

Quick Pressure Relief Valve

Model MN-73Q

Quick Pressure Relief control valve hydraulically operated, that relieves excessive system pressure when this pressure rises above the pre-set value. It immediately, accurately, and with high repeatability responds to system pressure rise by fully opening.

Bermad 700 Series valves are hydraulic, pilot operated, oblique pattern, globe valves with a seat assembly and double chamber unitized actuator, that can be disassembled from the body as a separate integral unit.

The valve's hydrodynamic body is designed for unobstructed flow path and provides excellent and highly effective modulation capacity for high differential pressure applications.

The 700 Series operate under difficult operation conditions with minimal cavitation and noise. They are made of the highest quality materials suitable for different mining applications.



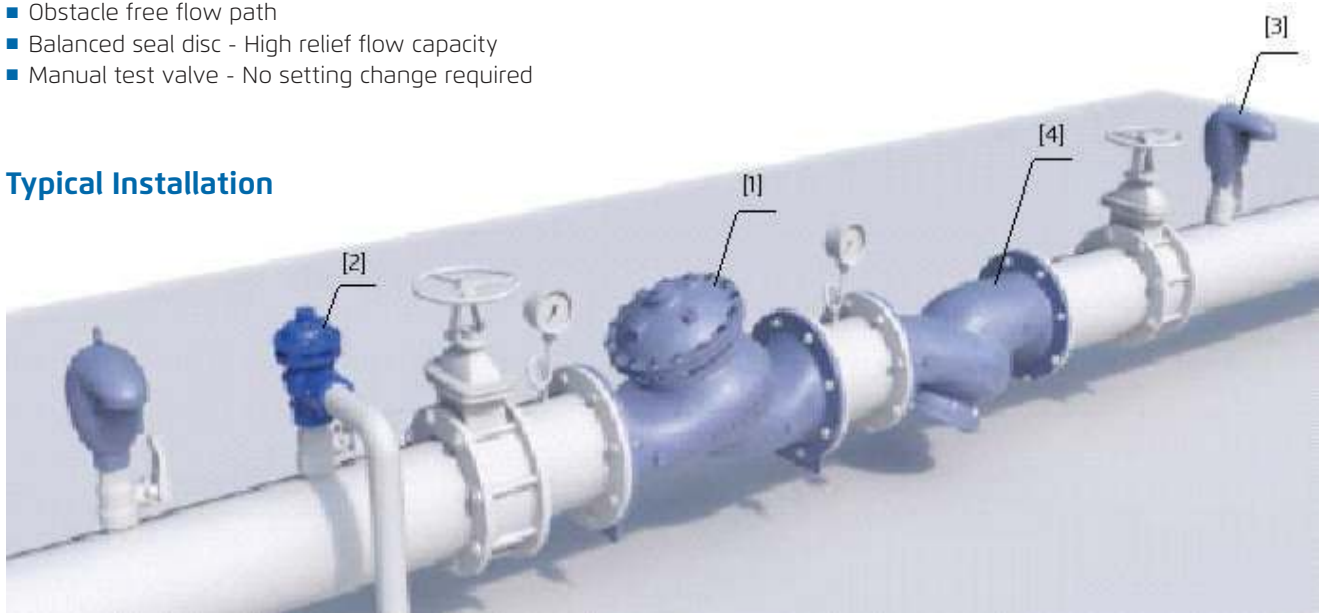
Features and Benefits

- Designed to stand up to the toughest conditions
 - Tamper resistant
 - Excellent anti-cavitation properties
 - Wide flow range
 - High stability and accuracy
 - Drip tight sealing
- Double chamber actuator design
 - Protected diaphragm
 - Moderated valve closing (no surges)
 - Simplified maintenance as it can be removed as a single unit. In-line serviceable
- Obstacle free flow path
- Balanced seal disc - High relief flow capacity
- Manual test valve - No setting change required

List of Components:

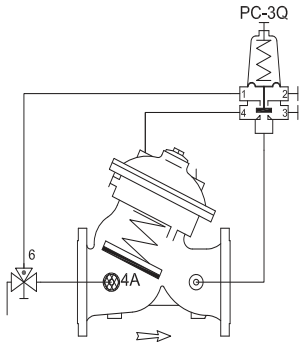
- [1] Pressure Reducing Valve MN-720
- [2] Pressure Relief Valve MN-73Q
- [3] Combination Air Valve C70
- [4] Strainer MN-70F

Typical Installation





Control Schematic (*)



Standard Configuration

- 4A Control Filter
- 6 3W Cock Valve
- PC-3Q Pressure Relief Pilot

Additional features (OPTIONAL)

- F Large Control Filter
- F1 Extra Large Control Filter
- 6 Pressure Gauge

(*) As a reference only. Components may vary based on valve's size and class.

Operation

- The Model 73Q is a pilot controlled valve equipped with an adjustable 2-Way pressure relief pilot.
- The pilot internal restriction continuously allows flow from the main valve inlet into the upper control chamber. The pilot [PC-3Q] senses upstream pressure.
- Should this pressure abruptly rise above pilot setting, the pilot opens, and pressure in the upper control chamber is vented, causing the main valve to immediately open, thereby relieving excessive system pressure.
- When upstream pressure decreases to below pilot setting, the pilot closes, enabling pressure to accumulate in the upper control chamber, causing the main valve to smoothly close.

Pilot Options

Various pilots and calibration springs are available. Select according to valve size and operation conditions. For more details check pressure relief pilots product page



| | | |
|-------------------|--------|------|
| Adjustment Ranges | PSI | Bar |
| | 15-150 | 1-10 |
| | 15-230 | 1-16 |
| | 30-430 | 2-30 |

Pressure Rating

| | Class 150 | | | Class 300 | | |
|---------------------------|------------------|------------------------|----------|------------------|------------------------|----------|
| Max. Recommended Pressure | 250 PSI | | | 400 PSI | | |
| Available End Connection | Flanged ANSI#150 | Grooved ANSI/AWWA C606 | Threaded | Flanged ANSI#300 | Grooved ANSI/AWWA C606 | Threaded |

Materials

| Components | | Water Applications | Thermal Shock Applications | Base Solutions Applications | Acid Solutions Applications (**) |
|--------------------------|---------------------|---------------------|----------------------------|-----------------------------|----------------------------------|
| Main Valve | Body & Cover | Ductile Iron | Carbon Steel | Ductile Iron | Stainless Steel 316 |
| | Internals | Stainless Steel | Stainless Steel | Stainless Steel | Stainless Steel 316 |
| | | Brass/Coated Steel | Brass/Coated Steel | Coated Steel | |
| | Elastomers | Synthetic rubber | Synthetic rubber | Synthetic rubber | Viton |
| Coating | Fusion Bonded Epoxy | Fusion Bonded Epoxy | Fusion Bonded Epoxy | Uncoated | |
| Pilot | Body | Brass/Bronze | Brass/Bronze | Stainless Steel 316 | Stainless Steel 316 |
| | Internals | Stainless Steel | Stainless Steel | Stainless Steel 316 | Stainless Steel 316 |
| | | Brass | Brass | | |
| Elastomers | Synthetic rubber | Synthetic rubber | Synthetic rubber | Viton | |
| Control Loop Accessories | Accessories | Brass/Bronze | Stainless Steel 316 | Stainless Steel 316 | Stainless Steel 316 |
| | Tubing & Fittings | Brass | Stainless Steel 316 | Stainless Steel 316 | Stainless Steel 316 |

(**) For highly aggressive acid solutions: Super Duplex, Hastelloy C-276, SMO-254 6-MO. Others by request.

Notes:

- Full system data is required for optimal valve sizing.
- Recommended maximum intermittent flow velocity: 15m/sec; 50ft/sec.
- Minimum operating pressure: 0.7 bar / 10 PSI. For lower pressure requirements consult factory.

