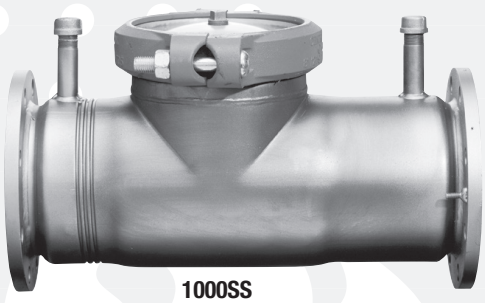
Installation, Maintenance, & Repair Series 1000SS

Detector Check Valve Assemblies

Sizes: 4" – 10" (100 – 250mm)**



1000SS

⚠ WARNING

Read this Manual BEFORE using this equipment.

Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment.

Keep this Manual for future reference.

⚠ WARNING

You are required to consult the local building and plumbing codes prior to installation. If the information in this manual is not consistent with local building or plumbing codes, the local codes should be followed. Inquire with governing authorities for additional local requirements.

⚠ WARNING

Need for Periodic Inspection/Maintenance: This product must 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 suppression system, all mechanical checks, such as alarms and backflow preventers, should be flow tested and inspected in accordance with NFPA 13 and/or NFPA 25. All products must be retested once maintenance has been performed. Corrosive water conditions, and/or unauthorized adjustments or repair could render the product ineffective for the service intended. Regular checking and cleaning of the product's internal components helps assure maximum life and proper product function.

NOTICE

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

Testing

For field testing procedure, refer to Ames installation sheets IS-A-ATG-1 found on **www.amesfirewater.com.**

For other repair kits and service parts, refer to our Backflow Prevention Products Repair Kits & Service Parts price list PL-A-RP-BPD found on **www.amesfirewater.com.**

For technical assistance, contact your local Ames representative.

** Metric Dimensions are nominal pipe diameter. This product is produced with ASME/ANSI flanged end connections.

Installation Instructions

NOTICE

A. The installation and maintenance of any Ames Detector Check Valve should be performed by a qualified licensed technician. Failure to do so may result in a malfunctioning assembly. All instructions should be read thoroughly by the technician before installation or performing any maintenance on the assembly.

B. Before installing an Ames Detector Check Valve, flush the lines thoroughly to remove all debris, chips and other foreign objects. Failure to do so may make the assembly inoperable.

C. Allow sufficient clearance around the installed assembly to conduct testing, servicing and inspection. Allow a minimum of 12” from the flood level to the bottom of the assembly.

Cam-Check Removal 4" and 6" (100 and 150mm)**

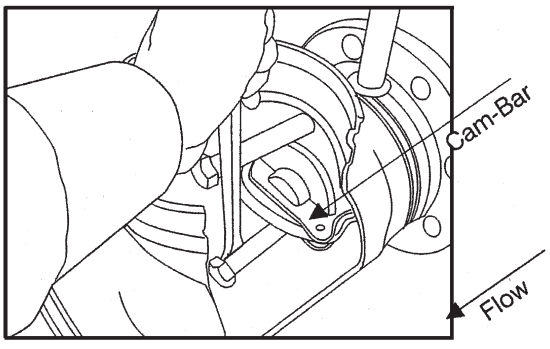
⚠ WARNING **Depressurize valve before servicing.**

Removing Cam-Check

Place yourself so that the water flow through the valve is left to right.

1. **Shut down** water system by closing two gate valves and lock out system if possible. Slowly open bleed port to relieve internal pressure. After pressure is relieved, loosen bolts on groove coupler and remove groove coupler and copper plate from valve body.
2. **Unscrew** (counterclockwise as viewed through the port facing the check) the Cam-Check. Insert the two grooved coupler bolts into the holes in the face of the seat. Be sure that the pins or bolts are installed with one on each side of the cam bar as shown. Insert a long screwdriver or pry bar between opposing pins and loosen the check counterclockwise) until it comes free to turn by hand. Finish unscrewing the Cam-Check by hand using the support ears for the clapper and cam bar to turn the check. (See Fig 1A)
3. **Lift** the Check straight up and out of the port access hole.

Figure 1A



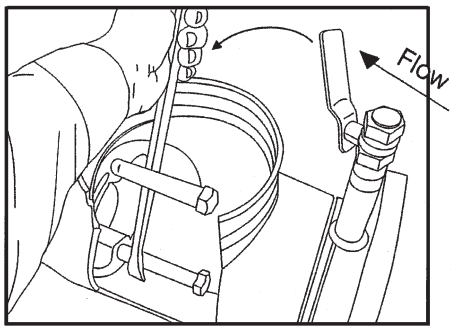
Cam-Check Installation 4" and 6" (100 and 150mm)**

Install the Cam-Check

Prior to installing the Cam-Check, ensure that all threads are clean and free of debris, grit, or other particles. Thoroughly clean O-rings grooves and lubricate O-rings with an FDA approved lubricant.

1. **Insert** the Cam-Check through the cover port with the clapper facing down. Align the threads of the Cam-Check with the threads in the body and start to thread the Check in by hand - using the ears which extend from the seat ring to turn the check assembly. DO NOT use the clapper or the cam bar to turn the check assembly.
2. **Tighten** the Cam-Check. Insert grooved coupler bolts into the holes in the face of the seat (or use the bolts from the lid groove coupler). Be sure that the pins or bolts are installed with one on each side of the cam bar. Insert a long screw driver or pry bar between opposing pins and tighten the check (clockwise as viewed through the port facing the check) until it comes to a solid stop. The back the check out about 15 degrees or from the 1:00 position to the 12:00 position. (See Fig 1B).

Figure 1B



START UP: After re-installation of the cover plate and groove coupler — the downstream shutoff valve should be closed. Open upstream gate slowly, fill the valve and bleed the air through bleed port. When valve is filled, open the downstream shut off slowly. Failure to bleed air from assembly may cause water hammer or shock damage to the water system.

Repair Parts

Figure 2

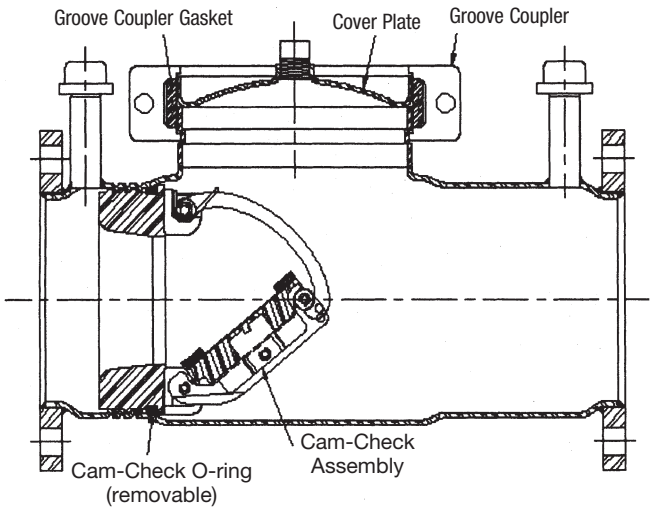
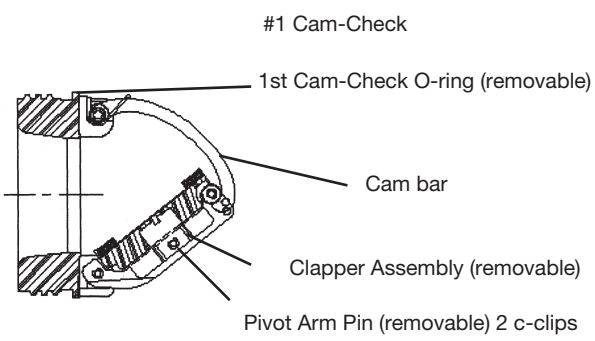


Figure 3



Cam-Check Disassembly 4" and 6" (100 and 150mm)**

Please use caution when disassembling cam-check.

⚠ WARNING

You may replace this item as an assembly.

Figure 4

Using a thin rod or screwdriver, lift the cambar up so that the clapper is free to swing upwards away from the seat.

Figure 5

Using your free hand, swing the clapper open until the roller is almost to the free end of the cambar. Align the maintenance lockout holes in the cambar and the hinge arms.

Secure the check assembly in the maintenance position by inserting a rod or thin screwdriver through the lock-out holes.

Figure 6

Remove 1 c-clip from the center pivot pin. Withdraw the centerpivot pin from the clapper and the hinge arms. Remove the clapper assembly from the check assembly module.

Figure 4

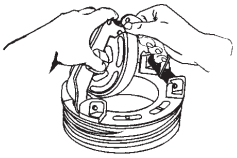


Figure 5

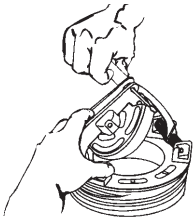
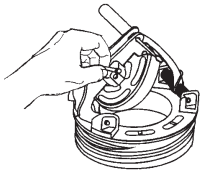


Figure 6



⚠ WARNING Depressurize valve before servicing.

Removal & Replacement of Knuckle Joint Assembly

(Internal Closing Assembly)

1. Shut down water system and lock out if possible.
2. Loosen vent screw in lid slowly to ensure system pressure has been relieved.
3. Loosen and remove all inspection port bolts and remove lid and gasket from valve.
4. Install proper size clapper retainer clip (see Figure 1). Be sure clip is pushed to within ½" of linkage.
5. Loosen equally the two knuckle joint mounting bolts, until assembly is free. As bolts are loosened, linkage will release slightly and lock clapper retainer clip in place.
6. Remove knuckle joint from body assuring clapper retainer clip is not disturbed, as preloaded knuckle joint springs have considerable tension in this position.
7. Bolt the knuckle joint to the outside of the body using the new ⅜" bolts supplied with the new knuckle joint (see Figure 2).
8. Push on clapper plate to release clapper retainer clip, remove and slowly release tension on clapper. Unbolt knuckle joint assembly from outside of body.
9. Bolt replacement knuckle joint assembly to body.
10. Push on clapper plate to extend springs and install clapper retainer clip, making sure springs are seated on pins. Unbolt knuckle joint assembly from body bolt hole.
11. Insert two new ⅜" mounting bolts and washers through mounting holes in body. Position knuckle joint in place inside body, and finger tighten both bolts.
12. Torque knuckle joint mounting bolts to 60 inch-pounds. **Remove clapper retainer clip.**
13. Replace lid and new gasket.

Figure 1

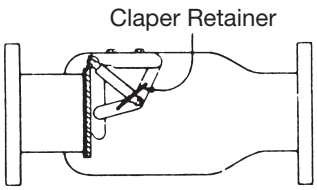
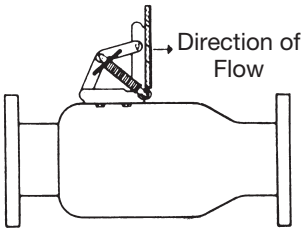


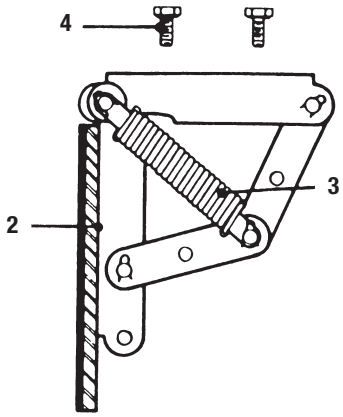
Figure 2



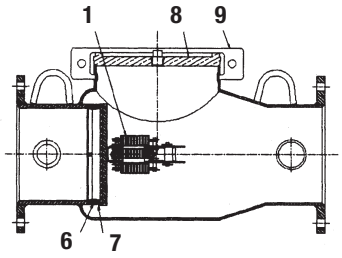
Repair Parts

Item #	Description
1.	Knuckle Joint Assembly (Complete Unit)
2.	Clapper Plate With Attached Link (not shown)
3.	Springs
4.	⅜" Stainless Steel Bolts
5.	Washer (not shown)
6.	Bronze Seat (Replaceable in Line)
7.	Seat O-Ring
8.	Cover Plate
9.	Groove Coupler
10.	Clapper Retainer Clip (Diagram 1)

Knuckle Joint Assembly **1**



Housing Half Section



WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
For more information: www.watts.com/prop65

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www.amesfirewater.com

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