

SSV 70-79

Special Compensating Bypass  
Check Valve



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overview



PN 10-PN 100  
ANSI 150-600



up to  
 $\Delta p$  80 bar

5



SSV



## SSV 70-79 (with control disc complete and non-return valve in bypass)

### Range of applications

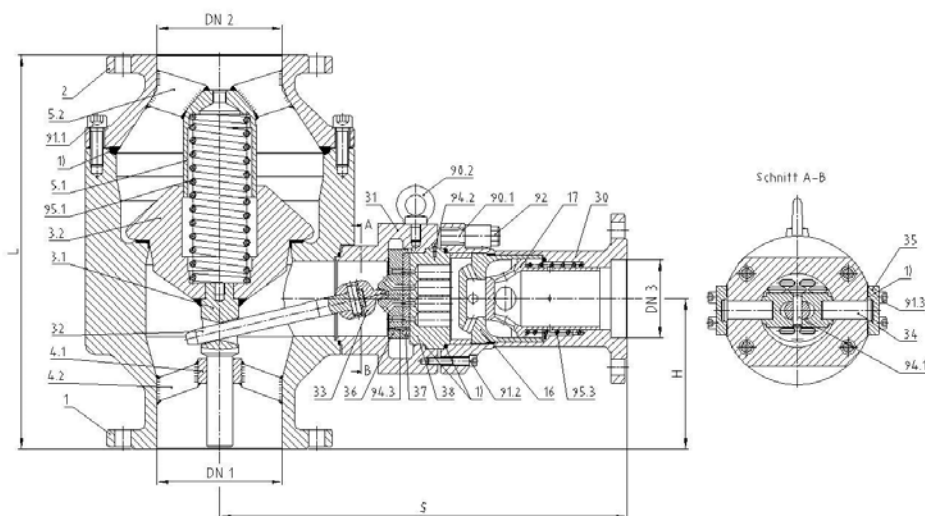
The Compensating Bypass Check Valve type SSV 70-79 is a pump protection device. In addition to the SSV 40-49 series the SSV 70-79 series uses a non-return valve in the bypass. Based on the SSV 10-20 series it was especially designed for centrifugal pumps with high bypass flow and low pressure load. Therefore 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 70-79 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  $Dp_{By}$  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 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 <sup>3</sup> /h]	Cv [USG/min]	
SSV 70	50-80	25-40	2"-3"	1"-1.5"	8,00	9.36
SSV 71	80-125	40-50	3"-5"	1.5"-2"	17,40	20.36
SSV 72	100-150	65-80	4"-6"	2.5"-3"	32,30	37.67
SSV 73	150-250	100-125	6"-10"	4"-5"	60,60	70.90
SSV 74	200-400	125-150	8"-16"	5"-6"	90,00	105.30
SSV 75	250-400	125-150	10"-16"	5"-6"	129,00	150.93
SSV 76	300-500	150-250	12"-18"	6"-10"	180,00	210.60
SSV 77	350-600	200-300	14"-20"	8"-12"	262,50	307.13
SSV 78	350-600	250-350	14"-20"	10"-14"	376,50	440.51
SSV 79	400-600	350-400	16"-20"	14"-16"	585,00	684.45



Standard body material 1.0460 (P250GH)

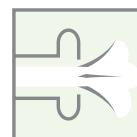
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## SSV 70-79 (with control disc complete and non-return valve in bypass)

### 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
Socket screw	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
Throttle	Part-No.	16
Non-return valve	Part-No.	17

#### Single Spare Parts

Coil spring	Part-No.	95.1
Coil spring	Part-No.	95.3

Materials according to operating conditions and valid standards.

