

Solenoid Valves for Boiler Applications

Full Port- Normally Closed Internal Pilot Operated

1.0 Installation

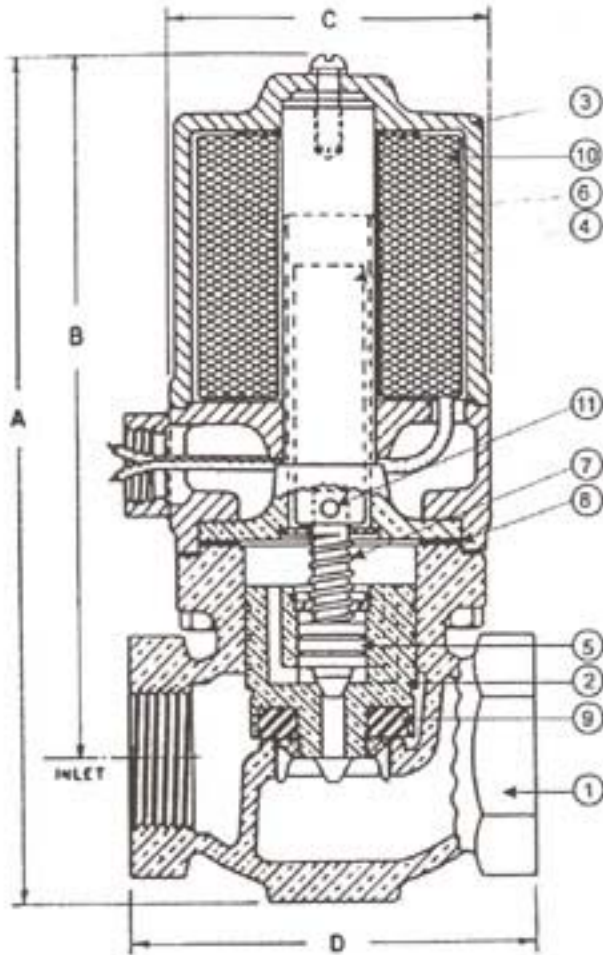
- Valve must be mounted in horizontal pipe with solenoid enclosure vertical and on top.
- Direction of flow as per arrow on body.
- Apply pipe dope sparingly on male pipe threads.
- Support piping to avoid strains on valve.
- Water valves must never be subjected to freezing weather.

2.0 Wiring

- Remove nameplate to connect coil.
- Controller output replay must always be wired into hot leg of line.

3.0 Maintenance

- To reach the moving parts, remove the lower or flange bolts, then use a screwdriver between the valve and solenoid to loosen it. Lift off vertically to avoid bending the internal parts. Do not disturb lock screw on top of the solenoid.
- If leakage through the valve develops, examine the valve disc and replace if worn. **CAUTION! Do not distort the piston by holding it in a vise.** To remove the pilot valve, insert a scriber or similar pointed tool in the slot provided in the top of the piston and pry off clamping spring. Replace the clamping spring in recess when reassembling.
- The magnet plunger and inside of the bonnet tube should be wiped clean of sediment if and A.C. hum develops. Tighten flange bolts evenly when reassembling the solenoid housing on the valve body.
- To uncover the coil, remove the screw on top of the solenoid. To reassemble, it is best to have the solenoid base mounted on the valve;; coil rests on the base with leads down; coil binder washer is on top of the coil with prongs up. The screw on top of the solenoid must be tightened firmly.



4.0 Operation

Valve opens when energized and closes when de-energized. When the coil is energized, the pilot valve opens, relieving the pressure above the piston which is then lifted from its seat by the laminated plunger. Upon de-energizing the coil, a spring closes the pilot valve and opens a bleed passageway to permit pressure to build above the piston and seat it.

Construction:

*1 Valve body	Cast bronze, globe pattern
*2 Piston	Cast bronze
3 Coil enclosure	Malleable or cast iron
*4 Plunger	430 S.S.
*5 Pilot valve	303 S.S.
*6 Bonnet tube	304 S.S.
*7 Spring	Inconel
*8 Body seal	Non-asbestos gasket
*9 Orifice seal	Glass filled Teflon®
*10 AC shading coil	Copper
11 Coil	Encapsulated Class H, 18" lead
*12 Stem pin	Inconel

* Wetted parts in contact with fluid

5.0 Application

To control the flow of hot liquids, hot gases, cryogenics and any other fluids not reactive with construction materials. Fluids must be free of sediment. Valve **MUST** be mounted in horizontal pipe with solenoid enclosure vertical and on top.

Solenoid Valve P/N	Size	Max Diff. Pressure	Max Temp. °F	Dimensions Inches			
				A	B	C	D
190842	½"	100 PSI	400°F	7	5 7/8	2 7/8	3 ¼
190840	½"	300 PSI		8	6 7/8	3 ½	
190843	¾"	100 PSI		7 7/8	6	2 7/8	3 ½
190841	¾"	300 PSI		8 1/8	7	3 ½	