

# Safety Valves

## Type 06800 with bellow seal



**Stainless steel bellow sealed Safety Valves, angle type, PN40, type tested TÜV-SV.1105. S/G/L orifice  $d_0 = 12.5$  mm TÜV-SV.1105. only S/G**

Standard safety valve,  
metal to metal seated, closed bonnet  
"cleaned and degreased for oxygen service"

### Part No. 06800.X.0000

Inlet: female thread type G (BSPP) acc. to ISO 228/1,  
Outlet: female thread type G (BSPP) acc. to ISO 228/1

### Part No. 06800.X.5000

Inlet: female NPT acc. to ANSI B 1.20.1,  
Outlet: female thread type G (BSPP) acc. to ISO 228/1

### Part No. 06800.X.6000

Inlet: female thread NPT acc. to ANSI B 1.20.1,  
Outlet: female thread NPT acc. to ANSI B 1.20.1

### Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for non-inflammable and inflammable vapours, gases and fluids.

Working temperature:  $-270^{\circ}\text{C} / -454^{\circ}\text{F}$  (3K) up to  $+225^{\circ}\text{C} / +437^{\circ}\text{F}$  (498K)

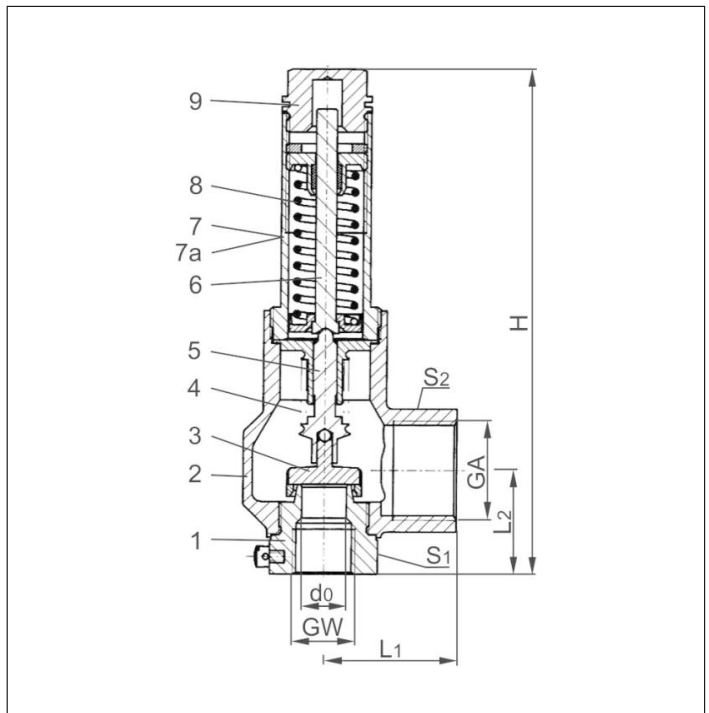
Maximum allowed back pressure: 15% of set pressure, pressure-temperature must be observed



Materials	DIN EN	ASME/ASTM
1 Inlet body	1.4571	A 276 Grade 316Ti
2 Outlet body	1.4308	A 351 CF8
3 Disc	1.4541	A 276 Grade 321
4 Bellow	1.4571	A 276 Grade 316Ti
5 Bellow stem	1.4571	A 276 Grade 316Ti
6 Stem	CW453K	B 103 UNS C52100
7 Bonnet	1.4301	A 276 Grade 304
8 Spring	1.4571	A 276 Grade 316Ti
9 Cap	1.4301	A 276 Grade 304

### Important:

For nominal size GW 1/2,  $d_0 = 15.0$  mm the back pressure reduces the blow off performance of the safety valve (see diagram 06800-1/2,  $d_0 = 15.0$ ).



Type 06800	Technical data				
Nominal size	GW	1/2	3/4	1	
Orifice	$d_0$	12.5	15	20	23
Dimension code	.X.	1204	1504	2006	2310
Set pressure range	bar	3.0-25.0	3.0-25.0	3.0-25.0	3.0-25.0
Outlet	GA	G 1	G 1	G 1-1/4	G 1-1/2
Height	H	170	170	198	245
Length	$L_1$	44	44	51	56
Length	$L_2$	35	35	48	58
Wrench size across flats	$S_1$	36	36	41	50
Wrench size across flats	$S_2$	41	41	50	55
Weight	ca. kg	1.0	0.97	1.65	2.50
Coeff. of discharge vapours, gases	$\alpha_w$	0.60	0.50	0.60	0.66
Coeff. of discharge fluids	$\alpha_w$	-	0.39	0.45	0.48

Dimensions in mm.

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### Discharge capacities

Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

Medium:

**Air** in m<sup>3</sup>/h at 0°C and 1013.25 mbar

**Water** in kg/h

**Saturated steam** in kg/h

**The capacity indicated below is for a fully opened valve.**

Maximum allowed back pressure: 15% of set pressure.

For nominal size GW 1/2, d<sub>0</sub> = 15.0 mm the back pressure reduces the blow off performance of the safety valve (see diagram 06800-1/2, d<sub>0</sub> = 15.0)

d<sub>0</sub> - orifice

A<sub>0</sub> - flow area

Set pressure in bar (g)	GW	1/2	1/2	3/4	1	1/2	1/2	3/4	1	1/2	3/4	1	
	d <sub>0</sub> (mm)	12.5	15.0	20.0	23.0	12.5	15.0	20.0	23.0	15.0	20.0	23.0	
	A <sub>0</sub> (mm <sup>2</sup> )	122.7	176.7	314.2	415.5	122.7	176.7	314.2	415.5	176.7	314.2	415.5	
	Medium	Air				Saturated steam				Water			
3.0		217	260	555	807	169	203	433	630	6374	13075	18445	
4.0		272	327	697	1013	211	254	541	787	7360	15098	21299	
5.0		328	394	840	1222	253	304	648	943	8229	16880	23813	
6.0		383	460	982	1428	295	354	754	1097	9015	18492	26085	
7.0		439	527	1124	1635	336	403	860	1251	9737	19973	28175	
8.0		496	595	1269	1847	377	452	965	1404	10409	21352	30121	
9.0		551	662	1412	2054	418	502	1070	1557	11041	22647	31948	
10.0		608	730	1557	2265	459	551	1174	1709	11638	23872	33676	
12.0		720	864	1842	2680	540	648	1383	2011	12749	26151	36890	
14.0		831	997	2127	3095	621	745	1590	2313	13770	28246	39846	
16.0		942	1131	2412	3509	702	842	1797	2615	14721	30197	42597	
18.0		1054	1265	2698	3924	783	940	2005	2916	15614	32028	45181	
20.0		1176	1412	3011	4381	864	1037	2212	3218	16458	33761	47625	
22.0		1289	1546	3299	4799	945	1134	2420	3520	17262	35409	49950	
25.0		1457	1749	3731	5427	1067	1281	2732	3975	18401	37746	53247	

Diagram 06800-1/2, d<sub>0</sub>=15.0

