

Safety Valves

Type 06420



Cryogenic Safety Valves, angle type, bronze, PN40

$d_0=7.0$ & 10.5 mm up to PN50

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal, (except d_07 , which is metal to metal seated only: in this case

the **Part No.** changes from **06420.X.X000** to **06420.070X.X100**), closed bonnet

"cleaned and degreased for oxygen service"

Part No. 06420.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. 06420.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. 06420.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. 06420.X.6000

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



Applications:

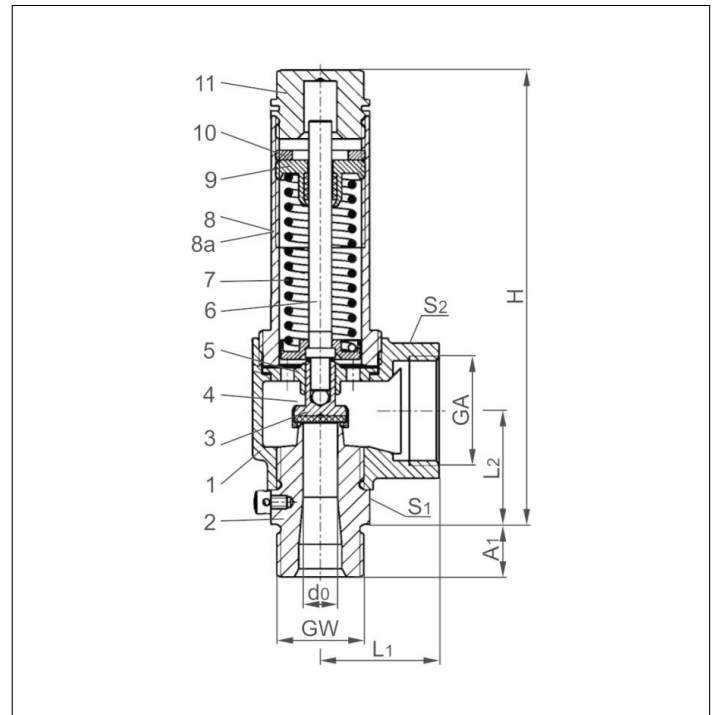
Provided as safety device for protection against excessive pressure in stationary and moveable gas

cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to $+185^{\circ}\text{C}$ / $+365^{\circ}\text{F}$ (458K), with PCTFE-seal

up to $+150^{\circ}\text{C}$ / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASME/ASTM
1 Outlet body	CC491K	SB62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 304
3 Valve seal	PCTFE	
	1.4571	A 313 Grade 316Ti (d_07)
	1.4541	A 276 Grade 321 ($d_010.5$)
4 Disc	CC493K	B 505 UNS C93200
5 Guide plate	CC493K	B 505 UNS C93200
6 Stem	CW453K	B 103 UNS C52100
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Cap	CW614N	B 455 UNS C38500



Type 06420	Technical data									
Nominal size	GW	1/2	3/4	1/2	3/4	3/4	1	1	1-1/4	1-1/4
Orifice	d_0	7.0	7.0	10.5	10.5	14.0	14.0	18.0	18.0	23.0
Dimension code	.X.	0704	0706	1004	1006	1406	1410	1810	1812	2312
Set pressure range	bar	0.4-50.0	0.4-50.0	0.4-50.0	0.4-50.0	0.4-40.0	0.4-40.0	0.4-40.0	0.4-40.0	0.4-10.0
Outlet	GA	1	1	1	1	1-1/4	1-1/4	1-1/2	1-1/2	1-1/2
Height	H	140	140	140	140	159	159	186	187	187
Length	A ₁	14	16	14	16	16	18	18	20	20
Length	L ₁	36	36	36	36	50	50	48	48	48
Length	L ₂	36.5	36.5	36.5	34.5	44	44	50.5	51.5	52
Wrench size across flats	S ₁	30	30	30	30	41	41	50	50	50
Wrench size across flats	S ₂	41	41	41	41	50	50	58	58	58
Weight	ca. kg	0.78	0.80	0.76	0.79	1.25	1.31	1.87	1.99	1.90
Coeff. of disch. from 3.0 bar	α_w	0.78	0.78	0.69	0.69	0.66	0.66	0.66	0.66	0.54

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.

Set pressure in bar (g)	GW	1/2 & 3/4	1/2 & 3/4	3/4 & 1	1 & 1-1/4	1-1/4	Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	3/4 & 1	1 & 1-1/4	1-1/4
	d ₀ (mm)	7.0	10.5	14.0	18.0	23.0		d ₀ (inch)	0.276	0.413	0.551	0.709	0.906
	A ₀ (mm ²)	38.48	86.59	153.94	254.47	415.48	A ₀ (in ²)	0.060	0.134	0.239	0.394	0.644	
	Medium	Air in m ³ /h					Medium	Air in SCFM					
0.4		24	43	77	123	157	15	-	-	92	-	-	
0.5		27	49	87	141	179	28	-	-	129	-	298	
1.0		41	77	131	216	287	29	42	-	-	-	304	
1.5		54	101	179	291	376	35	47	90	154	-	346	
2.0		66	126	219	362	473	40	52	100	169	280	382	
3.0		88	176	299	495	661	50	62	118	201	333	454	
4.0		111	221	375	621	829	60	72	137	233	385	525	
5.0		134	266	453	748	1000	70	82	156	265	438	597	
6.0		156	311	529	875	1169	80	92	174	296	490	669	
7.0		179	356	606	1001	1337	90	101	193	328	543	740	
8.0		202	402	684	1131	1511	100	111	212	360	595	812	
9.0		225	447	761	1258	1680	120	131	249	424	700	955	
10.0		248	494	839	1387	1853	145	155	296	503	831	1134	
12.0		293	584	993	1641	-	160	170	324	551	910	-	
14.0		339	674	1147	1895	-	180	190	361	614	1015	-	
16.0		384	765	1300	2149	-	220	229	436	741	1225	-	
18.0		430	855	1454	2403	-	240	249	473	805	1330	-	
20.0		480	954	1623	2683	-	250	258	492	836	1383	-	
22.0		525	1046	1778	2939	-	260	268	511	868	1435	-	
24.0		571	1137	1933	3196	-	280	288	548	932	1540	-	
26.0		617	1228	2088	3452	-	300	307	585	995	1645	-	
28.0		663	1319	2244	3709	-	325	332	632	1075	1777	-	
30.0		715	1424	2421	4003	-	350	357	679	1154	1908	-	
32.0		762	1516	2578	4262	-	375	381	725	1233	2039	-	
34.0		808	1608	2735	4520	-	400	406	772	1313	2170	-	
36.0		854	1700	2891	4779	-	425	430	819	1392	2302	-	
38.0		900	1792	3048	5038	-	450	455	865	1472	2433	-	
40.0		955	1901	3232	5343	-	475	479	912	1551	2564	-	
42.0		1002	1994	-	-	-	500	504	959	1630	2695	-	
44.0		1048	2086	-	-	-	525	528	1006	1710	2827	-	
46.0		1095	2179	-	-	-	550	553	1052	1789	2958	-	
48.0		1142	2272	-	-	-	575	577	1099	1868	3089	-	
50.0		1198	2385	-	-	-	600	602	1146	-	-	-	
							625	626	1192	-	-	-	
							650	651	1239	-	-	-	
							675	675	1286	-	-	-	
							700	700	1332	-	-	-	
							725	724	1379	-	-	-	