PROPORTIONAL PRESSURE REDUCING VALVE

Model 720-PD-EN/ES

Hydraulically operated, diaphragm actuated, pressure reducing control valve that reduces higher upstream pressure to lower downstream pressure at a fixed ratio. The fixed pressure reducing ratio is determined with regard to valve size and plug type.

BERMAD 700 SIGMA EN/ES series valves are hydraulic, oblique pattern, globe valves with a raised seat assembly and double chamber unitized actuator, that can be disassembled from the body as a separate integral unit. The valves hydrodynamic body is designed for unobstructed flow path and provides excellent and highly effective modulation capacity for high differential pressure applications. The valves are available in the standard configuration or with an Independent Check Feature code "25". The 700 SIGMA EN/ES Valves operate under difficult operation conditions with minimal cavitation and noise. They meet size and dimensions requirements of various standards.

Features and Benefits
- Designed to - stand up to the toughest conditions
  - Excellent anti-cavitation properties
  - Wide flow range
  - High stability and accuracy
  - Drip tight sealing
- Double chamber design
  - Moderated valve reaction
  - Protected diaphragm
  - Optional operation in very low pressure
  - Moderated closing curve
- Flexible design - Easy addition of features
- Obstacle free flow pass
- V-Port Throttling Plug (Optional) - Very stable at low flow
- Compatible with various standards
- High quality materials
- In-line serviceable - Easy maintenance

Major Additional Features
- Solenoid control – 720-PD-55
- Closing & Opening speed control – 720-PD-03
- Emergency pressure reducing valve – 720-PD-59
- Pressure sustaining – 723-PD

See relevant BERMAD publications.

Typical Installation

All images in this catalog are for illustration only
Main Valve
Valve Patterns: “Y” (Globe)
Size Range:
ES Series: 2½-24”; 65-600 mm
EN Series: 1½-16”; 40-400 mm
Pressure Rating: 25 bar; 400 psi
End Connections: Flanged (all standard)
Plug Types: Flat disc, V-port, Cavitation cage
Temperature Rating: 60°C; 140°F for Cold water applications
Optional higher temperature: Available on request

Standard Materials:
Body & actuator: Ductile Iron
Bolts, nuts & studs: Stainless Steel
Internals: Stainless Steel, Tin Bronze & Coated Steel
Diaphragm: Fabric-reinforced synthetic rubber
Seals: Synthetic rubber
Coating: Dark blue Fusion bonded epoxy

Control System
Standard Materials:
Accessories: Stainless Steel, Bronze & Brass
Tubing: Stainless Steel or Copper
Fittings: Stainless Steel or Brass

Reduction Ratios Table:

<table>
<thead>
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<th>Valve Size</th>
<th>700 ES Min.</th>
<th>700 ES Max.</th>
<th>700 EN Min.</th>
<th>700 EN Max.</th>
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</table>

Notes
- Reduction ratio may vary at extreme flow velocity and upstream pressure.
- Reduction ratios are based on flow velocity of 2.0-3.0 m/sec; 6.5-10 ft/sec.
- Recommended continuous flow velocity: 0.1-6.0 m/sec; 0.3-20 ft/sec.
- Minimum operating pressure: 0.7 bar /10 psi.

For detailed Engineering & Specification data, IOM and CAD Drawings, visit the Model Page on the BERMAD website.