

Safety valve TYPE SV07 / SV08 / SV09 / SV10



Description:

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

Features:

- suitable for neutral and non-neutral, not adhesive **gaseous media**.
- with lifting mechanism
- Optional with bellows
- TUV-type test approval letter D/G
- EC type examination Letter S/G
- Safety valves are set and sealed at the factory

Connection:

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

Temperature:

-60°C to +400°C – depending on design

Set pressure:

0,5 bar – 70,0 bar– depending on design

Materials:

Component

Body
Internal parts
Spring
bellows

Type SV07

Gunmetal CC499K
brass CW617N
Stainless steel 1.4310
-

Type SV08

Gunmetal CC499K
brass CW617N
Stainless steel 1.4310
Bronze CW452K

Type SV09

Stainless steel 1.4404 / 1.4408
Stainless steel 1.4404
Stainless steel 1.4310
-

Type SV10

Stainless steel 1.4404 / 1.4408
Stainless steel 1.4404
Stainless steel 1.4310
Stainless steel 1.4571

Seal:

EPDM

Ethylene-Propylene-Diene

-40°C to +170°C

to 25 bar Set pressure

FKM

Fluorocarbon

-20°C to +200°C

to 25 bar Set pressure

NBR

Nitrile-Butadiene

-30°C to +130°C

to 25 bar Set pressure

PTFE

Polytetrafluoroethylene

-60°C to +225°C

to 25 bar Set pressure

PTFE-Kohle

Polytetrafluoroethylene
carbon

-60°C to +225°C

+ 25 bar Set pressure

Metal

-60°C to +225°C

Stainless steel to +400°C

Approvals:

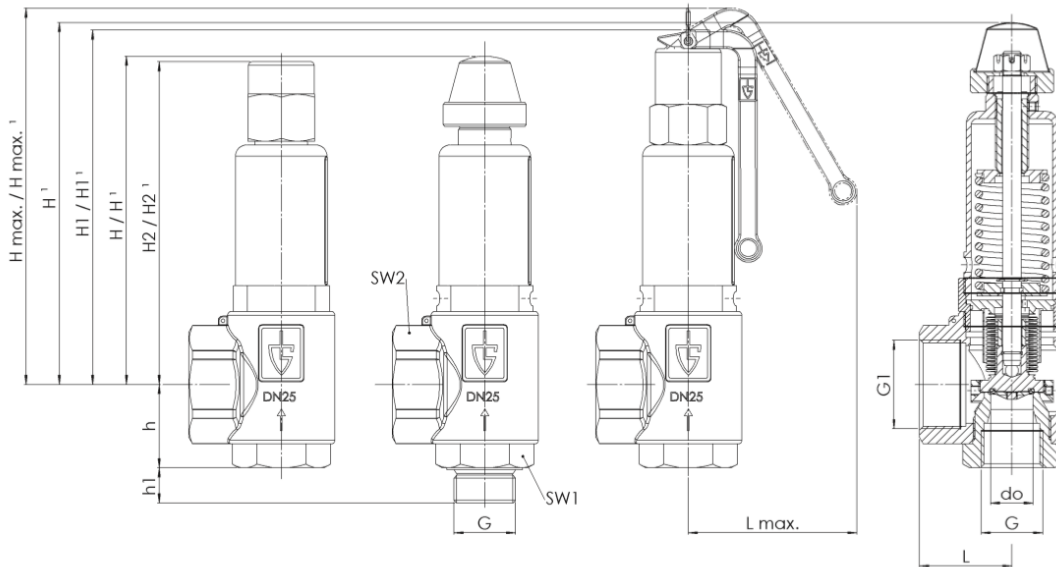
AD 2000 sheet A2

DIN ISO 4126-1

DGR 2014/68/EU

TRB 801 Nr.22 & 23

Dimensions:



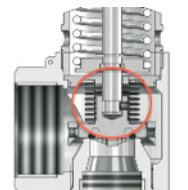
Diameter DN	15	15**	20	25	32	32	32
G*	1/2"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
G1*	1"	1"	1 1/4"	1 1/2"	2"	2"	2"
L	40	40	43	50	61	61	61
Lmax	65	65	91	92	92		
H / H with bellows	77	131	138	178	241 / 263		
H1 / H1 with bellows	91	149	158	192	264 / 286		
H2 / H2 with bellows	77	131	139	175	241 / 263		
Hmax / Hmax w. bellows	103	164	173	207	277 / 299		
h	30	30	39	45	55	h	30
h1	15	15	16	18	20	h1	15
SW1	30	30	36	46	55	SW1	30
SW2	40	40	50	58	70	SW2	40
do	15,8	15,8	18	23	30,3	do	15,8
Weight kg	0,4	0,8	1,0	1,8	4,0	4,0	4,0

* connection acc. to DIN EN ISO 228

** set pressure >25,1 bar in Dimension DN15 are bigger.

Bellows:

Safety valve with bellows for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.



Installation and Assembly:

Spring-loaded safety valves are to be installed with the spring bonnet pointing vertically upward. 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. Appropriate protection devices 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.

Removal of condensate discharge

In the event of possible condensate formation the pipes or the valves themselves (in flanged version) must be fitted at their lowest point with a continuously operating condensate discharge device. Hazard-free removal of the condensate or medium discharge must be ensured. The body, pipes and silencers must be protected against freezing.

Blowing-off pipe / backpressure

The blow-off pipe of the safety valves must be designed to ensure that the required mass flow can be discharged pressure-free during the blowing-off process. In safety valves with metal bellows a backpressure of up to max. 4 bar has no impact on the response pressure of the safety valve.

Operation:

The operating pressure of the plant is to be 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. Depending on the version, lifting is either carried out by means of a knurled nut above the spring bonnet which is turned counterclockwise (afterwards the knurled nut has to be turned back to the stop) or by actuating the lifting lever on the upper part of the valve. For delivery purposes the lifting lever is blocked by means of strap which has to be removed for actuating the lifting device.

Lifting for maintenance purposes:

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. This is why they can be made to open at the latest as from an operating pressure of $\geq 85\%$ of the response pressure. The lifting device is not to be operated when in a pressure-free state. In steam generating equipment, testing the ease of movement of safety valves must be carried at least every 4 weeks in compliance with TRD 601. 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 in dependence of the operating conditions.

Capacity table:

Blowing-off rates at 10% above set pressure

Media:

1 = Air Nm³/h

2 = Steam kg/h

DN	15		20		25		32	
	1	2	1	2	1	2	1	2
0,5	56**	42**	127	96	199	150	353	266
1	87	69	189	151	291	232	515	411
1,5	113	90	252	200	390	309	683	542
2	141	111	316	249	489	385	832	656
2,5	165	129	383	300	583	457	1012	793
3	189	148	447	349	681	532	1182	924
3,5	214	166	504	392	768	597	1333	1036
4	238	184	561	435	855	663	1484	1151
4,5	262	203	618	478	942	729	1635	1265
5	286	221	675	521	1029	794	1786	1378
5,5	310	239	732	564	1116	860	1937	1492
6	335	257	790	608	1203	926	2088	1607
6,5	359	275	847	650	1290	990	2239	1719
7	383	293	904	692	1377	1054	2390	1830
7,5	407	311	961	735	1464	1119	2542	1943
8	431	329	1018	777	1552	1184	2693	2056
8,5	456	347	1075	820	1639	1249	2844	2168
9	480	365	1132	862	1726	1314	2995	2281
9,5	504	383	1190	905	1813	1379	3146	2392
10	528	401	1247	947	1900	1443	3297	2504
11	577	437	1361	1031	2074	1571	3599	2727
12	625	472	1475	1115	2248	1699	3902	2948
13	674	508	1590	1199	2422	1827	4204	3172
14	722	544	1704	1284	2596	1957	4506	3396
15	770	580	1818	1368	2771	2085	4808	3618
16	819	616	1932	1453	2945	2214	5111	3842
17	867	650	2047	1535	3119	2339	5413	4059
18	916	686	2161	1619	3293	2467	5715	4281
19	964	721	2275	1703	3467	2594	6017	4503
20	1013	757	2390	1787	3641	2723	6320	4726

DN	15		20		25		32	
	1	2	1	2	1	2	1	2
21	1061	793	2504	1872	3816	2852	6622	4950
22	1109	829	2618	1956	3990	2981	6924	5173
23	1158	865	2732	2040	4164	3109	7226	5396
24	1206	900	2847	2125	4338	3238	7529	5619
25	1255	936	2961	2209	4512	3366	7831	5842
26	1303	972*	3075	2294*	4686	3496*	8133	6067*
27	1352	1008*	3190	2379*	4860	3626*	8435	6293*
28	1400	1044*	3304	2465*	5035	3756*	8738	6518*
29	1449	1081*	3418	2550*	5209	3886*	9040	6744*
30	1497	1114*	3532	2628*	5383	4005*	9342	6951*
32	1594	1186*	3761	2799*	5731	4265*	9947	7401*
34	1691	1258*	3990	2969*	6080	4524*	10551	7851*
36	1788	1330*	4218	3139*	6428	4783*	11156	8301*
38	1884	1402*	4447	3309*	6776	5042*	11760	8751*
40	1981	1474*	4675	3479*	7124	5301*	12365	9200*
42	2078	1547*	4904	3650*	7473	5562*	12969	9653*
44	2175	1619*	5132	3821*	7821	5823*	13574	10105*
46	2272	1692*	5361	3992*	8169	6083*	14178	10558*
48	2369	1764*	5589	4163*	8518	6344*	14783	11011*
50	2466	1837*	5818	4335*	8866	6606*	15387	11464*
52	2562	1910*	6047	4506*	9214	6867*	15992	11917*
54	2659	1984*	6275	4681*	9563	7134*	16596	12380*
56	2756	2061*	6504	4868*	9911	7412*	17200	12864*
58	2853	2136*	6732	5040*	10259	7681*	17805	13330*
60	2950	2209*	6961	5213*	10608	7943*	18409	13786*
62	3047	2282*	7189	5385*	10956	8206*	19014	14242*
64	3144	2355*	7418	5558*	11304	8469*	19618	14699*
66	3240	2428*	7647	5730*	11652	8732*	20223	15155*
68	3337	2502*	7875	5905*	12001	8998*	20827	15616*
70	3434	2578*	8104	6082*	12349	9269*	21432	16086*

only in stainless steel available

*) only with metal seal possible
 **) with bellows just at 1 bar available

only in stainless steel available

Article number:

Component	Type SV07	Type SV08	Type SV09	Type SV10
body	Gunmetal CC499K	Gunmetal CC499K	Stainless steel 1.4408	Stainless steel 1.4408
Internal parts	brass CW617N	brass CW617N	Stainless steel 1.4401	Stainless steel 1.4401
Bellows	No	Yes	No	Yes

Type	lifting mechanism	Connection	Seal	Size
SV07	0 – twist-type lifting	0 – female thread	01 – EPDM	03 – 1/2"
SV08	1 – Lever	1 – male thread	02 – FKM	04 – 3/4"
SV09			03 – PTFE	05 – 1"
SV10			04 – NBR	06 – 1 1/4"
			05 – Metal	07 – 1 1/2"
				08 – 2"

SV07110106:

SV07	1	1	01	06
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Article number. SV07110106
 Safety valve made of gunmetal
 Internal parts brass
 Bellows: No
 Lifting mechanism: Lever
 Connection: male thread
 Seal: EPDM
 Size: 1 1/4" Inch

Image similar, subject change without notice.