

SSV 40-49

Special Compensating Bypass
Check Valve



look at info
overview



PN 10-PN 100
ANSI 150-600



up to
 Δp 80 bar

4



SSV



SSV 40-49 (with control disc and bearing plate)

Range of applications

The Compensating Bypass Check Valve type SSV 40-49 is a pump protection device. Based on the SSV 10-20 series it was especially designed for centrifugal pumps with high bypass flow and low pressure load.

Therefore up to 65% of the nominal pump flow can be delivered through the bypass as minimum flow (with Type SSV 10-20 approx. 35% nominal pump flow is recommended). The max. bypass flow values Q_{By} can be gathered from table 1.

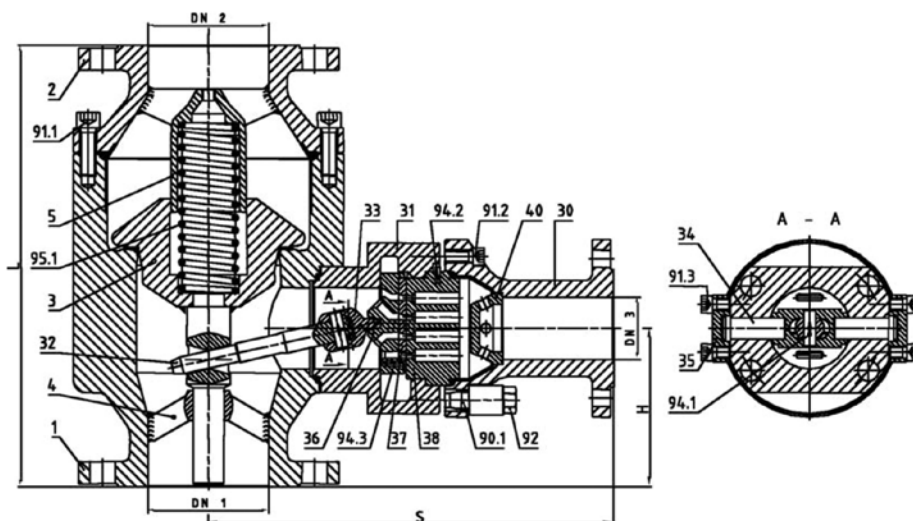
The SSV 40-49 valves normally are manufactured in the sizes DN50-DN600 (resp. NVS 2" to NVS 24"). Other sizes are deliverable on request. For design reasons the pressure loss Δp_{By} at the bypass is limited to approx. 80 bar. Other operating limits and application ranges are equal to the SSV 10-20 series.

Mode of Operation

The Compensating Bypass Check Valve with control disc and bearing plate works flow controlled, that means the non-return cone (3) is kept in his operating position by main flow only. The valve is designed in such a way, that the cone reaches its utmost upper position at denominated main flow.

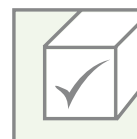
The non-return cone (3) activates the control disc (37) in the bypass by means of the lever (32). If the cone is positioned on the cone seat, the control disc (37) is completely open. It closes corresponding to the rising of the cone by delivery in main direction. The valve just allows such an amount of bypass flow, as it is necessary for supplement of the required minimum flow of the pump. As soon as the main flow exceeds the minimum pump flow, the bypass closes. On the other hand the bypass opens again, when the main flow falls short of the bypass flow.

Type	Nominal sizes				Specific values	
	Valve Body	Bypass branch	Valve Body	Bypass branch		
	DIN		ANSI			
	DN mm	DN3 mm	DN inch	DN3 inch	KV [m ³ /h]	CV [USG/min]
SSV 40	50-80	25-40	2"-3"	1"-1.5"	10.50	12.29
SSV 41	80-125	40-50	3"-5"	1.5"-2"	21.00	24.57
SSV 42	100-150	65-80	4"-6"	2.5"-3"	42.00	49.14
SSV 43	150-250	100-125	6"-10"	4"-5"	80.00	93.60
SSV 44	200-400	125-150	8"-16"	5"-6"	120.00	140.40
SSV 45	250-400	125-150	10"-16"	5"-6"	172.00	201.24
SSV 46	300-500	150-250	12"-18"	6"-10"	240.00	280.80
SSV 47	350-600	200-300	14"-20"	8"-12"	350.00	409.50
SSV 48	350-600	250-350	14"-20"	10"-14"	502.00	587.34
SSV 49	400-600	350-400	16"-20"	14"-16"	780.00	912.60



Standard body material 1.0460 (P250GH)

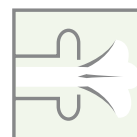
SSV
40-49



look at info
overview



PN 10-PN 100
ANSI 150-600



up to
 Δp 80 bar

SSV 40-49 with control disc and bearing plate

Parts List

Lower body	Part-No.	1
Upper body	Part-No.	2
Cone complete	Part-No.	3
Cone guide	Part-No.	4
Cone guide	Part-No.	5
Bypass branch	Part-No.	30
Adapter	Part-No.	31
Lever	Part-No.	32
Toothed segment	Part-No.	33
Bearing pin	Part-No.	34
Pin cover plate	Part-No.	35
Carrier plate	Part-No.	36
Control disc	Part-No.	37
Bearing plate	Part-No.	38
Throttle	Part-No.	40
Stud bolt	Part-No.	90.1
Eye bolt	Part-No.	90.2
Socket screw	Part-No.	91.1
Socket screw	Part-No.	91.2
Cap nut	Part-No.	92
Dowel pin	Part-No.	94.1
Dowel pin	Part-No.	94.2
Dowel pin	Part-No.	94.3
Coil spring	Part-No.	95.1

Spare Parts

Control disc, complete, consisting of:

Control disc	Part-No.	37
Bearing plate	Part-No.	38
Dowel pin	Part-No.	94.3

Single Spare Parts

Coil spring	Part-No.	95.1
-------------	----------	------

Materials according to operating conditions and valid standards.

