SINGER VALVE
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MODEL 106/206-PGX

Main Valve with Spring Lift
Installation, Operating and Maintenance Instructions
Size 2" Drawing A0630D Size 2-1/2" – 8" Drawing A0722C

DESCRIPTION:

Model 106/206-PGX is a hydraulically operated, diaphragm actuated globe valve. The valve has an external spring lift assembly to open the valve under no pressure conditions.

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

OPERATION:

The valve is normally open when no pressure is applied to the bonnet. An external pressure that is a minimum of 5 psi higher than the inlet pressure of the valve is required for operation. When this external pressure is directed to the bonnet, the valve closes. By varying the pressure in the bonnet with a SINGER Automatic Pilot Circuit the valve can be made to modulate. This varies the flow to meet required service conditions.

STORAGE:

This valve must be stored indoors, away from direct sunlight.

INSTALLATION:

Use washers under nuts when bolting valve flanges to pipe flanges to protect the Epoxy Coating.

1. **It is possible that diaphragms may take a set after shipping and storage. It is highly recommended that Bonnet and Body Bolts or Nuts be tightened after installation but before pressurizing the valve. If a leak develops after pressurizing, de-pressurize the valve and tighten the bolts or nuts.**
2. **These installation instructions apply to a by-pass pump control valve.**
3. Sufficient space should be provided around the valve for dismantling.
4. This valve should be installed with the stem vertical.
5. Check direction of flow (arrow cast on body) and install the valve accordingly.

SERVICE SUGGESTIONS:

FAILS TO OPEN

Pressure in the bonnet is not released due to:

- Isolating valves on pilot lines closed./ Open valves.
- Pilot components not functioning. / Refer to specific instructions on pilot components.
- Foreign material in pilot system. / Clear obstructions.

FAILS TO CLOSE

Lack of pressure in the bonnet due to:

- Pilot components not functioning. / Refer to specific instructions on pilot components.
- Foreign material in pilot system. / Clear obstructions.
- Ruptured diaphragm. / Replace diaphragm.
- Obstruction in valve. / Remove obstruction
- Worn inner valve disc. / Replace disc.
- Insufficient external pressure. / External pressure must be at least 5 psi higher than the valve inlet pressure.

MAINTENANCE:

SINGER Model 106/206-PGX requires a minimum of maintenance. All parts are accessible for inspection and repair without removing the valve from the line.

1. De-pressurize the valve.
2. Disconnect body and bonnet pilot lines.
3. Dismantle the spring lift assembly.
4. Remove the bonnet. If bonnet does not come free readily, it can be pried loose with a small pry-bar.
5. Remove the inner valve assembly for inspection. Do not attempt to remove the seat ring unless inspection shows that seat is damaged.
6. Replace worn or defective parts and reassemble.

NOTE REGARDING FREEZING:

This valve does not drain completely when inlet and outlet pipes are drained. Where freezing conditions are expected, one of the following must be performed:

1. Drain valve and pilot system completely.
2. Provide insulation and/or heating to keep the valve from freezing.