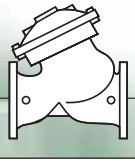


Quick Pressure Relief Valve

WW-73Q

- Immediately eliminates pressure peaks
- Visual indication of system over pressure
- Filtration system burst protection
- Thermal expansion over-pressure relief
- System maintenance savings

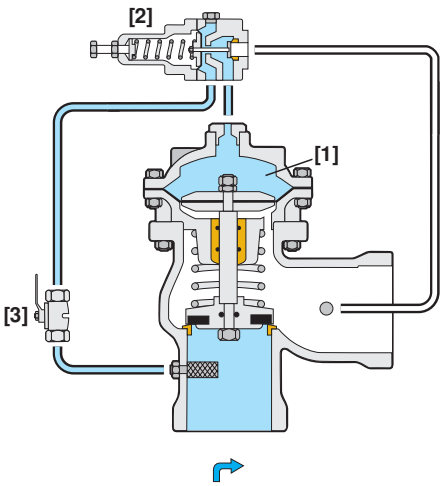
The Model 73Q Quick Pressure Relief Valve is a hydraulically operated, diaphragm actuated control valve that relieves excessive system pressure when this pressure rises above the pre-set value. It immediately, accurately, and with high repeatability responds to system pressure rise by fully opening. The Model 73Q provides smooth drip tight closing.

Features and Benefits

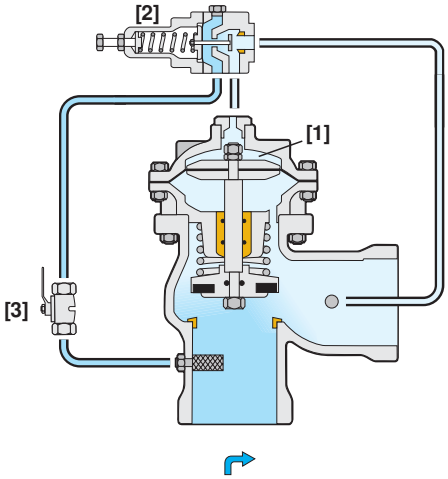
- **Hydraulic actuation**
  - Independent operation
  - Long term drip-tight sealing
  - Long term setting stability
  - Wide setting range
  - Tight setting window
  - Minimal hysteresis
- **Double chamber design**
  - Moderated valve closing (no surges)
  - Protected diaphragm
- **Obstacle free, full bore** – Uncompromising reliability
- **Balanced seal disk** – High relief flow capacity
- **Manual test valve** – No setting change required

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 **[1]**. The pilot **[2]** 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. Vented cock valve **[3]** is used to perform manual operating test.
For sizes 6-14" use pilot #3HC. For sizes 16" and larger, consult BERMAD.



Valve Closed
(system pressure is below setting)



Valve Open

Engineer Specifications

The Quick Pressure Relief Valve shall relieve excessive system pressure when this pressure rises above pre-set value. It shall immediately, accurately, and with high repeatability respond to system pressure rise by fully opening as well as provide smooth drip-tight closing.

Main Valve: The main valve shall be a center guided, diaphragm actuated globe valve of either oblique (Y) or angle pattern design. The body shall have a replaceable, raised, stainless steel seat ring. The valve shall have an unobstructed flow path, 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.

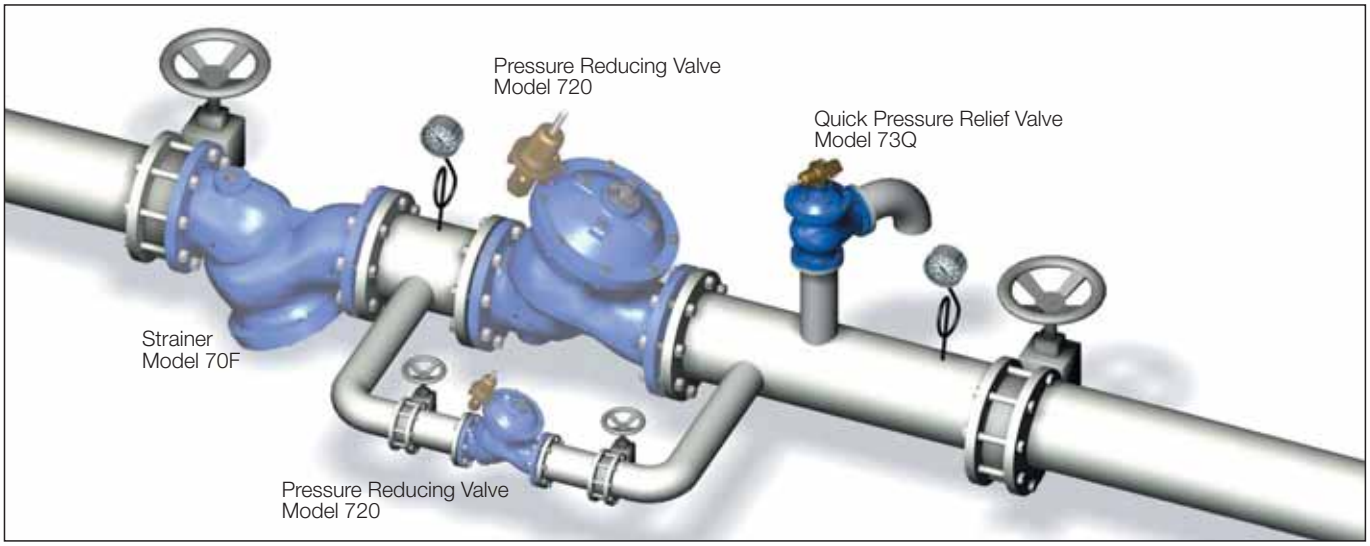
Actuator: The actuator assembly shall be double chambered with an inherent separating partition between the lower surface of the diaphragm and the main valve. The entire actuator assembly (seal disk to top cover) shall be removable from the valve as an integral unit. The stainless steel valve shaft shall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

Control System: The control system shall consist of a 2-Way adjustable, direct acting, quick pressure relief pilot valve, a testing cock valve, and a 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. The main valve shall be certified as a complete drinking water valve according to NSF, WRAS, and other recognized standards.

Typical Applications

Reduced Pressure Zone Safety Relief



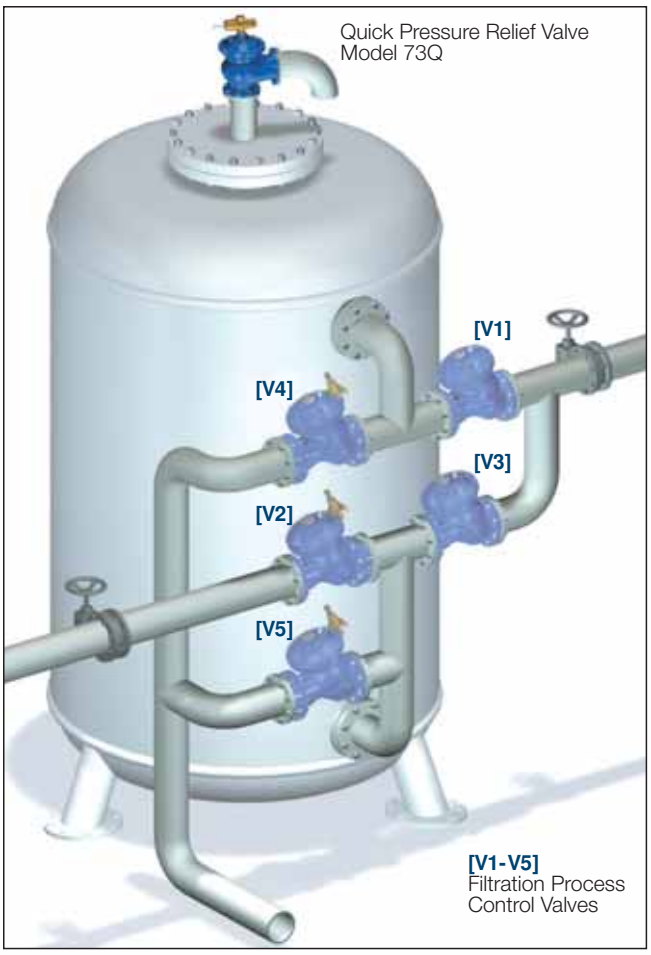
The Model 73Q Quick Pressure Relief Valve protects against:

- Momentary high pressure peaks
- Excessive pressure from another source
- Failure of other system components
- Static condition leaking of pressure reducing valves

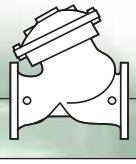
Filtration System Safety Relief

Filter tanks, due to their large surface areas, are often the system components most vulnerable to abrupt pressure rise. The Model 73Q Quick Pressure Relief Valve protects against:

- Pressure peak at end of filling process
- Sudden pressure rise due to drop in demand
- Increased pressure due to blocked filtration element
- Over pressure due to flow direction switching during back flushing



BERMAD Irrigation



WW-73Q

WW-700 Series

Pressure Relief

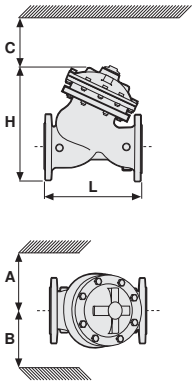
For full technical details, refer to Engineering Section.

Technical Data

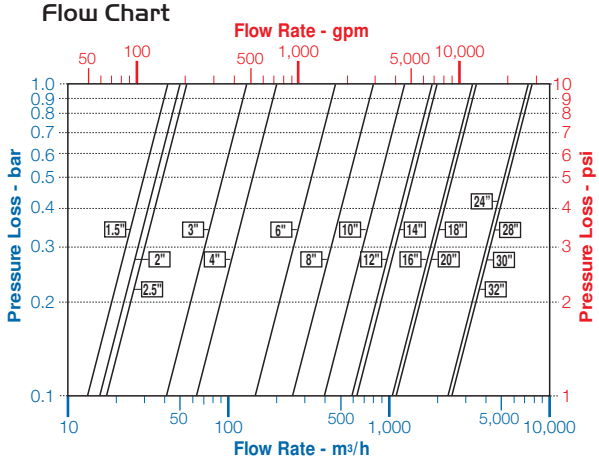
Dimensions and Weights

Size		A, B		C		L		H		Weight	
mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	kg	lbs
40	1½"	350	14	180	7	205	8.1	239	9.4	9.1	20
50	2	350	14	180	7	210	8.3	244	9.6	10.6	23
65	2½"	350	14	180	7	222	8.7	257	10.1	13	29
80	3"	370	15	230	9	250	9.8	305	12.0	22	49
100	4"	395	16	275	11	320	12.6	366	14.4	37	82
150	6"	430	17	385	15	415	16.3	492	19.4	75	165
200	8"	475	19	460	18	500	19.7	584	23.0	125	276
250	10"	520	21	580	23	605	23.8	724	28.5	217	478
300	12"	545	22	685	27	725	28.5	840	33.1	370	816
350	14"	545	22	685	27	733	28.9	866	34.1	381	840
400	16"	645	26	965	38	990	39.0	1108	43.6	846	1865
450	18"	645	26	965	38	1000	39.4	1127	44.4	945	2083
500	20"	645	26	965	38	1100	43.3	1167	45.9	962	2121

Data is for Y-pattern, flanged, PN16 valves
Weight is for PN16 basic valves
"C" enables removing the actuator in one unit
"L", ISO standard lengths available
For more dimensions and weights tables, refer to Engineering Section



Flow Chart



Data is for Y-pattern, flat disk valves
For more flow charts, refer to Engineering Section

Main Valve

Valve Patterns: "Y" (globe) & angle
Size Range: 1½–32" (40-800 mm)
End Connections (Pressure Ratings):
Flanged: ISO PN16, PN25 (ANSI Class 150, 300)
Threaded: BSP or NPT
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 or Electrostatic Polyester Powder, RAL 6017 (Green)

Control System

Standard Materials:
Accessories:
Bronze, Brass, Stainless Steel & NBR
Tubing: Copper or Stainless Steel
Fittings: Forged Srass or Stainless Steel
Pilot Standard Materials:
Body: Brass, Bronze or Stainless Steel
Elastomers: NBR
Springs: Galvanized Steel or Stainless Steel
Internals: Stainless Steel

Pilot Valve Selection

Valve Size	Pilot Setting (bar)	Pilot Type		
		PC3Q	#3	#3HC
1½-4"	<12	■		
40-100 mm	>12		■ ●	
6-14"	<15			■
150-350 mm	>15			●
For 16-32" / 400-800 mm Consult factory				

■ Standard model ● with high pressure setting kit

How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide)

Sector	Size	Primary Feature	Additional Feature	Pattern	Body Material	End Connections	Coating	Voltage & Position	Tubing & Fittings	Additonal Attributes
WW	3"	73Q	00	A	C	BP	EB	–	CB	–

Sector
- WW — Waterworks

Size
- 1½ - 32"

Primary Feature
- 73Q — Quick Pressure Relief

Additional Feature

No Additional Feature	00
Multi-Setting Levels - Electrically Selected	45
Solenoid Controlled	55

Multiple choices permitted

Pattern

Oblique (up to 20")	Y
Angle (up to 18")	A
Globe (24-32" only)	G

Body Material

Ductile Iron Standard	C
Cast Steel	S
St. Steel 316	N
Nickel Alumin. Bronze	U

End Connections

BSP	BP
NPT	NP
ISO-16	16
ISO-25	25
ANSI-150	A5
ANSI-300	A3
JIS-16	J6
JIS-20	J2

Coating

Epoxy FB Blue	EB
Polyester Green	PG
Polyester Blue	PB
Uncoated	UC

Voltage & Position

24VAC/50Hz - N.C.	4AC
24VAC/50Hz - N.O.	4AO
24VDC - N.C.	4DC
24VDC - N.O.	4DO
24VDC - L.P.	4DP
220VAC/50-60Hz N.C.	2AC
220VAC/50-60Hz N.O.	2AO

Use when additional electric control additional feature is selected

Tubing & Fittings

Copper Tubing & Brass Fittings	CB
Plastic Tubing & Brass Fittings	PB
St. St. 316 Tubing & Fittings	NN

Additonal Attributes

Large Control Filter	F
Electric Limit Switch	S
St. St. 316 Control Accessories	N
St. St. 316 Internal Trim (Closure & Seat)	T
St. St. 316 Actuator Internal Assembly	D
Delrin Bearing	R
Viton Elastomers for Seals & Diaphragm	E
Pressure Gauge	6

Multiple choices permitted

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