

Safety Valves

Type 06416

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV. 824. D/G

Standard safety valve (0.2 - 25.0/40.0 bar)
 Metal to metal seated, closed bonnet, with lifting device
 "cleaned and degreased for oxygen service"

Part No. 06416.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. 06416.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. 06416.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. 06416.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



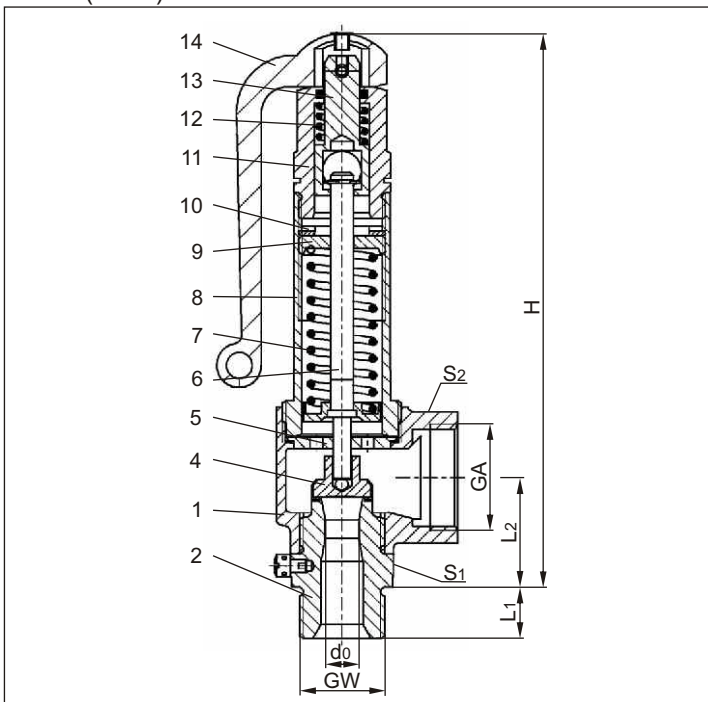
Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders. Approved for air gases and cryogenic liquefied gases such as oxygen, nitrogen, krypton, carbon dioxide, argon, dinitrogen monoxide, trifluormethan, carbon oxide, methane, ethane and ethylene.
 Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K)

Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	A 276 Grade 304
4 Disc	1.4541	A 276 Grade 321
5 Guide plate	CW453K	B 103 UNS C52100
6 Stem	CW453K	B 103 UNS C52100
7 Spring	1.4571	A 276 Grade 316Ti
8 Bonnet	1.4305	A 314 Grade 303
9 Spring clamp	CW612N	B 283 UNS C37700
10 Thread ring	CW612N	B 283 UNS C37700
11 Lifting cap	CW612N	B 283 UNS C37700
12 Lifting spring	1.4571	A 276 Grade 316Ti
13 Lifting stem	CW612N	B 283 UNS C37700
14 Lever	1.4408	A 351 CF8M

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).



Type 06416	Technical data			
Nominal size	GW	1/2	3/4	1
Orifice	d ₀	10.5	10.5	14.0
Dimension code	.X.	1004	1006	1410
Set pressure range	bar	0.2-25.0	0.2-25.0	0.2-40.0
Outlet	GA	1	1	1-1/4
Height	H	175	175	194
Length	L ₁	14	16	18
Length	L ₂	36	36	42
Wrench size across flats	S ₁	30	30	41
Wrench size across flats	S ₂	41	41	50
Weight	ca. kg	1.96	1.00	1.50
Coeff. of disch. from 3,0 bar	α _w	0.67	0.67	0.67

Dimensions in mm.

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Discharge capacities

Calculation of mass flow acc. to AD2000-Merkblatt A2

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (ü)	GW	1/2	3/4	1
	d ₀ (mm)	10.5	10.5	14.0
	A ₀ (mm ²)	86.6	86.6	153.9
	Medium	Air		
0.2		31	31	61
0.5		49	49	88
1.0		75	75	133
1.5		99	99	176
2.0		123	123	216
3.0		170	170	303
4.0		214	214	380
5.0		257	257	457
6.0		301	301	535
7.0		344	344	612
8.0		387	387	689
9.0		431	431	766
10.0		474	474	844
12.0		561	561	998
14.0		648	648	1153
16.0		735	735	1307
18.0		822	822	1461
20.0		909	909	1616
22.0		996	996	1770
24.0		1082	1082	1925
25.0		1126	1126	2002
26.0		-	-	2079
28.0		-	-	2234
30.0		-	-	2388
32.0		-	-	2543
34.0		-	-	2697
36.0		-	-	2852
38.0		-	-	3006
40.0		-	-	3161