



PRESSURE REDUCING and SUSTAINING VALVE with HYDRAULIC CHECK FEATURE

01/06

910 Series

—Model— **912-01**
612-01

Operation

The AMES Model 912-01 / 612-01 Combination Pressure Reducing and Sustaining Control Valve with Hydraulic Check Feature is designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates, and will throttle to sustain a minimum upstream pressure. It is controlled by a normally open, pressure reducing pilot designed to: 1) Open (allowing fluid out of the main valve cover chamber) when downstream pressure is below the adjustable setpoint, and 2) Close (allowing fluid to fill the main valve cover chamber) when downstream pressure is above the adjustable setpoint. A decrease in downstream pressure causes the valve to modulate toward an open position, raising downstream pressure. An increase in downstream pressure causes the valve to modulate toward a closed position, lowering downstream pressure.

The normally closed sustaining pilot remains open when upstream pressure is above the adjustable setpoint, and modulates toward a closed position if upstream pressure falls below the setpoint. As the sustaining pilot closes, fluid is directed into the main valve cover chamber, allowing the valve to modulate toward a closed position, raising upstream pressure. Normal pressure reducing operation resumes when upstream pressure is above the sustaining pilot setpoint, and downstream pressure is below the reducing pilot setpoint.

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.



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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” and larger 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.
- If installation is subjected to very low flow or potentially static conditions, AMES recommends a pressure relief valve (1/2” minimum) be installed downstream of the Pressure Reducing Valve for additional system protection.

Other AMES Pressure Reducing Control Valves

910 / 610	Pressure Reducing Valve
910-01 / 610-01	Pressure Reducing Valve with Hydraulic Check Feature
910-11 / 610-11	Pressure Reducing Valve with Downstream Surge Control Feature
910-15 / 610-15	Pressure Reducing Valve with Solenoid (On-Off) Feature
910-17 / 610-17	Pressure Reducing Valve with Return Flow Feature
910-48 / 610-48	Pressure Reducing Valve with Low Flow By-Pass
912 / 612	Pressure Reducing and Pressure Sustaining Valve