Description:
The BPP Back Pressure Pilot Control Valve automatically maintains a minimum preset upstream inlet pressure regardless of variation in downstream outlet demand and 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 upstream inlet pressure at a pre-set pressure.

Operation:
The BPP valve is normally held closed 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 upstream pressure.

Installation:
Installation must be performed by qualified, licensed personnel only.
The BPP Valve may be installed in any position. There is one 3/8” NPT inlet port and one 3/8” outlet port (two ports optional), for either straight or angle installation. The third port (1/4” NPT) is a sensing port which connects to the controlling pressure. A flow arrow is marked on the body casting.

Adjustment Procedure:
The BPP Valve can be adjusted to provide an upstream pressure range as specified on the label (25-125psi standard spring range other spring ranges are available).

Pressure adjustment is made by turning the adjustment screw (first remove plastic adjustment 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 upstream pressure.
2. Turn the adjustment screw out (counter-clockwise) to decrease the upstream 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 BPP 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 BPP must be inspected, tested and cleaned on a regular basis.

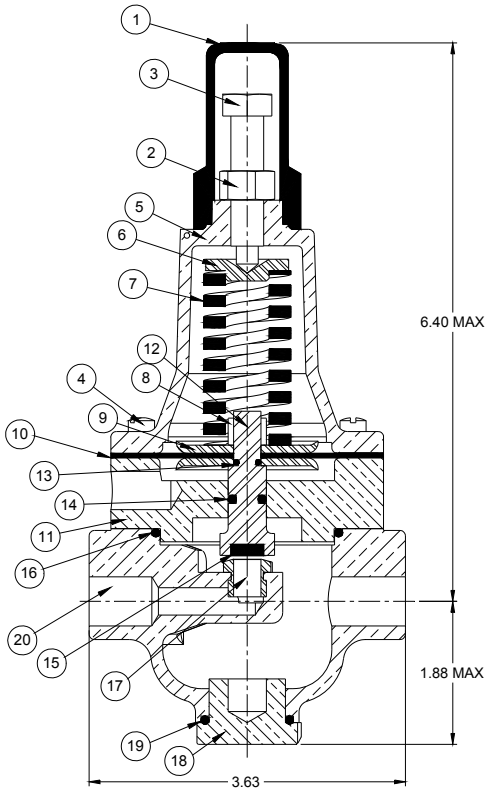
Disassembly:
To disassemble follow the sequence of the item numbers assigned to parts on the cross section drawing on the reverse side of this sheet.

Reassembly:
Reassembly is the reverse of the disassembly. Follow this procedure:

1. Install o-ring (19) onto plug (18) and screw into body (20). Screw the plug in by hand. Use wrench to tighten only.
2. Install seat (17) into body (20). Use socket to tighten only.
3. Install o-ring (14) onto center groove on stem (12) and install o-ring (13) onto stem (12) in groove at the bottom of the thread.
4. Install stem (12) into spacer (11).
5. Assemble diaphragm plate (9) onto stem (12) with the radius facing up. Install the diaphragm (10) onto the stem. Install the second diaphragm plate (9) onto the stem (12) with the radius facing the diaphragm (10). Tighten the hex nut (8) hand tight onto the stem (12). Using a wrench on the bottom of the stem (12) and a wrench on the hex nut (8) tighten until snug.
6. Install o-ring (16) onto spacer (11).
7. Install spacer (11) onto body (20). Be sure to align machine screw holes with the threads in the body and position the ¼” NPT in the spacer to its original position in order to re-attach the piping.
8. Install spring (7) with spring button (6) on top of spring.

9. Install cover (5), adjusting screw (3) with jamb nut (2) using eight machine screws (4).
10. Attach black plastic 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 upstream pressure
	Damaged spring	Disassemble & replace spring
	Spring button is not in place	Disassemble & place spring button on top of spring
	Damaged diaphragm	Disassemble and replace diaphragm.
Fails to regulate a lower pressure when upstream pressure rises	Spring is too compressed	Back off adjusting screw to give a lower upstream pressure
	Mechanical seat area obstruction	Disassemble & remove foreign material obstruction
	Worn disc in stem	Disassemble, remove & replace stem
	Damaged diaphragm	Disassemble & replace diaphragm
Leakage from cover or vent hole	Loose diaphragm nut	Remove cover & tighten diaphragm nut
	Damaged diaphragm	Disassemble BPP unit & replace diaphragm
	Loose cover screws	Tighten cover screws



Item #	Description:
1	Adjustment Cap
2	Jam Nut
3	Adjustment Screw
4	Screw
5	Cover
6	Spring Button
7	Spring
8	Diaphragm Nut
9	Diaphragm Plate
10	Diaphragm
11	Spacer
12	Stem
13	O’ring
14	O’Ring
15	Disc
16	Spacer O’Ring
17	Seat
18	Body Plug
19	Plug O’ring
20	Body

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.