

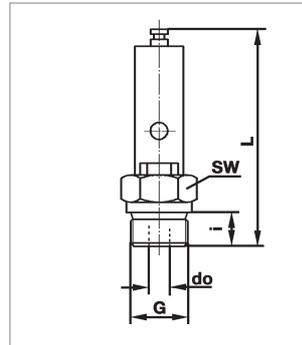


Component-tested safety valves DN6

Safety valves serve to blow out non-poisonous and non flammable gases into the atmosphere in order to protect pressure tanks against overpressure.

Please note: Only safety valves that have been set and sealed by us can be delivered with the component symbols, it is thus absolutely necessary to indicate the setting pressure in bar. As functional test, safety valves may be aerated by the way of pulling the haul-off bolt. Repairs may only be carried out by the manufacturer.

Connection threads W	Dimensions [mm]				Set pressure [bar]	Order No.
	L	i	SW	do		
G 1/4	65	10	17	6	4,5 - 7,0	469.23
					7,0 - 10,0	469.24
					10,0 - 13,0	469.25
					13,0 - 18,0	469.26
					18,0 - 24,0	469.27
G 3/8	65	10	19	6	4,5 - 7,0	469.33
					7,0 - 10,0	469.34
					10,0 - 13,0	469.35
					13,0 - 18,0	469.36
					18,0 - 24,0	469.37



Technical data

Connection thread	G 1/4, G 3/8
Operating temperature	-10°C up to +150°C
Setting range	4,5 up to 24 bar (5 steps)
Opening pressure difference	< 10%
Closing pressure difference	< 10%
Built-in position	vertical
Material	brass
Seal	FKM (viton)
Locking torque (valve installation)	13 Nm

Important: The supply connection to the safety valve should not be < DN6, the pressure drop in the supply connection not > 3%.

Definitions

Set pressure (start-to-leak):	beginning of <i>audible</i> leaking
Opening pressure:	valve completely open, max. blow-off/ deflation
Closing pressure:	valve is closed and sealed (tight)
Opening pressure difference:	difference between start-to-leak pressure and opening pressure
Closing pressure difference:	difference between start-to-leak pressure and closing pressure

For example:	set pressure	12,0 bar
	opening pressure (+10%)	13,2 bar
	closing pressure (-10%)	10,8 bar

Exhaust capacity air

The exhaust capacities indicated in the table are the minimum values reached when air pressure is raised by 10% above the set pressure.

Set pressure [bar]	Exhaust flow capacity (normal conditioning)	
	[m ³ /h]	[l/min]
6	45,5	763
10	92	1540
11	100	1681
14	126	2104
16	143	2387
18	160	2696
20	177	2551
22	194	3234
24	211	3516

Intermediate values can be interpolated.

Locking torques

Connection threads	Max. locking torques
G 1/4	15 Nm
G 3/8	25 Nm

Component symbols

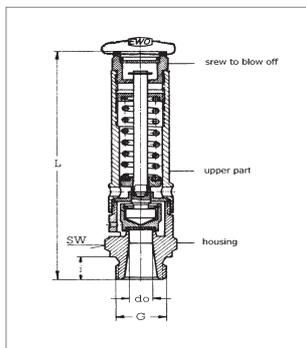
CE0685	SV	02	3	6	D/G	0,4	P	
								pressure setting (bar)
								flow factor
								suitable for gases and vapors
								narrowest flow diameter (mm)
								component number
								year of approval
								safety valve
								German technical inspection in this case: DEKRA



Component-tested safety valves DN8

Safety valves serve to blow out non-poisonous and non-flammable gases into the atmosphere in order to protect pressure tanks against overpressure.

Please note: Only safety valves that have been set and sealed with lead (plumbed) by us can be delivered with the component symbols, it is thus absolutely necessary to indicate the setting pressure in bar. To test their proper functioning, safety valves can be relieved by turning the knurled (thumb) screw to the left. The bearing surfaces and conical seals can be cleaned of impurities by unscrewing the entire upper part - **without** changing the pressure setting. Repairs may only be carried out by the manufacturer.



Connection threads W	Dimensions [mm] L i SW do	Set pressure [bar]	Order No.
G 1/4	85 10 20 8	1,0 - 1,5	351.221
G 1/4	85 10 20 8	1,5 - 2,0	351.222
G 1/4	85 10 20 8	2,0 - 3,0	351.223
G 1/4	85 10 20 8	3,0 - 5,0	351.224
G 1/4	85 10 20 8	5,0 - 7,0	351.225
G 1/4	85 10 20 8	7,0 - 9,0	351.226
G 1/4	85 10 20 8	9,0 - 15,0	351.227
G 1/4	90 10 20 8	15,0 - 20,0	351.421
G 1/4	90 10 20 8	20,0 - 27,0	351.422
G 1/4	90 10 20 8	27,0 - 40,0	351.423
G 3/8	85 10 20 8	1,0 - 1,5	351.241
G 3/8	85 10 20 8	1,5 - 2,0	351.242
G 3/8	85 10 20 8	2,0 - 3,0	351.243
G 3/8	85 10 20 8	3,0 - 5,0	351.244
G 3/8	85 10 20 8	5,0 - 7,0	351.245
G 3/8	85 10 20 8	7,0 - 9,0	351.246
G 3/8	85 10 20 8	9,0 - 15,0	351.247
G 3/8	90 10 20 8	15,0 - 20,0	351.441
G 3/8	90 10 20 8	20,0 - 27,0	351.442
G 3/8	90 10 20 8	27,0 - 40,0	351.443
G 1/2	87 12 24 8	1,0 - 1,5	351.251
G 1/2	87 12 24 8	1,5 - 2,0	351.252
G 1/2	87 12 24 8	2,0 - 3,0	351.253
G 1/2	87 12 24 8	3,0 - 5,0	351.254
G 1/2	87 12 24 8	5,0 - 7,0	351.255
G 1/2	87 12 24 8	7,0 - 9,0	351.256
G 1/2	87 12 24 8	9,0 - 15,0	351.257
G 1/2	92 12 24 8	15,0 - 20,0	351.451
G 1/2	92 12 24 8	20,0 - 27,0	351.452
G 1/2	92 12 24 8	27,0 - 40,0	351.453

Exhaust capacity air

The exhaust capacities indicated in the table are the minimum values reached when air pressure is raised by 10% above the set pressure.

Set pressure [bar]	Exhaust flow capacity (normal conditioning)	
	[m³/h]	[l/min]
1	23,5	394
2	35,5	592
4	59	985
6	63	1380
8	106	1773
10	130	2168
12	154	2562
14	177	2957
16	201	3350
18	225	3745
20	248	4138
22	272	4533
25	307	5124
30	367	6110
35	426	7095
40	485	8080

Intermediate values can be interpolated.

Locking torques

Connection threads	Max. locking torques
G 1/4	15 Nm
G 3/8	25 Nm
G 1/2	35 Nm

Technical data

Connection thread	G 1/4, G 3/8, G 1/2
Operating temperature	-10°C up to +180°C
Setting range	1 up to 40bar (10 steps)
Opening pressure difference	< 10%
Closing pressure difference	< 10% (under 3bar ≤ 0,3bar)
Built-in position	vertical
Material	brass
Seal	FKM (viton)
Leading	aluminum
Locking torque (valve installation)	13Nm

Important: The supply connection to the safety valve should not be < DN6, the pressure drop in the supply connection not > 3%.

Definitions

Set pressure (start-to-leak):	beginning of <i>audible</i> leaking
Opening pressure:	valve completely open, max. blow-off/deflation
Closing pressure:	valve is closed and sealed (tight)
Opening pressure difference:	difference between start-to-leak pressure and opening pressure
Closing pressure difference:	difference between start-to-leak pressure and closing pressure

For example:	set pressure	12,0bar
	opening pressure (+10%)	13,2bar
	closing pressure (-10%)	10,8bar

Component symbols

CE0685 SV 02 2 8 D/G 0,32 P

—	pressure setting (bar)
—	flow factor
—	suitable for gases and vapors
—	narrowest flow diameter (mm)
—	component number
—	year of approval
—	safety valve
—	German technical inspection in this case: DEKRA

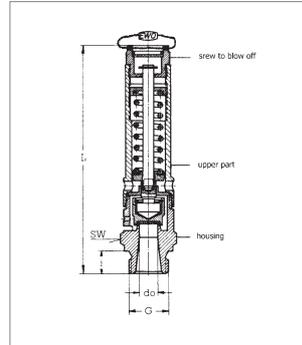


Component-tested safety valves DN 10

Safety valves serve to blow out non-poisonous and non-flammable gases into the atmosphere in order to protect pressure tanks against overpressure.

Please note: Only safety valves that have been set and sealed with lead (plumbed) by us can be delivered with the component symbols, it is thus absolutely necessary to indicate the setting pressure in bar. To test their proper functioning, safety valves can be relieved by turning the knurled (thumb) screw to the left. The bearing surfaces and conical seals can be cleaned of impurities by unscrewing the entire upper part - **without** changing the pressure setting. Repairs may only be carried out by the manufacturer.

Connection threads	Dimensions [mm]				Set pressure [bar]	Order No.
	W	L	i	SW do		
G ^{1/2}	120	12	27	10	2,0 - 3,6	351.261
					3,6 - 5,0	351.262
					5,0 - 7,0	351.263
					7,0 - 8,5	351.264
					8,5 - 11,5	351.265
					11,5 - 16,0	351.266
					16,0 - 22,0	351.267
G ^{3/4}	120	12	30	10	2,0 - 3,6	351.271
					3,6 - 5,0	351.272
					5,0 - 7,0	351.273
					7,0 - 8,5	351.274
					8,5 - 11,5	351.275
					11,5 - 16,0	351.276
					16,0 - 22,0	351.277



Technical data

Connection thread	G ^{1/2} , G ^{3/4}
Operating temperature	-10°C up to +180°C
Setting range	2 up to 22 bar (7 steps)
Opening pressure difference	< 10%
Closing pressure difference	< 10% (under 3 bar ≤ 0,3 bar)
Built-in position	vertical
Material	brass
Seal	FKM (viton)
Leading	aluminum
Locking torque (valve installation)	13 Nm

Important: The supply connection to the safety valve should not be < DN6, the pressure drop in the supply connection not > 3%.

Definitions

Set pressure (start-to-leak):	beginning of <i>audible</i> leaking
Opening pressure:	valve completely open, max. blow-off/deflation
Closing pressure:	valve is closed and sealed (tight)
Opening pressure difference:	difference between start-to-leak pressure and opening pressure
Closing pressure difference:	difference between start-to-leak pressure and closing pressure

For example:	set pressure	12,0 bar
	opening pressure (+10%)	13,2 bar
	closing pressure (-10%)	10,8 bar

Component symbols

CE0685	SV	02	1	10	D/G	0,43	P	
								pressure setting (bar)
								flow factor
								suitable for gases and vapors
								narrowest flow diameter (mm)
								component number
								year of approval
								safety valve
								German technical inspection in this case: DEKRA

Exhaust capacity air

The exhaust capacities indicated in the table are the minimum values reached when air pressure is raised by 10% above the set pressure.

Set pressure [bar]	Exhaust flow capacity (normal conditioning)	
	[m ³ /h]	[l/min]
2	74,5	1242
4	124	2068
6	174	2895
8	223	3722
10	273	4548
12	323	5377
14	372	6203
16	422	7032
18	471	7858
20	521	8685
22	571	9513

Intermediate values can be interpolated.

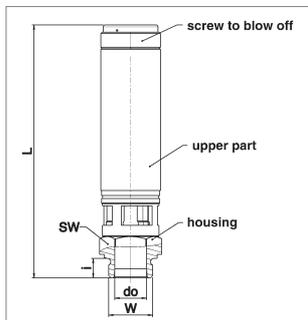
Locking torques

Connection threads	Max. locking torques
G ^{1/2}	35 Nm
G ^{3/4}	50 Nm

Component-tested high-performance safety valves G1 – G2



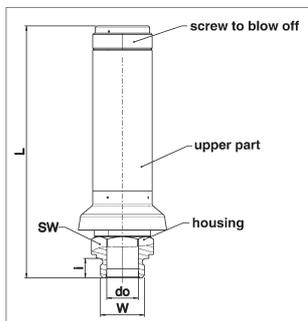
Safety valve with a very high blow-off capacity will be used for protection of pressure vessels and pressure systems for air and other neutral, non-toxic and non-combustible gases. The valves only can be supplied with a preset pressure, the desired set pressure must be specified with the order. After setting, the valves are labeled and sealed. For functional testing, the safety valve can be opened by turning the knurled screw. The bearing surfaces and seals can be cleaned from impurities by unscrewing the upper part **without** changing the pressure setting. Repairs may only be executed by the manufacturer.



Safety valves D/G

This spring-loaded safety valve with a very high blow-off capacity will be used for protection of pressure vessels and pressure systems for air and other neutral, non-toxic and non-combustible gases.

Connection threads	W	Dimensions [mm]	L	i	SW	do	Set pressure [bar]	Order No.
G1		177	15	41	24	0,2 - 35		352.00
G1 1/4		215	22,5	60	32	0,2 - 30		352.10
G1 1/2		215	22,5	60	32	0,2 - 30		352.20
G2		282	26	80	48	0,2 - 30		352.30



Safety valves F/K/S

This valves have a protective cover (stainless steel) and the spring area of the medium is separately. This design allows a usage to secure fixed pressure and vehicle tanks from dust and granular goods.

Connection threads	W	Dimensions [mm]	L	i	SW	do	Set pressure [bar]	Order No.
G1		177	15	41	24	0,2 - 6		352.40
G1 1/4		215	22,5	60	32	0,2 - 6		352.50
G1 1/2		215	22,5	60	32	0,2 - 6		352.60
G2		282	26	80	48	0,2 - 6		352.70

Options

Stainless steel - and
NBR or PTFE seals on request!

Locking torques

Connection threads	Max. locking torques
G1	60Nm
G1 1/4	80Nm
G1 1/2	80Nm
G2	80Nm

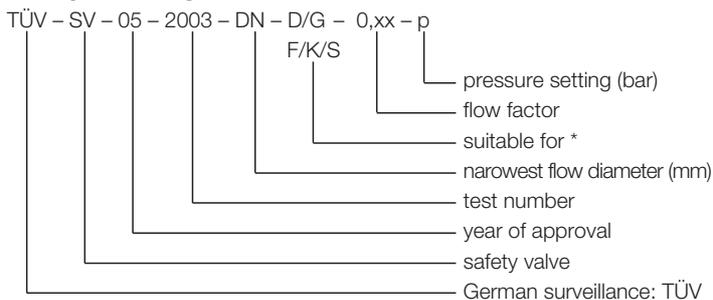
Technical data

Connection thread	G1, G1 1/4, G1 1/2, G2	
Operating temperature	+200°C	
Setting range	- model D/G	0,2 up to 30(35) bar
	- model F/K/S	0,2 up to 6 bar
Opening pressure difference	< 10%	
Closing pressure difference	< 10%	
Built-in position	vertical, standing	
Material	- housing, top, internal parts	brass (stainless steel on request!)
	- seal	FKM (viton)
		(NBR or PTFE on request!)
	- spring, guard	stainless steel

Definitions

Set pressure (start-to-leak):	beginning of <i>audible</i> leaking
Opening pressure:	valve completely open, max. blow-off/deflation
Closing pressure:	valve is closed and sealed (tight)
Opening pressure difference:	difference between start-to-leak pressure and opening pressure
Closing pressure difference:	difference between start-to-leak pressure and closing pressure

Component symbols



* D/G - for gases and vapors

F/K/S - for blowing air from tanks for liquid, granular or dust media

TÜV - Component certification: 2003

Power table see next side

Exhaust capacity air [Nm³/h]

At max. pressure exceeding 10% these values are achieved.

Model D/G

Set pressure [bar]	Exhaust flow capacity [m ³ /h]			
	G1	G1 ^{1/4}	G1 ^{1/2}	G2
0,2	225	376	376	721
0,3	258	430	430	786
0,4	284	473	473	851
0,5	310	517	517	916
0,6	337	563	563	981
0,7	371	618	618	1046
0,8	399	666	666	1111
0,9	429	715	715	1175
1,0	459	766	766	1370
1,5	604	1007	1007	1827
2,0	749	1249	1249	2325
3,0	1032	1723	1723	3177
4,0	1330	2219	2219	4056
5,0	1601	2671	2671	4962
6,0	1872	3123	3123	5802
7,0	2143	3575	3575	6642
8,0	2413	4027	4027	6034
9,0	2684	4478	4478	6711
10,0	2955	4930	4930	7388
11,0	3226	5382	5382	8066
12,0	3497	5834	5834	8742
13,0	3768	6286	6286	9420
14,0	4039	6738	6738	10097
15,0	4310	7190	7190	10774
16,0	4581	7642	7642	11451
17,0	4851	8094	8094	12128
18,0	5122	8546	8546	12806
19,0	5393	8998	8998	13483
20,0	5664	9450	9450	14160
21,0	5935	9902	9902	14838
22,0	6206	10354	10354	15515
23,0	6477	10806	10806	16192
24,0	6748	11258	11258	16869
25,0	7019	11710	11710	17546
26,0	7289	12162	12162	18224
27,0	7560	12614	12614	18901
28,0	7831	13066	13066	19578
29,0	8102	13518	13518	20255
30,0	8373	13970	13970	20933
31,0	8644	–	–	–
32,0	8915	–	–	–
33,0	9186	–	–	–
34,0	9457	–	–	–
35,0	9727	–	–	–

Model F/K / S

Set pressure [bar]	Exhaust flow capacity [m ³ /h]			
	G1	G1 ^{1/4}	G1 ^{1/2}	G2
0,2	225	376	376	721
0,3	258	430	430	786
0,4	284	473	473	851
0,5	310	517	517	916
0,6	342	571	571	981
0,7	371	618	618	1046
0,8	399	666	666	1111
0,9	429	715	715	1176
1,0	459	766	766	1370
1,2	514	858	858	1514
1,4	571	952	952	1658
1,6	629	1049	1049	1903
1,8	688	1148	1148	2055
2,0	749	1249	1249	2325
2,5	889	1483	1483	2724
3,0	1032	1723	1723	3177
3,5	1165	1943	1943	3583
4,0	1330	2219	2219	4056
4,5	1465	2445	2445	4469
5,0	1601	2671	2671	4962
5,5	1736	2897	2897	5382
6,0	1872	3123	3123	5802

Applied standards and regulations:

DIN EN ISO 4126-1
 AD 2000 data sheets A2
 TRB 801 No. 22 and No. 23
 DGR 97/23 EG

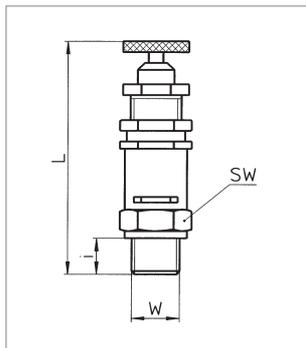
Applied standards and regulations:

DIN EN ISO 4126-1
 AD 2000 data sheets A2
 DGR 97/23 EG



Blow-off valves without component test DN3, DN6

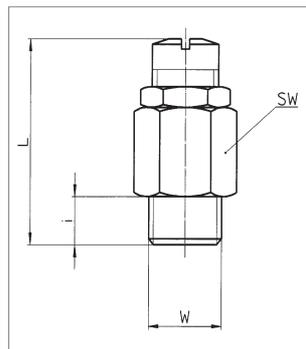
To blow out non-poisonous and non-flammable gases into the atmosphere in order to protect pressure tanks against overpressure.
Setting and lead seal at additional charge.



Classic blow-off valves DN6

Setted valves are plumbed.
 Metal seated valves may have slight leakage.

Connection threads W	Seal	Dimensions [mm]			Set pressure [bar]	Order No.
		L	i	SW		
G ¹ / ₄	Metal	78	10	17	1,5 - 4,0	259.007
					4,0 - 8,0	259.008
					8,0 - 12,0	259.009
G ¹ / ₄	NBR	78	10	17	1,5 - 4,0	259.010
					4,0 - 8,0	259.011
					8,0 - 12,0	259.012



Mini blow-off valve DN3

Setted safety device on request.

Connection threads W	Seal	Dimensions [mm]			Set pressure [bar]	Order No.
		L	i	SW		
G ¹ / ₈	NBR	27	7	16	0,2 - 1,0	368.025
					1,1 - 3,0	368.11
					3,1 - 6,0	368.12
					6,1 - 12,0	368.13
					12,1 - 18,0	368.14
					18,1 - 32,0	368.15
G ¹ / ₄	NBR	27	7	16	32,1 - 60,0	368.16
					0,2 - 1,0	368.016
					1,1 - 3,0	368.21
					3,1 - 6,0	368.22
					6,1 - 12,0	368.23
					12,1 - 18,0	368.24
					18,1 - 32,0	368.25
					32,1 - 60,0	368.26

Exhaust capacity air

The exhaust capacities indicated in the table are the minimum values reached when air pressure is raised by 10% above the set pressure.

Set pressure [bar] **Exhaust flow capacity (normal conditioning) [m³/h]** **[l/min]**

Classi blow-off valve DN6

1,5	10	165
2	13	215
4	26	430
6	42	700
8	58	970
10	74	1230
12	90	1500

Mini blow-off valve DN3

1	3	50
4	12	200
6	18	300
10	30	500
20	60	1000
30	90	1500
40	120	2000
50	150	2500
60	180	3000

Intermediate values can be interpolated.

Technical data

	DN6	DN3
Connection thread	G ¹ / ₄	G ¹ / ₈ , G ¹ / ₄
Operating temperature	NBR Metal	-10°C up to +90°C -10°C up to +180°C
	other temperatures on request!	
Setting range	1,5 - 12bar	1 - 60bar
Opening pressure difference	10% - 15%	~ 20%
Closing pressure difference	15% - 25%	~ 20%
Built-in position	vertical	
Material	- housing - seal	brass NBR

Definitions

Set pressure (start-to-leak):	beginning of <i>audible</i> leaking
Opening pressure:	valve completely open, max. blow-off/ deflation valve is closed and sealed (tight)
Closing pressure:	
Opening pressure difference:	difference between start-to-leak pressure and opening pressure
Closing pressure difference:	difference between start-to-leak pressure and closing pressure