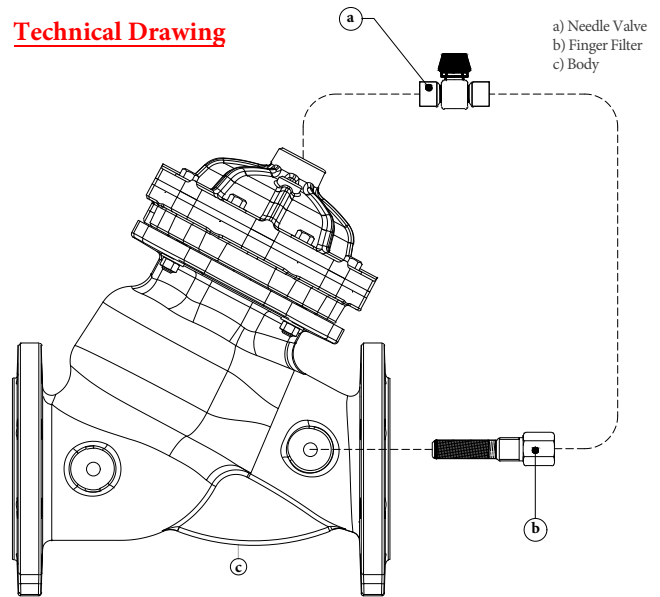




Technical Drawing



Product Description

BKV 116 Series proportional pressure reducing control valves are hydraulic control valves that reduce high inlet pressure by a ratio of (1/3 - 1/4). Proportional pressure reducing control valves reduce the outlet pressure by a ratio of (1/3 - 1/4) of the inlet pressure, regardless of flow rate and inlet pressure. They close completely and leak-proof when there is no flow in the system.

Production Standards

DN40	⇒	DN500
Pressure Range	1 bar	⇒ 16 bar
Connection	Flanged EN1092-2	
Colour	Electrostatic Powder Coating	
Temperature	-10 °C +80 °C	

Features

- Ergonomic external fasteners
- Safe operation at differential pressures
- Protection against cavitation,
- Low throttling noise,
- Series pressure reduction,
- Prevention of sudden opening waves,
- Low operating pressure
- Low cavitation risk.

Application Areas

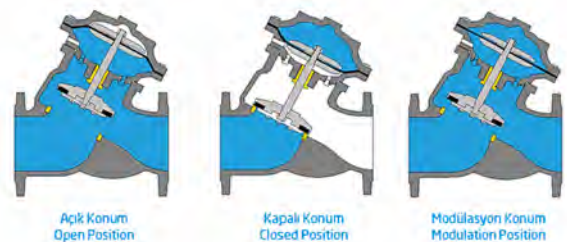
- Agricultural irrigation
- Fire extinguishing
- Industrial Applications
- Irrigation and drinking water systems

Working Principle

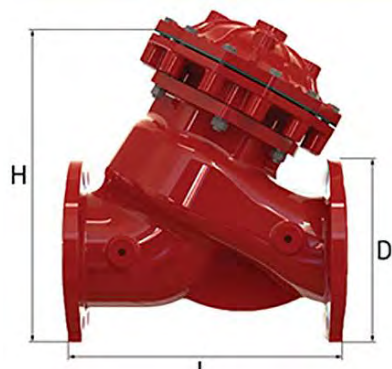
- Closed position: The valve is closed by applying pressure to the diaphragm with fluid pressure.
- Open position: Internal line pressure moves the diaphragm upwards, allowing flow.
- Modulation position: The diaphragm remains in a fixed position by balancing the internal and external line pressures.

Adjustment

This valve requires no adjustment. In fact, after connection, the valve reduces the pressure proportionally by approximately (1/4 - 1/3).



Nominal Diameter	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	YF160BD 40	YF160BD 50	YF160BD 65	YF160BD 80	YF160BD 100	YF160BD 125	YF160BD 150	YF160BD 200	YF160BD 250	YF160BD 300	YF160BD 350	YF160BD 400	YF160BD 450	YF160BD 500



Recommended Work Values

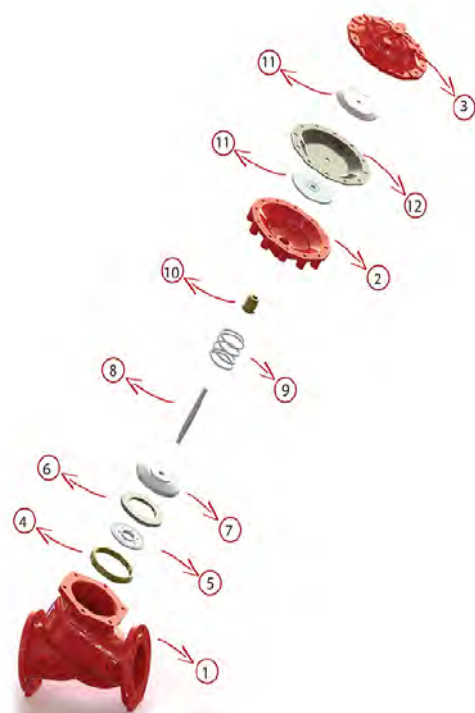
Working Pressure	Standard	1-16 bar (10-240 psi)
Temperature	Min. Operating Temperature	-10°C
	Max. Operating Temperature	+80°C
Connections	Flanged	EN 1092-2 ISO 7005-2
	Threaded	ISO (BSP) - ANSI (NPT)
Paint Coating	Standard	Polyester
	Optional	Epoxy

Y-Type Control Valve Size and Weight Chart

DN		L		D		H		WEIGHT	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
1 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.

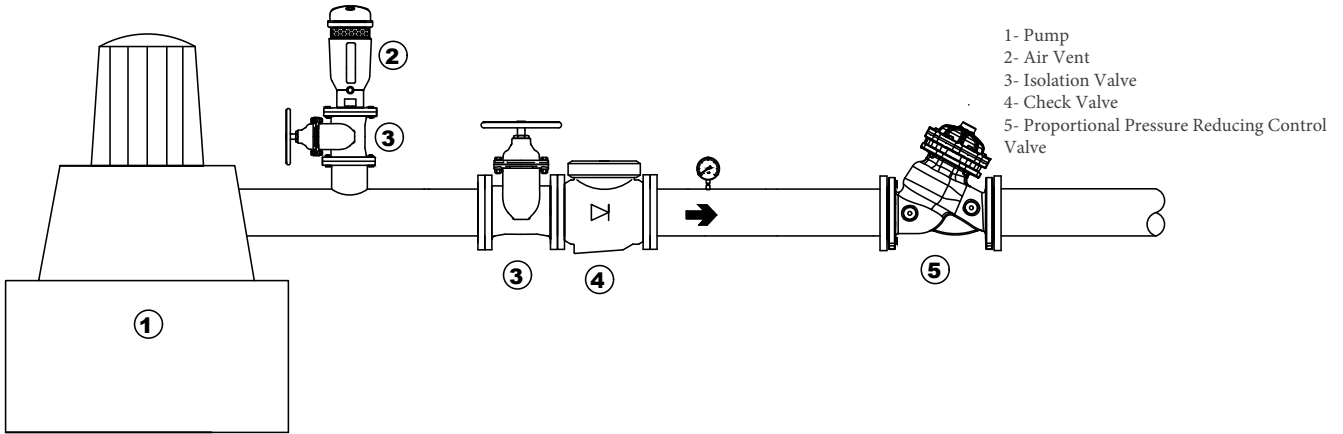
Main Parts



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	Leakproof	Brass/Bronze
5	Flap press	Stainless
6	Flap seal	Buna-N
7	Flap	Stainless
8	Shaft	Stainless
9	Spring	Stainless
10	Intermediate Body Shaft	Brass/Bronze
11	Diaphragm Pressing 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

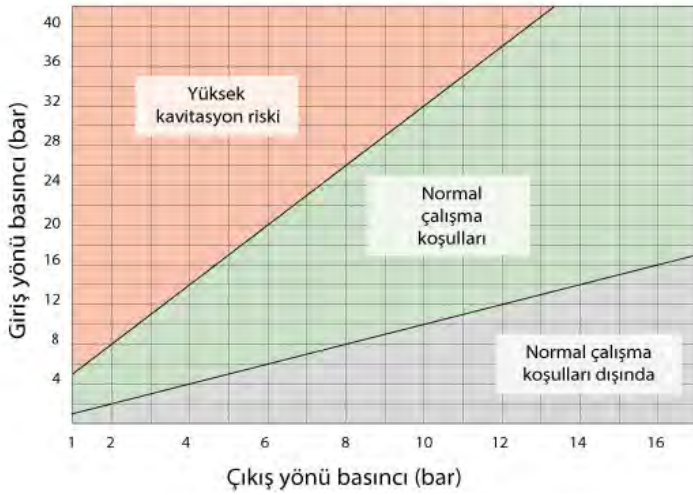
Example Application



Flow Analysis Table

Nominal Dia	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

