PRESSURE SUSTAINING VALVE

with Electric Override

Model 730-59-X

Hydraulically operated, pressure relief/sustaining control valve that can fulfill either of two separate functions: When installed in-line, it sustains minimum pre-set, upstream (back) pressure, regardless of fluctuating flow or varying downstream pressure. When installed as a circulation valve, it relieves excessive line pressure when above maximum pre-set. This valve is a double chamber configuration using 3-way control, being extremely responsive regardless of operating conditions, allowing full opening without the risk of hydraulic lock out. In response to an electric signal the valve switches between regulation mode and a fully open mode to override the regulation and to reduce pressure loss across the valve to a minimum.

The BERMAD 700 SIGMA EN/ES series valves are hydraulic globe valves with a raised seat and double chamber actuator. They provide unobstructed flow, effective high-pressure modulation, and minimal cavitation, complying with various potable water standards.

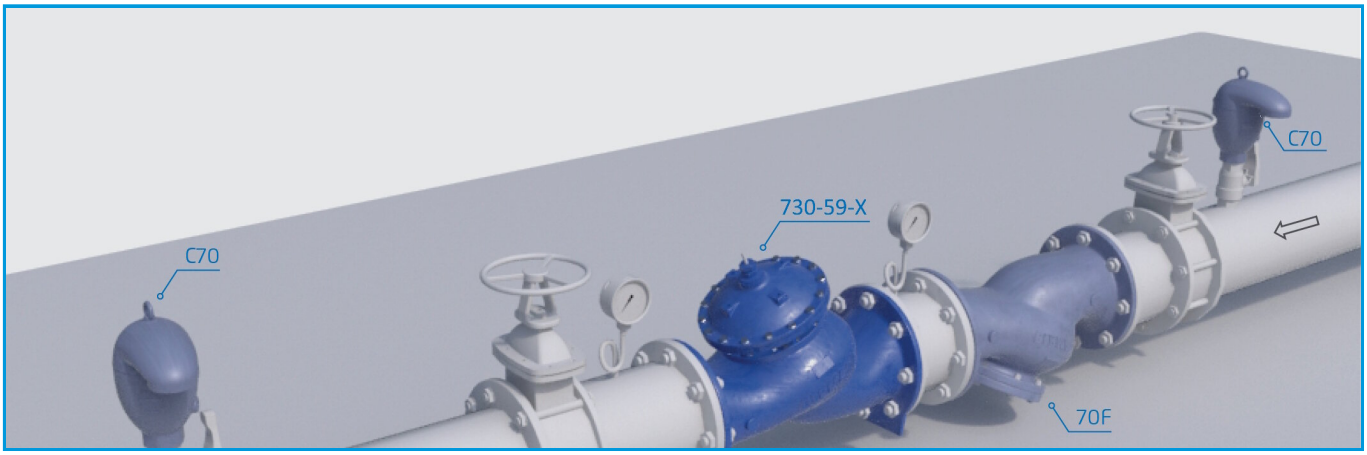
Features & Benefits

- 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

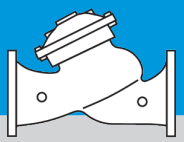
Typical Applications

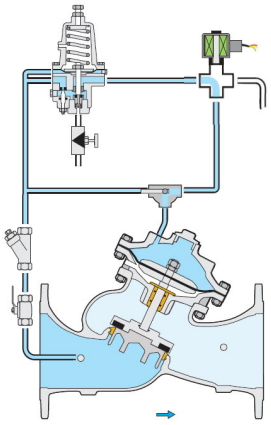
- Filtration system - Fully open with minimum pressure loss during filtration, switching to regulation and sustaining the required pressure for efficient backflush
- Water delivery system - Prioritizing upstream over downstream demand
- Pumping stations - Ensure operating point on pump curve

Typical Installation

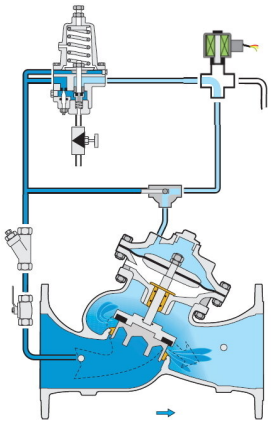


All images in this catalog are for illustration only

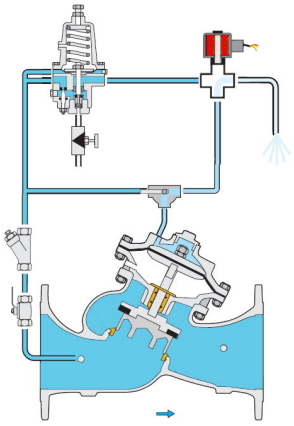




Closed



Regulating



Fully open - electric override

This drawing refers to 1½ – 12"; 40-300 mm sized valves only. For other sizes please refer to the Model's IOM.

Main Valve

Size Range:
EN Series: 1½"-16"; DN40-400
ES Series: 2½"-24"; DN65-600
Pattern: "Y" (globe)
Pressure Rating: 250 psi; 400 psi
End Connection: Flanged
Plug Types: Flat disc, V-port, Cavitation cage
Temperature Rating: 180°F
For 140–180°F consult factory

Standard Materials:

Body & Cover: Ductile Iron
Bolts, Nuts & Studs: Stainless Steel
Internals: Stainless Steel, Tin Bronze, Coated Steel & POM
Diaphragm: Fabric-reinforced synthetic rubber
Seals: Synthetic rubber
Coating: Dark blue Fusion bonded epoxy
For other materials contact BERMAD

Control System

Standard Materials:

Accessories: Stainless Steel, Bronze & Brass
Tubing: Stainless Steel or Copper
Fittings: Stainless Steel or Brass

Pilot standard materials:

Body: Stainless Steel, Bronze & Brass
Elastomers: Synthetic Rubber
Internals and Spring: Stainless Steel

Pilot Options:

Various pilots and calibration springs are available.
Select according to valve size and operating conditions.
For more details check relevant pilots product pages.

Solenoid standard materials:

Body: Brass or Stainless Steel
Elastomers: NBR or FPM
Enclosure: Molded Epoxy

Solenoid Electrical Data:

Voltages:
(AC): 24, 110-120, 220-240, (50-60Hz)
(DC): 12, 24, 110, 220
Power Consumption:
(AC): 30VA, inrush; 15VA (8W), holding or 70VA, inrush; 40VA (17.1W), holding
(DC): 8-11.6W
Values may vary according to specific solenoid model.
For more details check solenoid product page.

Notes

- Inlet Pressure, Outlet Pressure and Flow-rate are required for optimal sizing and cavitation analysis.
- Recommended continuous flow velocity: 0.1-6.0 m/sec; 0.3-20 ft/sec.
- Minimum operating pressure: 0.7 bar; 10 psi. For lower pressure requirements consult factory.

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