C-QR : *Quick Pressure Relief Control Valve*

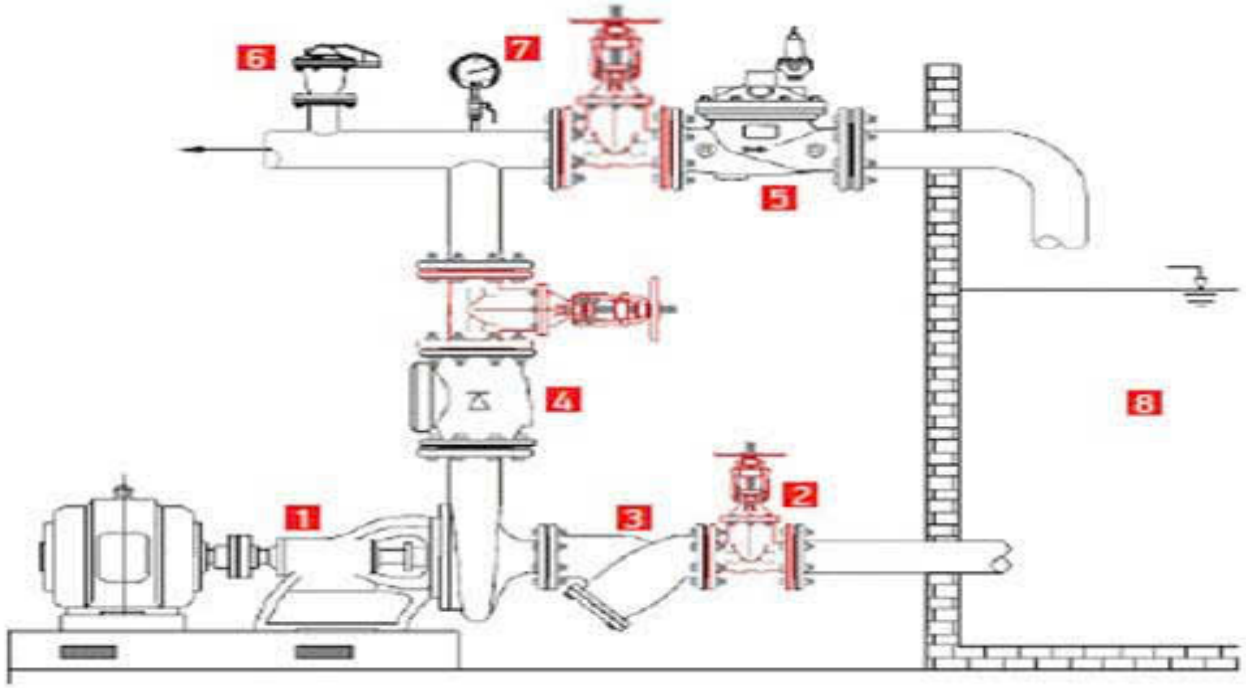
The Quick Pressure Relief Control Valve is the safety control valve designed to protect system by releasing pressure surges to atmosphere quickly caused from sudden changes in water speed because pumps put into/out of service frequently in water network elevation lines. When network pressure goes beyond set point, valve opens by itself quickly and protects system by releasing over pressure. When line pressure decreases to normal level, it is closed slowly and automatically as wholly sealed without causing surge.

* *Conforms: EN 1074-5*

Sample Application

#	Sample Application
1	Pump
2	Gate valve
3	Strainer
4	Check valve
5	Quick Pressure Relief Valve
6	Airvent
7	Pressure Gauge
8	Water Tank

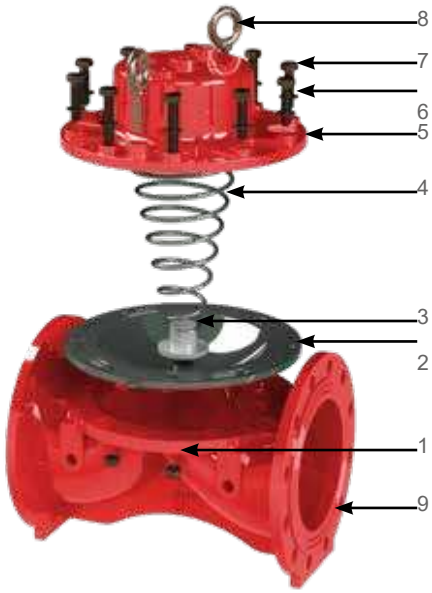
Working Pressure	
Body & Pilot	1.4 - 16 bar (10 - 240 psi)
Settings Range	1.4 - 16 bar (10 - 240 psi)
Adjust Differential	7 psi (0.5 bar)
Operating	Set Point add 5 Psi
Temp	- 10 °C (14 °F) to 80 °C (176 °F)



Valves & Fittings

From 2" To 5"

From 6" To 10"
12" Double Covers.



Cval hydraulic control valves are automatic valves with direct diaphragm shut-off working with line pressure. It is a comfortable, smooth flow in the minimum pressure loss of the body and diaphragm, which is kept in the foreground in its design. The valve can be used in horizontal or vertical position on the system.

In hydraulic control valves, worn parts such as shafts, bearings and bushings are longevity. The single moving part of valves is the diaphragm.

Cval hydraulic control valves, in-line water pump, agricultural irrigation, fire systems, filtration, industrial, etc. designed for use in areas.

Flanged

#	Material Name	Type of Material
1	Body	GGG40/GG25
2	Diaphragm	Natural Rubber
3	Spring Seat	Polyamide
4	Spring	SST 304
5	Cover	GGG40/GG25
6	Washer	8.8 Coated Steel
7	Bolt	8.8 Coated Steel
8	Lifting Eyebolts	8.8 Coated Steel
9	Nut	8.8 Coated Steel

Technical Specifications

Flanged

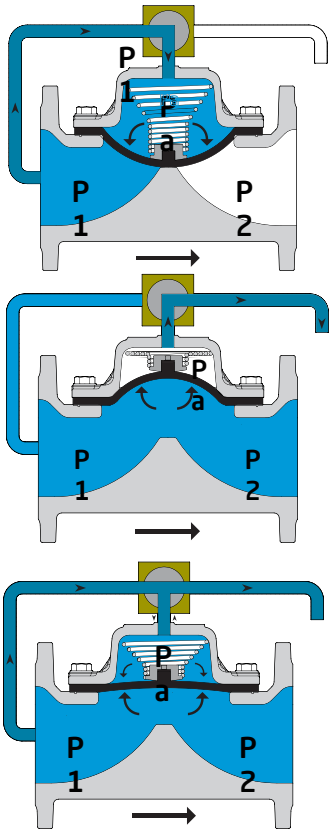
Connection	Material	Body	Transmition Pressure
Flanged	GGG40/GG25	Straight	PN10-PN16-PN25

AVAILABLE DIAMETERS

mm	50	65	80	100	125	150	200	250	300
inch	2	2½	3	4	5	6	8	10	12
L (mm)	200	214	290	305	370	405	495	605	605

Operating Pressure	Standard	1.4 - 16 bar (10 - 240 psi)
	Low Pressure Range	0,5 - 10 bar (7,5 - 160 psi)
	High Pressure Range	1.4 - 25 bar (10 - 360 psi)
Temperature	Minimum Operating Temp.	- 10 °C (14 °F) DIN 2401/2
	Maximum Operating Temp.	80 °C (176 °F) DIN 2401/2
Connection	Flanged	EN 1092-2, ISO 7005 - 2
	Threaded	ISO (BSP) , ANSI (NPT)
Covering	Standard	Epoxy
	Optional	Polyester
Hydraulic Connections	standard	Reinforced Nylon (Air Brake) Hydraulic Tube SAE J 844
	Optional	Copper DIN1057
Actuator Type	With Single Control Chamber | Aperture With Diaphragm	

They are automatic control valves which are used hydraulically to perform the desired operations with line pressure without the need of energy sources in the mains line.



Valve Closing Mode

When the pilot discharge position on the main control valve in the closed position is reached, the pressurized water on the diaphragm of the main control valve is drained. When the line pressure reaches the position of spring force, hydraulic force is applied to the diaphragm of the control valve under water, so that the valve is in full open position.

Valve Opening Mode

When the pilots on the main control valve reach the water pressure diaphragm, the water creates a hydraulic force. The resulting hydraulic force combines the diaphragm with the force applied by the spring to create a complete seal and close.

Modulation Mode

These are the pilot valves which are connected to the control valve which allows the main valve to operate in this position. According to the amount of flow and pressure to be adjusted, the water pressure on the diaphragm is controlled constantly, allowing it to operate in a modulated position.

HYDRAULIC PERFORMANCE

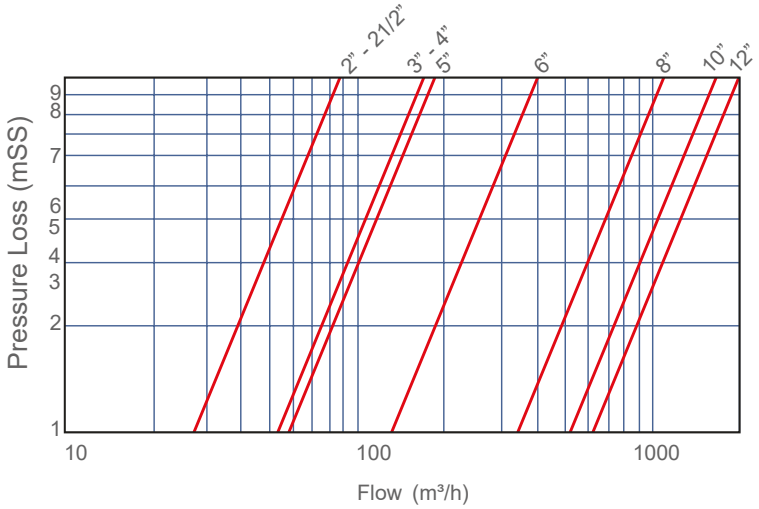
	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm
Valve Diameter	2	50	2½	65	3	80	4	100	5	125	6	150	8	200	10	250	12	300
Kv m³/h@1bar	50		50		130		200		200		450		800		1250		1800	
Cv gmp@1psi	60		60		150		230		230		520		925		1450		2080	

$$Kv(Cv)=Q.\sqrt{\frac{G}{\Delta P}}$$

Kv : Valve flow coefficient (flow rate at 1 bar pressure loss m³/h @ 1
Cv : Valve flow coefficient (flow in pressure loss of 1 psi GPM @ 1
Q : Flow (m³/h, gpm)

Cv=1,155Kv **ΔP**: Pressure Loss(bar, psi) **G**: The specific gravity of water(Water=1.0)

Pressure Loss Chart



Cavitation Chart