

# SURGE-ANTICIPATING CONTROL VALVE

## with Solenoid Control and Mechanical Flow Stem

### Model 735-55-M

Hydraulically operated, solenoid controlled, off-line surge anticipating valve that immediately opens in response to an electric signal. The pre-opened valve dissipates the returning high pressure wave, eliminating the surge. The valve smoothly closes drip tight as quickly as the relief feature allows, thereby preventing closing surge. The valve also relieves excessive system pressure.

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.



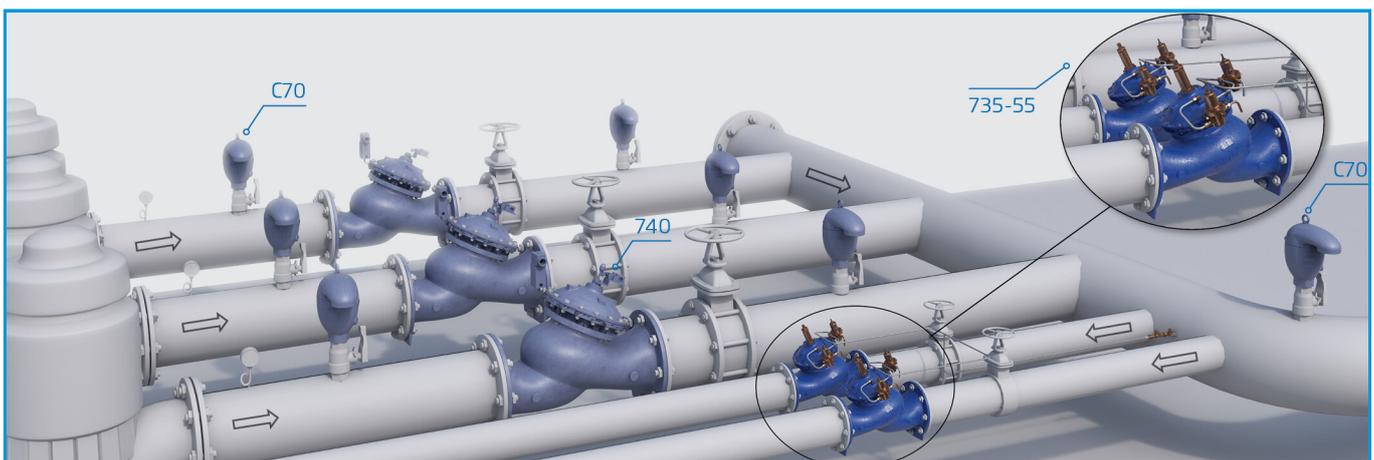
#### Features & Benefits

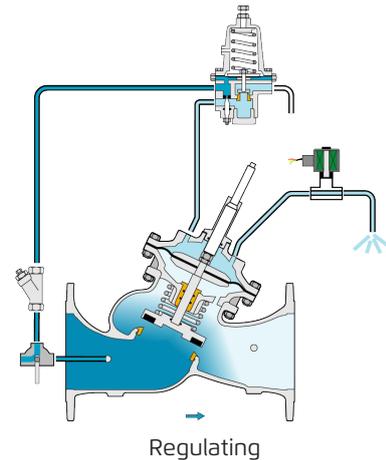
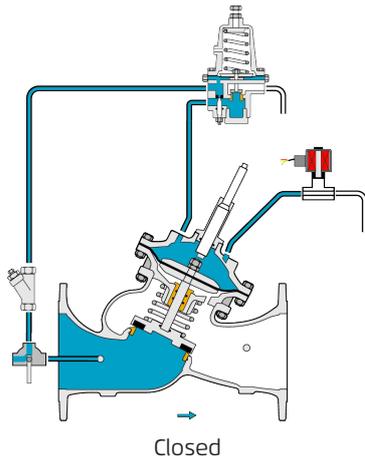
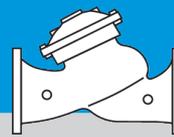
- Designed to - Stand up to the toughest conditions
  - Excellent anti-cavitation properties
  - Wide flow range
  - High stability and accuracy
  - Drip tight sealing
- Double chamber design
  - Moderated valve reaction
  - Protected diaphragm
  - Optional operation in very low pressure
  - Moderated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

- Pumping stations - Surge Control

#### Typical Installation





This drawing refers to 1½ – 4"; 40-100 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

### Solenoid standard materials:

**Body:** Brass or Stainless Steel

**Elastomers:** NBR or FPM

**Enclosure:** Molded Epoxy

### Solenoid Electrical Data:

**Voltages: (DC):** 24

**Power Consumption: (DC):** 8-11.6W

Values may vary according to specific solenoid model.

### 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.

## Notes

- Full system data is required for surge analysis and optimal valve sizing.
- A flow stem enables limiting valve opening stroke, adjusting precisely the required flow through the valve.
- Recommended maximum flow velocity: 15 m/sec; 50 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](https://www.bermad.com) website.