

DEEP WELL/BOOSTER PUMP CIRCULATION ELECTRIC CONTROL VALVE

Model 745 EN/ES

Hydraulically operated, deep well pump control valve that adds advanced “active check valve” logic to standard pump systems. The valve branches off the main line and is synchronized with the pump’s electric control; it opens during pump startup and shutdown, thereby preventing pipeline surges. It also prevents startup flow debris (such as sand and pebbles) from penetrating into the system.

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

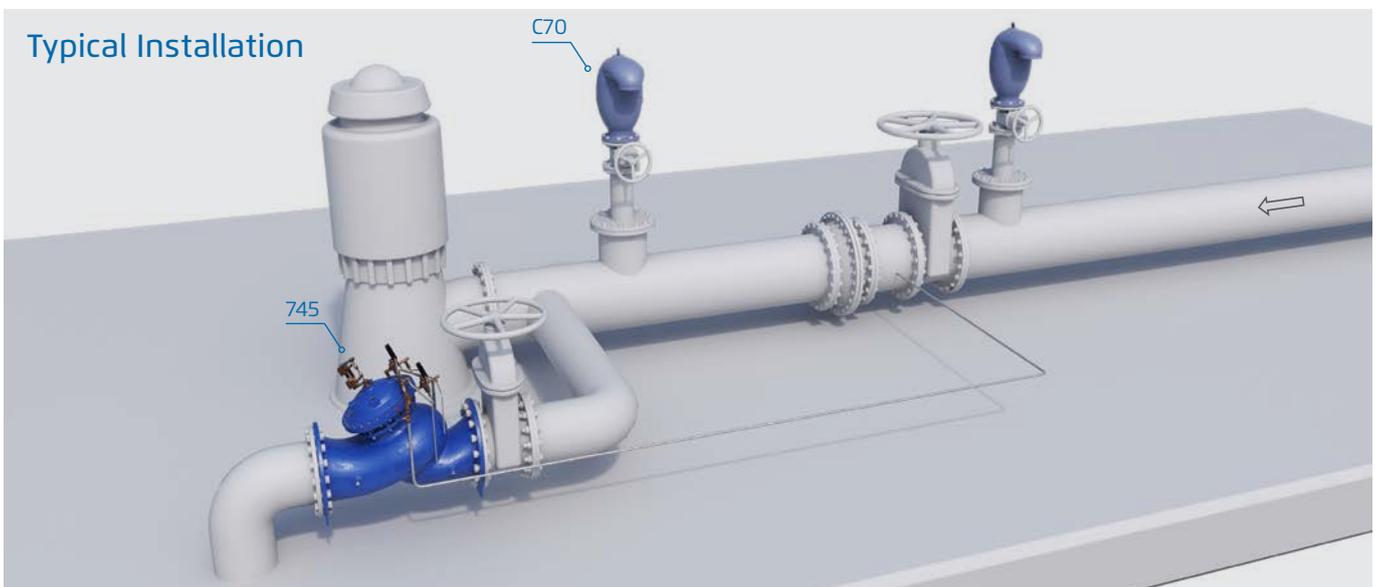
- Designed to - stand up to the toughest conditions
 - Excellent anti-cavitation properties
 - Wide flow range
 - High stability and accuracy
 - Drip tight sealing
- Double chamber design
 - Moderated valve reaction
 - Protected diaphragm
 - Optional operation in very low pressure
 - Moderated closing 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

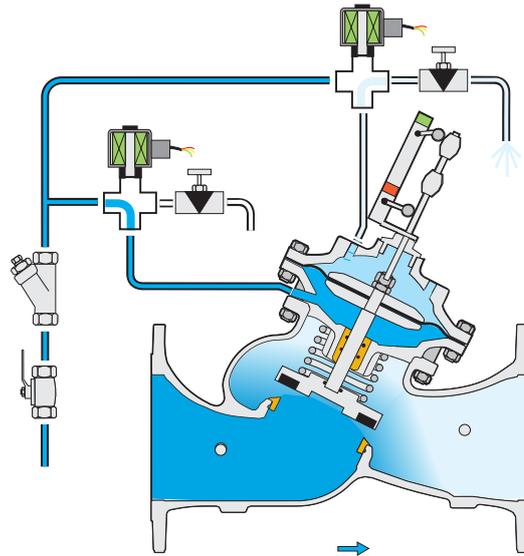
Major Additional Features

- Relief override – 745-3Q
 - Electronic control – 745-18
 - Pump circulation and flow control valve – 749-U
 - Pump Circulation and Pressure Sustaining Control Valve – 748
 - Independent Check Feature – 745-2S
- See relevant BERMAD publication

Typical Installation



All images in this catalog are for illustration only



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.
 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.

