

DESCRIPTION:

Model 2PR-SC-BT is a pilot operated pressure reducing valve designed to automatically reduce a high inlet pressure into a lower outlet pressure. The valve will maintain a relatively steady downstream pressure regardless of fluctuations in the supply pressure or flow rate.

The valve is equipped with two pressure reducing pilots. A latching solenoid with timer selects one of the two pilots thereby providing a selectable set point during certain times of day. Latching the solenoid open selects the higher set point.

NOTE: With any manufactured product there is a risk of malfunction in service, whether by operating conditions such as a plugged strainer or normal wear and tear. Singer Valve recommends regular maintenance with frequency to suit the importance to customer's application. We draw attention to our warranty which limits our responsibility to defects in workmanship and materials only. See Singer Valve Inc. Warranty IOM 613 attached and forming part of this Instruction and Operating Manual.

Unless otherwise specified, the valve will be assembled for service temperatures to 180°F (80°C).

DESCRIPTION OF OPERATION:

Main Valve (1) is normally open when pressure is applied to the valve inlet. When the same pressure is applied to the bonnet, the valve closes tight. Refer to 106/206-PG 'Description of Operation'. By controlling the pressure in the bonnet, the valve can be made to open fully, close tight or open partially.

The bonnet pressure (and therefore the position of the Main Valve) is controlled by a pilot circuit consisting of Fixed Restriction (5) and Pressure Reducing Pilot (7A) or (7B).

When there is no demand (and the downstream pressure is at the setting of Pilot (7)), Pilot (7) is closed. Pressure from the inlet side of the valve is directed to the bonnet through Fixed Restriction (5) and Flow Stabilizer (4). The Main Valve closes. When flow is required, Pilot (7) senses a drop in downstream pressure and opens. The flow through Pilot (7) is greater than flow through Fixed Restriction (5). Bonnet pressure is reduced and the valve opens to supply the demand. Speed of opening is determined by the setting of Flow Stabilizer (4). Refer to Model 26 instructions for details and adjustment.

Under flowing conditions, Pilot (7) reacts to small changes in downstream pressure and modulates the bonnet pressure (and Main Valve position) as required to keep the downstream pressure constant. Note that Main Valve position follows the position of Pilot (7). When Pilot (7) closes, the Main Valve closes. When Pilot (7) opens, the Main Valve opens.

Only one pilot (7A) or (7B) controls Main Valve (1). When Solenoid Valve (10) is latched closed (OFF), Pilot (7B) controls the Main Valve. When Solenoid Valve (10) is latched open (ON), Pilot (7A) controls the Main Valve.

INSTALLATION:

1. Refer to 106/206-PG 'Installation'.
2. Installation where there is loosely held piping and/or elbows close to the valve may cause the valve to pulsate.

ADJUSTING PROCEDURE:

1. Open Isolating Valves (2), (6) and (8).
2. Crack outlet stop valve and slowly open inlet stop valve wide.
3. Bleed air from Main Valve bonnet. SEE 106/206-PG 'INSTALLATION'.
4. Open outlet stop valve wide.
5. Latch Solenoid Valve (10) close (OFF) when setting Pilot (7B).
6. Set reduced (downstream) pressure by turning pilot adjusting screw: To increase pressure, turn adjusting screw clockwise. - To reduce pressure, turn adjusting screw counterclockwise.

NOTE THAT THERE MUST BE FLOW THROUGH THE VALVE WHEN PRESSURE IS ADJUSTED.

7. Latch Solenoid Valve (10) open (ON) when setting Pilot (7A). Repeat step 6 for pilot (7A).
8. REFER TO RAINBIRD TIMER INSTALLATION AND SET-UP MANUAL.
9. IF THE VALVE DOES NOT OPEN (pressure remains low), check the adjustment of Flow Stabilizer (4). SEE MODEL 26 INSTRUCTIONS.
10. IF THE VALVE BEGINS TO OSCILLATE OR HUNT:
 - Bleed air from Main Valve bonnet. SEE 106-PG/206-PG 'INSTALLATION'.
 - Adjust Flow Stabilizer (4). SEE MODEL 26 INSTRUCTIONS.