



PRESSURE SUSTAINING VALVE with SOLENOID (On-Off) and HYDRAULIC CHECK FEATURE

01/05

Classic Series

F116-32 (Globe)

F1116-32 (Angle)

Operation

The Watts ACV Pressure Sustaining and Solenoid (On-Off) Control Valve with Hydraulic Check Feature is designed to permit flow when upstream pressure is above the adjustable setpoint of the control pilot, and throttle toward closed when upstream pressure falls below the adjustable setpoint. It is controlled by a normally closed control pilot designed to: 1) Open (allowing fluid out of the main valve cover chamber) when upstream pressure is above the adjustable setpoint, and, 2) Close (allowing fluid to fill the main valve cover chamber) when upstream pressure is below the adjustable setpoint. An increase in upstream pressure causes the valve to modulate toward an open position. A decrease in upstream pressure causes the valve to modulate toward a closed position.

The Solenoid Pilot will either open to allow regulating action, or close the valve drip-tight when energized. **Specify energize to open or close the Main Valve and voltage PRIOR to ordering.**

If downstream pressure becomes greater than upstream pressure, downstream pressure is admitted to the main valve cover chamber, closing the valve and preventing reversal of flow. Normal backpressure or sustaining operation resumes when upstream pressure exceeds downstream pressure.

When the valve is located “in line” **connecting two distribution zones**, the valve acts as a **Pressure Sustaining Control Valve**. When pressure in the upstream zone falls below the pilot setting, the valve modulates toward a closed position, **sustaining** pressure in the upstream zone. The valve will close, if necessary, until upstream pressure is above the pilot setting. The valve should be specified to include the optional **opening speed control** and **position indicator** when used for Pressure Sustaining applications.



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Installation Guidelines

- Prior to installation, flush line to remove debris.
- Install valve horizontally “in line” (cover facing UP), so flow arrow matches flow through the line. Avoid installing valves 6” or higher vertically. Consult factory **prior** to ordering if installation is other than described.
- Install inlet and outlet isolation valves. **NOTE:** When using butterfly valves, insure disc does not contact control valve. Damage or improper valve seating may occur.
- Provide adequate clearance for valve servicing and maintenance,
- Install pressure gauges to monitor valve inlet and outlet pressure.
- Connect Solenoid to proper electrical source in compliance with local electrical codes.

Other Watts ACV Pressure Relief / Backpressure or Sustaining Control Valves

F116 / F1116	Pressure Relief / Backpressure or Sustaining Valve
F116-5 / F1116-5	Backpressure / Sustaining Valve with Hydraulic Check Feature
F116-31 / F1116-31	Pressure Sustaining Valve with Solenoid (On-Off) Feature
F116-52 / F1116-52	Surge Anticipator and Pressure Relief Valve