PRESSURE SUSTAINING AND REDUCING VALVE

Model 1023

Hydraulically operated control valve with independent Pressure Sustaining and Pressure Reducing functions. It sustains minimum pre-set upstream pressure, regardless of fluctuating flow or varying downstream pressure, and it prevents downstream pressure from rising above maximum pre-set level, regardless of fluctuating flow or excessive upstream pressure.

The BERMAD 1000 is at the leading edge of control valve design, providing a valve that is free of the typical limitations associated with standard control valves. A unitized flexible diaphragm & guided plug provide a significantly 'look through' passage resulting in accurate & stable regulation and high flow capacity.

The 1000 unique composite structure allows fast & simple maintenance by easy replacing of lightweight diaphragm assembly. It has a wide range of end connection types and sizes, including articulated flange connections isolating the valve from pipeline bending & pressure stresses.

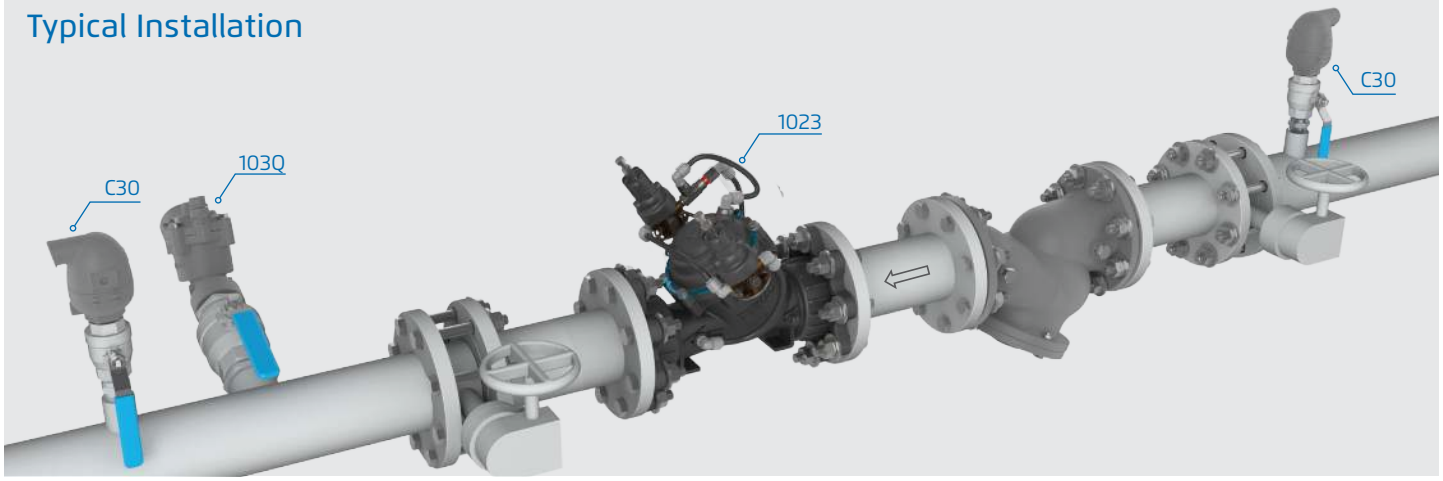
Features and Benefits

- Easy set-up
  - Super light weight
  - Line pressure driven - no external power needed
  - Easy pressure setting - in site or pre-ordered
  - Adaptable on-site to a wide range of end connection
- Simple and durable design
  - Excellent cavitation resistance
  - Highly durable construction & material - No rust
  - Unitized actuator unit - open, replace, close
  - In-line serviceable - no need to remove from line
- All the benefits of a diaphragm actuated control valve
  - Wide flow range
  - Low flow stability
  - Drip tight sealing
  - Obstacle free flow pass
  - Easy addition of hydraulic features

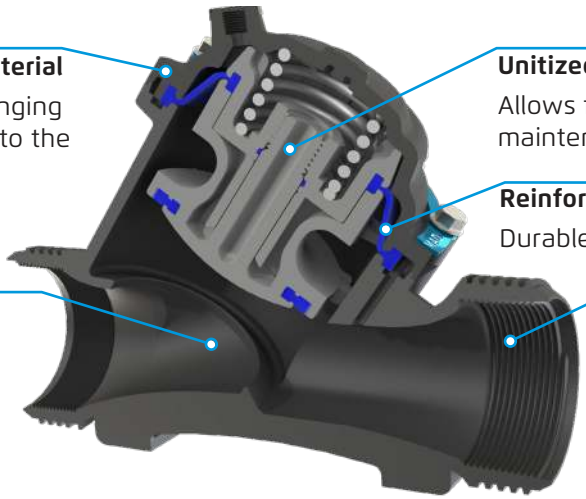
Typical Applications

- Maintaining pre-set maximum pressure in pipe lines through the day for leakage reduction
- Pressure reduction for main off-branching lines requiring lower pressure
- Sustaining sufficient pressure at upstream in case of pressure drop
- Elimination of pressure fluctuation from dynamic pressure losses at end consumers
- Supplying safe pressure to facilities and households with low pressure rated appliances
- Prioritizing upstream consumes over downstream high demand
- Preventing line emptying in gravity lines

Typical Installation



All images in this catalog are for illustration only



Advanced Composite Polymer Material

Strong, inert and light weight; bringing the next generation of materials to the water supply industry

Unitized Actuator Assembly

Allows fast and simple in-line maintenance

Reinforced Rolling Diaphragm

Durable and flexible operation

Unobstructed Flow

High capacity semi-straight flow for exceptionally low head loss

Internal Threads or Adaptors

Flexible option for Threaded, Groove or Flange connection

Technical Specifications

End Connections:

Threaded - Female NPT or BSP.T:
- 1½"EN, 2"ES/EN, 3"ES/EN

Grooved - According to ANSI C606-81:
- Adaptors on Threaded Body: 2"ES/EN, 3"ES/EN, 4"ES

Flanged - ISO-7005-2 (PN10/PN16), ANSI #125/ANSI #150, JIS K-10:
- Universal Adaptors on Threaded Body: 3"ES/EN, 4"ES

Pressure Rating:
- 1½"EN-4"ES: 250 psi; PN16

Valve Pattern:
- Y (Oblique)
- Angle - consult factory for available sizes

Temperature: For Cold Water Applications
Consult Bermad For hot water applications.

Main Valve Materials:

Body, Cover and Actuator assembly:
Reinforced Polyamide

Cover Bolts: Stainless Steel 304

Spring: Stainless Steel 302 (Optional 316)

Diaphragm: EPDM

Seals: EPDM

Trim:

Accessories: Stainless Steel / Bronze & Brass / Polyamide

Tubing: Polypropylene

Fittings: Stainless Steel / Brass / Acetal

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

How To Order

Please Specify the requested valve in the following sequence:

WW - 2" - 1023 - EN - P2 - Y - Q - VN - UC - 460 - PA - HR

Segment
WW
BC

Model
1023

Size	Code	
Design	EN	ES
1½", DN40	1½"	-
2", DN50	**2"**	2"
3", DN80	3"	3"
4", DN100		4"

Type	Code
High Flow	**EN**
Normal Flow	ES

End Connection	Body Threads	Code
Threaded	BSP.T Female	BP
	NPT Female	NP
Grooved	BSP.T Female	VV
	NPT Female	**VN**
Flanged	BSP.T Female	CC
	NPT Female	CN

Voltage	Code
24VAC/50Hz	4A
24VAC/60Hz	**46**
24VDC	4D
220VAC/50-60Hz	2A
220VDC	2D
110VAC/50-60Hz	5A
110VDC	5D
12VDC	1D

Main Valve Position (When Solenoid De-energized)	Code
Normally Closed	C
Normally Open	**O**
Last Position	P
Latch Solenoid	S

Additional Attributes (Multiple Options Permitted)	Code
St.St. 316 All Control Accessories	N
3-Way Control	X
Trim Isolation Ball Valves	h
Pressure Gauge	6
Horizontal Installation, Left Side Circuit (Standard)	HL
Horizontal Installation, Right Side Circuit	**HR**

Standard Configurations:

Main Valve Compliance	Code
Potable Water	**P2**

Orientation	Code
Y Oblique	**Y**

Construction Material	Code
Nylon Glass Reinforced	**Q**

Coating	Code
Uncoated	**UC**

Tubings & Fittings	Code
Polypropylene Tubing and Acetal Fittings	**PA**

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

www.bermad.com