

Servicing the First and Second Check Valves

NOTE: Before servicing be certain water is turned off or shutoff valves are closed

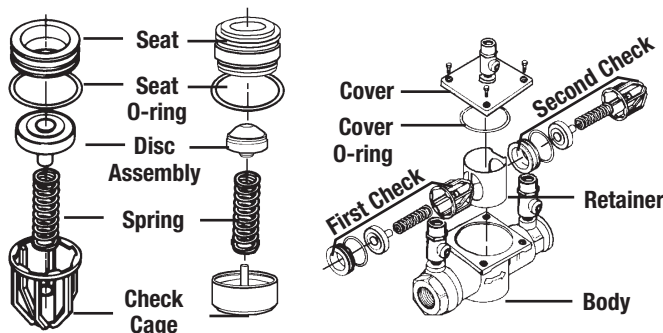
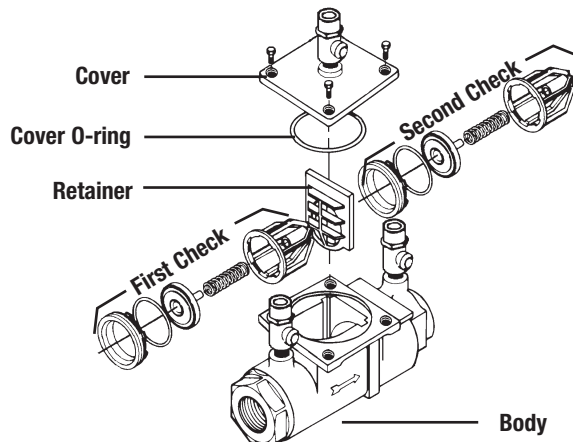
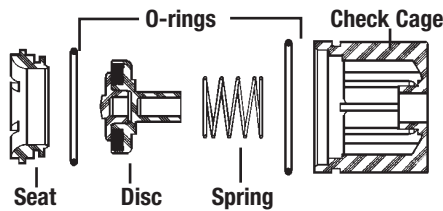
1. After removing the cover, remove the retainer for the body bore. The check valve modules can now be removed from the valve by hand or with a screwdriver.

Note: For Series 007 sizes 1/2" - 2" (15-50mm), the seats and springs of the first and second check modules are not interchangeable. The heavier spring and smaller diameter seat belong with the first check module. Series 007M1 sizes 3/4" - 1" (20-25mm) and Series 007M2 3/4" (20mm) have interchangeable seats and springs.

2. The check seats are attached to the cage with a bayonet type locking arrangement. Holding the cage in one hand, push the seat inward and rotate clockwise against the cage, for 3/4" (20mm) Series 007M2 pull apart seat and cage. The seat, cage, spring and disc assembly are now individual components.

3. The disc assembly may now be cleaned and reassembled or, depending on its condition, it may be discarded and replaced with a new assembly from the repair kit. O-rings should be cleaned or replaced as necessary.

4. Reassemble the check valve module in the reverse order. Check modules are installed in the valve body with the seats facing the valve inlet. The modules must be securely in place before the retainer can be replaced. On the 3/4" - 1" (20-25mm) size, this retainer may have to be tilted slightly into place. Replace cover.



1/2" - 2" Replacement Parts

When ordering, specify ordering code number, kit number and valve size

Check Kits: 1st or 2nd Check

ORDERING CODE	KIT NO.	SIZE	
		in.	mm
0887193	RK 007 CK4	1/2	15
0887026	RK 007M1 CK4	3/4 - 1	20-25

1st Check

0887023	RK 007 CK1	3/4 - 1	20-25
0887045	RK 007M2 CK1	3/4	20
0888550	RK 007M3 CK1	3/4	20
0887025	RK 007 CK1	1 1/2 - 2	40-50
0887186	RK 007M1 CK1	1 1/2 - 2	40-50
0887719	RK 007M2 CK1	1 1/4 - 1 1/2	32-40

2nd Check

0887024	RK 007 CK2	3/4 - 1	20-25
0887046	RK 007M2 CK2	3/4	20
0888551	RK 007M3 CK2	3/4	20
0887028	RK 007 CK2	1 1/2 - 2	32-50
0887187	RK 007M1 CK2	1 1/2 - 2	32-50
0887720	RK 007M2 CK2	1 1/4 - 1 1/2	32-40

Kit includes: Seat, seat o-ring, disc assembly, spring, check cage, cover o-ring.

Complete Rubber Parts

0887194	RK 007 RT	1/2	15
0887040	RK 007 RT	3/4 - 1	20-25
0887042	RK 007M1 RT	3/4 - 1	20-25
0887043	RK 007M2 RT	3/4	20
0888552	RK 007M3 RT	3/4	20
0887041	RK 007 RT	1 1/2 - 2	40-50
0887188	RK 007M1 RT	1 1/2 - 2	40-50
0887721	RK 007M2 RT	1 1/4 - 1 1/2	32-40

Kit includes: Cover o-ring, two seat discs and two seat o-rings.

Installation Instructions

2½" and 3" 007

Indoors - Figure 1

Series 007 may be installed in either a vertical or horizontal position. Pipe lines should be thoroughly flushed to remove foreign material before installing the unit. A strainer should be installed as shown, ahead of backflow preventer to prevent disc from unnecessary fouling. Install valve in the line with arrow on valve body pointing in the direction of flow. For indoor installations, it is important that the valve be easily accessible to facilitate testing and servicing. Do not install in a concealed location.

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 007 be tested periodically in compliance with local codes, but at least once a year or more often depending upon system conditions.

NOTE: Fire Protection System Installations

The National Fire Protection Agency (NFPA) Guidelines require a confirming flow test to be conducted whenever a "main line" valve such as the shutoff valves or a backflow assembly have been operated. Certified testers of backflow assemblies must conduct this test. The trim valves of the detector meter bypass line, on assemblies so equipped, should be shutoff during the confirming flow test. When the test is completed the trim valves must be returned to a fully open position.

Outside Building Above Ground -

Figure 2

In an area where freezing conditions do not occur, Series 007 can be installed outside of a building. The most satisfactory installation is above ground and should be installed in this manner whenever possible. In an area where freezing conditions can occur, Series 007 should be installed above ground in an insulated enclosure.

Annual inspection of all water system safety and control valves is required and necessary. Regular inspection, testing and cleaning assures maximum life and proper product function.

Parallel- Figure 3

Consult Local codes for Approval

Two or more Series 007 smaller size valves may be piped in parallel (where approved) to serve a larger 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 increase capacity where needed beyond that provided by a single valve and permits testing or servicing of an individual valve without shutting down the complete line. For two valve installations the total capacity should equal or exceed that required by the system.

The quantity of valves used in parallel should be determined by the engineers judgement based on the operating conditions of a specific installation. (See F-FC regarding flow curves)

INSTALLATION NOTE: The flange gasket bolts for the gate valves should be retightened during installation as the bolts may have loosened due to storage and shipping.

Figure 1

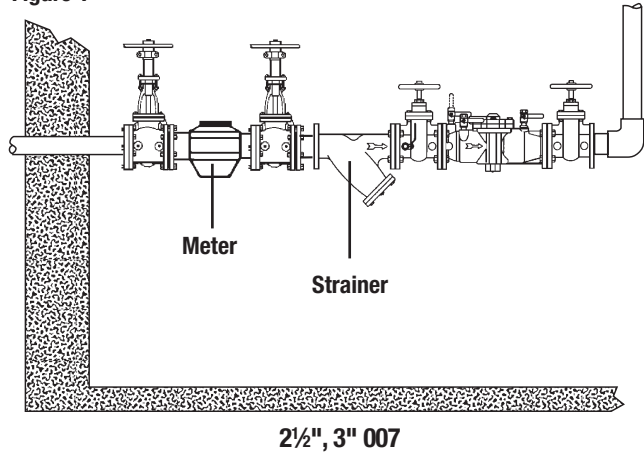


Figure 2

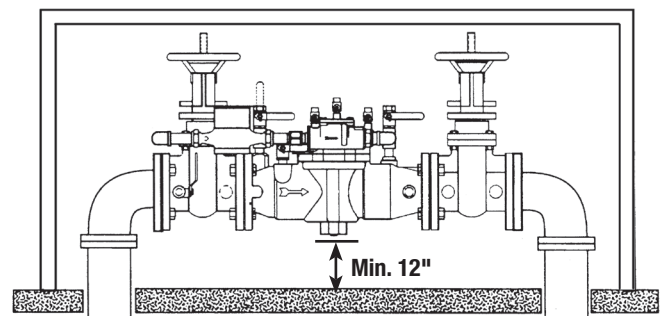
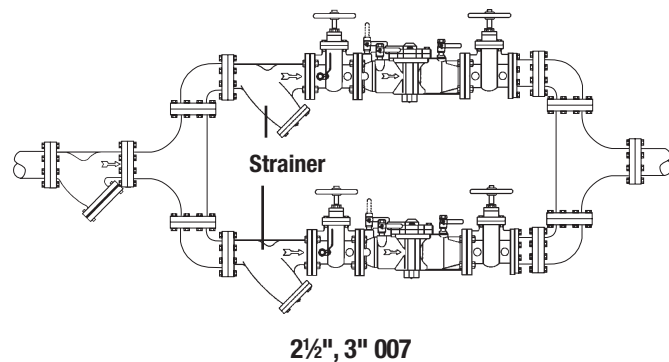


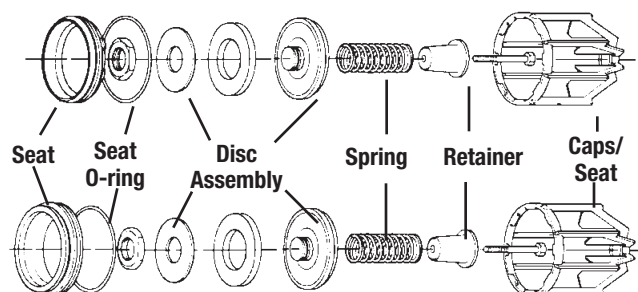
Figure 3



Servicing First and Second Check Valves

2½" and 3" 007

1. Remove cover bolts and cover.
2. Remove the retainer from the body bore. The check valve modules can now be removed from the valve by hand or with a screwdriver.
3. The check seats are attached to the cage with a bayonet type locking arrangement. Holding the cage in one hand, push the seat inward and rotate counterclock-wise against the cage. The seat, spring cage, spring and disc assembly are now individual components.
4. The disc assembly may now be cleaned and reassemble or depending on its condition, may be discarded and replaced with a new assembly from the repair kit. O-rings should be cleaned or replaced as necessary.
5. Reassemble the Check valve modules. Check modules are installed in the valve body with the seats facing the valve inlet. The modules must be securely in place before the retainer can be replace.



Check Assemblies

NOTE: No special tools required to service Series 007.

Replacement Parts

2½" and 3" 007

When ordering, specify ordering code number, kit number and valve size.

First Check Kit

ORDERING CODE	KIT NO.	SIZE	
		in.	mm
0887285	RK 007 CK1	2½, 3	65, 80

Kit Includes: Seat, seat o-ring, disc assembly, spring, spring retainer, check cage and cover o-ring.

Second Check Kit

0887286	RK 007 CK2	2½, 3	65, 80
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Kit Includes: Seat, seat o-ring, disc assembly, spring, spring retainer, check cage and cover o-ring.

First and Second Check Rubber Parts

0887287	RK 007 RT	2½, 3	65, 80
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Kit Includes: Two seat discs, two seat o-rings, two cover o-rings.

Cover Kit

0887288	RK 007 C	2½, 3	65, 80
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Kit includes: Cover and cover o-ring.

Seat Kit

0887289	RK 007 S	2½, 3	65, 80
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Kit Includes: Seat and seat o-ring.

"Use only original equipment manufactured parts to protect the validated warranty."

