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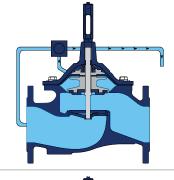


HYDRAULIC CONTROL VALVES

BEECO® ACV Series Basic Valve is a hydraulically operated diaphragm actuated, globe pattern valve. It consists of three major components; body, diaphragm assembly and cover. With any effect of the pressure to the diaphragm, the diaphragm moves up/down. With pressure build up in the actuator chamber, the valve is closed with full tightness. When pressure reduces in the actuator chamber or there is low pressure than the inlet pressure in the actuator chamber, the valve allows water to pass. BEECO® ACV series control valves are used for many applications such as pressure regulation, flow control and level control. As with all BEECO® products it offers low cost of ownership due to the ease of repair and maintenance.

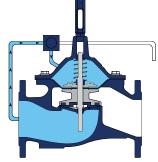
PRINCIPLES OF OPERATION

OPENING MODE



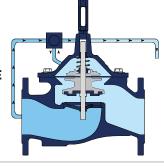
When pressure in the cover chamber is relieved to a zone of lower pressure, the line pressure at the valve inlet opens the valve, allowing full flow.

CLOSING MODE



When pressure from the valve inlet is applied to the cover chamber, the valve closes driptight.

MODULATION MODE

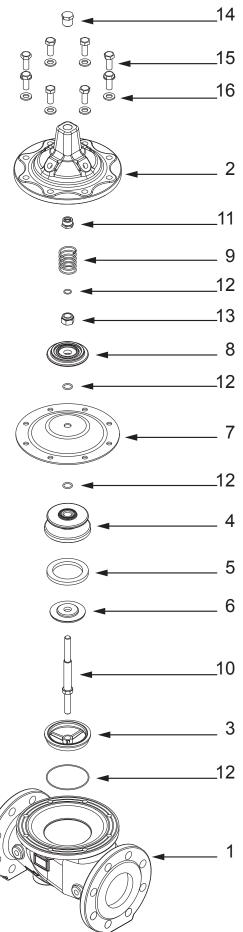


The valve holds any intermediate position when operating pressures are equal above and below the diaphragm.

BEECO ACV Series



MAIN PARTS				
No.	PART NAME	MATERIAL		
1	Body	GGG50 (Ductile Iron)		
2	Bonnet	GGG50 (Ductile Iron)		
3	Seat	AISI304 Stainless Steel		
4	Disc	GGG50 (Ductile Iron)		
5	Rubber Seal	Natural Rubber, EPDM (Optional)		
6	Disc Washer	AISI304 Stainless Steel		
7	Diaphragm	Natural Rubber, EPDM (Optional)		
8	Diaphragm Disc	GGG50 (Ductile Iron)		
9	Spring	AISI302 Stainless Steel		
10	Stem	AISI304 Stainless Steel		
11	Stem Bearing	AISI304 Stainless Steel		
12	O-Ring	NBR		
13	Fiber Nut	AISI304 Stainless Steel		
14	Plug	Brass		
15	Bolts & Nuts	Galvanized, AISI304, Stainless Steel (Optional)		
16	Washer	Galvanized, AISI304, Stainless Steel (Optional)		



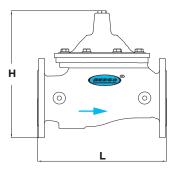


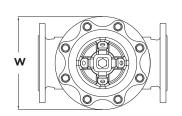


TECHNICAL SPECIFICATIONS				
PRESSURE RATING	Standard	0.5 - 16 bar (7.5 - 240 psi)		
	High Pressure Range	0.5 - 25 bar (7.5 - 360 psi)		
TEMPERATURE	Min. Operating Temperature	- 50°F (10°C) DIN 2401 / 2		
	Max. Operating Temperature	176°F (80°C) DIN 2401 / 2		
CONNECTION	Flanged	Standard: EN 1092/2, Optional: ANSI, BS 10-E		
COATING	Standard	Ероху		
COATING	Optional	Polyester		
	Standard	Copper		
HYDRAULIC CONNECTIONS	Optional	SST, Reinforced Nylon Hydraulic Pipe · SAEJ 844		
ACTUATOR TYPE	77 Model	Single Chamber, Diaphragm Actuated, Disc Closed Type		
DESIGN	EN 1074-5			

AVAILABLE MODEL	ACV 77			
Connection	Flanged			
Material	Ductile Iron (GGG50)			
Body Pattern	Globe			
Operating Pressure	16 bar (240 psi) - 25 bar (360 psi)			
	2" (50)			
	2 1/2" (65)			
Available Sizes	3" (80)			
Available Sizes	4" (100)			
	6" (150)			
	8" (200)			







DN	Н	L	W	WEIGHT	
2" (50)	10,2" (260)	9,1" (230)	6,9" (170)	29,7 lbs.	13,5 kg
2 1/2" (65)	10,6" (270)	11,4" (290)	6,9" (170)	35,2 lbs.	16 kg
3" (80)	12,4" (315)	12,2" (310)	9" (228)	52,8 lbs.	24 kg
4" (100)	13,8" (350)	13,8" (350)	10,2" (258)	70,4 lbs.	32 kg
6" (150)	21,5" (545)	18,9" (480)	15,4" (392)	189,2 lbs.	86 kg
8" (200)	24,6" (625)	23,6" (600)	18,2" (462)	330 lbs.	150 kg

BEECO ACV Series



HYDRAULIC PERFORMANCE							
Valve Size		2" (50)	2 1/2" (65)	3" (80)	4" (100)	6" (150)	8" (200)
Kv	m³/h @ 1 bar	50	75	115	200	380	700
Cv	gpm @ 1 psi	58	87	133	231	439	809
Max. Flow Continuance	m³/h	39	66	100	156	350	622
	gpm	171	289	438	685	1541	2739
Max. Flow Intermittent	m³/h	78	131	199	311	573	848
	gpm	342	579	876	1369	2521	3735

 $Kv,Cv=Q\sqrt{\frac{G}{\Delta P}}$ Cv=1,155Kv

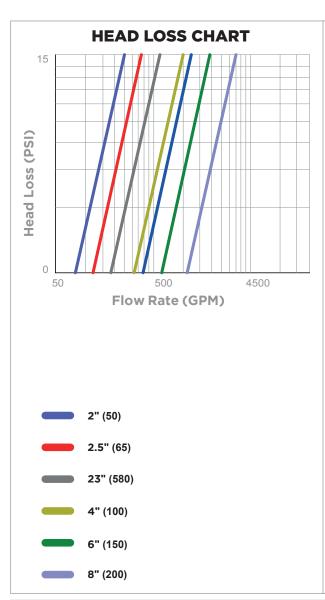
Kv: Valve flow coefficient (flow in m³/h at 1 bar differential pressure)

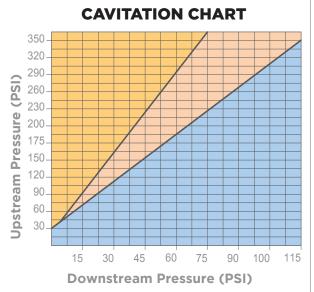
Cv: Valve flow coefficient (flow in gpm at 1 psi differential pressure)

Q: Flow rate (m³/h; gpm)

ΔP: Differential pressure (bar; psi)

G: Liquid specific gravity (Water = 1.0)





For the purpose of using cavitation charts:

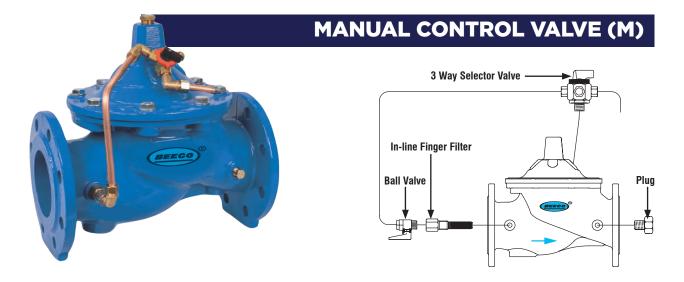
- Determine the valve upstream pressure specified in the system on the charts.
- Make the required downstream pressure intersect the determined downstream pressure.
- Determine the cavitation condition of the valve based on 3 areas whose intersections are shown on the charts.

CAVITATION ZONE

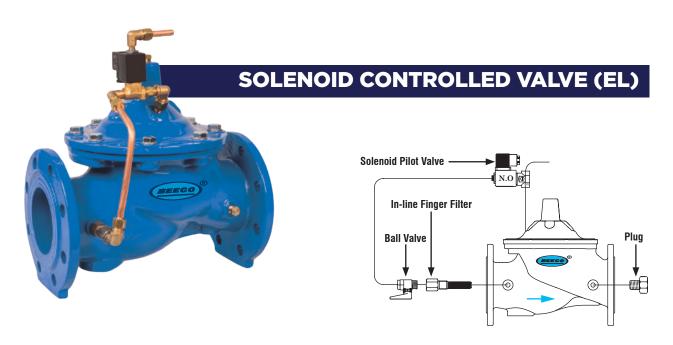
NOISY OPERATION ZONE

SAFETY ZONE



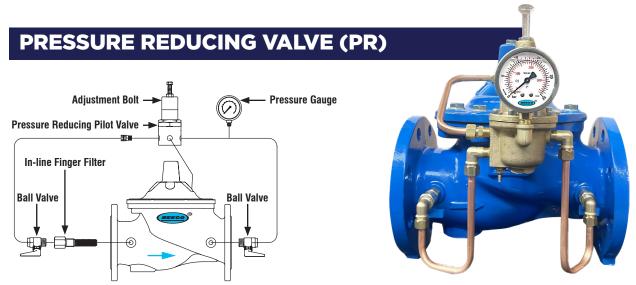


BEECO® "M" model manual control valves are hydraulic control valves that operate with line pressure and provide on-off with a 3-way selector valve. The minimum operating pressure of the valve is 0.5 bar. Thanks to its flexible diaphragm, rigidly seated valve stem and stainless steel spring, it provides easy and fast control in high pressure applications and it closes completely tightened. It can be used in many different applications by adding different pilot valves on the main valve body.

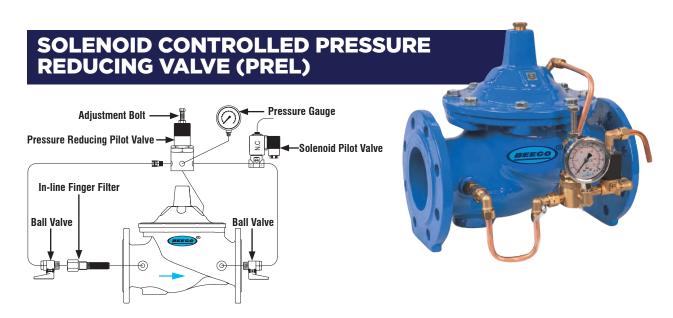


BEECO® "EL" model solenoid controlled valves are hydraulic control valves that perform the on-off operation by controlling the 3/2-way solenoid pilot valves mounted on valve with a remote electrical signal. The electrical signal to the solenoid pilot valves is provided by a control equipment such as control device, time relay, switch, PLC control units. Thanks to the manual control screw on the solenoid pilot valve, it can be easily opened and closed. 24 Volt AC 50Hz or 60 Hz, 12 Volt DC, 9 Volt DC latch and 12 Volt DC latch, normally open (N.O) or normally closed (N.C.) solenoid coils can be used on the main valve.



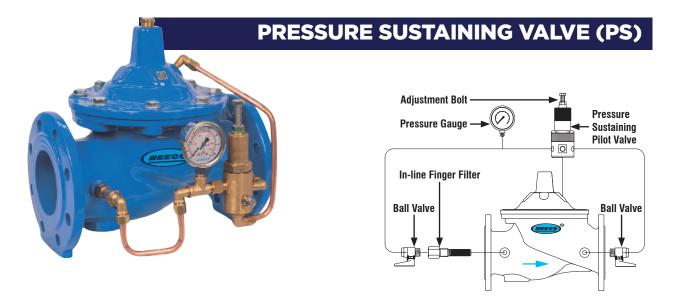


BEECO® "PR" model pressure reducing valves are hydraulic control valves that reduce the high inlet pressure value into a lower desired pressure value thanks to the pressure reducing pilot. The pressure reducing control valve constantly controls the desired output pressure value without being affected by the flow rate and inlet pressure values and keeps it constant. When there is no flow in the system, the valve automatically closes itself as drip-tight. When the valve inlet pressure value in the system falls below the set outlet pressure value, the valve opens fully. The valve can be used in horizontal or vertical positions in the system.

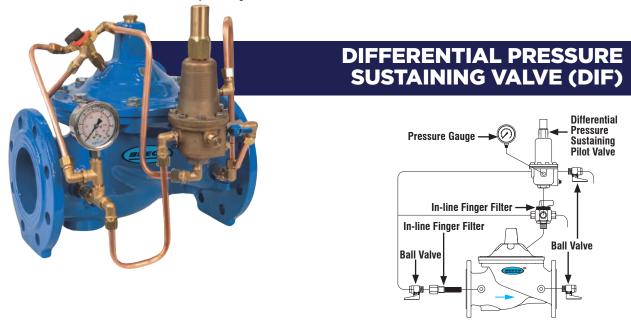


BEECO® "PREL" model solenoid controlled pressure reducing valves are hydraulic control valves that reduce the high inlet pressure value into a lower desired pressure value. The control of the main valve is realized by means of 3/2 way solenoid pilot valves. The electrical signal to the solenoid pilot valves is provided by a control equipment such as control device, time relay, switch, PLC control units. Thus, automation and control are easily provided in application systems.



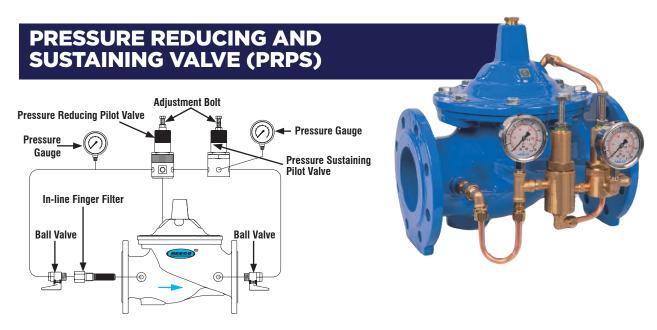


BEECO® "PS" model pressure sustaining valves are control valves that maintains valve inlet pressure value constant. The valve opens when the line pressure reaches the valve set pressure level. Thanks to this feature, it enables the pump motor to rise without load in pumping systems. Thus, it also prevents positive pressure waves caused by the pump, When it starts to operate. The valve keeps the inlet pressure value constant by controlling it, without being affected by the flow rate changes. When there is no flow, the valve closes itself completely sealed.

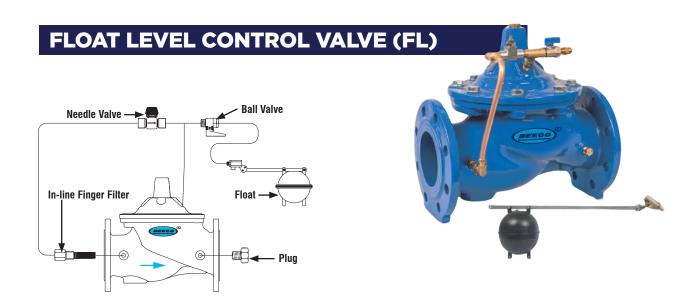


BEECO® "DIF" model differential pressure sustaining valves keep the differential pressure between two positions at a constant value without being affected by variable flow rate and inlet pressure. Required inlet pressure can be easily adjusted with the pilot. It can control the drainage of booster pumps, heating and cooling systems, bypass lines, filters and other similar systems.





BEECO® "PRPS" model pressure reducing and sustaining valves are control valves that sustain the upstream pressure and reduce the downstream pressure to the desired value. There exist two pilot valves on the main valve. The inlet pilot valve is the pressure sustaining pilot and sustains the inlet pressure. The other pilot valve is the pressure reducing pilot valve and it reduces the downstream pressure value to the desired value and ensures that it remains constant.



BEECO® "FL" model float level control valve is the hydraulic control valve designed to control water level in reservoirs and tanks continuously. Main valve is controlled by 2-way modulating type float pilot valve hydraulically. Main valve mounted on reservoir and tank upstream is closed as fully sealed without causing surge when water level reaches to maximum level. Valve opening/closing speed may be adjusted in set value.



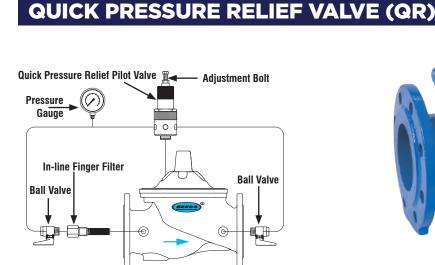


BEECO® "FLEL" model electric float level control valve is the hydraulic control valve designed to control water level continuously by means of electrical float placed in reservoirs and tanks. Electrical float sends signal to solenoid coil on main valve when water level decreases below set level. Main valve is opened and ensures that tank or reservoir will be filled permanently. When water reaches maximum level, electrical float sends signal to solenoid coil again and main valve is closed as drip-tight.



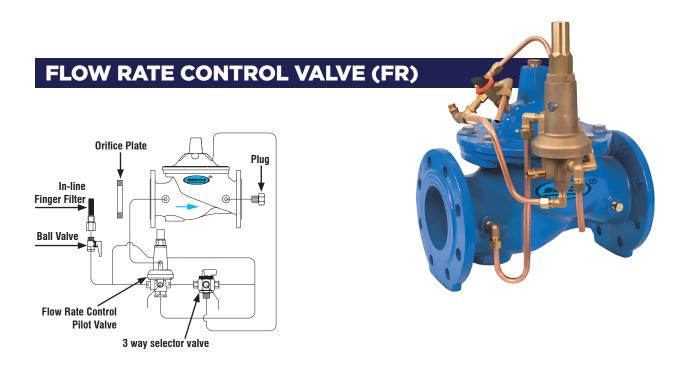
BEECO® "DIFL" model differential float level control valve is a hydraulic control valve that can control the water level in tanks or reservoirs at desired intervals. Thanks to the 4-way differential control, the main valve is closed in a fully sealed manner when the water level reaches the desired maximum level. The maximum and minimum water level in the tank or reservoir can be easily adjusted to the desired value in a wide range. Due to this feature, the pump does not switch on and off continuously during the level control of the tanks or reservoirs fed by the pump.





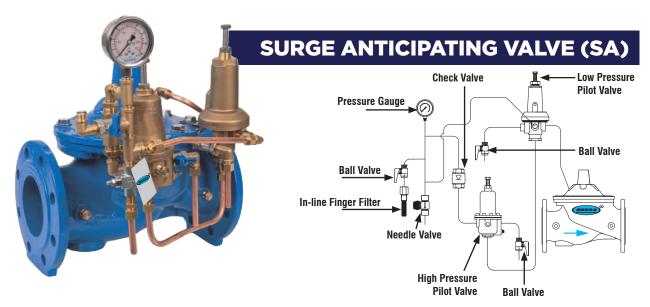


BEECO® "QR" model quick pressure relief valve is a safety valve designed to protect the network system, which automatically discharges pressure fluctuations that occur as a result of sudden changes in water speed, to the atmosphere. When the pressure of the system exceeds the set point, the valve opens itself quickly and protects the system by relieving the excess pressure. When the pressure value in the system drops to the normal level, the valve closes itself slowly and automatically without surge.

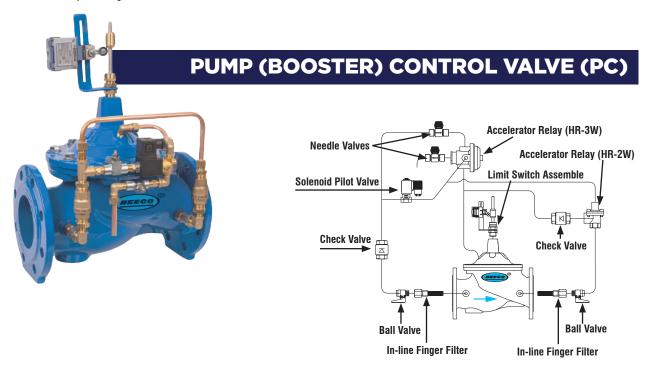


BEECO® "FR" model flow control valves are control valves designed to limit the desired flow rate. The orifice at the inlet of the main valve creates differential pressure and the 3-way differential pressure adjustment pilot senses the differential pressure and ensures the main valve to open at the adjusted flow rate. Thus, the valve automatically limits the desired flow rate and keeps it constant without being affected by the inlet pressure and flow rate changes. It prevents excessive water loss by preventing excessive flow during backwashing process in filtration systems.





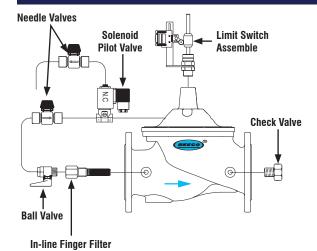
BEECO® "SA" model surge anticipating control valves are valves that absorb energy waves that occur as a result of energy cuts in pumping systems. It is a safety control valve designed to protect the network system, which automatically and quickly evacuates water hammers caused by sudden changes in water speed as a result of the pumps switching on and off in the system. The valve opens quickly by sensing the decreasing pressure wave with its pressure signal pipe and low pressure pilot. When the line pressure reaches the normal level, the valve automatically closes itself slowly and completely sealed.



BEECO® "PC" model pump control valves are control valves designed to automatically activate and deactivate the booster type pumps used in the water network lines. As soon as the "start" button of the pump is pressed, the pump control valve is in the closed position. From pressing the start button until the pump finds its speed, the pump control valve opens itself slowly relative to the booster pump. When the "stop" button of the pump is pressed, the pump control valve is closed slowly without causing surge.



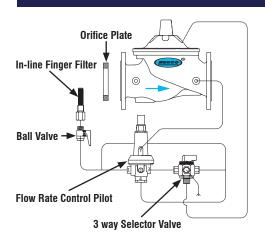
PUMP (DEEP WELL) CONTROL VALVE (DPC)





BEECO® "DPC" model deep well pump control valve is a relief valve designed to automatically activate and deactivate deep well type pumps. The valve is connected to the main line by a "TE" piece. The valve is in the open position before the pump operates. As soon as the pump starts to work, the valve closes itself slowly without causing surge and gradually increases the system pressure. Before the pump stops, the valve opens slowly and gradually reduces the system pressure.

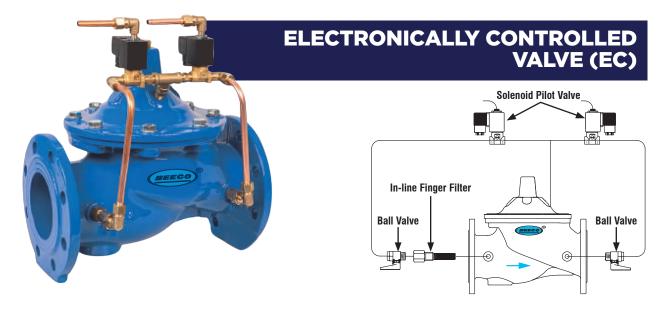
EXCESSIVE FLOW SHUT-OFF VALVE (FE)



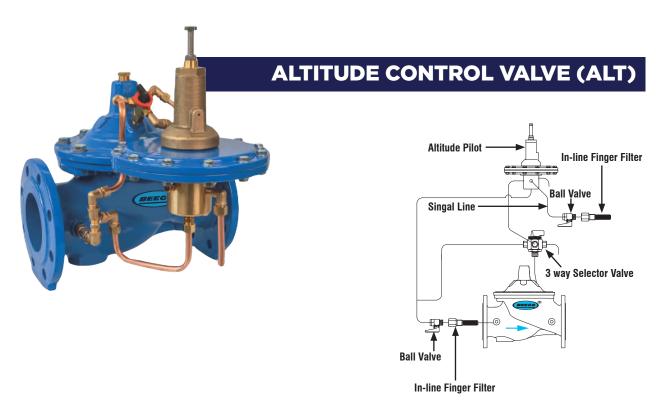


BEECO® "FE" model excessive flow shut-off control valve is hydraulic control valve that operate with line pressure and close when flow is above the set flow rate. The valve opens fully while passing water rate is below the set flow rate. With the help of the 3-way differential pilot valve and orifice, valve closes itself in a completely sealed way when flow rate exceeds the set value. Thanks to this feature, it closes itself in case of damage such as pipe bursting and prevents water wastage.





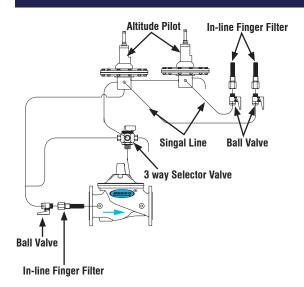
BEECO® "EC" model electronically controlled valves can provide local or remote control in time related applications, and automatic control systems. The valve is controlled by two solenoid valves and the solenoids controlled by PLC controller. It has a simple and reliable design that works with low energy.



BEECO® "ALT" model altitude control valves are pilot-controlled automatic level control valves with high sensitivity, which are active with the water level in water towers. The high-precision pilot valve, which senses the water level in the water towers, opens or closes the main valve. As the pilot valve located outside the water tower, no pilot float is required.

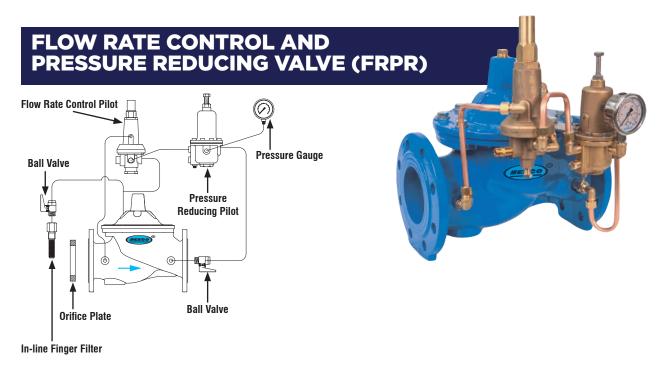


BI-LEVEL ALTITUDE CONTROL VALVE (ALT-B)





BEECO® "ALT-B" model bi-level altitude control valves are two pilot-controlled automatic level control valves with high sensitivity, which are active with the water level in water towers. The high-precision pilot valve, which senses the water level in the water towers, opens or closes the main valve. As the pilot valve located outside the water tower, no pilot float is required. One of the pilot valves control the minimum water level and the other controls the maximum water level.



BEECO® "FRPR" model flow rate control and pressure reducing valves provide two functions independently. There is a 3-way differential pilot on the valve that works with line pressure without requiring any other energy. The pressure reducing pilot valve controls the outlet pressure of the valve. Flow control is provided with this pilot. Flow rate control and pressure reducing valves offer two separate valve functions in a single valve.



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CLPB-2025 LIGHT COMMERCIAL **PRODUCTS** (I IT-048)



AD-2024-USA **ACCESS DOORS** (LIT-043)



BEECO-2025 BACKFLOW PREVENTERS, AND ACCESSORIES (LIT-071)



NH-2022-06 NO HUB COUPLINGS (LIT-044)













TDPC-2025 POLYMER CONCRETE TRENCH DRAINS (LIT-076)



TD-2025 **GRP & STEEL** TRENCH DRAINS (LIT-046)



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