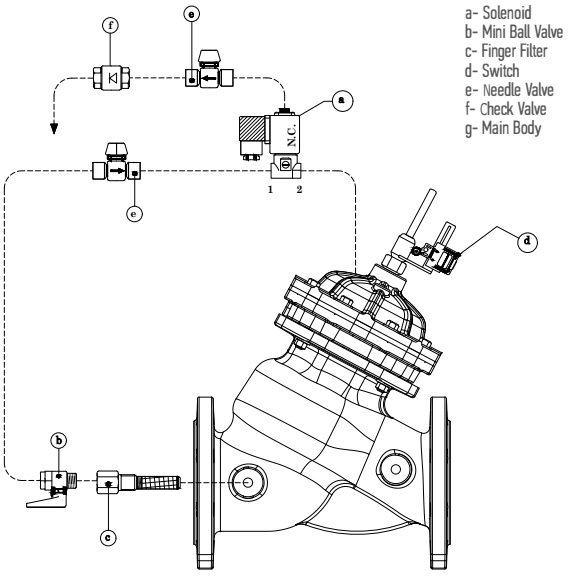
Vertical Shaft Pump Control Valve



Technical Drawing



Product Description

BKV 116 Series vertical shaft pump control valves are designed to automatically start or stop vertical pumps used in water supply systems' booster lines. They are active 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 speed, the pump control valve opens more slowly than the pump. When the switch is pressed, the coil power is cut off, and the valve closes slowly.

Production Standards

Production Standards	*DN40 ⟹ DN500*
Pressure Range	*0,7 bar ⟹ 16 bar*
Connection	*Flanged N1092-2*
Paint	*Electrostatic Powder Coating*
Temperature	*-10 °C +80 °C*

Features

- Düşük maliyetli kablolama.
- Normally open-normally closed solenoid valves.
- Wide pressure and voltage ranges.
- Safe mechanical shutdown.
- Remote motor on/off feature.
- Minimizing surge damage.
- Individually adjustable on/off rates.
- Low cavitation risk.

Application Areas

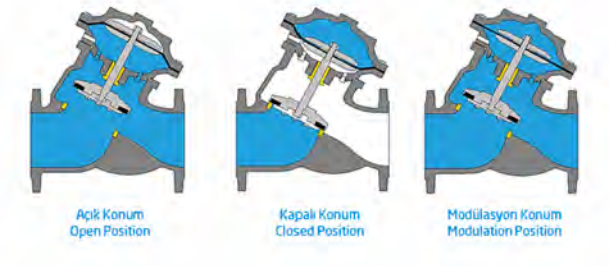
- **Agricultural irrigation**
- **Fire extinguishing**
- **Industrial Applications**
- **Irrigation and drinking water distribution systems**

Adjustment

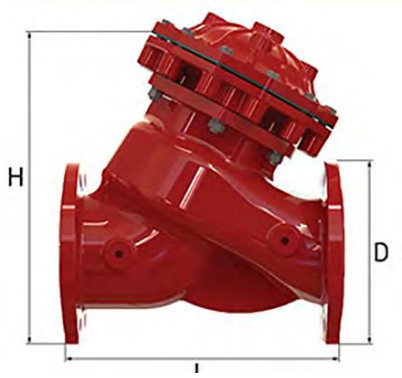
- Open the mini valve marked "b" on the main valve.
- Connect the pump control valve to the pump's control panel according to the electrical diagram shown.
- Start the pump.
- The valve will open slowly. When the valve is fully open, adjust the position of the Limit Switch, indicated by "d," to the position where the valve will be fully closed and secure it. The knob at the end of the valve's indicator shaft must contact the Limit Switch.
- Adjust the opening speed of the valve with the "e2" needle valve and the closing speed with the "e1" needle valve.

Working Principle

- Closed position: The valve is closed by applying pressure to the diaphragm through fluid pressure.
- Open position: Internal line pressure moves the diaphragm upwards, allowing flow.
- Modulation position: The diaphragm remains in a fixed position by balancing the internal and external line pressures.



Nominal Diameter	1 1/2" DN40	2" DN50	2 1/2" DN65	3" DN80	4" DN100	5" DN125	6" DN150	8" DN200	10" DN250	12" DN300	14" DN350	16" DN400	18" DN450	20" DN500
Product Code	YF16DMPK 40	YF16DMPK 50	YF16DMPK 65	YF16DMPK 80	YF16DMPK 100	YF16DMPK 125	YF16DMPK 150	YF16DMPK 200	YF16DMPK 250	YF16DMPK 300	YF16DMPK 350	YF16DMPK 400	YF16DMPK 450	YF16DMPK 500



Recommended Work Values

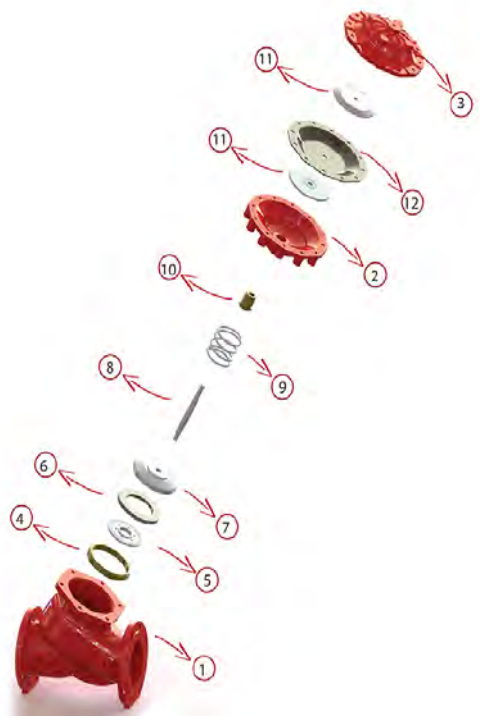
Working Pressure	Standard	1-16 bar (10-240 psi)
Temperature	Min.Operating Temperature	-10°C
	Max.Operating Temperature	+80°C
Connection	Flanged	EN 1092-2 ISO 7005-2
	Threaded	ISO (BSP) – ANSI (NPT)
Paint Coating	Standard	Polyester
	Optional	Epoxy

Y-Type Control Valve Size and Weight Chart

DN		L		D		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
1 ½"	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 ½"	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.

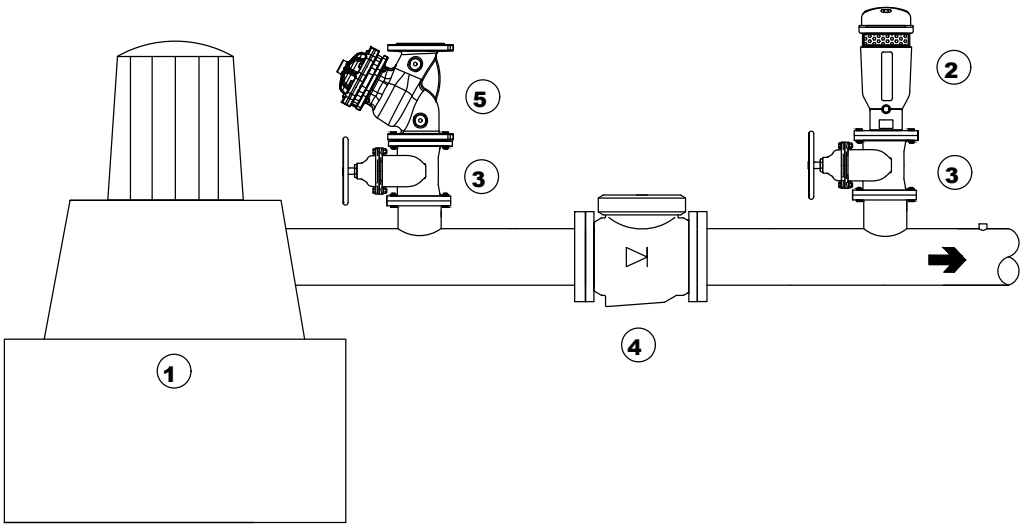
Main Parts



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

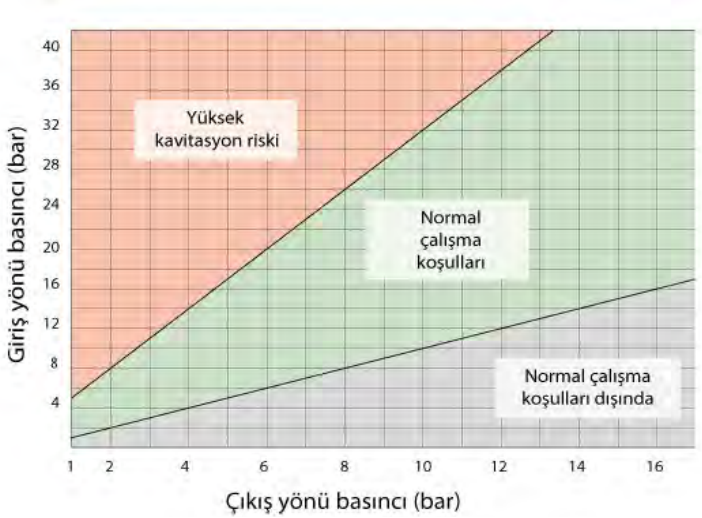


1- Pump
2-Air Vent
3- Isolation Valve
4- Check Valve
5- Vertical Shaft Pump Control Valve

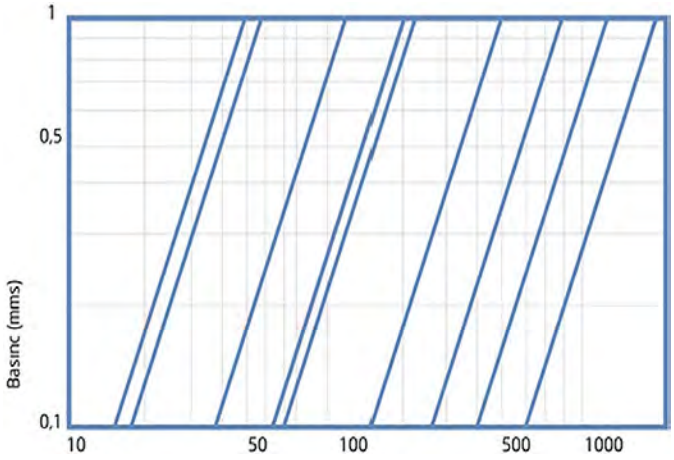
Flow Analysis Table

Nominal Diameter	mm	50	65	80	100	125	150	200	250	300	350	400	450	500
	İnch	2"	2½"	3"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"
kv	m³/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



Flow
(m3/h)