PRESSURE REDUCING VALVE with LOW FLOW BY-PASS

01/06

910 Series

Model 910-48 / 610-48

Operation

The AMES Model 910-48 / 610-48 Pressure Reducing Control Valve with Low Flow By-Pass is designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates. 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.

A Low Flow By-Pass Valve is piped parallel to the Main Pressure Reducing Valve, and is set approximately ***10 PSI higher***. The Low Flow By-Pass handles flow requirements below the range of the Main Pressure Reducing Valve. During “off peak” demand conditions, the Low Flow By-Pass provides flow and pressure to the downstream zone. As flow requirements increase beyond the capacity of the Low Flow By-Pass, downstream pressure falls below the setpoint of the Main Pressure Reducing Valve allowing it to throttle toward open, supplementing flow and pressure. As flow requirements decrease, downstream pressure rises above the setpoint of the Main Pressure Reducing Valve, causing it to throttle toward closed, allowing the Low Flow By-Pass to resume command of flow and pressure.

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
912 / 612	Pressure Reducing and Pressure Sustaining Valve
912-01 / 612-01	Pressure Reducing and Sustaining Valve with Hydraulic Check Feature