

# Safety Valves

## Type 06012, Type 06016



### Cryogenic Safety Valves, angle type, stainless steel, PN63, type tested TÜV-SV.1048. S/G

Standard safety valve, with carbon filled PTFE valve seal, open bonnet

Outlet: female thread Rc 3/8 acc. to ISO 7/1, "cleaned and degreased for oxygen service"

**Type 06012:** Closed bonnet drainage hole in the peg

**Type 06016:** drainage hole in the bonnet

**Part No. 06012.X.0000:**

**Part No. 06016.X.0000 (with lifting device)**

Inlet: male thread type R (BSPT) acc. to ISO 7/1

**Part No. 06012.X.2000**

**Part No. 06016.X.2000 (with lifting device)**

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

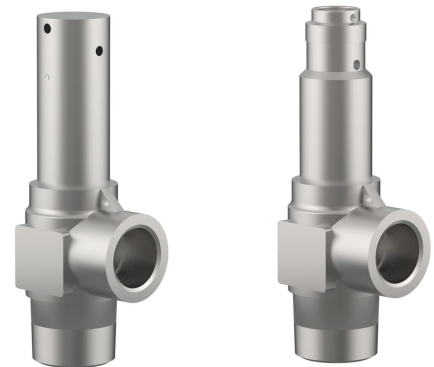
**Part No. 06012.X.5000**

**Part No. 06016.X.5000 (with lifting device)**

Inlet: male thread NPT acc. to ANSI B 1.20.1

Available options - on request only:

- with installed elbow at the outlet



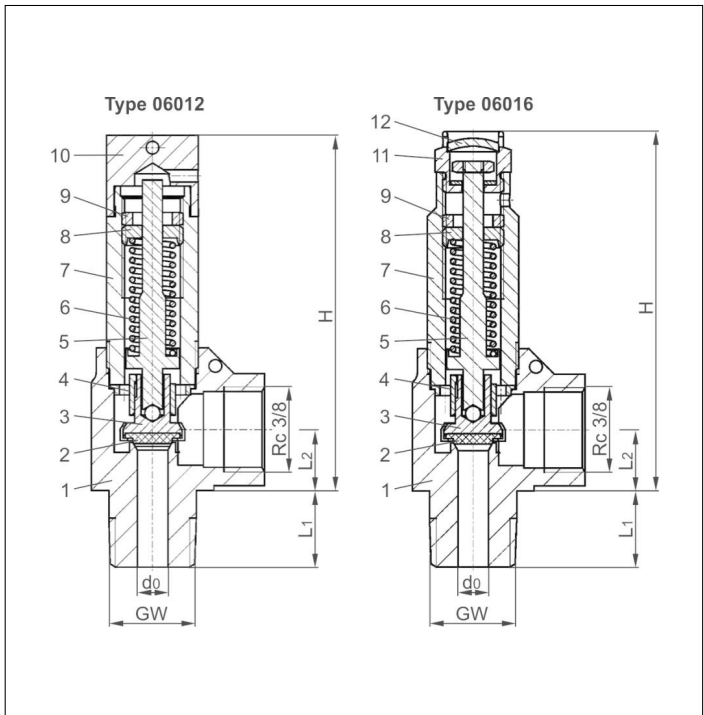
### Applications:

Provided as safety device for protection against thermal expansion in pipeworks and parts of facilities.

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

Working temperature: -196°C / -321°F (77K) up to +150°C / +302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Body	1.4408	A 351 CF8M
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	1.4301	A 276 Grade 304
4 Guide plate	1.4301	A 276 Grade 304
5 Stem	1.4301	A 276 Grade 304
6 Spring	1.4571	A 313 Grade 316Ti
7 Bonnet	1.4301	A 276 Grade 304
8 Spring clamp	1.4305	A 276 Grade 303
9 Thread ring	1.4305	A 276 Grade 303
10 Cap	1.4301	A 276 Grade 304
11 Lifting device	1.4305	A 276 Grade 303
12 Closing cap	1.4305	A 276 Grade 303



**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).



Technical data	Type 06012			Type 06016			
	GW	1/4	3/8	1/2	1/4	3/8	1/2
Nominal size	d <sub>0</sub>	6.0	6.0	6.0	6.0	6.0	6.0
Orifice	d <sub>0</sub>	6.0	6.0	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0200	0300	0400
Set pressure range	bar	1.0-55.0	1.0-55.0	1.0-55.0	1.0-55.0	1.0-55.0	1.0-55.0
Height	H	70	70	70	72	72	72
Length	L <sub>1</sub>	13	15	17	13	15	17
Length	L <sub>2</sub>	13	13	13	13	13	13
Weight	ca. kg	0.185	0.20	0.22	0.18	0.195	0.21
Coeff. of discharge from 3.0 bar	α <sub>w</sub>	0.42	0.42	0.42	0.42	0.42	0.42

Dimensions in mm.

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### Discharge capacities

Calculation of mass flow 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

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

d<sub>0</sub> - orifice

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

Set pressure in bar (g)	GW	1/4. 3/8 & 1/2
	d <sub>0</sub> (mm)	6.0
	A <sub>0</sub> (mm <sup>2</sup> )	28.3
	Medium	<b>Air</b>
1.0		15.5
2.0		26.0
3.0		34.9
4.0		43.8
5.0		52.6
6.0		61.5
7.0		70.4
8.0		79.3
9.0		88.2
10.0		97.1
12.0		114.9
14.0		132.7
16.0		150.4
18.0		168.2
20.0		186.0
22.0		203.8
24.0		221.6
26.0		239.4
28.0		257.1
30.0		274.9
32.0		292.7
34.0		310.5
36.0		328.3
38.0		346.1
40.0		363.8
42.0		381.6
44.0		399.4
46.0		417.2
48.0		435.0
50.0		452.7
52.0		470.5
54.0		488.3
55.0		497.2