



Product Description

BKV 116 Series Pump Control Valves are designed to automatically start or stop booster (horizontal shaft) pumps used in water supply system transfer lines. They are active check valves that open or close completely in response to electrical signals. From the moment the pump's start button is pressed until the pump reaches its operating speed, the pump control valve opens more slowly than the pump. When the pump's stop button is pressed, the pump control valve first begins to close slowly without creating a shock, and then, when the valve is fully closed, the pump is switched off by the limit switch on the valve. In the event of a power failure, the pump control valve acts as an active check valve to prevent backflow to the pump, eliminating the need for an additional check valve in the system.

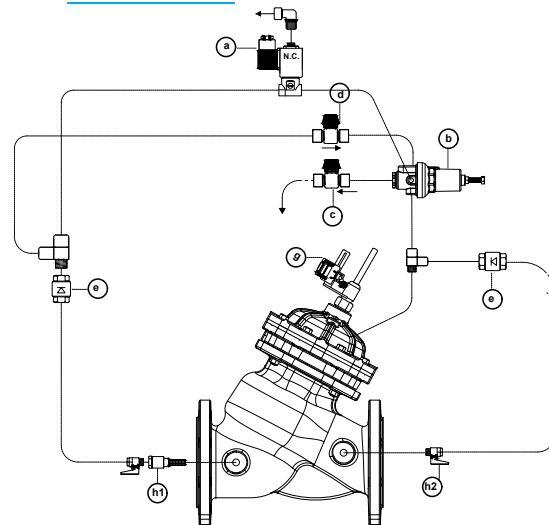
Features

- Low-cost cabling.
- Normally open/normally closed solenoid valves.
- Wide pressure and voltage ranges.
- Safe mechanical shut-off.
- Remote motor on/off capability.
- Active check valve feature.
- Minimizing surge damage.
- Individually adjustable opening and closing ratios.
- Low cavitation risk.

Adjustment

- Open the valves indicated by (e) on the valve.
- Open the needle valve indicated by (c1) 3 turns. Open the needle valve indicated by (c2) 2 turns.
- Check the pump panel electrical circuit diagram.
- The pump control valve will open completely.
- Restart the pump by opening the isolation valve located at the outlet.
- You can adjust the opening speed of the valve with the needle valve indicated by (c1).
- When you stop the pump, you can adjust the closing speed of the valve with the needle valve indicated by (c2).
- Start the pump.

Technical Drawing



- a- Solenoid
- b- 3-Way Pilot
- c- Needle Valve
- d- Check Valve
- e- Mini Ball Valve
- f- Finger Filter
- g- Switch
- h- Body

Production Standards

DN40 → DN500

Pressure Range 0,7 - 25 bar

Connection Flanged EN1092-2

Paint	Electrostatic Powder Coating
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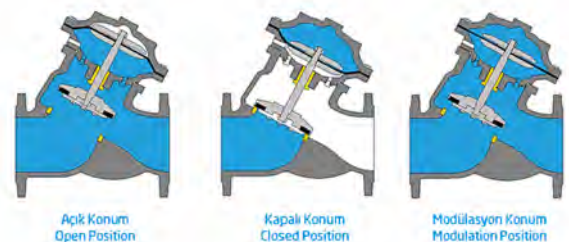
Temperature -10 °C +80 °C

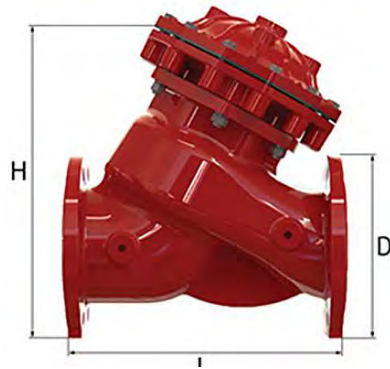
Application Areas

- Agricultural irrigation
- Fire extinguishing
- Industrial applications
- Irrigation and drinking water distribution systems

Working Principle

- Closed position: The valve is closed by applying pressure to the diaphragm through fluid pressure.
- Open position: Internal line pressure causes the diaphragm to move upwards, allowing flow.
- Modulation position: Internal and external line pressures are balanced, keeping the diaphragm in a fixed position.

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Recommended Work Values

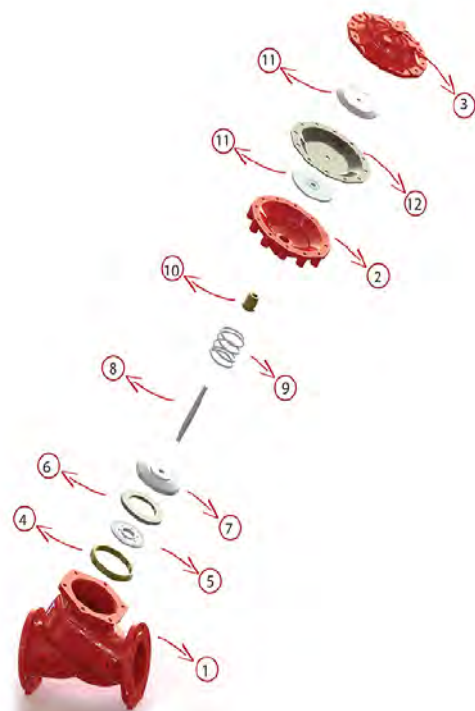
Working Pressure	Standard	1-16 bar (10-240 psi)
Temperature	Min. Operating Temperature	-10°C
	Max. Operating Temperature	+80°C
Connection	Flanged	EN 1092-2 ISO 7005-2
	Threaded	ISO (BSP) - ANSI (NPT)
Paint Coating	Standard	Polyester
	Optional	Epoksi

Y-Type Control Valve Size and Weight Chart

DN		L		D		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
1 1/2"	40	8,5	215	5,9	150	10,6	270	33	15
2"	50	8,7	220	6,5	165	10,6	270	35	16
2 1/2"	65	8,7	220	7,3	185	11,2	285	39	18
3"	80	10,60	270	7,9	200	13,4	340	59	27
4"	100	12,80	325	8,7	220	15,4	390	85	39
5"	125	13,20	335	9,8	250	16,5	420	97	44
6"	150	16,93	430	11,2	285	20,5	520	200	91
8"	200	21,26	540	13,4	340	26,0	660	399	181
10"	250	24,60	625	15,9	405	30,5	775	590	268
12"	300	26,97	685	18,3	465	31,9	810	661	300
14"	350	34,3	870	20,5	520	41,9	1065	1569	712
16"	400	34,3	870	23,0	585	43,1	1095	1598	725
18"	450	43,9	1115	56,3	1430	53,7	1365	3042	1380
20"	500	43,9	1115	56,3	1430	53,7	1365	3086	1400

NOTE: Weight and valve height (h) do not include accessories.

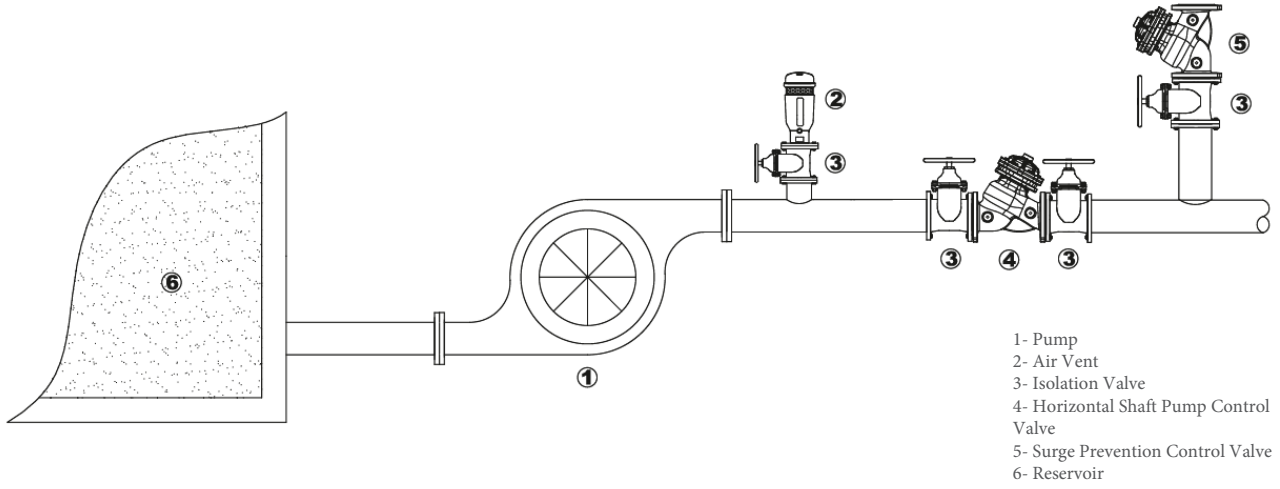
Main Parts



1	Body	GGG40 (EN-GJS 400-15) Cast iron
2	Intermediate Body	GGG40 (EN-GJS 400-15) Cast iron
3	Lid	GGG40 (EN-GJS 400-15) Cast iron
4	Sealing Bushing	Brass/Bronze
5	Flap Press Cover	Stainless
6	Flap Seal	Buna-N
7	Flap	Stainless
8	Shaft	Stainless
9	Spring	Stainless
10	Intermediate Body Shaft Bearing	Brass/Bronze
11	Diaphragm Press Disc	Stainless
12	Diaphragm	Nopren (Nylon based)

Maximum Working Pressure		Leakage Test Pressure		Body Test Pressure	
BAR	PSI	BAR	PSI	BAR	PSI
10	145	11	160	15	217
16	232	17,6	255	24	348
25	363	27,5	399	37,5	544

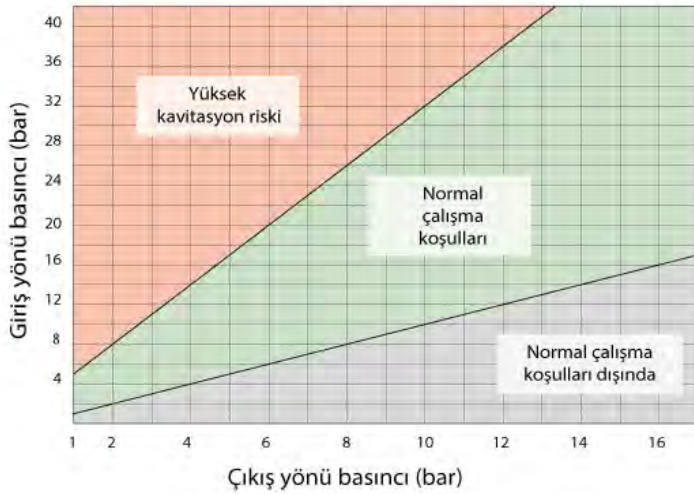
Example Application



Flow Analysis Table

Nominal Diameter	mm	50	65	80	100	125	150	200	250	300	350	400	450	500
	Inch	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"
kv	m ³ /h- 1 ar	70	73	167	215	224	503	830	1300	1800				
		44	46	96	168	171	388	685	1054	1565				

Cavitation Graph



Pressure Loss Graph

