

Description:

The FCP Flow Control Pilot Valve automatically reduces a higher inlet pressure to a lower outlet pressure. It is a direct acting, spring-loaded, diaphragm type valve that operates hydraulically and is designed to maintain a pre-set pressure. When used as a pilot control with a Flomatic Automatic Control Valve, it will hold a constant downstream pressure at a pre-set pressure. See cross section drawing on back page.

Operation:

The Flow Control Pilot Valve is normally held open by the force of the compression spring above the diaphragm; delivery pressure acts on the diaphragm. The flow thru the valve responds to changes in the down stream pressure.

Installation:

Installation must be performed by qualified, licensed personnel only.

The Flow Control Pilot Valve may be installed in any position. There is one 3/8" NPT inlet port (sensing port) and one 3/8" outlets (two ports optional), for either straight or angle installation. The second outlet port can be used for a gauge connection (1/4" NPT optional, add **GP** to part number). A flow arrow is marked on the body casting.

Adjustment Procedure:

The Flow Control Pilot Valve Model FCP can be adjusted to provide a delivery pressure range as specified on the data plate (25-175 PSI standard range other spring ranges are available)

Pressure adjustment is made by turning the adjustment screw (first remove metal protective cap and loosen jam nut on adjustment screw) to vary the spring pressure on the diaphragm. The greater the compression on the spring the higher the pressure setting.

1. Turn the adjustment screw in (clockwise) to increase delivery pressure.
2. Turn the adjustment screw out (counter-clockwise) to decrease the delivery pressure. When pressure adjustment is completed, tighten jam nut on adjustment screw and replace protective cap.

For best operation, observes the minimum flow rates given in the table are for the main valve on which the FCP is installed:

Control Valve Size	1-1/4" thru 3"	4" thru 8"	10" thru 16"
Minimum Flow GPM	15-30	50-200	300-650

Maintenance:

Annual inspection and maintenance is required of all plumbing system components. To ensure proper performance and maximum life, the FCP must be inspected, tested and cleaned on a regular basis.

Disassembly:

To disassemble follow the sequence of the item numbers assigned to parts on the cross section drawing on the reverse side of this sheet.

Reassembly:

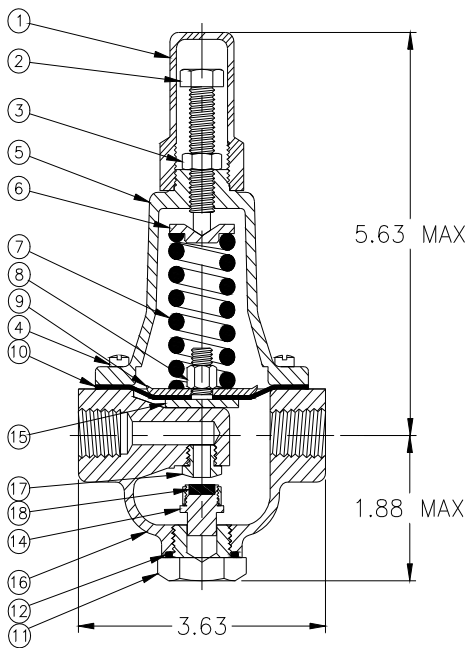
Reassembly is the reverse of the disassembly. Caution must be taken to avoid having the yoke (15) drag on the inlet nozzle of the body (18). Follow this procedure:

1. Place yoke (15) in body and screw the disc retainer assembly (14) until it bottoms.
2. Install gasket (12) onto plug (11) and screw into body (with spring for lower spring ranges than 30 PSI). Disc retainers must enter guide hole in plug as it is assembled. Screw the plug in by hand. Use wrench to tighten only.
3. Place diaphragm (10) and diaphragm plate (9) on yoke (15). Screw on diaphragm nut (8) finger tight.
4. Aligned the diaphragm holes to the valve body screw holes before tightening of nut (8) with the yoke centered on valve seat. Pull yoke to open and lower yoke closed positions with no evidence of yoke contacting or dragging valve body.

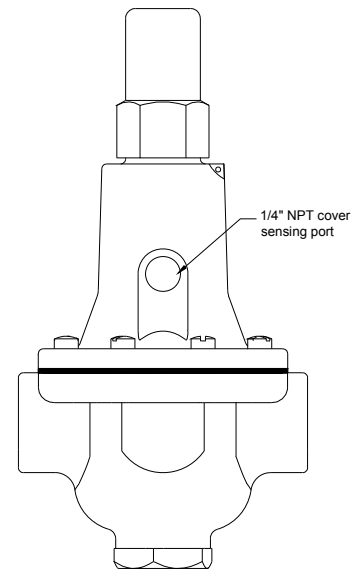
Important: check for proper yoke/diaphragm alignment rotate diaphragm clockwise and then counterclockwise as far as possible. Diaphragm holes should rotate equal distance on either side of valve body screw holes $\pm 1/8"$.

5. Install spring (7) with spring button (6) on top of spring.
6. Install cover (5), adjusting screw (2) with jam nut (3) using eight machine screws (4).
7. Attach metal adjustment cap (1) hand tight and lock in position with a fine wire to prevent tampering with pressure setting

Trouble Shooting Guide		
Problem:	Possible Cause:	Possible Solutions:
Fails to regulate a higher pressure when pressure lowers.	No spring compression.	Tighten adjusting screw to give higher discharge pressure.
	Damaged spring	Disassemble & replace spring.
	Spring button (6) is not in place	Disassemble & place spring button (6) on top of spring (7).
	Yoke dragging on sides of inlet nozzle	Check for proper yoke/diaphragm alignment. Rotate diaphragm clockwise & then counterclockwise as far as possible. Diaphragm holes should rotate equal distance on either side of valve body screw holes $\pm 1/8"$.
Fails to regulate a lower pressure when delivery pressure rises	Spring is too compressed	Back off adjusting screw to give a lower discharge pressure.
	Mechanical seat area obstruction	Disassemble & remove foreign material obstruction.
	Worn disc	Disassemble, remove & replace disc retainer (14).
	Yoke dragging on inlet nozzle	Refer to paragraph 6
	Damaged diaphragm (10)	Disassemble & replace
Leakage from cover or vent hole	Loose diaphragm nut (8)	Remove cover & tighten diaphragm nut (8)
	Damaged Diaphragm	Disassemble PRP unit & replace diaphragm



Item #	Description:
1	Adjustment Cap
2	Adjustment Screw
3	Jam Nut
4	Screw
5	Cover
6	Spring Button
7	Spring
8	Diaphragm Nut
9	Diaphragm Plate
10	Diaphragm
11	Body Plug
12	O'Ring
13	Pipe Plug (optional / not shown)
14	Disc Retainer
15	Yoke
16	Body
17	Seat
18	Disc



Information needed to order repair parts:

Pilot Model
 Pilot Working Pressure

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 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.