

QUICK PRESSURE RELIEF VALVE  
CATALOG



 **tayfur**  
su sistemleri

**TYPHOON**<sup>®</sup>



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**TYPHOON<sup>®</sup>**



# ABOUT US

Tayfur Water Systems, which was established by Tayfun Yazarođlu in 2004 in Izmir. We continue our activities as "Tayfur Water Systems Machinery Engineering Industry and Trade Inc." since 2017.

Our company offers its products and experiences to the local market and international market. Tayfur Water Systems, while strengthening its recognition abroad, continues to expand its production, sales and marketing activities every day.

Our engineers and technical staff, technological infrastructure, manufacturing, sales, project-consulting, contracting and service planning meets the requirements of the sector.

Our company manufactures "TYPHOON" brand, hydraulic control valves, plastic hydraulic control valves, backwash valves, plastic backwash valves, impact-free dynamic suction cups, plastic suction cups, bottom clamps, filter reverse flushing control devices. It is progressing towards becoming a strong brand in both domestic and foreign markets by meeting the special demands of its domestic and foreign customers.

## Our Quality Policy

In order to be a leader in quality in the sales, marketing and service sector by complying with legal conditions and to comply with the requirements of Quality Management System in order to meet the needs and expectations of our customers, to continuously improve the efficiency and to not compromise the quality under any circumstances.

## Our Mission

To be a company aiming to present its synergy in the national and international market which has always taken its responsibilities, desires and expectations of our customers in a correct, reliable and timely manner, within the framework of high quality standards, transforming efficiency and competition into an advantage...

## Our Vision

To be a leading, innovative, powerful and reputable enterprise in its sector.

# Quick Pressure Relief Control Valve

## Hydraulic Control Valves

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.

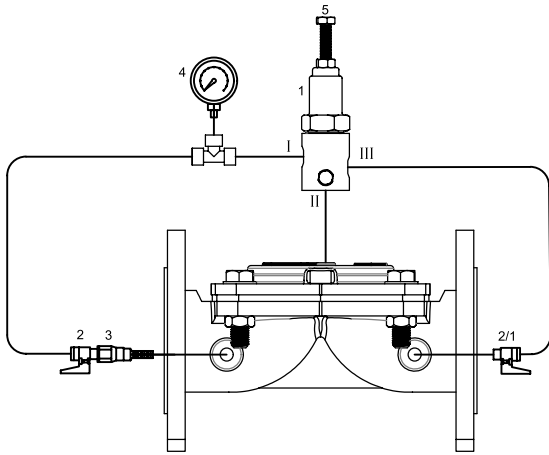
When network pressure goes beyond set point, valve opens by itself quickly and protects system by releasing over pressure. When line pressure decreases to normal level, it is closed slowly and automatically as wholly sealed without causing surge.

### Order Information

Please provide the following information in order

- Maximum flow rate ..... m<sup>3</sup>/h
- Maximum mains / operating pressure ..... bar
- Main pipeline diameter ..... mm
- Valve connection type
- Maximum valve inlet pressure ..... bar
- Desired inlet pressure value..... bar





- 1 Quick Pressure Relief Pilot
- 2 Mini Ball Valves
- 3 Finger Filter
- 4 Manometer
- 5 Pressure Adjustment Bolts

### Assemble

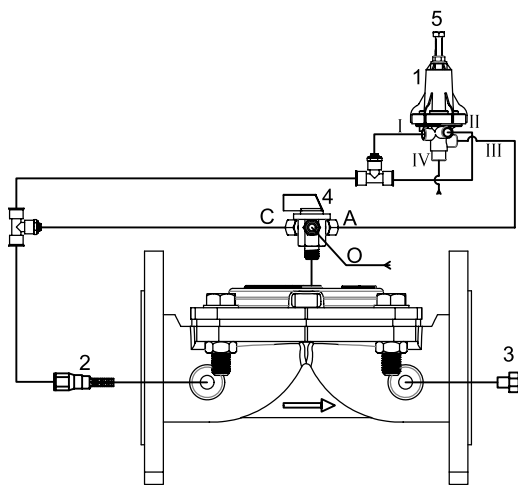
- After connect the mini ball valve that is numbered "2" and the inline finger filter that is numbered "3" to the inlet of valve, the connection is provided to connect with Te fitting parts at the of the pressure sustaining pilot's outlet "I" with copper and plastic pipe.
- The outlet of metal pilot "II" is mounted with required connection parts onto the cover of valve.
- Numbered as "2/1" the mini ball valve is connected to the outlet of valve. From this point, a connection is provided to the outlet "III" of the metal pilot. At last the gauge is connected onto the other side of te fitting parts.
- Valve nominal diameter has to be same as the diameter of line or less one size than line diameter.
- Mount the valve in the direction of the arrow which is shown onto the valve.
- Usage of the isolation valves ( butterfly valves and gate valves etc), air release valve, quick pressure relief control valves and strainers is recommended at assemble of the valve onto the pipeline.
- In the period of pressure reducing, the cavitation risk is dangerous for the body of valve. Adjust the requested outlet pressure value according to the cavitation schema and apply to our company.

### Adjust

- Run the pump or open the main valve in the network of line and give the water to the system.
- Wait a few seconds for the water's entering to the control reservoir of the valve.
- When you turn the adjust bolt "5" in the direction of the clockwise, the adjusting of pressure value will be increased and when turn the adjust bolt in the opposite direction of the clockwise, the outlet's pressure value will be reduced.
- After adjust the desired outlet's pressure value, tighten the nut which is under of the adjust bolt.
- Check the inline finger filter that is shown as "2" according to the quality of water and please clean. If Water is not too much dirty, dont clean the filter in a few months more than one time.
- In winter season, please release the water into the pilot valves and actuators for the non-used valves..

# Quick Pressure Relief Control Valve

## Plastic Pilot Mount / Adjustment



- 1 Quick Pressure Relief Pilot
- 2 Finger Filter
- 3 Blind Plugs
- 4 Three Way Valve
- 5 Pressure Adjustment Bolts

## Assemble

- After connect the inline finger filter that is numbered "2" and the connection is provided to connect with Te fitting parts at the of the pressure sustaining pilot's outlet "I" with copper and plastic pipe.
- The outlet of metal pilot "II" is mounted with required connection parts onto the cover of valve.
- The outlet "III" of the plastic pilot is connected to the the outlet "A" of the auto position at 3way valve and the end-cap is connected to the outlet of valve.
- Valve nominal diameter has to be same as the diameter of line or less one size than line diameter.
- Mount the valve in the direction of the arrow which is shown onto the valve.
- Usage of the isolation valves ( butterfly valves and gate valves etc) , air release valve , quick pressure relief control valves and strainers is recommended at assemble of the valve onto the pipeline.
- In the period of pressure reducing , the cavitation risk is dangerous for the body of valve. Adjust the requested outlet pressure value according to the cavitation schema and apply to our company.

## Adjust

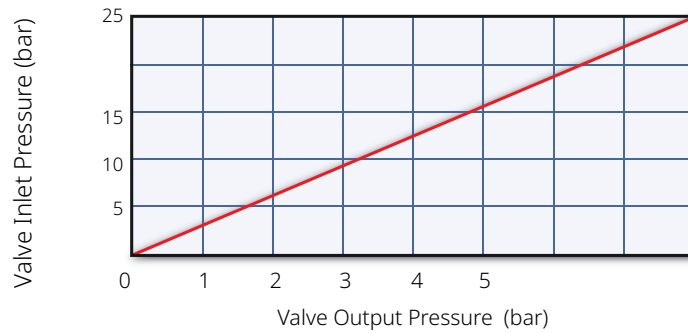
- Run the pump or open the main valve in the network of line and give the water to the system.
- Turn the 3 way valve to the auto position "A".
- Wait a few seconds for the water's entering to the control reservoir of the valve.
- When you turn the adjust bolt "5" in the direction of the clockwise , the adjusting of pressure value will be increased and when turn the adjust bolt in the opposite direction of the clockwise , the outlet's presure value will be reduced.
- After adjust the desired outlet's pressure value , tighten the nut which is under of the adjust bolt.
- Check the inline finger filter that is shown as "2" according to the quality of water and please clean. If Water is not too much dirty, dont clean the filter in a few months more than one time.
- In winter season , please release the water into the pilot valves and actuators for the non-used valves..



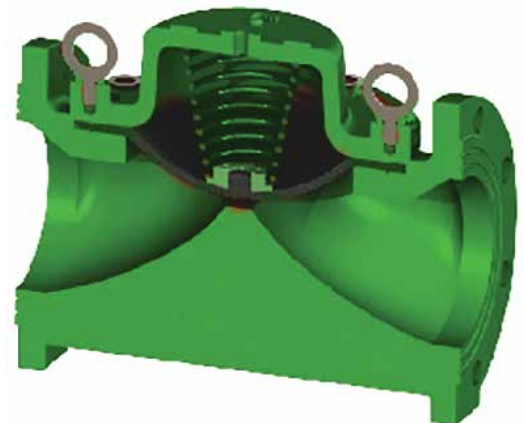
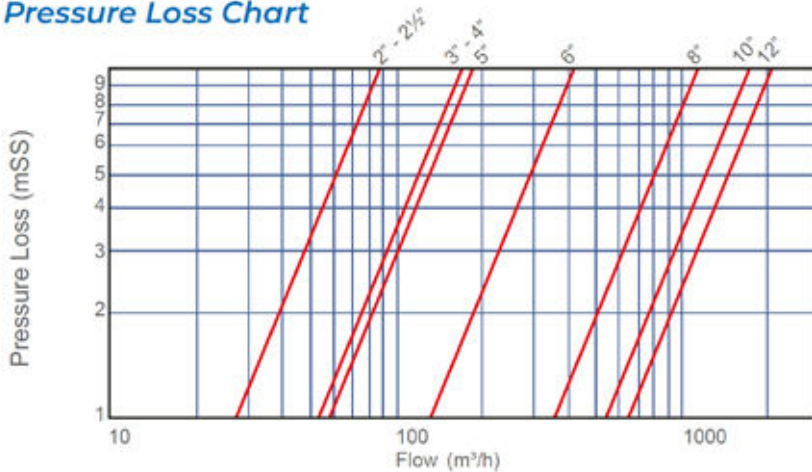
### Technical Specifications

<b>Operating Pressure</b>	Standard	0,7 - 16 bar (10 - 240 psi)
	Low Pressure Range	0,5 - 10 bar (7,5 - 160 psi)
	High Pressure Range	0,7 - 25 bar (10 - 360 psi)
<b>Temperature</b>	Minimum Operating Temp.	- 10 °C (14 °F) DIN 2401/2
	Maximum Operating Temp.	80 °C (176 °F) DIN 2401/2
<b>Connection</b>	Flanged	DIN 2501, ISO 7005 - 2
	Threaded	ISO (BSP) , ANSI (NPT)
<b>Covering</b>	Standard	Epoxy
	Optional	Polyester
<b>Hydraulic Connections</b>	Standard	Reinforced Nylon (Air Brake) Hydraulic Tube SAE J 844
	Optional	Copper DIN1057
<b>Actuator Type</b>	With Single Control Chamber   Aperture With Diaphragm	

### Cavitation Chart



### Pressure Loss Chart



# HYDRAULIC CONTROL VALVES

## Flanged - Threaded - Angled - Victaulic

Typhoon 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.

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

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

M	Manually Controlled Valve
PR	Pressure Reducing Control Valve
PRPS	Pressure Reducing + Pressure Sustaining Control Valve
PS	Pressure Sustaining Control Valve
PREL	Pressure Reducing + Solenoid Controlled Valve
EL	Solenoid Controlled Valve
QR	Quick Relief Control Valve
FL	Float Level Control Valve
FLEL	Electric Float Level Control Valve
DIFL	Differential Float Level Control Valve
PC	Pump (Booster) Control Valve
DPC	Deep Well (Submersible) Pump Control Valve
SA	Surge Anticipating Control Valve
HD	Hydraulic Check Valve

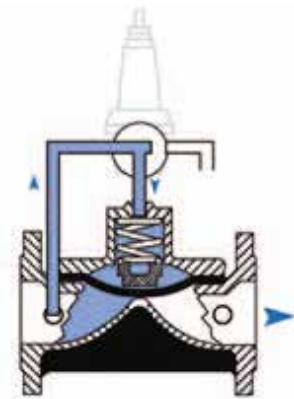




They are automatic control valves which are used hydraulically to perform the desired operations with line pressure without the need of energy sources in the mains line.

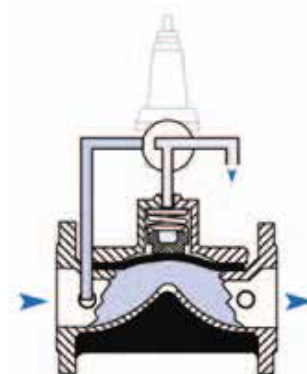
### Valve Closing Mode

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.



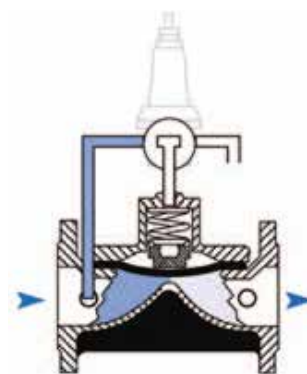
### Valve Opening Mode

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 CONTROL VALVES

## Models

### Flanged

Connection	Material			Body		Transmission Pressure			
Flanged	GGG40			Globe		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



### Threaded

Connection	Material			Body		Transmission Pressure			
Threaded	GGG40			Globe		PN10 - PN16 - PN25			
Available Diameters									
mm	20	25	32	40	50	65	80		
inch	¾	1	1¼	1½	2	2½	3		



### Victaulic

Connection	Material			Body		Transmission Pressure			
Victaulic	GGG40			Globe		PN10 - PN16 - PN25			
Available Diameters									
mm	50	65	80	100	150	200			
inch	2	2½	3	4	6	8			



### Angled

Connection	Material			Body		Transmission Pressure			
Flanged Threaded	GGG40			Globe		PN10 - PN16 - PN25			
Available Diameters									
mm	50	80	100	150					
inch	2	3	4	6					



### Hydraulic Performance

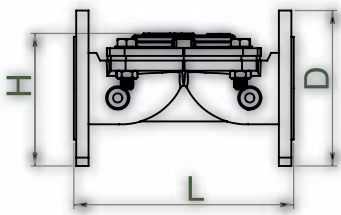
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
Valve Diameter	2	50	2½	65	3	80	4	100	5	125	6	150	8	200	10	250	12	300
Kv m³/h @ 1bar	88		88		174		187		187		419		1139		1698		2276	
Cv gmp @ 1psi	102		102		201		216		216		484		1316		1961		2629	

$$Kv(Cv) = Q \cdot \sqrt{G/\Delta P}$$

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

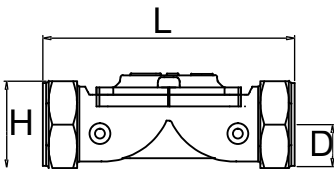
**Cv** = 1,155Kv  
**ΔP** : Pressure Loss (bar, psi)  
**G** : The specific gravity of water(Water=1.0)

### Flanged



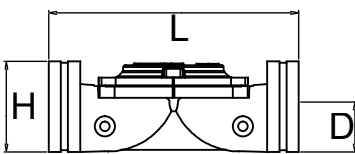
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	6,50	165	8,66	220	5,87	149	17,60	8,00
2½	65	7,28	185	8,66	220	6,06	154	21,60	9,80
3	80	7,87	200	11,26	286	6,81	173	38,80	17,46
4	100	8,66	220	12,99	330	6,81	173	46,47	29,08
5	125	9,84	250	14,49	368	8,35	212	62,30	28,25
6	150	11,22	285	15,51	394	12,80	325	114,40	51,90
8	200	13,38	340	18,19	462	14,96	380	200,80	91,10
10	250	15,94	405	21,46	545	19,09	458	332,90	151,00
12	300	18,11	460	22,19	582	19,69	500	392,90	178,20

### Threaded



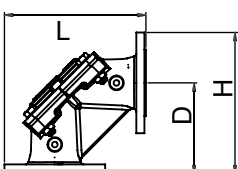
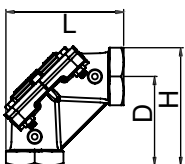
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
¾	20	0,9	23	5,2	132	2	50	2,2	1
1	25	0,9	23	5,2	132	2	50	2,2	1
1¼	32	1,35	34	6,8	173	3,6	92,3	6,3	2,85
1½	40	1,35	34	6,8	173	3,6	92,3	5,8	2,65
2	50	1,65	41,5	7,3	186	4,4	112	9	4,1
2½	65	1,8	46	8,9	226	4,6	118	11,7	5,3
3	80	2,05	52,5	12,5	318	5	127	26,4	12

### Victaulic



DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	1,18	30	7,24	184	3,11	79	8,6	3,9
2½	65	1,46	37	8,9	226	3,74	95	9,92	4,5
3	80	1,77	45	11,42	290	3,7	94	13	5,9
4	100	2,26	57,5	12,48	317	4,19	106,5	13,6	6,2
6	150	3,3	84	17,87	454	5,24	133	66	30
8	200	4,53	115	21,40	544	13,10	332	143,3	

### Angled



Flanged Threaded

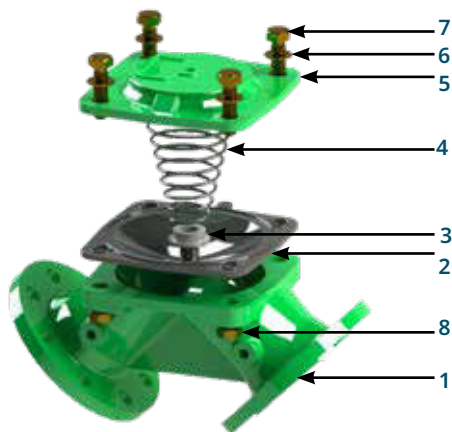
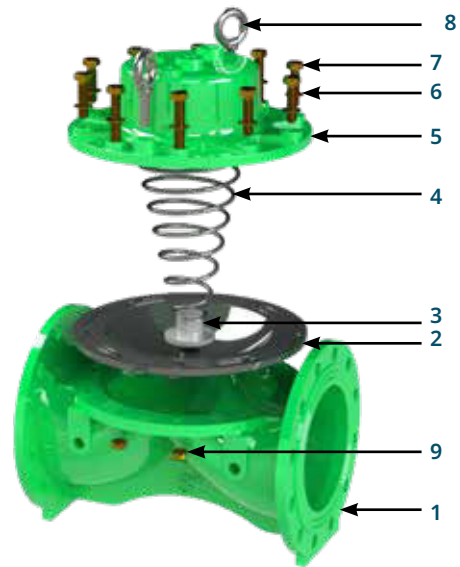
DN		D		L		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	Lbs	Kg
2	50	4,4	112	6,05	154	6,05	154	9,47	4,3
3	80	7,1	180	9,45	240	9,45	240	29,3	13,3
2	50	4,4	112	7,44	189	7,44	189	19,07	8,65
3	80	7,1	180	10,95	278	10,95	278	39,02	17,7
4	100	7,48	190	12	305	12	305	60,19	27,3
6	150	9,05	230	14,92	379	14,92	379	106,26	48,2

# HYDRAULIC CONTROL VALVES

## Main Parts

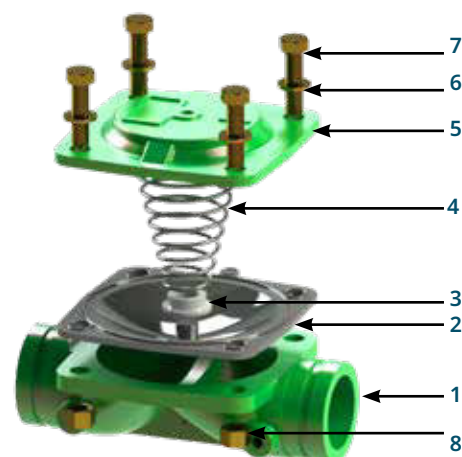
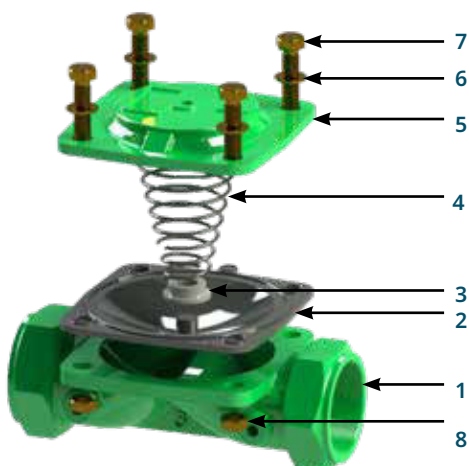
### Flanged

Nr.	Material Name	Type Of Material
1	Body	GGG40
2	Diaphragm	Natural Rubber
3	Spring Seat	Polyamide
4	Spring	SST 302
5	Cover	GGG40
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



### Threaded - Victaulic - Angled

Nr.	Material Name	Type Of Material
1	Body	GGG40
2	Diaphragm	Natural Rubber
3	Spring Seat	Polyamide
4	Spring	SST 302
5	Cover	GGG40
6	Washer	8.8 Coated Steel
7	Bolt	8.8 Coated Steel
8	Nut	8.8 Coated Steel













**Her  
Fabrika** Bir  
Kaledir\*

*H. Odaturk*



\*Every factory is a fortress

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