



## PRESSURE REDUCING VALVE

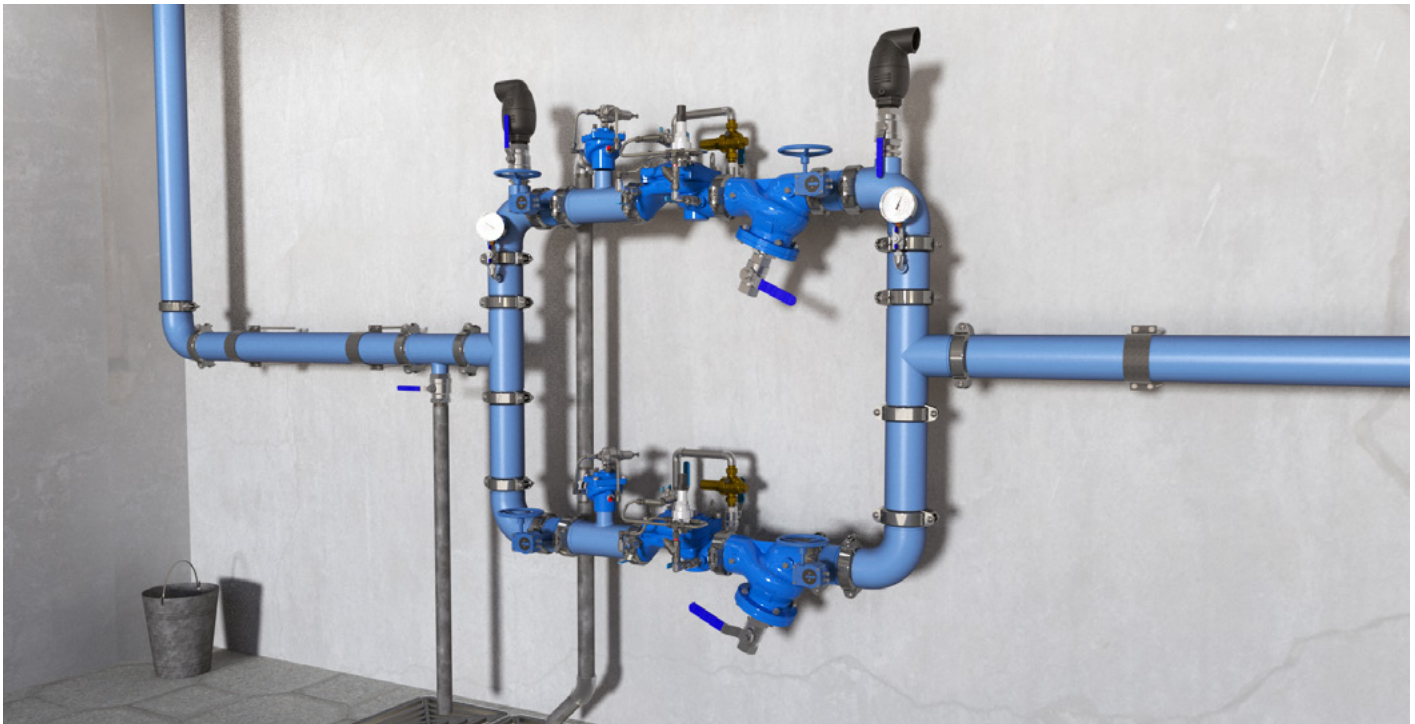
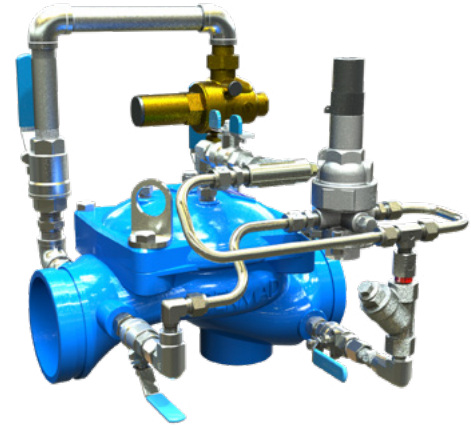
### with Off-Peak Flows Bypass

#### Model BC-420-2B-P

Hydraulically operated, pressure reducing control valve that reduces higher upstream pressure to lower constant downstream pressure, regardless of fluctuating demand or varying upstream pressure.

the model includes an off peak flows by-pass regulated with a Direct Acting Pressure Reducing valve mounted on the valve body.

BERMAD 400 series valves are hydraulically operated, simple and reliable, globe valves with full bore hydrodynamic body providing an unobstructed flow path and superior performance. The valves balanced rolling-diaphragm assembly is vulcanized with a rugged radial seal disk construction, performing as the valves only moving part.



Pressure Reducing Station, featuring BERMAD BC-420-2B-P valves to reduce high incoming pressure to a lower downstream set-point, a redundant, parallel branch to minimize the possibility of total water shut-off. The imbedded low flow by-pass saves on installation of

another small flow branch. For information on the other BERMAD products in this system please see the product data sheet for the BERMAD BC-43Q-P and BERMAD BC-70F-P.

### Typical Application

- Pressure control of potable water supply lines in building operating under moderate conditions
- Excessive pressure protection of low-grade plastic supply lines in buildings
- Protection of main supply lines of high-rise buildings where the building's lower zones are exposed to excessive pressure
- In parallel, redundant and duty cycled branches where uninterrupted water supply systems are required
- When a single valve needs to service a wide range of flows



## Features and Benefits

- High quality construction materials ensure reliable, long lasting operation
- Full bore valve port area and hydrodynamic body ensure unobstructed flow path; minimal pressure loss with low cavitation damage
- Fully supported and balanced rolling diaphragm - low actuation pressure and excellent low flow regulation performance
- Ensured operation after long standby periods
- Straightforward three major components design - easy and simple on-site inline maintenance with minimal down time
- 2-way pilot and control loop that continuously sense downstream pressure and immediately control the valve accordingly, providing stable, reliable and accurate pressure modulation under a wide range of flow-rate and pressure conditions
- Line Pressure Driven - Independent operation, no external power needed
- On-site adjustable pilot allows simple and easy calibration of required pressure level
- Integrated by-pass - stability in wide range of flows

**Note:** Outlet pressure range 1-6 bar; 15-90 psi.

## Technical Data

### General:

#### End connections:

- Grooved: 2", 3"-8"
- Flanged: 1½"-14"
- Threaded: 1½"-3"

**Pressure Rating:** 230 psi; PN16

**Valve Pattern:** Y (Oblique) / Angle

#### Working Temperature:

Cold Water up to 122°F; 50°C

#### Optional Higher Temperatures:

Available on request

### Main Valve Materials:

#### Body, Cover and Partition:

- Standard: Ductile Iron
- Optional: Stainless Steel 316

#### Spring: Stainless Steel

#### Diaphragm Assembly:

- NR / EPDM with Reinforcing Vulcanized Radial Seal Disk:
- 1½"-6": Plastic
- 8"- 10": Iron
- 12"-14": Iron with St.St Upper Guide

#### Coating: Blue Fusion bonded epoxy

### Control Trim Materials:

#### Control Accessories:

- Stainless Steel / Bronze & Brass
- NBR / EPDM

#### Tubing: Stainless Steel / Copper

#### Fittings: Stainless Steel / Brass

\* For other optional material consult BERMAD.

\*\* Materials may vary according to sanitary standard.

## How to Order

Please Specify the requested valve in the following sequence:

BERMAD Segment	Size <sup>1</sup>	Model	Approval Group	End Connections & Pressure Rating	Ordering code would be																																																				
BC	3"	420-2B	P0	16	BC-3"-420-2B-P0-16																																																				
Buildings & Constructions	<table border="1"> <thead> <tr> <th>Inch</th> <th>mm</th> </tr> </thead> <tbody> <tr><td>1½"</td><td>40</td></tr> <tr><td>2"</td><td>50</td></tr> <tr><td>2½"</td><td>65</td></tr> <tr><td>3"</td><td>80</td></tr> <tr><td>4"</td><td>100</td></tr> <tr><td>6"</td><td>150</td></tr> <tr><td>8"</td><td>200</td></tr> <tr><td>10"</td><td>250</td></tr> <tr><td>12"</td><td>300</td></tr> </tbody> </table>	Inch	mm	1½"	40	2"	50	2½"	65	3"	80	4"	100	6"	150	8"	200	10"	250	12"	300	<table border="1"> <thead> <tr> <th>Potable Water<sup>2</sup></th> <th></th> </tr> </thead> <tbody> <tr><td>European Standards</td><td>P1</td></tr> <tr><td>NSF 61/372</td><td>P2</td></tr> <tr><td>Australia Standards</td><td>P3</td></tr> <tr><td>Unregistered</td><td>P0</td></tr> </tbody> </table>	Potable Water <sup>2</sup>		European Standards	P1	NSF 61/372	P2	Australia Standards	P3	Unregistered	P0	<table border="1"> <thead> <tr> <th colspan="3">Up to 250 psi / PN16</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Grooved</td> <td>ANSI C606</td> <td>VI</td> </tr> <tr> <td>BS 1378</td> <td>VB</td> </tr> <tr> <td rowspan="3">Flanged</td> <td>ISO-16</td> <td>16</td> </tr> <tr> <td>ABNT16</td> <td>B6</td> </tr> <tr> <td>ANSI 150</td> <td>A5</td> </tr> <tr> <td rowspan="2">Threaded</td> <td>AST-*</td> <td>S*</td> </tr> <tr> <td>BSP</td> <td>BP</td> </tr> <tr> <td></td> <td>NPT</td> <td>NP</td> </tr> </tbody> </table>	Up to 250 psi / PN16			Grooved	ANSI C606	VI	BS 1378	VB	Flanged	ISO-16	16	ABNT16	B6	ANSI 150	A5	Threaded	AST-*	S*	BSP	BP		NPT	NP	<ol style="list-style-type: none"> <li>Larger sizes available on request</li> <li>BERMAD complies with a wide range of international potable water standards. Please consult with BERMAD about compliance.</li> </ol>
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