

24-36"; DN600-900 Hydraulic Control Valves The Biggest of the Best

- Large scale pumping systems
- National and municipal distribution networks
- Reservoir and dam level control
- Large scale industrial applications

BERMAD 24", 28", 30", 32", 36" 700 Series Control Valves are hydraulically operated, diaphragm actuated globe pattern valves.

The valve is comprised of two major components: the body assembly and the actuator assembly.

The actuator assembly is removable from the body as an integral unit. It consists of a lower & upper control chamber. It can be converted on-site from single to double chambered actuator and vice-versa according to the required control function.

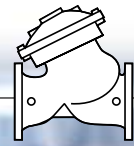


Features and Benefits

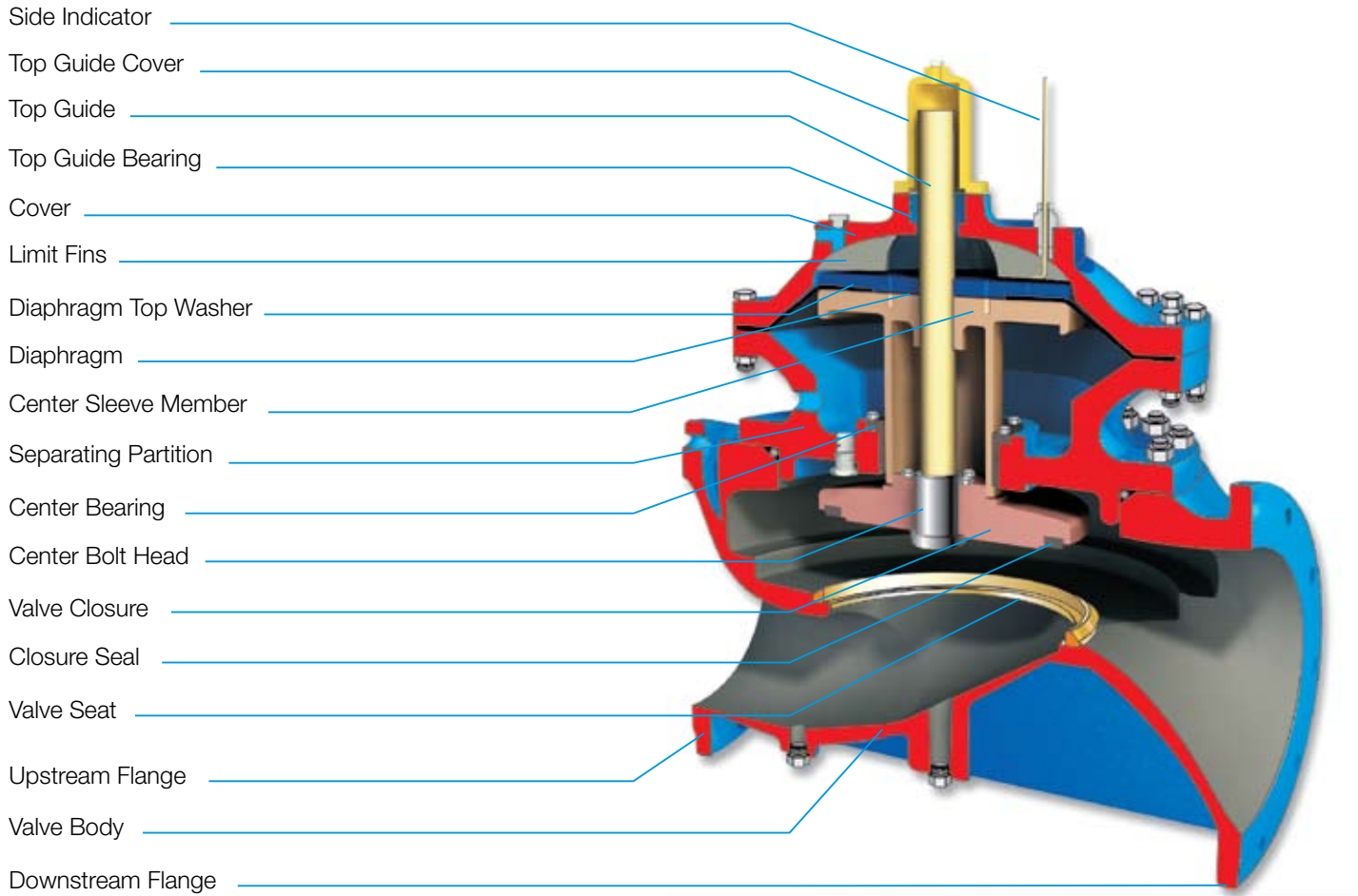
- **Globe pattern wide body with semi-straight flow:**
 - Higher flow (Kv; Cv) than standard globe pattern
 - Higher resistance to cavitation damage
- **Double chambered actuator as standard:**
 - Fast opening and non-slam closing characteristic
 - Reliable drip tight seal
 - Wide range of control function
 - Accurate control
 - Application flexibility even after installation
 - Independent cushioned action check valve
- **Easy access design:**
 - In-line serviceable
 - Quick remove actuator (minimal downtime)
 - On-site and in-line replaceable seat
- **Wide range of options and accessories**
 - One-way or two-way flow configuration
 - Wide variety of control accessories easily added on-site
- **Servo-check** – Independent action non slam check feature

Major Additional Features

- Solenoid controlled valve – **Model 710**
- Pressure reducing valve – **Model 720**
- Pressure sustaining/relief valve – **Model 730**
- Surge anticipating valve – **Model 735**
- Pump control valve – **Model 740**
- Pump circulation control valve – **Model 748**
- Level control valve – **Model 750**
- Check valve – **Model 760**
- Flow control valve – **Model 770**
- Burst control valve – **Model 790**
- Combination models



Valve Cross Section



Specifications

Main Valve

Valve Pattern: Globe

Size Range: 24–36"; DN600-900

End Connections (Pressure Ratings):

Flanged: ISO PN16, PN25; ANSI Class 150, 300

Others: Available on request

Working Temperature: Water up to 80°C; 180°F

Standard Materials:

Body & Actuator: Ductile Iron

Internals: Stainless Steel, Bronze & coated Steel

Diaphragm: NBR Nylon fabric-reinforced

Seals: NBR

Coating:

Fusion Bonded Epoxy, RAL 5005 (Blue)

NSF & WRAS approved

Control Chamber Displacement: 98 Liters; 26 Gallons

Control System

Standard Materials:

Accessories:

Bronze, Brass, Stainless Steel & NBR

Tubing: Copper or Stainless Steel

Fittings: Forged Brass or Stainless Steel

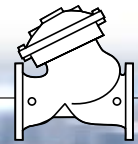
Pilot Standard Materials:

Body: Brass, Bronze or Stainless Steel

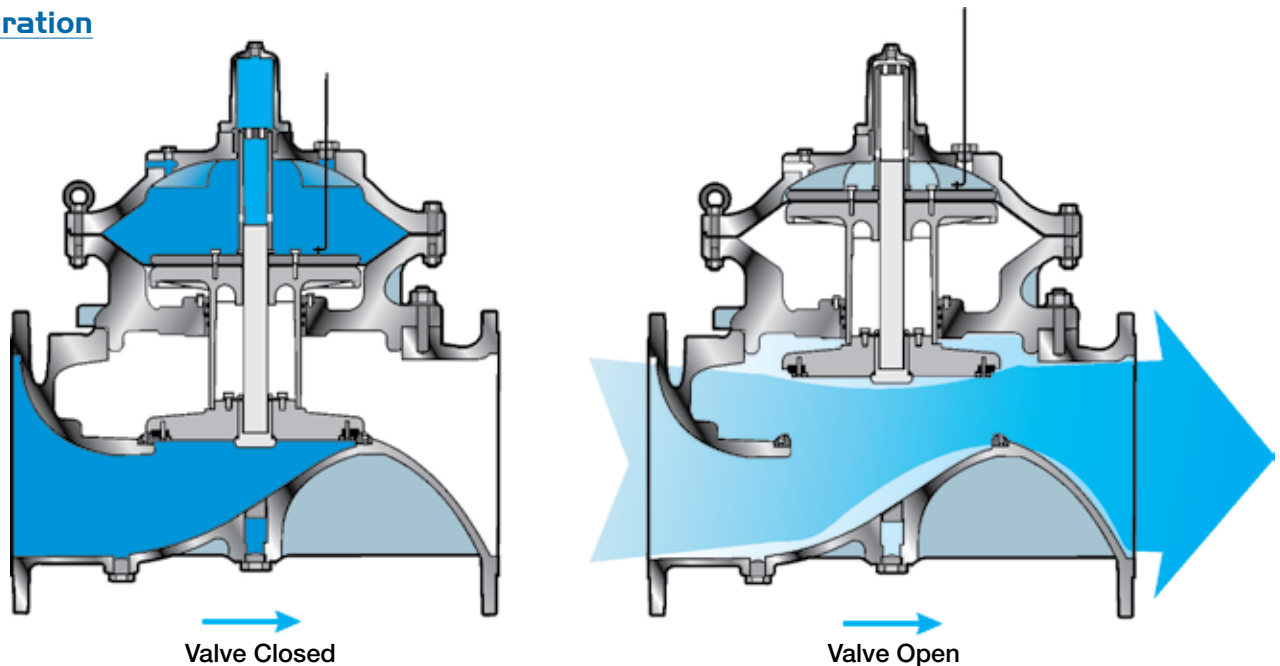
Elastomers: NBR

Springs: Galvanized Steel or Stainless Steel

Internals: Stainless Steel



Operation



Application

Large Scale Pressure Sustaining & Reducing System

In this project, flow rates between 2,000 and 28,000 m³/hr are supplied through a 1,200 mm pipeline to several municipalities. Due to the various demand regimes throughout the day, and the relatively high pressures, the design required that during low flow periods pressure shall be reduced from 12 bar to 5 bar. During peak demands, back pressure had to remain at least 8 bar to protect the pumps and line components. Five parallel Pressure Sustaining and Reducing Valves Model 723 were specified and installed. They perform according to design specification and to the complete satisfaction of all involved.



Engineer Specifications

The control valve shall be double chambered, hydraulically operated and diaphragm actuated.

Main Valve: The main valve shall be a center guided, diaphragm actuated, globe valve. The body shall have a replaceable, raised, stainless steel seat ring. The valve shall have an unobstructed flow path of at least 24" diameter; DN600, with no stem guides, bearings, or supporting ribs. The body and cover shall be ductile iron. All external bolts, nuts, and studs shall be Duplex® coated. All valve components shall be accessible and serviceable without removing the valve from the pipeline.

Actuator: The actuator assembly shall be double chambered with an inherent separating partition between the lower surface of the diaphragm and the main valve. The entire actuator assembly (seal disk to top cover) shall be removable from the valve as an integral unit. The stainless steel valve shaft shall be 300 mm in diameter and center guided by a bearing in the separating partition. The replaceable radial seal disk shall include a resilient seal.

Control System: The control system shall be suited for high capacity control flow with at least 1/2" diameter flow path including a self-flushing inline filter. All fittings shall be forged brass or stainless steel. The assembled valve shall be hydraulically tested and factory adjusted to customer requirements.

Quality Assurance: The valve manufacturer shall be certified according to the ISO 9001 Quality Assurance Standard.

