

# Safety valve TYPE SV01 / SV02



**Description:**

Safety valves are used to protect a closed system, pressure tanks etc. against overpressure.

**Features:**

- for air and other neutral, non-poisonous and non-flammable gases which can be freely discharged into the environment
- with lifting mechanism
- TUV-type test approval letter D/G
- EC type examination Letter S/G
- Safety valves are set and sealed at the factory

**Connection:**

1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"

**Temperature:**

-60°C to 225°C  
- depending on version

**Druck:**

0,2 bar – 50,0 bar \*  
- depending on version

**Materials:**

**Type SV01**

Component	Material	DIN EN	ASME
Body	Brass	CW617N	CW617N
Internal parts	Brass	CW617N	CW617N
Spring (up to DN25)	Stainless steel	1.4568	631
Spring (starting DN32)	Stainless steel	1.4310	302

**Type SV02**

Component	Material	DIN EN	ASME
Body	Stainless steel	1.4404	316 L
Internal parts	Stainless steel	1.4404	316 L
Spring (up to DN25)	Stainless steel	1.4568	631
Spring (starting DN32)	Stainless steel	1.4310 / 1.4568	302 / 631

**Seal:**

<b>FKM</b>	Fluorcarbon	-20°C to 200°C	0,2-25 bar set pressure
<b>PTFE</b>	Polytetrafluorethylen	-60°C to 225°C	25,1-50 bar set pressure

**Approvals:**

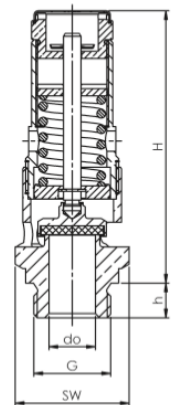
- AD 2000 sheet A2                      - DIN ISO 4126-1                      - DGR 2014/68/EU

\* set/markung acc. to ASME (psi) on request;  
Safety valves are set and sealed at the factory. Please inform us about needed set pressure in case of an order. Please consider that the set pressure can't be changed afterwards.

**Dimensions:**

Size DN	8	10		15		20		25
Inlet G*	1/4"	3/8"		1/2"		3/4"		1"
H	60	65	78	66	79	94	104	111
h	10	10	10	12	12	12	12	14
SW	19	24	24	27	27	34	34	41
do	7,5	10	10	11	11	16	16	20
Set pressure (bar)	0,2-50	0,2-9	9,1-50	0,2-7	7,1-50	0,2-9	9,1-50	0,2-50
Set pressure ASME (psi)	15-725	15-130	131-725	15-102	103-725	15-130	131-725	15-725
Weight kg	0,1	0,14	0,16	0,17	0,19	0,35	0,4	0,6

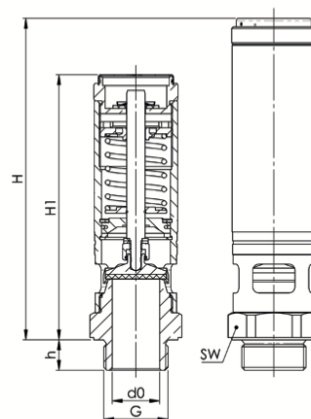
\* Thread / connection acc to. DIN EN ISO 228-1



Size DN	32	40	50
Inlet G*	1 1/4"	1 1/2"	2"
H	215	215	282
h	22,5	22,5	26
SW	55	55	80
do	31	31	48
Set pressure (bar)	0,2-50	0,2-50	0,2-30
Set pressure ASME (psi)	15-725	15-725	15-435
Weight kg	2,6	2,6	5,4

\* Thread / connection acc. to DIN EN ISO 228-1

short version (H1: 177mm) for typ SV02 sizes DN32 and DN40 on request



**Installation and Assembly:**

Spring-loaded safety valves are to be installed with the spring bonnet pointing vertically upward. The safety function of the valves is also guaranteed and tested in a horizontal position. To ensure a satisfactory operation of the safety valves they must be installed in such a way that the safety valve is not exposed to any impermissible static, dynamic or thermal loads. During installation the max. torque value must not be exceeded (see chart). Appropriate protection devices (for example by fitting a blow-off/protective cover) must be applied if the medium that discharges upon actuation of the valve can lead to direct or indirect hazards to people or the environment. Always pay attention to possible fumes discharging from the relief bores in the spring bonnet.

**Supply**

Supply connection pieces for safety valves are to be kept as short as possible and are to be designed in such a way that there can be no pressure loss greater than max. 3 % of the response pressure.

Size	Max. torque value
DN 8	30 Nm
DN 10	40 Nm
DN 15	50 Nm
DN 20	60 Nm
DN 25	60 Nm
DN 32	80 Nm
DN 40	80 Nm
DN 50	90 Nm

**Operation:**

The operating pressure of the plant is to be at least 5 % lower than the closing pressure of the safety valve. In this way, the valve can satisfactorily close again after blowing off. In the event of minor leaks, which may be caused by contamination between the sealing surfaces, the valve can be made to blow off through lifting, for cleaning purposes. If this does not remove the leak the sealing surface is probably damaged and this can only be repaired at our factory or by authorized specialists.

**Maintenance:**

In the case of safety valves with a lifting device it is recommended, and in certain plant-specific cases even stipulated that the valves from time to time must be made to blow-off by lifting the seal off the seat, in order to assure the correct functioning of the safety valve. They can be made to open by hand at the latest when the working pressure is > 85% of the response pressure.

Lifting is carried out by turning the twist-type lifting mechanism above the bonnet in a counterclockwise direction. Turn the twist-type lifting mechanism back to the stop again afterwards.

Safety valves are the ultimate safety device for the tank or system. They must be able to prevent impermissible overpressure even when all other upstream control and monitoring equipment fail. To ensure these functional characteristics safety valves require regular and recurring maintenance. The maintenance intervals are determined by the operator independence of the operating conditions.

**Article number:**

Type	SV01	SV02
Body	Brass	Stainless steel
Interoir	Brass	Stainless steel
Seal	FKM (PTFE)	FKM (PTFE)

Type	Design	Seal	Size
SV01 – brass	00 – lifting mechanism	00 – FKM (set pressure up to 25bar)	01 – 1/4"
SV02 – stainless steel		03 – PTFE (set pressure > 25bar*)	02 – 3/8"
			03 – 1/2"
			<b>04 – 3/4"</b>
			05 – 1"
			06 – 1 1/4"
			07 – 1 1/2"
			08 – 2"
<b>SV01</b>	<b>  00</b>	<b>  00</b>	<b>  04</b>

Article No. SV01000004  
 Safety valve made of brass  
 Design: lifting mechanism  
 Seal: FKM  
 Size: Entry 3/4"

\* PTFE-seal for set pressure smaller than 25,1 on request

Image similar, subject change without notice.

**TYPE SV01 - Capacity table acc. to ISO 4126-1 / AD2000 A2:**

**Blowing-off rates at 10% above set pressure**

DN	8	10	15	20	25	32	40	50
Set pressure bar	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h
0,2	19	34	42	92	115	353,2	353,2	662,2
0,5	32	59	75	157	190	529,1	529,1	926,9
1	46	86	108	227	308	771,1	771,1	1382,7
1,5	60	109	137	287	410	1014,7	1014,7	1852,6
2	73	133	166	346	505	1256,0	1256,0	2334,0
2,5	86	158	194	406	604	1493,1	1493,1	2760,6
3	100	182	223	465	702	1736,4	1736,4	3194,6
3,5	112	205	251	525	797	1985,9	1985,9	3636,1
4	125	228	280	584	890	2221,2	2221,2	4085,1
4,5	138	251	308	644	980	2447,4	2447,4	4541,5
5	151	275	337	703	1071	2673,7	2673,7	4967,8
5,5	163	298	365	763	1162	2899,9	2899,9	5388,2
6	176	321	394	822	1252	3126,1	3126,1	5808,5
6,5	189	344	422	882	1343	3352,3	3352,3	6228,9
7	202	368	451	941	1434	3578,6	3578,6	6649,2
7,5	214	391	479	1001	1524	3804,8	3804,8	5815,3
8	227	414	508	1060	1615	4031,0	4031,0	6161,1
8,5	240	437	536	1120	1706	4257,3	4257,3	6506,9
9	253	461	565	1179	1796	4483,5	4483,5	6852,6
9,5	265	484	593	1239	1887	4709,7	4709,7	7198,4
10	278	507	621	1298	1977	4936,0	4936,0	7544,2
11	304	554	678	1417	2159	5388,4	5388,4	8235,7
12	329	600	735	1537	2340	5840,9	5840,9	8927,3
13	355	647	792	1656	2521	6293,4	6293,4	9618,8
14	380	693	849	1775	2703	6745,8	6745,8	10310,4
15	406	740	906	1894	2884	7198,3	7198,3	11001,9
16	431	786	963	2013	3065	7650,8	7650,8	11693,5
17	457	833	1020	2132	3246	8103,2	8103,2	12385,0
18	482	879	1077	2251	3428	8555,7	8555,7	13076,6
19	507	926	1134	2370	3609	9008,1	9008,1	13768,1
20	533	972	1191	2489	3790	9460,6	9460,6	14459,7

DN	8	10	15	20	25	32	40	50
Set pressure bar	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h
21	558	1019	1248	2608	3971	9913,1	9913,1	15151,2
22	584	1065	1305	2727	4153	10365,5	10365,5	15842,8
23	609	1112	1362	2846	4334	10818,0	10818,0	16534,3
24	635	1158	1419	2965	4515	11270,5	11270,5	17225,9
25	660	1205	1476	3084	4696	11722,9	11722,9	17917,4
26	686	1251	1533	3203	4878	12175,4	12175,4	18609,0
27	711	1298	1590	3322	5059	12627,9	12627,9	19300,5
28	737	1344	1647	3441	5240	13080,3	13080,3	19992,1
29	762	1391	1704	3560	5422	13532,8	13532,8	20683,6
30	788	1437	1761	3679	5603	13985,2	13985,2	21375,2
32	839	1530	1875	3917	5965	14890,2	14890,2	-
34	890	1623	1989	4155	6328	15795,1	15795,1	-
36	941	1716	2103	4393	6690	16700,0	16700,0	-
38	992	1809	2217	4631	7053	17605,0	17605,0	-
40	1043	1902	2331	4869	7416	18509,9	18509,9	-
42	1094	1995	2445	5107	7778	19414,8	19414,8	-
44	1145	2088	2558	5345	8141	20319,7	20319,7	-
46	1196	2181	2672	5583	8503	21224,7	21224,7	-
48	1247	2274	2786	5821	8866	22129,6	22129,6	-
50	1298	2367	2900	6059	9228	23034,5	23034,5	-

**TYPE SV01 - Capacity table acc. to ASME CODE SEC. VIII DIV.1:**

**Blowing-off rates at 10% above set pressure**

DN	8	10	15	20	25	32	40	50
Set pressure psi	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM
15	31	55	67	142	221	543,1	543,1	984,8
30	45	81	98	207	323	792,2	792,2	1436,5
40	56	99	120	254	397	974,9	974,9	1767,8
50	66	118	143	302	472	1157,6	1157,6	2099,1
60	77	137	165	350	546	1340,3	1340,3	2430,4
70	87	155	188	397	621	1523,0	1523,0	2761,6
80	98	174	210	445	695			
90	108	192	233	493	770	1888,4	1888,4	3424,2
100	119	211	255	540	844	2071,1	2071,1	3755,5
110	129	230	278	588	919	2253,8	2253,8	4086,7
120	140	248	300	636	993	2436,5	2436,5	4418,0
130	150	267	323	683	1068	2619,2	2619,2	4749,3
140	161	286	345	731	1142	2801,9	2801,9	5080,6
150	171	304	368	779	1217	2984,6	2984,6	5411,8
160	182	323	391	826	1291	3167,3	3167,3	5743,1
170	192	341	416	874	1366	3350,0	3350,0	6074,4
180	203	360	436	922	1440	3532,7	3532,7	6405,7
190	213	379	458	969	1515	3715,4	3715,4	6736,9
200	223	397	481	1017	1589	3898,1	3898,1	7068,2
210	234	416	503	1065	1663	4080,8	4080,8	7399,5
220	244	434	526	1112	1738	4263,5	4263,5	7730,8
230	255	453	548	1160	1812	4446,2	4446,2	8062,1
240	265	472	571	1208	1887	4628,9	4628,9	8393,3
250	276	490	593	1255	1961	4811,6	4811,6	8724,6
260	286	509	616	1303	2036	4994,3	4994,3	9055,9
270	297	528	638	1351	2110	5177,0	5177,0	9387,2
280	307	546	661	1398	2185	5359,7	5359,7	9718,4
290	318	565	683	1446	2259	5542,4	5542,4	10049,7
300	328	583	706	1494	2334	5725,1	5725,1	10381,0
320	349	621	751	1589	2483	6090,5	6090,5	11043,5
340	370	658	796	1684	2632	6455,8	6455,8	11706,1

DN	8	10	15	20	25	32	40	50
Set pressure psi	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM
360	391	695	841	1780	2781	6821,2	6821,2	12368,6
380	412	732	886	1875	2929	7186,6	7186,6	13031,2
400	433	770	931	1970	3078	7552,0	7552,0	13693,7
420	454	807	976	2066	3227	7917,4	7917,4	14356,3
435						8191,5	8191,5	14853,2
440	475	844	1021	2161	3376			-
460	496	881	1066	2256	3525	8648,2	8648,2	-
480	517	919	1111	2351	3674	9013,6	9013,6	-
500	538	956	1157	2447	3823	9379,0	9379,0	-
520	559	993	1202	2542	3972			-
540	580	1030	1247	2637	4121			-
550						10292,5	10292,5	-
560	600	1067	1292	2733	4270			-
580	621	1105	1337	2828	4419			-
600	642	1142	1382	2923	4568	11206,0	11206,0	-
620	663	1179	1427	3019	4717			-
640	684	1216	1472	3114	4866			-
650						12119,5	12119,5	-
660	705	1254	1517	3209	5015			-
680	726	1291	1562	3305	5164			-
700	747	1328	1607	3400	5313	13032,9	13032,9	-
725	773	1375	1663	3519	5499	13489,7	13489,7	-

**TYPE SV02 - Capacity table acc. to ISO 4126-1 / AD2000 A2:**

**Blowing-off rates at 10% above set pressure**

DN	8	10	15	20	25	32	40	50
Set pressure bar	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h
0,2	20	35	46	100	133	353,2	353,2	662,2
0,3	25	45	54	119	144			
0,4	29	52	67	137	167			
0,5	32	58	74	158	185	529,1	529,1	926,9
0,6	35	64	82	172	211			
0,7	37	70	87	187	235			
0,8	41	74	95	200	260			
0,9	43	80	101	213	282			
1	46	85	107	227	305	771,1	771,1	1382,7
1,5	60	108	137	286	408	1014,7	1014,7	1852,6
2	73	132	166	346	506	1256,0	1256,0	2334,0
2,5						1493,1	1493,1	2760,6
3	100	182	222	465	699	1736,4	1736,4	3194,6
3,5						1985,9	1985,9	3636,1
4	125	228	279	584	889	2221,2	2221,2	4085,1
4,5						2447,4	2447,4	4541,5
5	151	274	336	703	1070	2673,7	2673,7	4967,8
5,5						2899,9	2899,9	5388,2
6	176	321	393	821	1251	3126,1	3126,1	5808,5
6,5						3352,3	3352,3	6228,9
7	201	367	450	940	1432	3578,6	3578,6	6649,2
7,5						3804,8	3804,8	5815,3
8	227	414	507	1059	1613	4031,0	4031,0	6161,1
8,5						4257,3	4257,3	6506,9
9	252	460	564	1178	1794	4483,5	4483,5	6852,6
9,5						4709,7	4709,7	7198,4
10	278	507	621	1297	1975	4936,0	4936,0	7544,2
11	303	553	678	1416	2156	5388,4	5388,4	8235,7
12	329	599	735	1535	2337	5840,9	5840,9	8927,3
13	354	646	791	1654	2518	6293,4	6293,4	9618,8
14	380	692	848	1773	2700	6745,8	6745,8	10310,4
15	405	739	905	1891	2881	7198,3	7198,3	11001,9
16	431	785	962	2010	3062	7650,8	7650,8	11693,5
17	456	832	1019	2129	3243	8103,2	8103,2	12385,0

DN	8	10	15	20	25	32	40	50
Set pressure bar	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h	Air Nm <sup>3</sup> /h
18	482	878	1076	2248	3424	8555,7	8555,7	13076,6
19	507	925	1133	2367	3605	9008,1	9008,1	13768,1
20	533	971	1190	2486	3786	9460,6	9460,6	14459,7
21	558	1017	1247	2605	3967	9913,1	9913,1	15151,2
22	584	1064	1304	2724	4148	10365,5	10365,5	15842,8
23	609	1110	1361	2843	4329	10818,0	10818,0	16534,3
24	635	1157	1417	2961	4510	11270,5	11270,5	17225,9
25	660	1203	1474	3080	4691	11722,9	11722,9	17917,4
26	685	1250	1531	3199	4872	12175,4	12175,4	18609,0
27	711	1296	1588	3318	5053	12627,9	12627,9	19300,5
28	736	1342	1645	3437	5234	13080,3	13080,3	19992,1
29	762	1389	1702	3556	5415	13532,8	13532,8	20683,6
30	787	1435	1759	3675	5597	13985,2	13985,2	21375,2
31	813	1482	1816	3794	5778			-
32	838	1528	1873	3913	5959	14890,2	14890,2	-
33	864	1575	1930	4031	6140			-
34	889	1621	1986	4150	6321	15795,1	15795,1	-
35	915	1667	2043	4269	6502			-
36	940	1714	2100	4388	6683	16700,0	16700,0	-
37	966	1760	2157	4507	6864			-
38	991	1807	2214	4626	7045	17605,0	17605,0	-
39	1017	1853	2271	4745	7226			-
40	1042	1900	2328	4864	7407	18509,9	18509,9	-
41	1068	1946	2385	4983	7588			-
42	1093	1993	2442	5101	7769	19414,8	19414,8	-
43	1119	2039	2499	5220	7950			-
44	1144	2085	2556	5339	8131	20319,7	20319,7	-
45	1170	2132	2612	5458	8313			-
46	1195	2178	2669	5577	8494	21224,7	21224,7	-
47	1220	2225	2726	5696	8675			-
48	1246	2271	2783	5815	8856	22129,6	22129,6	-
49	1271	2318	2840	5934	9037			-
50	1297	2364	2897	6053	9218	23034,5	23034,5	-

**TYPE SV02 - Capacity table acc. to ASME CODE SEC. VIII DIV.1:**

**Blowing-off rates at 10% above set pressure**

DN	8	10	15	20	25	32	40	50
Set pressure psi	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM
15	31	55	67	142	221	543,1	543,1	984,8
30	45	81	98	207	323	792,2	792,2	1436,5
40	56	99	120	254	397	974,9	974,9	1767,8
50	66	118	143	302	472	1157,6	1157,6	2099,1
60	77	137	165	350	546	1340,3	1340,3	2430,4
70	87	155	188	397	621	1523,0	1523,0	2761,6
80	98	174	210	445	695			
90	108	192	233	493	770	1888,4	1888,4	3424,2
100	119	211	255	540	844	2071,1	2071,1	3755,5
110	129	230	278	588	919	2253,8	2253,8	4086,7
120	140	248	300	636	993	2436,5	2436,5	4418,0
130	150	267	323	683	1068	2619,2	2619,2	4749,3
140	161	286	345	731	1142	2801,9	2801,9	5080,6
150	171	304	368	779	1217	2984,6	2984,6	5411,8
160	182	323	391	826	1291	3167,3	3167,3	5743,1
170	192	341	416	874	1366	3350,0	3350,0	6074,4
180	203	360	436	922	1440	3532,7	3532,7	6405,7
190	213	379	458	969	1515	3715,4	3715,4	6736,9
200	223	397	481	1017	1589	3898,1	3898,1	7068,2
210	234	416	503	1065	1663	4080,8	4080,8	7399,5
220	244	434	526	1112	1738	4263,5	4263,5	7730,8
230	255	453	548	1160	1812	4446,2	4446,2	8062,1
240	265	472	571	1208	1887	4628,9	4628,9	8393,3
250	276	490	593	1255	1961	4811,6	4811,6	8724,6
260	286	509	616	1303	2036	4994,3	4994,3	9055,9
270	297	528	638	1351	2110	5177,0	5177,0	9387,2
280	307	546	661	1398	2185	5359,7	5359,7	9718,4
290	318	565	683	1446	2259	5542,4	5542,4	10049,7
300	328	583	706	1494	2334	5725,1	5725,1	10381,0
320	349	621	751	1589	2483	6090,5	6090,5	11043,5
340	370	658	796	1684	2632	6455,8	6455,8	11706,1

DN	8	10	15	20	25	32	40	50
Set pressure psi	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM	Air SCFM
360	391	695	841	1780	2781	6821,2	6821,2	12368,6
380	412	732	886	1875	2929	7186,6	7186,6	13031,2
400	433	770	931	1970	3078	7552,0	7552,0	13693,7
420	454	807	976	2066	3227	7917,4	7917,4	14356,3
435						8191,5	8191,5	14853,2
440	475	844	1021	2161	3376			-
460	496	881	1066	2256	3525	8648,2	8648,2	-
480	517	919	1111	2351	3674	9013,6	9013,6	-
500	538	956	1157	2447	3823	9379,0	9379,0	-
520	559	993	1202	2542	3972			-
540	580	1030	1247	2637	4121			-
550						10292,5	10292,5	-
560	600	1067	1292	2733	4270			-
580	621	1105	1337	2828	4419			-
600	642	1142	1382	2923	4568	11206,0	11206,0	-
620	663	1179	1427	3019	4717			-
640	684	1216	1472	3114	4866			-
650						12119,5	12119,5	-
660	705	1254	1517	3209	5015			-
680	726	1291	1562	3305	5164			-
700	747	1328	1607	3400	5313	13032,9	13032,9	-
725	773	1375	1663	3519	5499	13489,7	13489,7	-