

Y-Check Valve Installation Instructions

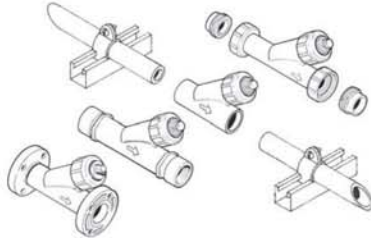
YC-3A-0314



Y-Check Valves automatically stop reverse flow by the dead weight of the disc plug. The valve can be mounted in either vertical up-flow or horizontal positions. However, attention must be paid to flow direction as indicated on the valve body. The valve branch must always be oriented up to properly operate. Spears® Y-Check Valves feature replaceable Seat & Seals plus an O-ring sealed Plug on the branch Bonnet to allow quick flushing to clean out the seat area.

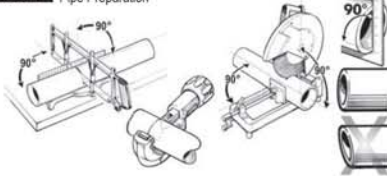
Read all applicable instructions & procedures thoroughly before starting. Suitability of the intended service application must be determined prior to installation. Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting. Y-Check Valves are designed for direct in-line installation without any adjustments.

See "Precautions and Warnings" for all installations in this instruction.



SOLVENT CONNECTIONS

STEP 1 Pipe Preparation



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STEP 2 Assemble Joint

"HAND TIGHTEN ONLY"



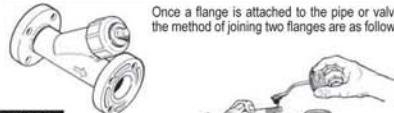
STEP 3 No more than 1 to 2 turns beyond finger-tight thread engagement. Care must be taken in final positioning so as to avoid the need to "Back-up" the wrench assembly.



Unnecessary OVER TIGHTENING will cause damage to both pipe and Y-Check Valve.

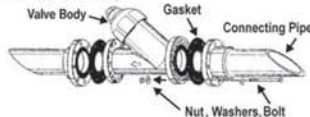
FLANGED CONNECTIONS

Once a flange is attached to the pipe or valve, the method of joining two flanges are as follows:



STEP 1 Use of well lubricated bolts & flat washers are required. Use an anti-seize lubricant, such as IMS Copper Flake.

STEP 2 With a 1/8" gasket having a shore "A" durometer of approximately 60 in place, align the bolt holes of the mating flanges by rotating the ring into position. Insert all bolts, washers, and nuts. Tighten the nuts by hand until they are snug.



AT THIS TIME, BE SURE THAT THE FLANGE AND GASKET SURFACES ARE FLUSH AND SQUARELY ALIGNED.

SPECIAL SPLIT RING FLANGE INSTRUCTIONS FOR 3" & 4" Y-CHECK VALVES

Place rings as shown over the flange hubs at each end of the valve body. Insert new bolts, washers and nuts into new pipe system flanges, through gasket and into the split ring flange in alignment. Continue to instruction 3.

DO NOT USE BOLTS TO BRING TOGETHER IMPROPERLY MATED FLANGES.

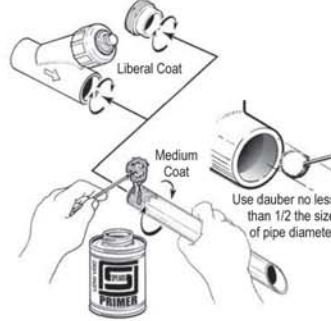
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Deburr and Bevel



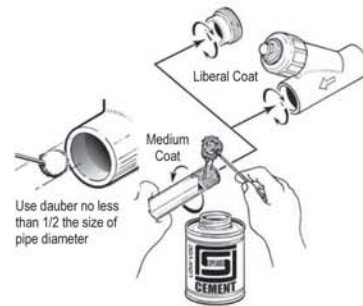
Wipe away all dirt and moisture

STEP 2 Apply Primer



THE MOST FREQUENT CAUSE OF JOINT FAILURE IS INADEQUATE PRIMER PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.

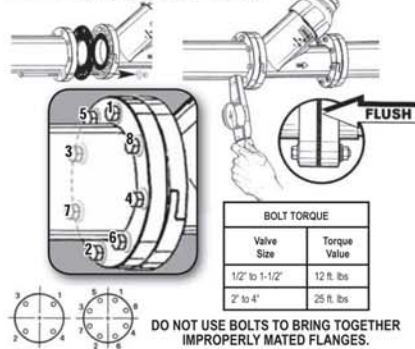
STEP 3 Solvent Cement End Connection



CAUTION: Care must be taken to prevent primer or cement contact with seat or internal valve components. True Union style End Connectors should be removed from valve body for installation.

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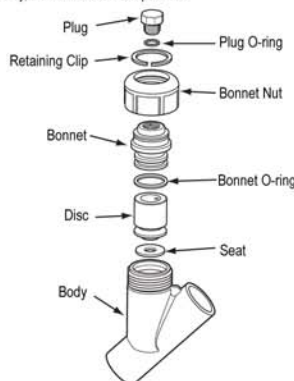
STEP 3 Tighten Bolts in 5 ft. lb. increments.



MAINTENANCE & SERVICE INSTRUCTIONS

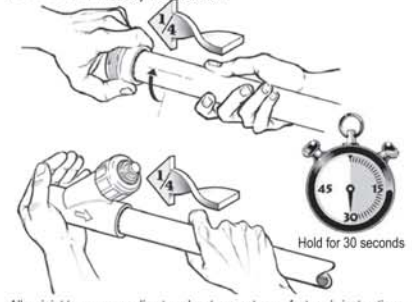
The valve Seat and internal O-ring Seals can be easily accessed from the Bonnet Nut for replacement or internal cleaning and service. CAUTION: Before servicing, the system should be shut down, depressurized and drained.

STEP 1 Remove the plastic Retaining Clip located at top of Bonnet. Remove Bonnet Nut by turning counterclockwise direction. Pull Bonnet assembly, then Disc & Seat assembly from body branch. Remove O-ring sealed Plug from Bonnet and remove Plug O-ring. Remove Bonnet O-ring from Bonnet assembly. Remove flat, washer-style Seat from Disc stub. Examine O-rings and Seat for debris or damage. Clean or replace as necessary, then reinstall on components.



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STEP 4 Immediately Assemble Joint



Allow joint to cure according to solvent cement manufacturer's instructions.

STEP 5 Attach Valve Body to End Connector Socket and tighten Union Nut.



"HAND TIGHTEN ONLY"

DO NOT USE THE REMAINING UNION NUT TO DRAW TOGETHER ANY GAPS BETWEEN THE END CONNECTOR AND THE VALVE BODY.

THREADED CONNECTIONS

WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. TRANSITIONS TO METAL PIPE REQUIRE THOROUGH CLEANING AND DEGREASING TO REMOVE ANY PIPE THREAD CUTTING OIL.

Spears® Manufacturing Company highly recommends the use of Spears® BLUE 75™ thread sealant, which has been tested for compatibility with Spears® products.

STEP 1 Apply Joint Sealant



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STEP 2 Reinstall Disc & Seat assembly into valve. Seat end first. Thread O-ring sealed Plug into bonnet until snug. Apply a mild soap & water solution to Bonnet O-ring and slide the Bonnet assembly into the Valve body. Install Bonnet Nut, turning in a clockwise direction until properly seated. Reinstall Retaining Clip on groove in Bonnet at top of Nut.

QUICK FLUSH CLEANOUT

STEP 1

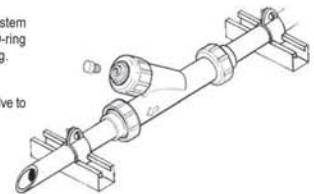
Depressurize system and remove O-ring sealed drain plug.

STEP 2

Flush through valve to remove debris.

STEP 3

Reinstall O-ring sealed plug. Tighten snug.



PRECAUTIONS AND WARNINGS

CAUTION: The system must be designed and installed so as not to pull the components in any direction. Pipe system must be cut and installed in such a manner as to avoid all stress loads associated with bending, pulling, or shifting. All piping systems must be supported.

CAUTION: BEFORE THE VALVE IS CYCLED, all dirt, sand grit or other material shall be flushed from the system. This is to prevent scarring of internal components; e.g. ball, cup, wedge, seats, etc.

WARNING: System should not be operated or flushed out at flow velocities greater than 5 feet per second.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS

All air must be bled from the system during the initial fluid fill. Pressure testing of the system must not be made until all solvent cement joints have properly cured. Initial pressure testing must be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems prior to testing at higher pressures.



STAYFLOW Chicago, IL
312.428.4750

www.stayflowproducts.com
sales@stayflowproducts.com