

BOOSTER PUMP AND FLOW CONTROL VALVE

Model 747-U EN/ES

Hydraulically operated, active check, pump control valve with two independent functions: It opens fully or shuts off in response to electric signals, isolating the pump from the system during pump startup and shutdown, thereby preventing pipeline surges. While open, it maintains a pre-set maximum flow, preventing the pump from exceeding its designed flow or power consumption.

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 "2S". 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.



[Click here for control accessories](#)



HOME VIEW

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

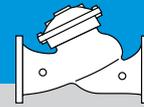
Major Additional Features

- Independent check feature – 747-2S
 - 3-Way control – 747-X
 - Pressure reducing – 742
 - Pump circulation control – 745
 - Electronic control – 740-18
- See relevant BERMAD publication

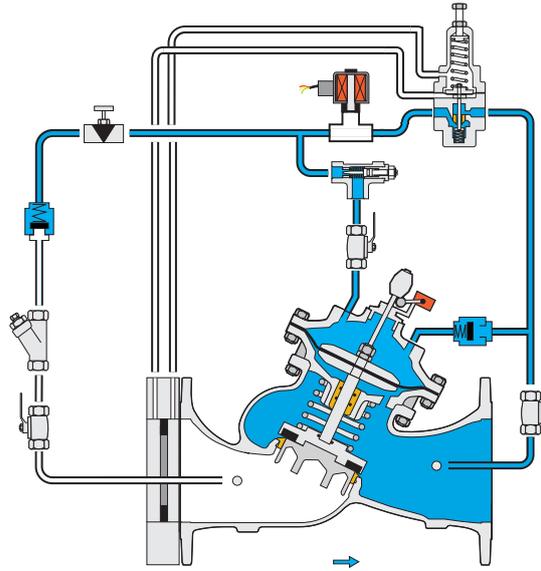
Typical Installation



All images in this catalog are for illustration only



- CLOSED
- Reverse Flow
- Regulating



This drawing refers to 1½ – 8"; 40-200 mm sized valves only. For other sizes please refer to the Model's IOM.

Main Valve

- Valve Patterns:** "Y" (Globe)
- Size Range:**
- EN Series:** 1½-16"; 40-400 mm
- ES Series:** 2½-24"; 65-600 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

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 might vary according to specific solenoid model.

Pilot standard materials:

- Body:** Stainless Steel, Bronze or Brass
- Elastomers:** Synthetic rubber
- Spring:** Stainless Steel
- Internals:** Stainless Steel

Pilot Options:

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

Limit Switch:

- Switch Type:** SPDT
- Electrical Rating:** 10A, type gl or gG
- Operating Temperature:** Up to 85°C (185°F)
- Enclosure Rating:** IP66

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.

