

Pressure Control Valves

Safety Valves SV 6, 60

Full Lift Safety Valve



Technical Data

Connection DN	25/40 - 150/250
Nominal Pressure PN	16 - 40
Set Pressure	0.1 - 40 bar
Temperature	200 °C
Medium	liquids, gases, steam

Description

Safety valves are the ultimate protection device for tanks and pipelines. They prevent pressure limits being exceeded once all automatic control and monitoring equipment has failed.

SV 6 and SV 60 are spring-loaded full-stroke safety valves with tested components provided with flanged connection. SV 6 features a closed spring cap, SV 60 is provided with an open spring cap for better cooling of the spring.

Full lift safety valves open instantly up to maximum lift within a pressure rise of 5 %. Because of their instant opening they are used where suddenly larger flow volumes or fast pressure rises may occur. They are mainly used for relieving pressure in vapours and gases.

Pressure rise:
above 1 bar set pressure:5 % up to the max. valve lift;
below 1 bar set pressure:0.1 bar.

Options

» special version up to 300 °C

Operating instructions, know how and safety instructions must be observed. All the pressure has always been indicated as overpressure. We reserve the right to alter technical specifications without notice.



Available Versions

H2	without lifting device, gastight cap
H3	with lifting device, not gastight
H4	with lifting device, gastight cap

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Materials	
1 Body	GG-25 / GS-C 25 / 1.4408
5 Seat	1.4404
7 Cone	1.4122 / 1.4404
8 Guide	0.7040 / 1.0501 / 1.4104 / 1.4404
9 Bonnet	0.7040 (0.7043 / 1.0619) / 1.4408 / 1.4571
12 Spindle	1.4021 / 1.4404
16 Spring Plate	1.0718 / 1.4404
18 Adjusting Screw	1.4404 / 1.4104 with PTFE-bush
54 Spring	up to 200 °C 1.1200 / 1.7102 / 1.8159 / 1.4310
	from 200 °C 1.7102 / 1.8159 / 1.4310

Dimensions [mm]										
DN inlet	20	25	32	40	50	65	80	100	125	150
DN outlet	40	40	50	65	80	100	125	150	200	250
do	18	23	29	37	46	60	74	92	98	125
A ₁	95	100	110	115	120	140	160	180	200	225
B ₁	85	105	115	140	150	170	195	220	250	285
C (H2)*	217	232	315	356	403	481	558	615	615	735
C (H3)*	218	233	325	366	413	526	603	660	660	735
C (H4)*	219	234	331	372	419	529	606	663	663	735
E	150	150	200	250	300	350	400	450	450	450

- *H2 = without lifting device, gastight cap
- *H3 = with lifting device, not gastight
- *H4 = with lifting device, gastight cap

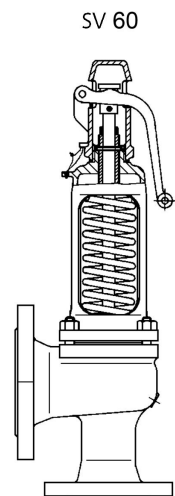
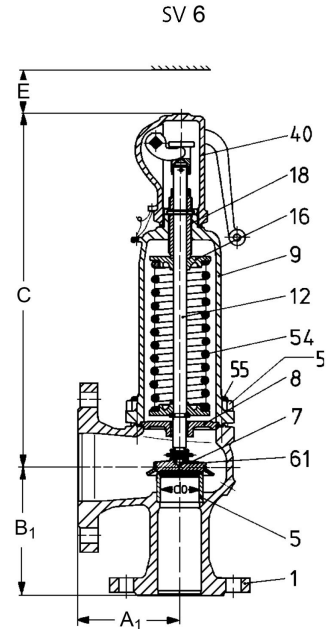
Dimensions for stainless steel design on request.

Weights [kg]										
nominal diameter DN										
20	25	32	40	50	65	80	100	125	150	
9	9	12	16	22	32	56	75	85	131	

Customs Tariff Number
84814010

Special designs on request.
The pressure has always been indicated as overpressure.
Mankenberg reserves the right to alter or improve the designs or specifications of the products described herein without notice.

Dimensional Drawing



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Flow Rate

type	medium	set pressure	flange connection - nominal diameter DN								
			25/40	32/50	40/65	50/80	65/100	80/125	100/150	125/200	150/250
6 60	saturated steam[kg/h]	0,5	209	332	541	837	1424	2166	3349	3800	6183
		1	310	493	804	1242	2114	3216	4971	5640	9177
		2	493	784	1276	1973	3357	5106	7892	8955	14570
		3	662	1052	1714	2649	4507	6856	10597	12024	19563
		4	827	1315	2141	3309	5631	8565	13239	15022	24440
		5	991	1576	2566	3967	6749	10266	15869	18006	29295
		6	1155	1836	2989	4621	7862	11959	18484	20974	34124
		7	1318	2096	3412	5273	8972	13648	21095	23936	38943
		8	1481	2354	3833	5924	10079	15332	23699	26891	43749
		9	1643	2612	4253	6574	11185	17013	26297	29839	48546
		10	1805	2871	4673	7223	12289	18694	28894	32786	53340
		12	2127	3382	5506	8511	14480	22027	34046	38632	62851
		14	2449	3894	6339	9799	16671	25359	39196	44476	72359
		16	2771	4406	7172	11086	18861	28690	44345	50318	81864
		18	3094	4919	8007	12376	21056	32029	49506	56174	91391
		24	4057	6450	10499	16228	27610	41998	64915	73659	119838
		28	4705	7480	12176	18820	32019	48704	75280	85420	-
		air [Nm³/h]	0,5	334	532	866	1338	2277	3464	5355	6076
	1		489	777	1266	1956	3329	5064	7827	8881	14449
	2		786	1249	2034	3144	5350	8138	12578	14273	23221
	3		1063	1690	2751	4253	7236	11007	17013	19304	31407
	4		1335	2122	3455	5341	9087	13822	21365	24242	39441
	5		1607	2555	4159	6429	10938	16638	25717	29181	47475
	6		1879	2987	4863	7517	12789	19454	30069	34119	55510
	7		2151	3420	5567	8605	14640	22270	34421	39058	63544
	8		2423	3852	6271	9693	16491	25085	38774	43996	71578
	9		2695	4285	6975	10781	18342	27901	43126	48934	79613
	10		2967	4717	7679	11869	20194	30717	47478	53873	87647
	12		3511	5582	9087	14045	23896	36438	56182	63749	103716
	14		4055	6447	10495	16221	27598	41980	64887	73626	119785
	16		4599	7312	11902	18397	31300	47611	73591	83503	135853
	18		5143	8177	13310	20573	35002	53243	82295	93380	151922
	20		5687	9041	14718	22750	38705	58874	91000	103256	167991
	22		6231	9906	16126	24926	42407	64506	99704	113133	184060
	24		6775	10771	17534	27102	46109	70138	108409	123010	200128
	26		7319	11636	18942	29278	49811	75769	117113	132887	-
32	8951		14231	23166	35806	60918	92664	143226	-	-	
36	10039	15961	25981	40158	68323	103927	160635	-	-		
40	11127	17690	28797	44511	75727	115190	178044	-	-		
6	water [m³/h]	0.5	7.37	11.7	19.1	29.5	50.1	76.3	118	134	218
		1	9.97	15.	25.8	39.9	67.9	103	160	181	295
		2	14.1	22.4	36.5	56.4	96,0	146	226	256	417
		3	17.3	27.5	44.7	69.1	118	179	276	314	510
		4	19.9	31.7	51.6	79.8	136	206	319	362	589
		5	22.3	35.5	57.7	89.2	152	231	357	405	659
		6	24.4	38.8	63.2	97.7	166	253	391	444	722
		7	26.4	42.0	68.3	106	180	273	422	479	779
		8	28.2	44.8	73.0	113	192	292	451	512	833
		9	29.9	47.6	77.4	120	204	310	479	543	884
		10	31.5	50.1	81.6	126	215	326	505	573	932
		12	34.6	54.9	89.4	138	235	358	553	627	1021
		14	37.3	59.3	96.6	149	254	386	597	678	1102
		16	39.9	63.4	103	160	272	413	638	724	1178
		22	46.8	74.4	121	187	318	484	748	849	1382
		28	52.8	83.9	137	211	359	546	844	-	-
		32	56.4	89.7	146	226	384	584	903	-	-
		36	59.8	95.1	155	239	407	619	957	-	-
40	63.1	100	163	252	429	653	1009	-	-		