Pressure Reducing Control Valve

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ACVxx-HF-PR (Full Port: 3" - 6")
ACVxx-PR (Reduced Port: 4"- 8")

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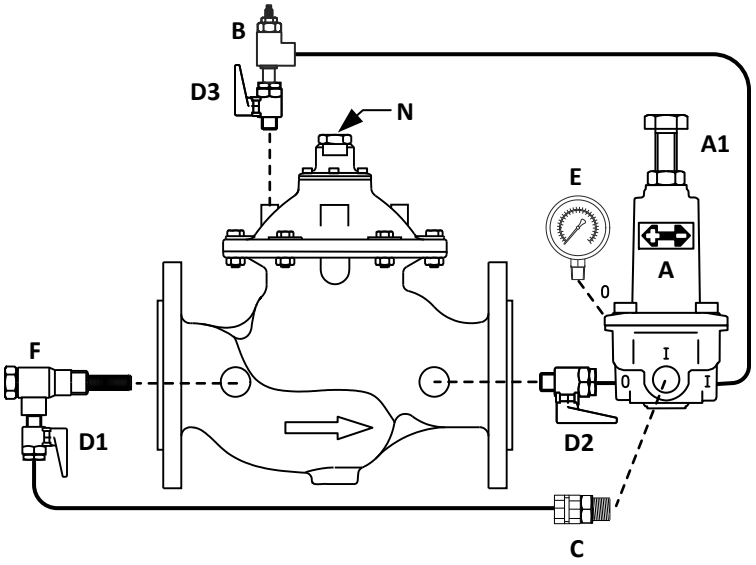
- Reduces a fluctuating higher inlet pressure to a constant lower outlet pressure
- Outlet setpoint is adjustable
- Valve will regulate near-zero flow without the use of special trim or low-flow bypass
- Stainless Steel Body and Cover Port Sleeves provide corrosion resistant service

Standard Components

A – Pressure Reducing Pilot
B – Adjustable Speed Control
C – Orifice / Nozzle
D – Ball Valve
E – Pressure Gauge
F – Removable Self Cleaning Strainer
N – Air Bleed Valve

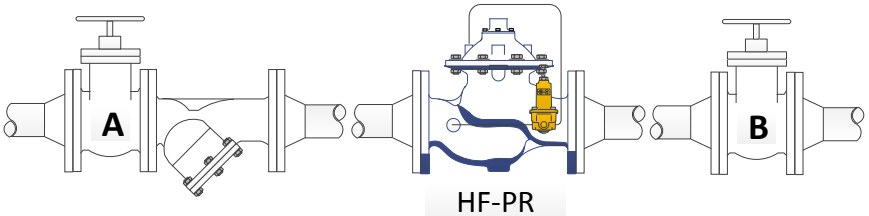


Operation

The BEECO Model "PR" Pressure Reducing Control Valve is a pilot controlled diaphragm valve designed to reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates. It is controlled by Pressure Reducing Pilot (A) which internally senses downstream pressure, and allows fluid out of the main valve control chamber when downstream pressure is below the adjustable setting, and fluid to fill the main valve control chamber (through Orifice / Nozzle C) when downstream pressure is above the adjustable setting.

A decrease in downstream pressure below the adjustable setting of Pressure Reducing Pilot (A) causes the valve to modulate toward an open position, raising downstream pressure. An increase in downstream pressure above the adjustable setting causes the valve to modulate toward a closed position, lowering downstream pressure.

Typical Installation



HF-PR

The Model PR throttles to reduce a high inlet pressure to a constant lower outlet pressure from near zero to the maximum flow rate per valve size without the need for an additional Low-Flow Bypass Valve.

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Pressure Reducing Control Valve

ACVxx-HF-PR (Full Port)
ACVxx-PR (Reduced Port)

Specification

The Pressure Reducing Control Valve shall be a pilot controlled diaphragm valve designed to automatically reduce a fluctuating higher upstream pressure to a constant lower downstream pressure regardless of varying flow rates.
The valve shall be capable of stable throttling from a minimum of <5 gpm to the rated capacity of the valve size without the use of an external low-flow bypass valve arrangement.

The valve Body and Cover shall be Ductile Iron ASTM A536 internally and externally epoxy lined and coated with (Threaded, ANSI 150 Flanged, ANSI 300 Flanged, Grooved) end connections. All control port connections shall be stainless steel to prevent corrosion and blockage. Direction of flow through shall be clearly indicated by a large highly visible flow arrow cast into the Valve Body. All external fasteners shall be stainless steel.

The Diaphragm shall be constructed of nylon reinforced EPDM and contour formed and molded to evenly contact the support surfaces of the Body and Cover without buckling or wrinkling when installed. The Disc and Diaphragm Assembly shall contain an EPDM Seal Disc

The Disc and Diaphragm Assembly must be separately top and bottom guided to avoid deflection and assure positive disc-to-seat contact. All valve internal and throttling components shall be Stainless Steel.

The Pilot Control System shall contain a Flo-Clean Strainer, a Bronze Pressure Reducing Pilot with pre-installed liquid filled pressure gauge, an Adjustable Valve Speed Control, Type B Nylon Core Fiber Reinforced and Jacketed Control Tubing conforming with SAEJ844 / DOT FMVSS 49CFR 571.106 with Brass Fittings, and Isolation Ball Valves on all Body and Cover port connections.

The Main Valve with Pilot Control System installed shall be factory tested hydrostatically to 160% of the maximum working pressure and functionally flow tested to assure proper valve performance prior to shipment. The valve shall be certified Lead Free in conformance to NSF 61 Annex G.

The valve will be sized as shown on the plans and associated valve schedules, and shall be BEECO Model ACV-PR (Reduced Port) or ACV-HF-PR (Full Port) Pressure Reducing Control Valve.

Other BEECO Pressure Reducing Control Valves (xx = size)

ACVxx-PR-CV / ACVxx-HF-PR-CV	Pressure Reducing Control Valve w/ Hydraulic Check Feature
ACVxx-PR-EL / ACVxx-HF-PR-EL	Pressure Reducing Control Valve w/ Electric On-Off Feature
ACVxx-PR-PS / ACVxx-HF-PR-PS	Pressure Reducing Control Valve w/ Pressure Sustaining Feature
ACVxx-PR-Q / ACVxx-HF-PR-Q	Pressure Reducing Control Valve w/ Quick-Closing Feature