

Angle-type safety valve TYPE SV11/SV12



Description:

Angle type safety valve are used to protect a closed system, pressure tanks etc. against overpressure.

Features:

- Suitable for neutral and non-neutral liquid and gaseous media
- Optional with lever
- gastight spring housing
- with bellows starting set pressure 1,6 bar
- TÜV-type test approval 2069 D/G, F, F/K/S*
- EC type examination Letter S/G, L, F/K/S*
- Safety valves are set and sealed at the factory

Connection:

1/4", 3/8"

Temperature:

-40°C to +260°C – depending on design

Set pressure:

0,5 bar – 50,0 bar– depending on design

Materials:

Component

Set pressure

Body
Internal parts
Spring
PTFE bellows
Metallic bellows
spring housing

Type SV11

0,5 to 1,5 bar

Stainless steel 1.4404
Stainless steel 1.4404
Stainless steel 1.4310
--
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gastight

Type SV12

1,6 to 50,0 bar

Stainless steel 1.4404
Stainless steel 1.4404
Stainless steel 1.4310
PTFE (set pressure 1,6 to 12 bar)
Stainless steel 1.4571 (set pressure 12,1 to 50,0 bar)
gastight

Type SV11 (without bellows) will automatically be delivered for set pressure from 0,5 to 1,5 bar, type SV12 (with bellows) will automatically be delivered for set pressure from 1,6 to 50,0 bar.

Seal

EPDM

Ethylene-Propylene-Diene (0,5 – 30 bar) -40°C to +170°C

FKM

Fluorcarbon (0,5 – 30 bar) -20°C to +200°C

PTFE

Polytetrafluorethylene (0,5 – 50 bar) -40°C to +225°C

Approvals:

AD 2000 sheet A2

DIN ISO 4126-1

DGR 2014/68/EU

TRB 801 No. 22 & 23*

*only for versions with bellows

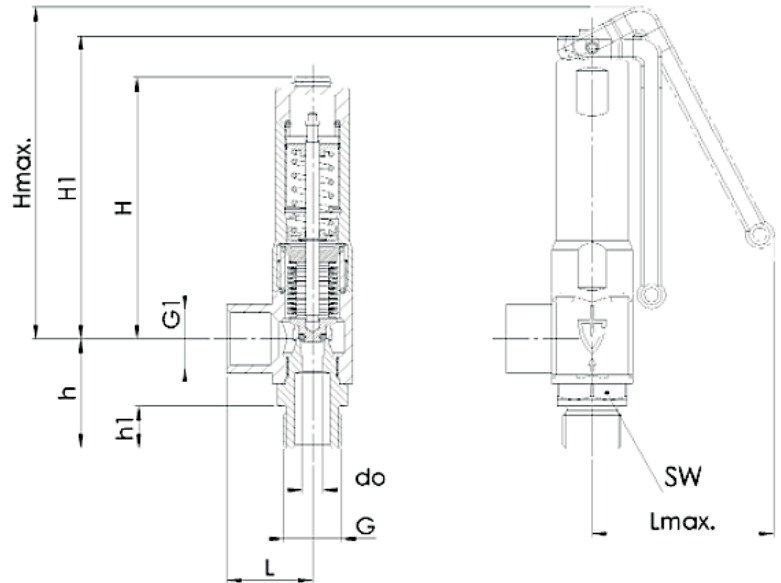
Bellows:

Safety valve with bellows suitable for neutral and non-neutral media. Spring, moving parts and the environment are protected from being affected by the medium.

Dimension:

Diameter DN	8	10
Inlet (male) G*	1/4"	3/8"
Outlet (female) G1*	3/8"	3/8"
L	25	25
Lmax	45	45
H	75	75
H1	87	87
Hmax	93	93
h	34	34
h1	12	12
SW	20	20
do	6,0	6,0
weight kg	0,3 / 0,4	0,25 / 0,35

* Thread / Connection acc. to DIN EN ISO 228 BSP-P



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 out 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:

Media:

1 = Air Nm³/h

2 = Steam kg/h

3 = Water m³/h

Blowing-off rates at 10% above set pressure

DN	8			10		
	1	2	3	1	2	3
Set pressure bar						
0,5	10	8	0,39	15	12	0,46
1,0	16	13	0,53	23	18	0,62
1,5	21	17	0,65	30	23	0,76
2,0	28	22	0,75	38	30	0,88
2,5	32	25	0,84	45	35	0,98
3,0	37	29	0,92	52	41	1,07
3,5	42	33	0,99	59	46	1,16
4,0	47	36	1,06	65	51	1,24
4,5	52	40	1,12	72	56	1,31
5,0	56	43	1,18	79	61	1,38
5,5	61	47	1,24	85	66	1,45
6,0	66	51	1,29	92	71	1,52
6,5	71	54	1,35	99	76	1,58
7,0	75	58	1,40	105	81	1,64
7,5	80	61	1,45	112	86	1,70
8,0	85	65	1,49	119	91	1,75
8,5	90	68	1,54	125	96	1,80
9,0	94	72	1,59	132	101	1,86
9,5	99	75	1,63	139	106	1,91
10,0	104	79	1,67	145	110	1,96
11,0	113	86	1,75	159	120	2,05
12,0	123	93	1,83	172	130	2,14
13,0	132	100	1,91	185	140	2,23
14,0	142	107	1,98	199	150	2,32
15,0	151	114	2,05	212	160	2,40
16,0	161	121	2,11	225	169	2,48
17,0	171	128	2,18	239	179	2,55
18,0	180	135	2,24	252	189	2,63
19,0	190	142	2,30	265	199	2,70
20,0	199	149	2,36	279	208	2,77
21,0	209	156	2,42	292	218	2,84
22,0	218	163	2,48	305	228	2,90
23,0	228	170	2,53	319	238	2,97
24,0	237	177	2,59	332	248	3,03
25,0	247	184	2,64	345	258	3,09
26,0	256	191	2,69	359	268	3,16
27,0	266	198	2,75	372	278	3,22
28,0	275	205	2,80	385	287	3,28
29,0	285	212	2,85	399	297	3,33
30,0	294	219	2,89	412	307	3,39
32,0	313	233	2,99	439	326	3,50
34,0	332	247	3,08	465	346	3,61
36,0	351	262	3,17	492	366	3,71
38,0	370	276	3,26	519	386	3,82
40,0	390	290	3,34	545	406	3,91
42,0	409	304	3,42	572	426	4,01
44,0	428	318	3,50	599	446	4,11
46,0	447	333	3,58	625	466	4,20
48,0	466	347	3,66	652	486	4,29
50,0	485	361	3,74	679	506	4,38

Article number:

Component	Type SV11	Type SV12
Set pressure	0,5 to 1,5 bar	1,6 to 50,0 bar
Body	Stainless steel 1.4404	Stainless steel 1.4404
Internal parts	Stainless steel 1.4404	Stainless steel 1.4404
Spring	Stainless steel 1.4310	Stainless steel 1.4310
PTFE bellows	--	PTFE (set pressure 1,6 to 12 bar)
Metallic bellows	--	Stainless steel 1.4571 (set pressure 12,1 to 50,0 bar)

Type	Lifting	Connection	Seal	Size
SV11	0 – without	0 – male thread (on entry)	01 – EPDM	01 – 1/4"
SV12 (with bellows)	1 – lever		02 – FKM 03 – PTFE	02 – 3/8"

Example no. SV11100201

SV11 | **1** | **0** | **02** | **01**

Article number: SV11100201
 Safety valve made of stainless steel
 Internal parts made of stainless steel
 Bellows: without
 Lifting mechanism: lever
 Connection: male thread
 Seal: FKM
 Size: 1/4"

Type SV11 (without bellows) will automatically be delivered for set pressure from 0,5 to 1,5 bar, type SV12 (with bellows) will automatically be delivered for set pressure from 1,6 to 50,0 bar.

Image similar, subject change without notice.