

Safety Valves

Type 06388



Cryogenic Safety Valve, angle type, bronze, PN50, type tested TÜV-SV.780. S/G

Full lift safety valve, orifice $d_0=23\text{mm}$ standard safety valve,
with carbon filled PTFE valve seal, closed bonnet
"cleaned and degreased for oxygen service"

Part No. 06388.X.0000

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

Part No. 06388.X.2000

Inlet: male thread type R (BSPT) acc. to ISO 7/1, Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06388.X.5000

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

Part No. 06388.X.6000

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

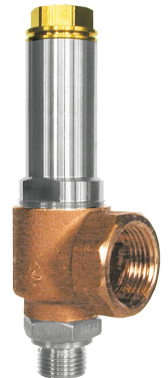
Available options - on request only:

- external parts nickel plated · with installed elbow at the outlet

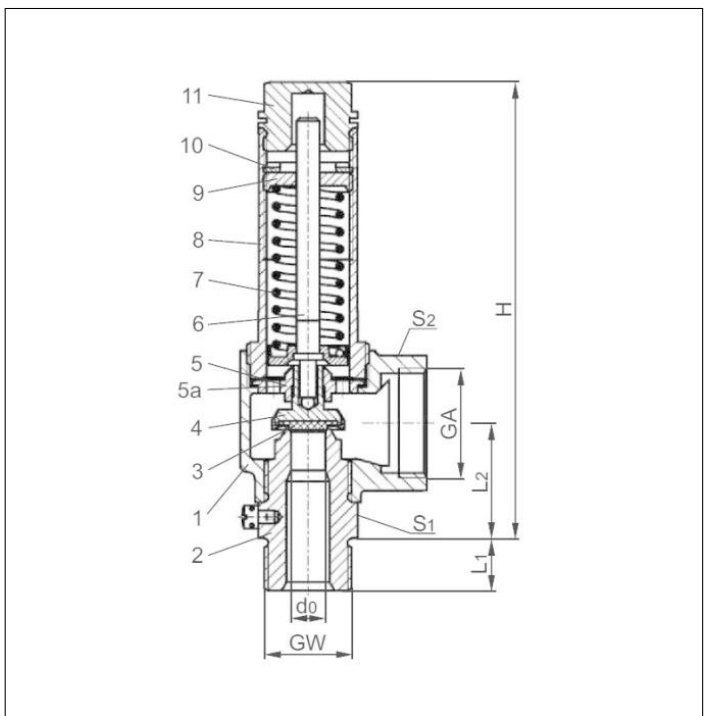
Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders. Approved for air gases, vapours and cryogenic liquefied gases e.g. oxygen (O_2), nitrogen (N_2), argon (Ar), hydrogen (H_2), helium (He), carbon dioxide (CO_2), carbon monoxide (CO), methane (CH_4), ethane (C_2H_6), ethylene (C_2H_4), incl. LPG and LNG.

Working temperature: $-196^\circ\text{C} / -321^\circ\text{F} (77\text{K})$ up to $+185^\circ\text{C} / +365^\circ\text{F} (458\text{K})$, suitable for horizontal installation



Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	SA-479.304
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	CC493K	SB 505 UNS C93200
5 Guide plate	CC493K	SB 505 UNS C93200
5a Guide plate from GW 1	CC453K	SB 103 UNS C52100
6 Stem	CW453K	SB 103 UNS C52100
7 Spring	1.4571	SA-479.316
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	EN 12164 R400
10 Thread ring	CW614N	EN 12164 R400
11 Cap	CW614N	EN 12164 R400



Essential: Valves are delivered at a set pressure, therefore when ordering please confirm set pressure, medium and temperature.

Standard marking acc. to Pressure Equipment Directive 97/23/EC (PED) and ASME Code Section VIII.



Type 06388	Technical data								
	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Nominal size	d_0	7.0	7.0	10.5	10.5	15.0	23.0	23.0	23.0
Dimension code	.X.	0704	0706	1004	1006	1510	2312	2314	2320
Set pressure range	bar	3.3-50.0	3.3-50.0	2.9-50.0	2.9-50.0	2.9-50.0	2.0-50.0	2.0-50.0	2.0-50.0
Outlet	GA	1	1	1	1	1-1/4	2	2	2
Height	H	140	140	140	140	157	218	218	216
Length	L_1	14	16	14	16	18	20	20	25
Length	L_2	36	36	36	36	42	56	56	54
Wrench size across flats	S_1	30	30	30	30	41	55	55	65
Wrench size across flats	S_2	41	41	41	41	50	70	70	70
Weight	ca. kg	0.78	0.80	0.76	0.79	1.27	3.05	3.10	3.30
Coefficient of discharge	α_w	0.82	0.82	0.58	0.58	0.5	0.62	0.62	0.62

Dimensions in mm.

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Discharge capacities

Medium:

Air in m³/h at 0°C and 1013.25 mbar

Air in SCFM at 60°F (15.6°C) and 14.7 psia (1013.25 mbar)

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Calculation of discharge capacity acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1 resp. ASME Code Sec. VIII.
The safety valve is marked with the lower capacity of both calculations.

Set pressure in bar (g)	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2	Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (mm)	7.0	10.5	15.0	23.0		d ₀ (inch)	0.276	0.414	0.591	0.907
	A ₀ (mm ²)	38.48	86.6	176.63	415.27		rated slope	0.862	1.517	2.769	7.55
Medium	Air in m ³ /h					Medium	Air in SCFM				
2.0	-	-	-	-	546	50	60	102	180	524	
2.9	-	138	244	712	607	60	70	118	208	607	
3.0	-	142	251	732	690	70	79	134	236	690	
3.3	96	153	270	787	772	80	89	150	265	772	
4.0	112	178	314	916	855	90	98	167	294	855	
5.0	135	215	378	1103	938	100	107	183	322	938	
6.0	157	251	442	1288	1021	110	117	199	350	1021	
7.0	180	287	505	1473	1104	120	126	215	379	1104	
8.0	203	324	570	1663	1187	130	136	231	407	1187	
9.0	226	360	634	1849	1269	140	145	248	435	1269	
10.0	249	397	699	2039	1352	150	155	264	464	1352	
12.0	295	470	827	2411	1559	175	179	304	535	1559	
14.0	340	542	954	2783	1766	200	202	345	606	1766	
16.0	386	615	1082	3155	1973	225	226	384	677	1973	
18.0	432	687	1209	3526	2180	250	250	425	748	2180	
20.0	482	767	1350	3936	2386	275	273	465	818	2386	
22.0	528	840	1478	4311	2593	300	297	506	889	2593	
24.0	574	913	1607	4687	2800	325	321	546	961	2800	
26.0	620	987	1736	5062	3007	350	345	586	1032	3007	
28.0	666	1060	1865	5438	3214	375	368	627	1103	3214	
30.0	718	1144	2012	5868	3421	400	392	667	1174	3421	
32.0	765	1218	2142	6247	3628	425	416	707	1244	3628	
34.0	811	1291	2272	6626	3835	450	439	748	1315	3835	
36.0	858	1365	2402	7005	4042	475	463	788	1386	4042	
38.0	904	1439	2532	7384	4249	500	487	828	1457	4249	
40.0	959	1526	2685	7830	4456	525	510	869	1529	4456	
42.0	1006	1601	2817	8212	4662	550	534	909	1600	4662	
44.0	1052	1675	2948	8594	4869	575	558	950	1670	4869	
46.0	1099	1750	3079	8977	5283	625	605	1030	1812	5283	
48.0	1146	1824	3210	9359	5697	675	653	1111	1954	5697	
50.0	1203	1915	3369	9824	6111	725	700	1192	2096	6111	