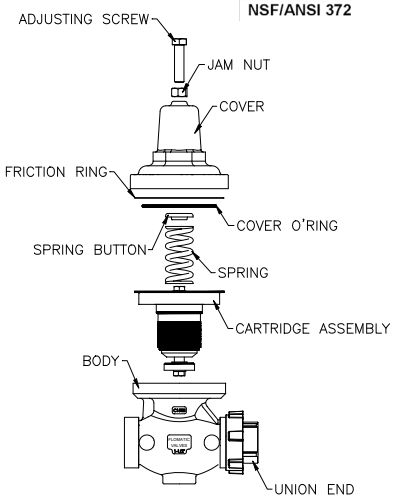
Direct Acting Pressure Reducing Valve **Installation Instructions**

Model C150E 1-½" & 2"

Flomatic Corporation

Max Pressure 400 psi
Max Temperature 180°F

INSTALLATION INSTRUCTIONS:



Before installing reducing valve, flush out line to remove loose dirt and scale which might damage seal ring and seat. Install valve in line with arrow on valve body pointing in direction of flow. The valve must be installed so it is accessible for repair. All valves will be furnished with factory settings to reduce to 50psi. To readjust reduced pressure, loosen outer locknut and turn adjustment screw clockwise (into cover) to raise reduced pressure, or counterclockwise (out of cover) to lower reduced pressure. May be installed in the horizontal or vertical position.

NOTICE: Annual inspection and maintenance is required of all plumbing system components. To ensure proper performance and maximum life, this product must be subject to regular inspection, testing and cleaning.
Regulators in series: Where the desired pressure reduction is more than a 4 to 1 ratio (i.e. 200 psi to 50 psi) or if inlet pressure is above 150 psi, multiple regulators in series should be installed.
DIAPHRAGM WARNING: Loosen jam nut and adjustment screw slowly. Look for any trapped water pressure under the diaphragm. Relieve pressure before removing the cover.
CAUTION: Anytime a reducing valve is adjusted, a pressure gauge must be used downstream to verify correct pressure setting. Do not bottom out adjustment screw on cover. Valve may be installed in any position.

HOW TO MAKE REPAIRS:

Shut Off Water Service Before Disassembly

1. Open a faucet on dwelling to relieve line pressure.
2. Note distance that adjustment screw protrudes from cover. Loosen jam nut on adjustment screw, then turn adjustment screw out of cover to remove spring tension.
3. Unscrew cover counterclockwise and remove spring, spring button and friction ring.
4. Remove cartridge from regulator by gripping retaining bolt with pliers and pulling outwards away from body.

TO REASSEMBLE:

1. While disassembled, open inlet of water service to flush out valve body and service line of debris.
2. Replace the old cartridge assembly with new cartridge assembly. Push the cartridge into bore in body making sure O-rings seal tight against both the cartridge and body.
3. Replace friction ring, spring, spring button and cover, make sure friction ring is installed with raised edge faced up. Tighten cover onto body by threading clockwise.
4. Turn adjustment screw into cover to old setting.
5. Enter the dwelling and turn on several faucets.
6. Turn on the water service. Let water run for several seconds then turn off faucets in dwelling.
7. Adjust regulator to desired pressure by turning adjustment screw clockwise (into cover) to raise pressure or counterclockwise (out of cover) to lower pressure. NOTE: When reducing pressure, open a downstream faucet to relieve pressure.
8. Tighten jam nut when desired pressure is achieved.

Limited One Year Warranty: *Flomatic® valves are guaranteed against defects of material or workmanship when used for the services recommended. If, in any recommended service a defect develops due to material or workmanship, and the device is returned, freight prepaid, to Flomatic'S® Corporation within 12 months from date of purchase, it will be repaired or replaced free of charge. Flomatic® Corporations' liability shall be limited to our agreement to repair or replacement of valve only.* ***DO NOT*** *use standard construction on oil service. Oil service requires special diaphragm and disc.*

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General Trouble Shooting

- Pipelines in a water supply system must be of sufficient carrying capacity to maintain adequate pressure at the most remote or highest fixture. Under the maximum probable fixture use, minimum adequate pressure is generally 8 to 15 lbs., but maybe more, depending on the equipment being supplied.
- Relatively high service pressures which can create high water velocities in pipelines would allow use of smaller pipes to satisfy fixture use. However, high velocities tend to cause whistling and humming. Reductions of pressure by the use of a pressure reducing valve, in an attempt to eliminate the undesirable condition, may reduce pipeline capacities below what is adequate for maximum probable use.
- When high service pressures are in effect, either continuously or periodically, the application of a pressure reducing valve will be successful only when the installed pipeline is of adequate size to satisfy the system demand at the lower pressure. When actual water demands are unknown, the valve size should be no less than the existing pipe size.
- Valve requires laminar flow, must be installed 5 diameters downstream from any obstructions like elbows, pumps etc.

PROBLEM	POSSIBLE CAUSE OR CAUSES
1. Pressure creeps or builds up in a system above setting of pressure reducing valve.	A. Thermal expansion of water as it is being heated. B. Foreign matter on the seating face of sealing ring. C. Cut, worn or chipped seal ring. D. Cut or worn stem O-ring or worn O-ring groove.
SOLUTION:	
A. This is a natural consequence. It may happen each time that the heater runs. A pressure relief valve or expansion tank must be installed. It will not prevent pressure rising but should limit it to a safe level. B. Flush the reducing valve by opening one or two fixture outlets wide. If this does not correct the trouble, remove seal ring for cleaning. C. Replace with new seal ring. Temporary repairs may be made by turning the seal ring over. D. Replace with new stem O-ring and/or cartridge.	
PROBLEM	**POSSIBLE CAUSE OR CAUSES**
2. Pressure and fixture flow unsteady.	A. Low water supply pressure in mains caused possible by high area demands during certain periods of the day. B. Heavy periodic demands by appliances in the house.
SOLUTION:	
A. This is a water department problem. It is due to the mains being inadequate for the demands made on them. B. House service lines may at times be inadequate for the load. The size of some pipelines may need to be increased. Pressure setting of reducing valve may be too low. C. Try increasing pressure before changing pipelines.	
PROBLEM	**POSSIBLE CAUSE OR CAUSES**
3. Small inadequate flow from fixtures.	A. Pipelines to fixtures may be too small or house main supply may be inadequate for normal fixture demand. B. Heavy periodic demands by appliances in the house. C. Screen clogged with debris.
SOLUTION:	
A. It may be necessary to increase pipe size only in some sections of the system leading to the offending appliances or fixtures. Increasing the house service mains might be necessary if small supply is general at all fixtures. B. Raise pressure gradually by readjusting valve until this point is determined. C. Clean screen.	
PROBLEM	**POSSIBLE CAUSE OR CAUSES**
4. Valve appears to be noisy, hums, whistles or chatters.	A. Hum or whistle is usually caused by high velocity of flow in pipelines causing vibration. B. Chatter usually originates with worn seat washer or loosely installed seat ring.
SOLUTION:	
A. Pipelines could be small or too light. Reducing valves could be too small. Pipes and valves being small would accentuate this condition. B. Inspect seal ring. If a deep channel appears on seal ring face, replace or use the opposite side. C. Frequently, noise appears in a faucet or appliance and seems to originate in the reducing valve. There is a general tendency to use streamline piping of a relatively small size. Velocity is naturally high, and noise of the fast-moving-water is not unusual. D. Make sure there is at least 5 diameters of straight pipe upstream.	