

**INSTALLATION INSTRUCTIONS****Series 850****Double Check Valve Assemblies**

Sizes: 1/2" - 2" (15 – 50mm)

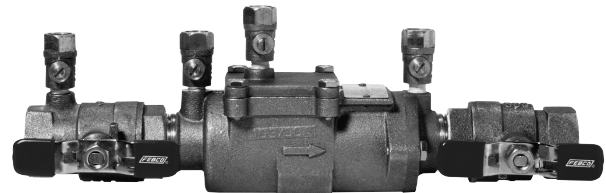
**Installation Instructions**

1. Consult local codes for specific installation requirements and restrictions applicable to your area.
2. These instructions apply to Series 850 (DC) and 850U (DC) sizes 1/2" to 2" (15-50mm) only. The valves may be installed only in the orientation/flow direction shown.
3. The valve assembly must be installed where it is accessible for periodic testing and maintenance. The recommended clearances shown in the installation views apply to the exterior, interior and pit/vault installations. These minimums do not apply to removable protective enclosures.
4. **PRIOR TO INSTALLING THE VALVE INTO THE LINE, FLUSH THE SUPPLY LINE OF ALL FOREIGN MATERIAL.** Failure to flush the supply line may cause the check valves to become fouled and require disassembly and cleaning.
5. After installation, SLOWLY fill the assembly with water and bleed air from the body using the # 3 and #4 test cocks. Test the valve assembly to ensure correct operation.

**NOTE:** All assemblies are tested at the factory for proper operation and leakage. If the valve does not pass the field test, it is most likely due to a fouled check valve. This is not covered by the factory warranty. The valve cover must be removed and the check seats inspected and cleaned. Any damage or improper operation caused by pipeline debris or improper installation/start-up is not included in the factory warranty.

In case of a possible warranty claim, contact your local supplier or **FEBCO** Representative. **DO NOT REMOVE THE VALVE ASSEMBLY FROM THE PIPELINE.**

6. The assembly must be protected from freezing and excessive pressure increases. Pressure increases can be caused by thermal expansion or water hammer. These excessive pressure situations must be eliminated to protect the valve and system from possible damage.
7. Plastic test cock plugs and tethers are provided (loose in box) for the 1/2" to 2" (15-50mm) product for those who want to use them.



850

**Service and Maintenance**

1. Rinse all parts with water prior to re-assembly.
2. **DO NOT USE ANY PIPE DOPE, OIL, GREASE OR SOLVENT ON ANY PART UNLESS INSTRUCTED TO DO SO.**
3. Do not force parts. Parts should fit together freely. Excess force may cause damage and render the assembly inoperable.
4. Carefully inspect the seals and seating surfaces for debris or damage.
5. Test the assembly after servicing to ensure proper operation.

**Check Valves Disassembly**

1. Close inlet and outlet ball valves. Bleed residual pressure by opening No. 2, 3, and 4 test cocks. Allow the test cocks to remain open until the re-assembly is complete. Test cock No. 1 should remain closed.
2. Remove cover bolts using the appropriate size wrench.
3. Remove spacer by grasping the flanged end of the spacer and pulling straight up.
4. Remove the inlet check assembly by pulling it in the direction of flow out from the body bore until it is completely exposed then lift out of the body.
5. Remove the outlet check assembly by placing the tip of a medium size, flat nose screwdriver in the slot of the seat and prying the check assembly back until the red O-ring is exposed. Then using your fingers, pull it out of the body bore until it is completely exposed then lift it out of the body.



# Typical Installation

Figure 1

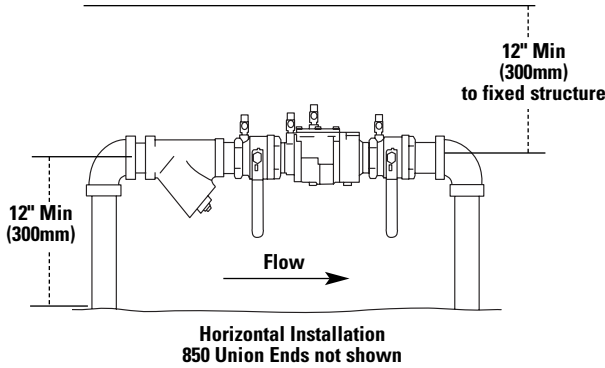


Figure 3

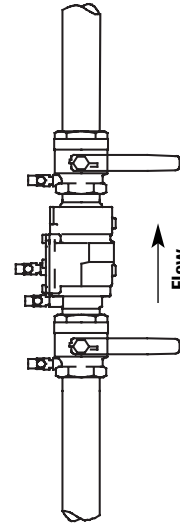
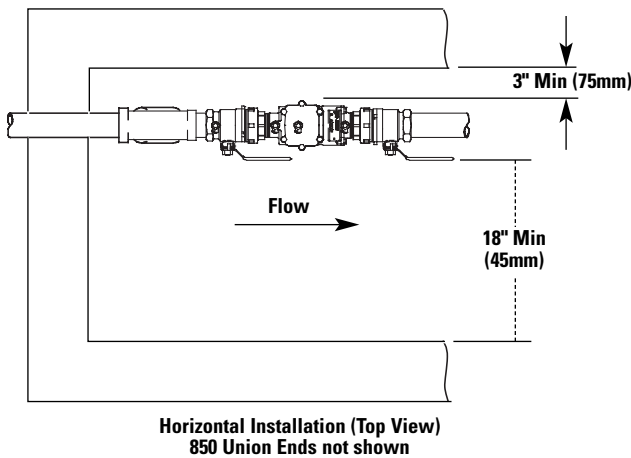


Figure 2



Vertical Flow Up or Down Installation  
850 Union Ends not shown

**CALIFORNIA PROPOSITION 65 WARNING**

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (California law requires this warning to be given to customers in the State of California.)

For more information: [www.watts.com/prop65](http://www.watts.com/prop65)

**Limited Warranty:** FEBCO warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge. This shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication or improper installation of the product. **THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.** Any implied warranties that are imposed by law are limited in duration to one year.

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights.