

Safety Valves

Type 06001 - gastight



Cryogenic Safety Valves, angle type, brass, PN63, type tested TÜV-SV.1048. S/G/L

Standard Safety Valve,
complete with carbon filled PTFE valve seal, closed bonnet, gastight
Outlet: female thread Rc 3/8 acc. to ISO 7/1
"cleaned and degreased for oxygen service"

Part No. 06001.X.0000

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

Part No. 06001.X.2000

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

Part No. 06001.X.5000

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.

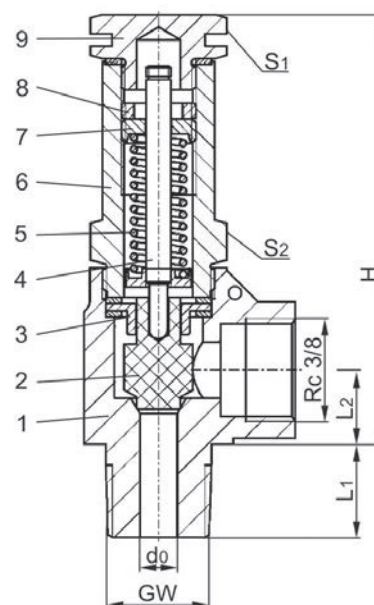
Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +65°C / +149°F (338K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Body	CW610N	B 111 UNS C36500
2 Disc	PTFE / Carbon filled (25%)	
3 Guide plate	CW614N	B 283 UNS C38500
4 Stem	CW614N	B 283 UNS C38500
5 Spring	1.4571	A 313 Grade 316Ti
6 Bonnet	CW614N	B 283 UNS C38500
7 Spring clamp	CW614N	B 283 UNS C38500
8 Thread ring	CW614N	B 283 UNS C38500
9 Cap	CW614N	B 283 UNS C38500

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 06001	Technical data			
Nominal size	GW	1/4	3/8	1/2
Orifice	d ₀	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400
Set pressure range	bar	5.0-55.0	5.0-55.0	5.0-55.0
Height	H	70	70	70
Length	L ₁	13	15	17
Length	L ₂	13	13	13
Wrench size across flats	S ₁	19	19	19
Wrench size across flats	S ₂	19	19	19
Weight	ca. kg	0.18	0.195	0.21
Coefficient of discharge	α _w	0.09	0.09	0.09

Dimensions in mm.

Safety Valves

Type 06001 - gastight



Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

Water in kg/h

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/4, 3/8 & 1/2	1/4, 3/8 & 1/2
	d ₀ (mm)	6.0	6.0
	A ₀ (mm ²)	28.3	28.3
	Medium	Air	Water
5.0		11.3	303
6.0		13.3	332
7.0		15.2	359
8.0		17.1	384
9.0		19.1	407
10.0		21.0	429
12.0		24.9	470
14.0		28.7	508
16.0		32.6	543
18.0		36.4	576
20.0		40.7	607
22.0		44.5	637
24.0		48.4	665
26.0		52.3	692
28.0		56.2	719
30.0		60.6	744
32.0		64.6	768
34.0		68.5	792
36.0		72.4	815
38.0		76.3	837
40.0		80.9	859
42.0		84.9	880
44.0		88.9	901
46.0		92.8	921
48.0		96.8	941
50.0		101.6	960
52.0		105.6	979
54.0		109.6	998
55.0		111.6	1007



Safety Valves

Type 06002, Type 06006

HEROSE



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

Standard safety valve, with carbon filled PTFE valve seal

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

Type 06002: Closed bonnet drainage hole in the locking screw

Type 06006: drainage hole in bonnet

Part No. 06002.X.0000

Part No. 06006.X.0000 (with lifting device)

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

Part No. 06002.X.2000

Part No. 06006.X.2000 (with lifting device)

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

Part No. 06002.X.5000

Part No. 06006.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.

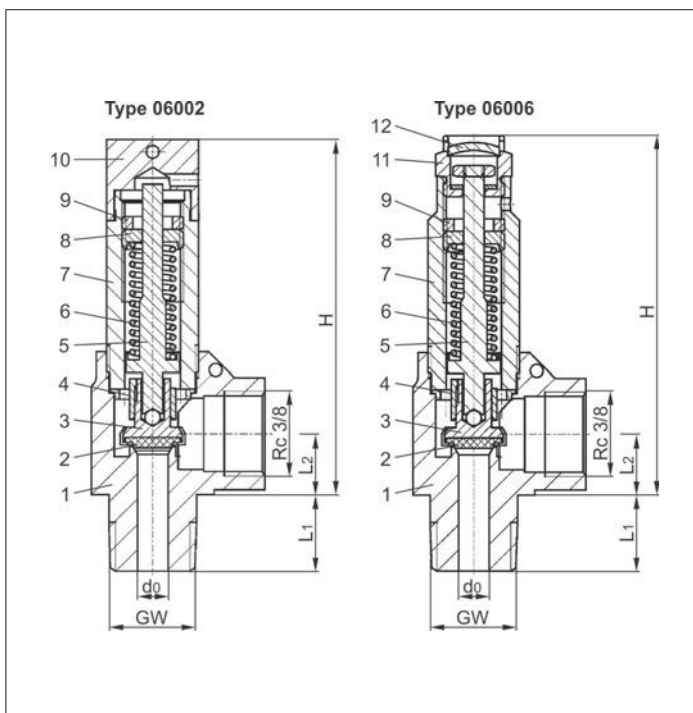
Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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

Materials	DIN EN	ASTM
1 Body	CW610N	B 111 UNS C36500
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW452K	B 159 UNS C51900
4 Guide plate	CC493K	B 505 UNS C93200
5 Stem	CW614N	B 283 UNS C38500
6 Spring	1.4571	A 313 Grade 316Ti
7 Bonnet	CW614N	B 283 UNS C38500
8 Spring clamp	CW614N	B 283 UNS C38500
9 Thread ring	CW614N	B 283 UNS C38500
10 Cap	CW614N	B 283 UNS C38500
11 Lifting device	CW614N	B 283 UNS C38500
12 Closing cap	CW507L	B 30 UNS C27000

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 06002			Type 06006		
Nominal size	GW	1/4	3/8	1/2	1/4	3/8	1/2
Orifice	d ₀	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 ₁	13	15	17	13	15	17
Length	L ₂	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 _w	0.42	0.42	0.42	0.42	0.42	0.42

Dimensions in mm.

Safety Valves

Type 06002, Type 06006



Discharge capacities

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

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 (g)	GW	1/4, 3/8 & 1/2
	d ₀ (mm)	6.0
	A ₀ (mm ²)	28.3
	Medium	Air
1.0		15.5
2.0		26.0
3.0		35.0
4.0		43.9
5.0		52.9
6.0		61.8
7.0		70.8
8.0		80.0
9.0		88.9
10.0		98.1
12.0		116.1
14.0		134.0
16.0		152.0
18.0		169.9
20.0		189.7
22.0		207.8
24.0		226.0
26.0		244.1
28.0		262.2
30.0		283.0
32.0		301.3
34.0		319.6
36.0		337.9
38.0		356.2
40.0		377.8
42.0		396.2
44.0		414.7
46.0		433.2
48.0		451.6
50.0		474.1
52.0		492.7
54.0		511.3
55.0		520.6

Safety Valves

Type 06002 - gastight



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

Standard Safety Valve,
gastight, closed bonnet
with carbon filled PTFE valve seal
Outlet: female thread Rc 3/8 acc. to ISO 7/1
"cleaned and degreased for oxygen service"

Part No. 06002.X.0020

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

Part No. 06002.X.2020

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

Part No. 06002.X.5020

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.

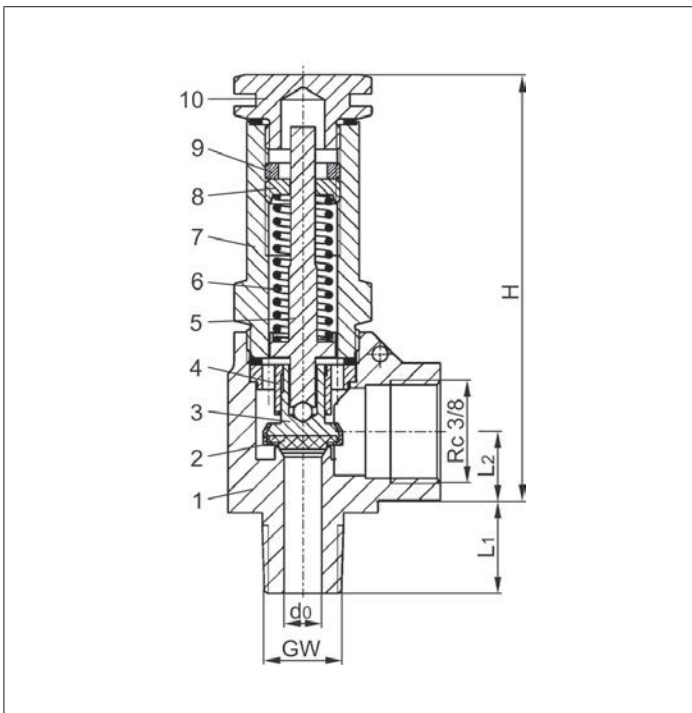
Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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

Materials	DIN EN	ASTM
1 Body	CW610N	B 111 UNS C36500
2 Valve seal	PTFE / Carbon filled (25%)	
3 Disc	CW452K	B 159 UNS C51900
4 Guide plate	CC493K	B 505 UNS C93200
5 Stem	CW614N	B 283 UNS C38500
6 Spring	1.4571	A 313 Grade 316Ti
7 Bonnet	CW614N	B 283 UNS C38500
8 Spring clamp	CW614N	B 283 UNS C38500
9 Thread ring	CW614N	B 283 UNS C38500
10 Cap	CW614N	B 283 UNS C38500

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 06002	Technical data			
Nominal size	GW	1/4	3/8	1/2
Orifice	d ₀	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400
Set pressure range	bar	1.0-55.0	1.0-55.0	1.0-55.0
Height	H	70	70	70
Length	L ₁	13	15	17
Length	L ₂	13	13	13
Weight	ca. kg	0.18	0.20	0.22
Coefficient of discharge	α _w	0.34	0.34	0.34

Dimensions in mm.

Safety Valves

Type 06002 - gastight



Discharge capacities

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

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 (g)	GW	1/4, 3/8 & 1/2
	d ₀ (mm)	6.0
	A ₀ (mm ²)	28.3
	Medium	Air
1.0		12.0
2.0		20.0
3.0		28.0
4.0		35.0
5.0		42.0
6.0		50.0
7.0		57.0
8.0		64.0
9.0		71.0
10.0		79.0
12.0		93.0
14.0		108.0
16.0		123.0
18.0		137.0
20.0		153.0
22.0		168.0
24.0		182.0
26.0		197.0
28.0		212.0
30.0		229.0
32.0		243.0
34.0		258.0
36.0		273.0
38.0		288.0
40.0		305.0
42.0		320.0
44.0		335.0
46.0		350.0
48.0		365.0
50.0		383.0
52.0		398.0
54.0		413.0
55.0		421.0

Safety Valves

Type 06011 - gastight



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

Standard safety valve,
complete with carbon filled PTFE valve seal, closed bonnet, gastight
Outlet: female thread Rc 3/8 acc. to ISO 7/1
"cleaned and degreased for oxygen service"

Part No. 06011.X.0000

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

Part No. 06011.X.2000

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

Part No. 06011.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Available options - on request only:

- with installed elbow at the outlet



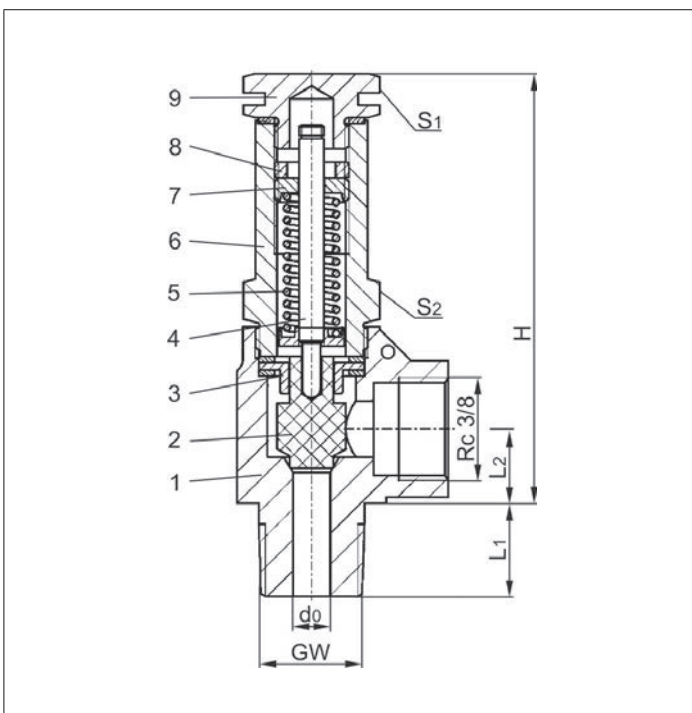
Applications:

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 +65°C / +149°F (338K), suitable for horizontal installation

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



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 06011	Technical data			
Nominal size	GW	1/4	3/8	1/2
Orifice	d ₀	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400
Set pressure range	bar	5.0-55.0	5.0-55.0	5.0-55.0
Height	H	70	70	70
Length	L ₁	13	15	17
Length	L ₂	13	13	13
Wrench size across flats	S ₁	19	19	19
Wrench size across flats	S ₂	19	19	19
Weight	ca. kg	0.18	0.195	0.21
Coefficient of discharge	α _w	0.09	0.09	0.09

Dimensions in mm.

Safety Valves

Type 06011 - gastight



Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

Water in kg/h

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/4. 3/8 & 1/2	1/4. 3/8 & 1/2
	d ₀ (mm)	6.0	6.0
	A ₀ (mm ²)	28.3	28.3
	Medium	Air	Water
5.0		11.3	303
6.0		13.3	332
7.0		15.2	359
8.0		17.1	384
9.0		19.1	407
10.0		21.0	429
12.0		24.9	470
14.0		28.7	508
16.0		32.6	543
18.0		36.4	576
20.0		40.7	607
22.0		44.5	637
24.0		48.4	665
26.0		52.3	692
28.0		56.2	719
30.0		60.6	744
32.0		64.6	768
34.0		68.5	792
36.0		72.4	815
38.0		76.3	837
40.0		80.9	859
42.0		84.9	880
44.0		88.9	901
46.0		92.8	921
48.0		96.8	941
50.0		101.6	960
52.0		105.6	979
54.0		109.6	998
55.0		111.6	1007



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 locking screw

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.

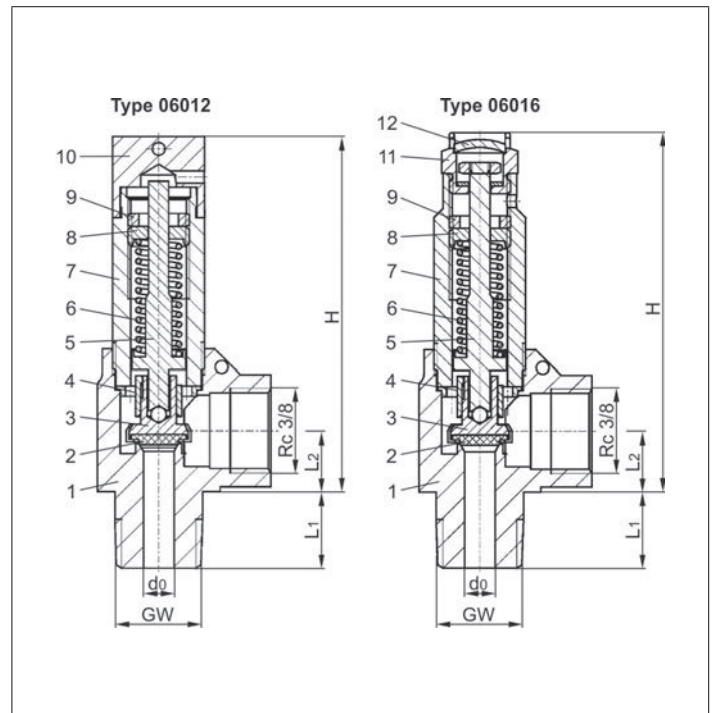
Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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		
Nominal size	GW	1/4	3/8	1/2	1/4	3/8	1/2
Orifice	d ₀	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 ₁	13	15	17	13	15	17
Length	L ₂	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 _w	0.42	0.42	0.42	0.42	0.42	0.42

Dimensions in mm.

Safety Valves

Type 06012, Type 06016



Discharge capacities

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

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 (g)	GW	1/4. 3/8 & 1/2
	d ₀ (mm)	6.0
	A ₀ (mm ²)	28.3
	Medium	Air
1.0		15.5
2.0		26.0
3.0		35.0
4.0		43.9
5.0		52.9
6.0		61.8
7.0		70.8
8.0		80.0
9.0		88.9
10.0		98.1
12.0		116.1
14.0		134.0
16.0		152.0
18.0		169.9
20.0		189.7
22.0		207.8
24.0		226.0
26.0		244.1
28.0		262.2
30.0		283.0
32.0		301.3
34.0		319.6
36.0		337.9
38.0		356.2
40.0		377.8
42.0		396.2
44.0		414.7
46.0		433.2
48.0		451.6
50.0		474.1
52.0		492.7
54.0		511.3
55.0		520.6



Safety Valves

Type 06012 - gastight



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

Standard Safety Valve,
gastight, closed bonnet
with carbon filled PTFE valve seal
Outlet: female thread Rc 3/8 acc. to ISO 7/1
"cleaned and degreased for oxygen service"

Part No. 06012.X.0020

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

Part No. 06012.X.2020

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

Part No. 06012.X.5020

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.

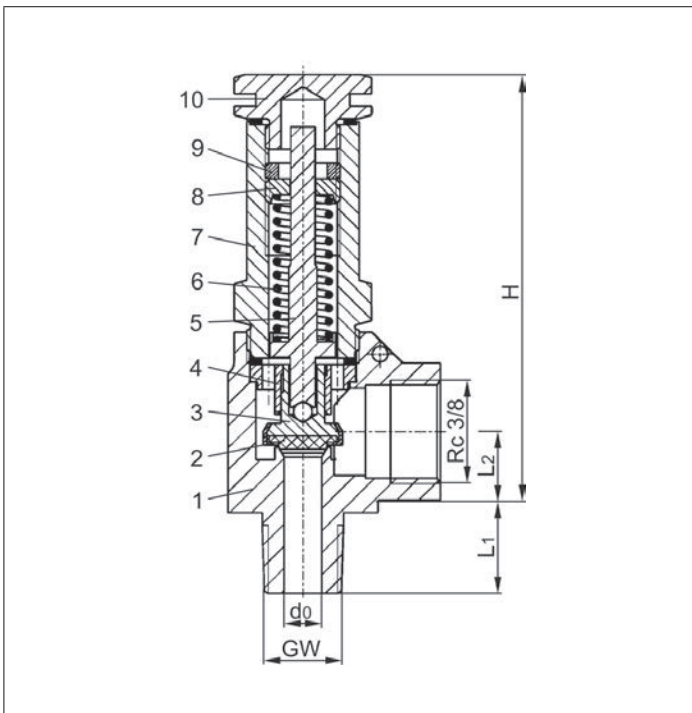
Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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

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 06002	Technical data			
Nominal size	GW	1/4	3/8	1/2
Orifice	d ₀	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400
Set pressure range	bar	1.0-55.0	1.0-55.0	1.0-55.0
Height	H	70	70	70
Length	L ₁	13	15	17
Length	L ₂	13	13	13
Weight	ca. kg	0.18	0.20	0.22
Coefficient of discharge	α _w	0.34	0.34	0.34

Dimensions in mm.

Safety Valves

Type 06012 - gastight



Discharge capacities

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

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 (g)	GW	1/4, 3/8 & 1/2
	d ₀ (mm)	6.0
	A ₀ (mm ²)	28.3
	Medium	Air
1.0		12.0
2.0		20.0
3.0		28.0
4.0		35.0
5.0		42.0
6.0		50.0
7.0		57.0
8.0		64.0
9.0		71.0
10.0		79.0
12.0		93.0
14.0		108.0
16.0		123.0
18.0		137.0
20.0		153.0
22.0		168.0
24.0		182.0
26.0		197.0
28.0		212.0
30.0		229.0
32.0		243.0
34.0		258.0
36.0		273.0
38.0		288.0
40.0		305.0
42.0		320.0
44.0		335.0
46.0		350.0
48.0		365.0
50.0		383.0
52.0		398.0
54.0		413.0
55.0		421.0



Safety Valves

Type 06472



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.836. S/G

Standard safety valve,

metal to metal seated, closed bonnet

Outlet: female thread type G 1/2 acc. to ISO 228/1

"cleaned and degreased for oxygen service"

Part No. 06472.X.0000

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

Part No. 06472.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Part No. 06472.0600.0000

Inlet: union type braze fitting for pipe outside diameter 12 mm

Available options - on request only:

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



Applications:

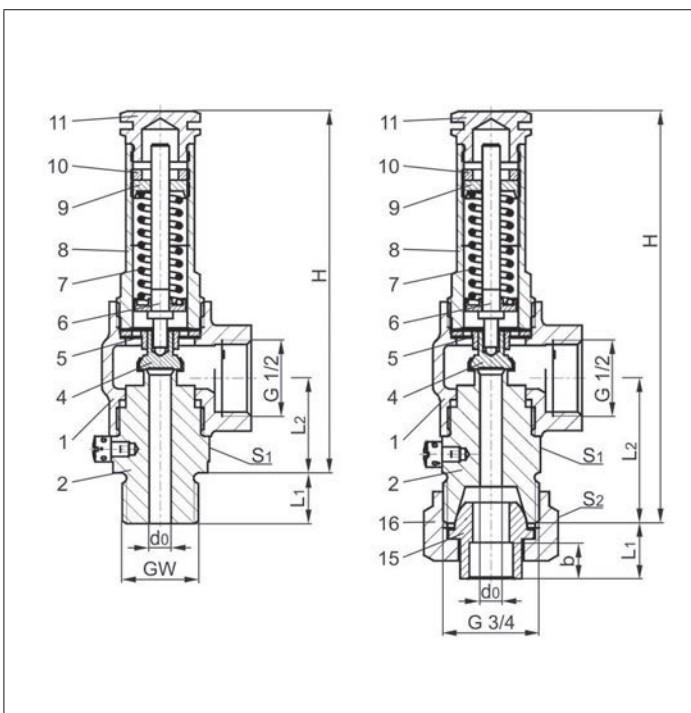
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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

Materials	DIN EN	ASTM
1 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	CW614N	B 283 UNS C38500
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Cap	CW614N	B 283 UNS C38500
15 Braze fitting	1.4301	A 276 Grade 304
16 Union nut	CW614N	B 283 UNS C38500

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 06472	Technical data				
Nominal size	GW	1/4	3/8	1/2	3/4
Orifice	d ₀	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0600
Set pressure range	bar	0.5-6.0	0.5-6.0	0.5-6.0	0.5-6.0
Height	H	100	100	100	114
Length	L ₁	12	13	14	15.5
Length	L ₂	26	26	26	40
Socket depth	b	-	-	-	10
Wrench size across flats	S ₁	27	27	27	27
Wrench size across flats	S ₂	-	-	-	32
Weight	ca. kg	0.34	0.36	0.38	0.47
Coeff. of discharge from 3.0 bar	α _w	0.55	0.55	0.55	0.55

Dimensions in mm.

Discharge capacities

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

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 (g)	GW	1/4	3/8	1/2	3/4
	d ₀ (mm)	6.0	6.0	6.0	6.0
	A ₀ (mm ²)	28.3	28.3	28.3	28.3
	Medium	Air			
0.5		13	13	13	13
0.6		15	15	15	15
0.7		17	17	17	17
0.8		18	18	18	18
0.9		19	19	19	19
1.0		21	21	21	21
1.2		23	23	23	23
1.4		26	26	26	26
1.6		28	28	28	28
1.8		31	31	31	31
2.0		33	33	33	33
2.2		36	36	36	36
2.4		38	38	38	38
2.6		40	40	40	40
2.8		43	43	43	43
3.0		45	45	45	45
3.2		48	48	48	48
3.4		50	50	50	50
3.6		52	52	52	52
3.8		55	55	55	55
4.0		57	57	57	57
4.2		59	59	59	59
4.4		62	62	62	62
4.6		64	64	64	64
4.8		66	66	66	66
5.0		69	69	69	69
5.2		71	71	71	71
5.4		73	73	73	73
5.6		76	76	76	76
5.8		78	78	78	78
6.0		80	80	80	80

Safety Valves

Type 06477



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.836. S/G

Standard safety valve,
metal to metal seated, closed bonnet, with lifting device

Outlet: female thread G 1/2 acc. to ISO 228/1

"cleaned and degreased for oxygen service"

Part No. 06477.X.0000

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

Part No. 06477.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Part No. 06477.0600.0000

Inlet: union type braze fitting for pipe outside diameter 12 mm

Available options - on request only:

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



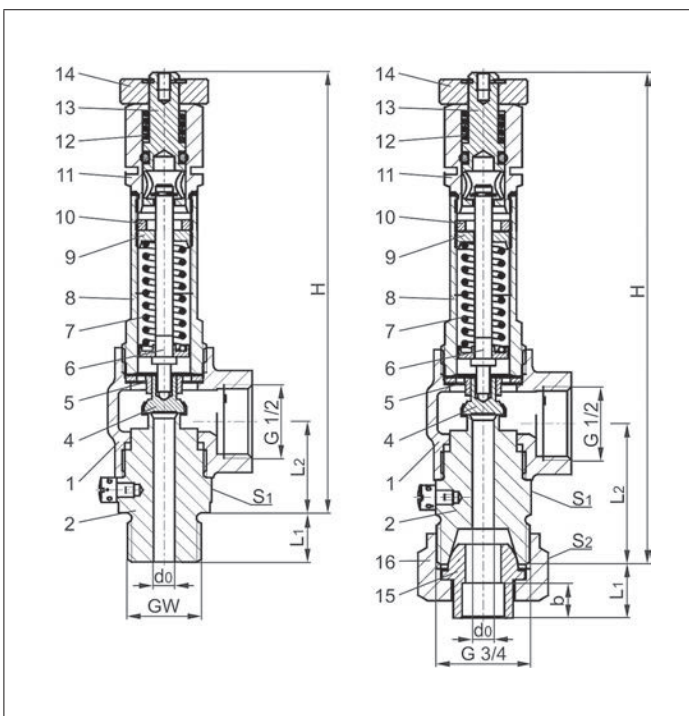
Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. 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 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	CW614N	B 283 UNS C38500
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Lifting cap	CW614N	B 283 UNS C38500
12 Lifting spring	1.4571	A 276 Grade 316Ti
13 Lifting stem	CW614N	B 283 UNS C38500
14 Lifting device	CW614N	B 283 UNS C38500
15 Braze fitting	1.4301	A 276 Grade 304
16 Union nut	CW614N	B 283 UNS C38500

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 06477	Technical data				
Nominal size	GW	1/4	3/8	1/2	3/4
Orifice	d ₀	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0600
Set pressure range	bar	0.5-6.0	0.5-6.0	0.5-6.0	0.5-6.0
Height	H	126	126	126	140
Length	L ₁	12	13	14	15.5
Length	L ₂	26	26	26	40
Socket depth	b	-	-	-	10
Wrench size across flats	S ₁	27	27	27	27
Wrench size across flats	S ₂	-	-	-	32
Weight	ca. kg	0.40	0.42	0.44	0.48
Coeff. of discharge from 3.0 bar	α _w	0.55	0.55	0.55	0.55

Dimensions in mm.

Discharge capacities

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

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 (g)	GW	1/4	3/8	1/2	3/4
	d ₀ (mm)	6.0	6.0	6.0	6.0
	A ₀ (mm ²)	28.3	28.3	28.3	28.3
	Medium	Air			
0.5		14	14	14	14
0.6		15	15	15	15
0.7		17	17	17	17
0.8		19	19	19	19
0.9		20	20	20	20
1.0		21	21	21	21
1.2		23	23	23	23
1.4		26	26	26	26
1.6		29	29	29	29
1.8		31	31	31	31
2.0		33	33	33	33
2.2		36	36	36	36
2.4		38	38	38	38
2.6		40	40	40	40
2.8		43	43	43	43
3.0		46	46	46	46
3.2		48	48	48	48
3.4		50	50	50	50
3.6		53	53	53	53
3.8		55	55	55	55
4.0		57	57	57	57
4.2		60	60	60	60
4.4		62	62	62	62
4.6		64	64	64	64
4.8		67	67	67	67
5.0		69	69	69	69
5.2		71	71	71	71
5.4		74	74	74	74
5.6		76	76	76	76
5.8		78	78	78	78
6.0		81	81	81	81

Safety Valves

Type 06474

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN63, type tested TÜV-SV.836. S/G

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

Outlet: female thread G 1/2 acc. to ISO 228/1

"cleaned and degreased for oxygen service"

Part No. 06474.X.0000

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

Part No. 06474.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Part No. 06474.0600.0000

Inlet: union type braze fitting for pipe outside diameter 12 mm

Available options - on request only:

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



Applications:

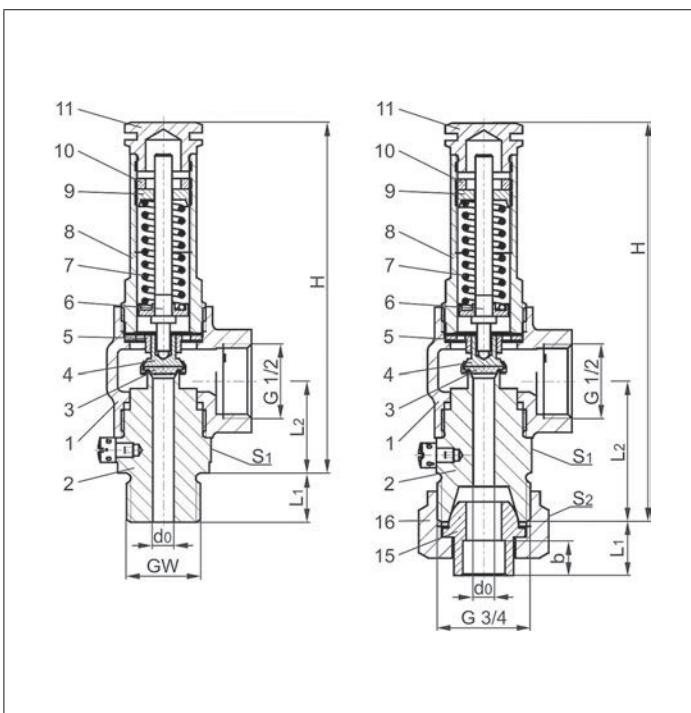
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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

Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	A 276 Grade 304
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	CW452K	B 159 UNS C51900
5 Guide plate	CC493K	B 505 UNS C93200
6 Stem	CW614N	B 283 UNS C38500
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Cap	CW614N	B 283 UNS C38500
15 Braze fitting	1.4301	A 276 Grade 304
16 Union nut	CW614N	B 283 UNS C38500

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 06474	Technical data				
Nominal size	GW	1/4	3/8	1/2	3/4
Orifice	d ₀	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0600
Set pressure range	bar	4.5-45.0	4.5-45.0	4.5-45.0	4.5-45.0
Height	H	100	100	100	114
Length	L ₁	12	13	14	15.5
Length	L ₂	26	26	26	40
Socket depth	b	-	-	-	10
Wrench size across flats	S ₁	27	27	27	27
Wrench size across flats	S ₂	-	-	-	32
Weight	ca. kg	0.34	0.36	0.38	0.48
Coefficient of discharge	α _w	0.66	0.66	0.66	0.66

Dimensions in mm.

Safety Valves

Type 06474



Discharge capacities

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

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 (g)	GW	1/4	3/8	1/2	3/4
	d ₀ (mm)	6.0	6.0	6.0	6.0
	A ₀ (mm ²)	28.3	28.3	28.3	28.3
	Medium	Air			
4.5		75	75	75	75
5.0		83	83	83	83
6.0		97	97	97	97
7.0		111	111	111	111
8.0		125	125	125	125
9.0		139	139	139	139
10.0		154	154	154	154
12.0		182	182	182	182
14.0		210	210	210	210
16.0		238	238	238	238
18.0		267	267	267	267
20.0		298	298	298	298
22.0		326	326	326	326
24.0		355	355	355	355
26.0		383	383	383	383
28.0		412	412	412	412
30.0		444	444	444	444
32.0		473	473	473	473
34.0		502	502	502	502
36.0		531	531	531	531
38.0		559	559	559	559
40.0		593	593	593	593
42.0		622	622	622	622
44.0		651	651	651	651
45.0		666	666	666	666



Safety Valves

Type 06478

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN63, type tested TÜV-SV.836. S/G

Standard safety valve,
with carbon filled PTFE valve seal, closed bonnet, with lifting device

Outlet: female thread G 1/2 acc. to ISO 228/1

"cleaned and degreased for oxygen service"

Part No. 06478.X.0000

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

Part No. 06478.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Part No. 06478.0600.0000

Inlet: union type braze fitting for pipe outside diameter 12 mm

Available options - on request only:

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

Applications:

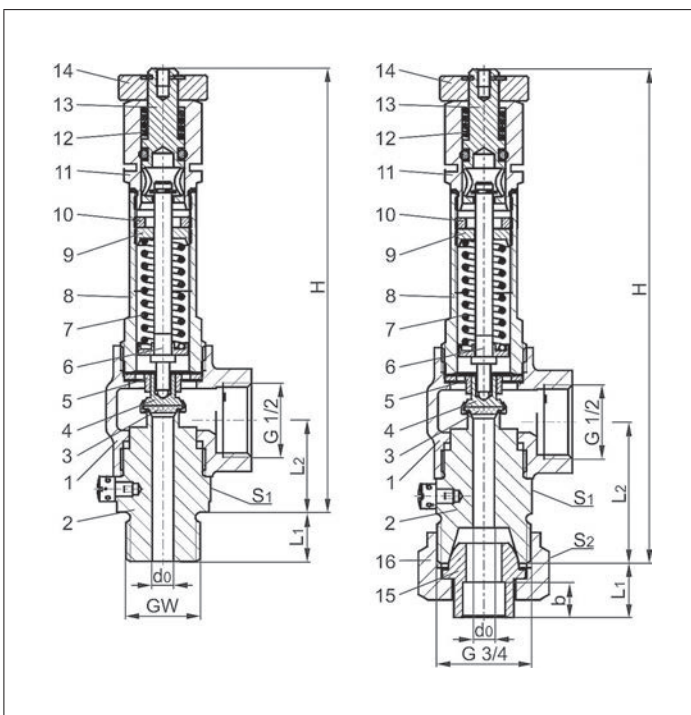
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to +150°C / +302°F (423K), suitable for horizontal installation



Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	A 276 Grade 304
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	CW452K	B 159 UNS C51900
5 Guide plate	CC493K	B 505 UNS C93200
6 Stem	CW614N	B 283 UNS C38500
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Lifting cap	CW614N	B 283 UNS C38500
12 Lifting spring	1.4571	A 276 Grade 316Ti
13 Lifting stem	CW614N	B 283 UNS C38500
14 Lifting device	CW614N	B 283 UNS C38500
15 Braze fitting	1.4301	A 276 Grade 304
16 Union nut	CW614N	B 283 UNS C38500

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 06478	Technical data				
Nominal size	GW	1/4	3/8	1/2	3/4
Orifice	d ₀	6.0	6.0	6.0	6.0
Dimension code	.X.	0200	0300	0400	0600
Set pressure range	bar	4.5-45.0	4.5-45.0	4.5-45.0	4.5-45.0
Height	H	126	126	126	140
Length	L ₁	12	13	14	15.5
Length	L ₂	26	26	26	40
Socket depth	b	-	-	-	10
Wrench size across flats	S ₁	27	27	27	27
Wrench size across flats	S ₂	-	-	-	32
Weight	ca. kg	0.40	0.42	0.44	0.47
Coefficient of discharge	α _w	0.66	0.66	0.66	0.66

Dimensions in mm.

Safety Valves

Type 06478



Discharge capacities

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

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 (g)	GW	1/4	3/8	1/2	3/4
	d ₀ (mm)	6.0	6.0	6.0	6.0
	A ₀ (mm ²)	28.3	28.3	28.3	28.3
	Medium	Air			
4.5		76	76	76	76
5.0		83	83	83	83
6.0		97	97	97	97
7.0		111	111	111	111
8.0		125	125	125	125
9.0		139	139	139	139
10.0		153	153	153	153
12.0		181	181	181	181
14.0		209	209	209	209
16.0		237	237	237	237
18.0		265	265	265	265
20.0		293	293	293	293
22.0		321	321	321	321
24.0		349	349	349	349
26.0		377	377	377	377
28.0		404	404	404	404
30.0		432	432	432	432
32.0		460	460	460	460
34.0		488	488	488	488
36.0		516	516	516	516
38.0		544	544	544	544
40.0		572	572	572	572
42.0		600	600	600	600
44.0		628	628	628	628
45.0		642	642	642	642



Safety Valves

Type 06386



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.780. S/G

Standard safety valve (0.2 - 25.0/40.0 bar)

Metal to metal seated, closed bonnet

"cleaned and degreased for oxygen service"

Part No. 06386.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. 06386.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. 06386.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. 06386.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:

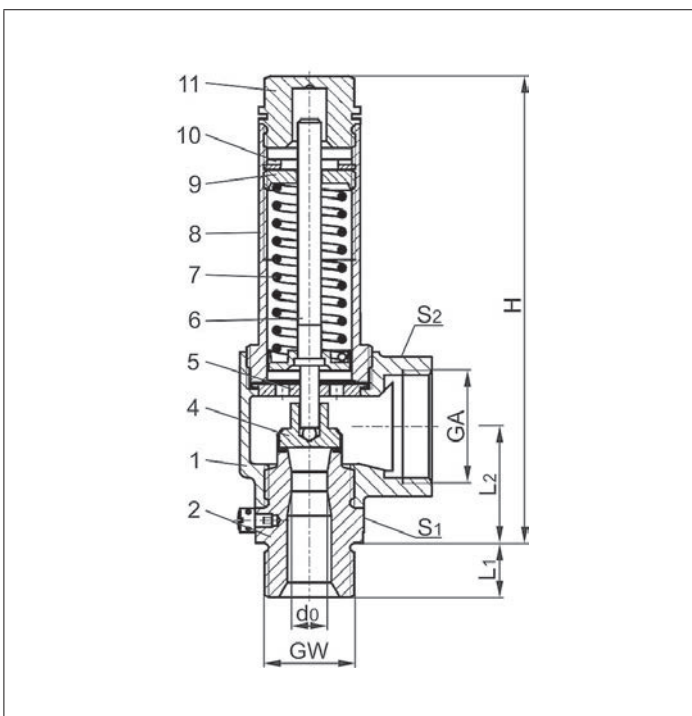
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Cap	CW614N	B 283 UNS C38500

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 06386	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	140	140	157
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	0.75	0.78	1.24
Coeff. of discharge from 3.0 bar	α _w	0.67	0.67	0.67

Dimensions in mm.

Safety Valves

Type 06386



Discharge capacities

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

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 (g)	GW	1/2 & 3/4	1
	d ₀ (mm)	10.5	14.0
	A ₀ (mm ²)	86.6	153.9
	Medium	Air	
0.2		25	49
0.5		48	87
1.0		74	135
1.5		99	175
2.0		123	217
3.0		170	303
4.0		214	381
5.0		258	459
6.0		302	537
7.0		345	614
8.0		390	694
9.0		434	772
10.0		479	851
12.0		566	1007
14.0		654	1163
16.0		742	1319
18.0		830	1475
20.0		926	1647
22.0		1015	1805
24.0		1103	1962
25.0		1148	2041
26.0		-	2120
28.0		-	2277
30.0		-	2458
32.0		-	2617
34.0		-	2776
36.0		-	2934
38.0		-	3093
40.0		-	3280

Safety Valves

Type 06416



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.780. S/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
- with installed elbow at the outlet



Applications:

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

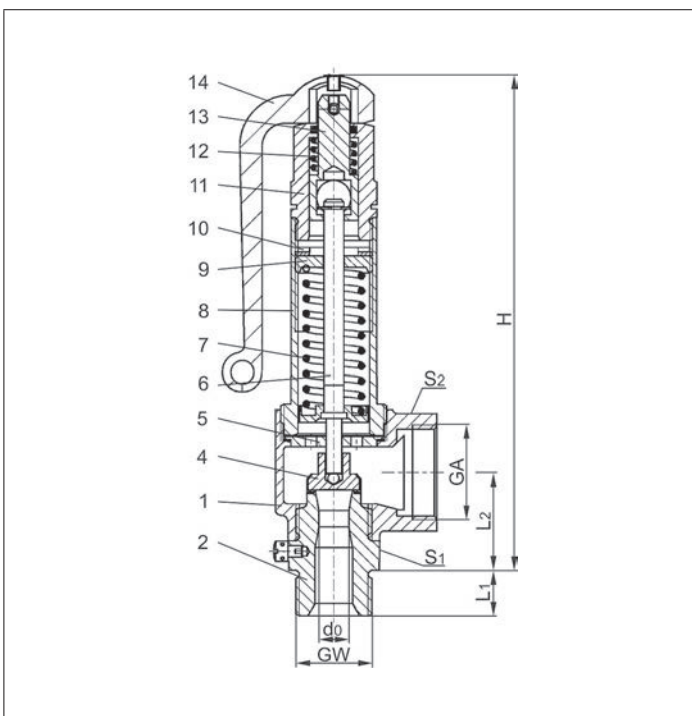
cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +185°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 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Lifting cap	CW614N	B 283 UNS C38500
12 Lifting spring	1.4571	A 276 Grade 316Ti
13 Lifting stem	CW614N	B 283 UNS C38500
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	0.96	1.00	1.50
Coeff. of discharge from 3.0 bar	α _w	0.67	0.67	0.67

Dimensions in mm.

Safety Valves

Type 06416



Discharge capacities

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

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 (g)	GW	1/2 & 3/4	1
	d ₀ (mm)	10.5	14.0
	A ₀ (mm ²)	86.6	153.9
	Medium	Air	
0.2		25	49
0.5		48	87
1.0		74	135
1.5		99	175
2.0		123	217
3.0		170	303
4.0		214	381
5.0		258	459
6.0		302	537
7.0		345	614
8.0		390	694
9.0		434	772
10.0		479	851
12.0		566	1007
14.0		654	1163
16.0		742	1319
18.0		830	1475
20.0		926	1647
22.0		1015	1805
24.0		1103	1962
25.0		1148	2041
26.0		-	2120
28.0		-	2277
30.0		-	2458
32.0		-	2617
34.0		-	2776
36.0		-	2934
38.0		-	3093
40.0		-	3280

Safety Valves

Type 06387



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.780. S/G

Standard safety valve (0.2 - 25.0 bar)

Metal to metal seated, closed bonnet

"cleaned and degreased for oxygen service"

Part No. 06387.X.0000

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

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

Available options - on request only:

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



Applications:

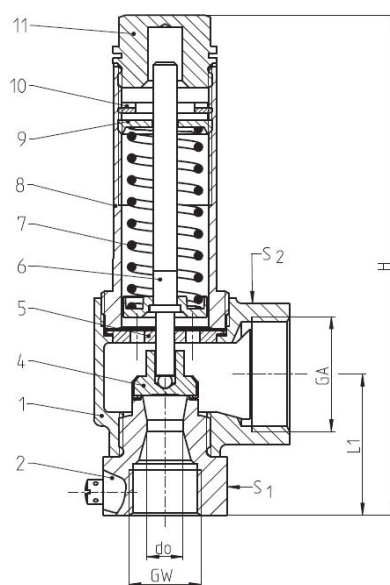
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Cap	CW614N	B 283 UNS C38500

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 06387	Technical data	
Nominal size	GW	1/2
Orifice	d ₀	10.5
Dimension code	.X.	1004
Set pressure range	bar	0.2-25.0
Outlet	GA	1
Height	H	144
Length	L ₁	41
Wrench size across flats	S ₁	36
Wrench size across flats	S ₂	41
Weight	ca. kg	0.78
Coeff. of discharge from 3.0 bar	α _w	0.67

Dimensions in mm.

Safety Valves

Type 06387



Discharge capacities

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

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 (g)	GW	1/2
	d ₀ (mm)	10.5
	A ₀ (mm ²)	86.6
	Medium	Air
0.2		25
0.5		48
1.0		74
1.5		99
2.0		124
3.0		170
4.0		214
5.0		258
6.0		302
7.0		345
8.0		390
9.0		434
10.0		479
12.0		566
14.0		654
16.0		742
18.0		830
20.0		926
22.0		1015
24.0		1103
25.0		1148
26.0		-
28.0		-
30.0		-
32.0		-
34.0		-
36.0		-
38.0		-
40.0		-



Safety Valves

Type 06417



Cryogenic Safety Valves, angle type, bronze, PN40, type tested TÜV-SV.780. S/G

Standard safety valve (0.2 - 25.0 bar)

Metal to metal seated, closed bonnet, with lifting device

"cleaned and degreased for oxygen service"

Part No. 06417.X.0000

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

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

Available options - on request only:

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



Applications:

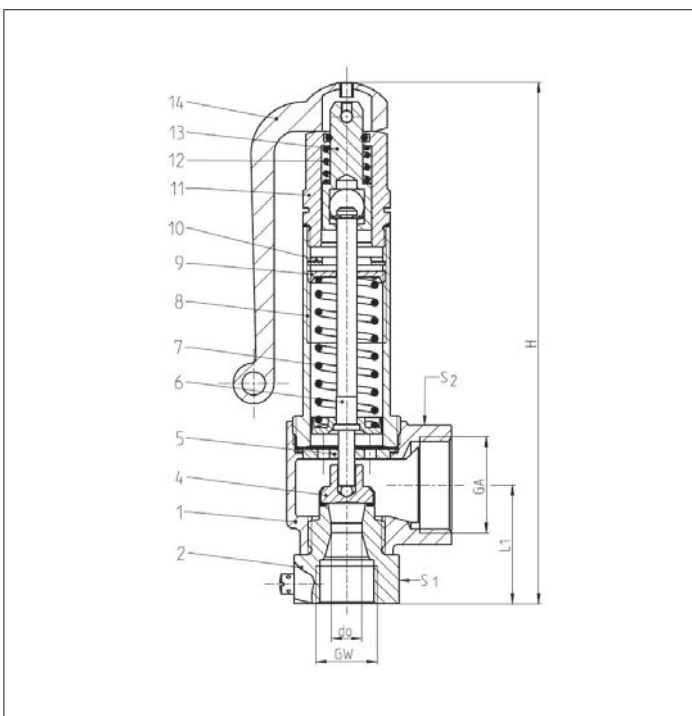
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

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 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 283 UNS C38500
10 Thread ring	CW614N	B 283 UNS C38500
11 Lifting cap	CW614N	B 283 UNS C38500
12 Lifting spring	1.4571	A 276 Grade 316Ti
13 Lifting stem	CW614N	B 283 UNS C38500
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 06417	Technical data	
Nominal size	GW	1/2
Orifice	d ₀	10.5
Dimension code	.X.	1004
Set pressure range	bar	0.2-25.0
Outlet	GA	1
Height	H	180
Length	L ₁	41
Wrench size across flats	S ₁	30
Wrench size across flats	S ₂	41
Weight	ca. kg	0.99
Coeff. of discharge from 3.0 bar	α _w	0.67

Dimensions in mm.

Safety Valves

Type 06417



Discharge capacities

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

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 (g)	GW	1/2
	d ₀ (mm)	10.5
	A ₀ (mm ²)	86.6
	Medium	Air
0.2		25
0.5		48
1.0		74
1.5		99
2.0		124
3.0		170
4.0		214
5.0		258
6.0		302
7.0		345
8.0		390
9.0		434
10.0		479
12.0		566
14.0		654
16.0		742
18.0		830
20.0		926
22.0		1015
24.0		1103
25.0		1148
26.0		-
28.0		-
30.0		-
32.0		-
34.0		-
36.0		-
38.0		-
40.0		-





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
- with additional drain hole at the outlet (1)



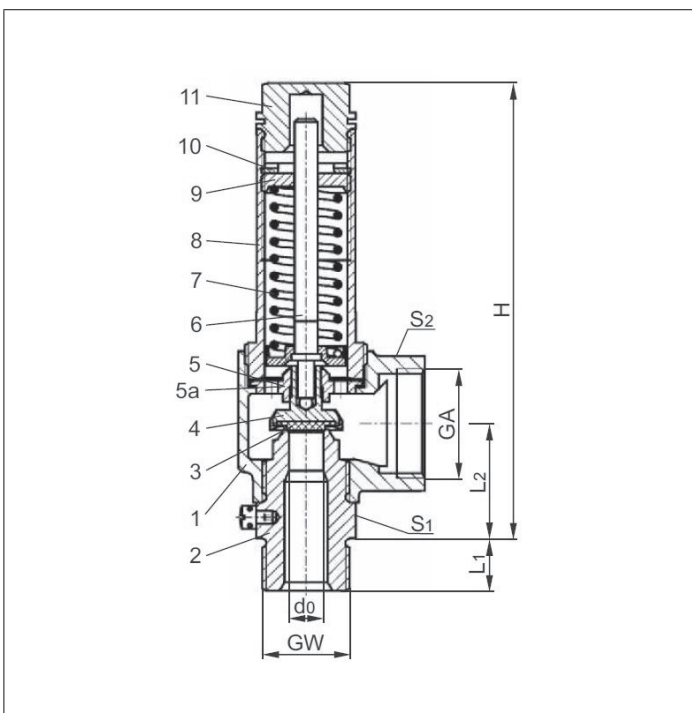
Applications:

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), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 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	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Cap	CW614N	B 455 UNS C38500

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								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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.

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
	d ₀ (mm)	7.0	10.5	15.0	23.0
	A ₀ (mm ²)	38.48	86.6	176.63	415.27
	Medium	Air in m ³ /h			
2.0		-	-	-	563
2.9		-	143	252	737
3.0		-	147	259	756
3.3		93	158	279	814
4.0		108	185	325	949
5.0		130	222	391	1142
6.0		153	260	458	1335
7.0		174	298	524	1528
8.0		196	335	590	1721
9.0		219	373	656	1914
10.0		241	410	722	2107
12.0		285	486	855	2493
14.0		330	561	987	2879
16.0		373	636	1119	3265
18.0		418	711	1252	3651
20.0		461	787	1384	4037
22.0		507	862	1517	4422
24.0		550	937	1649	4808
26.0		595	1012	1781	5194
28.0		638	1088	1914	5580
30.0		683	1163	2046	5966
32.0		727	1238	2178	6352
34.0		772	1313	2311	6738
36.0		815	1389	2443	7124
38.0		860	1464	2576	7510
40.0		904	1539	2708	7896
42.0		949	1614	2840	8282
44.0		992	1690	2973	8668
46.0		1037	1765	3105	9054
48.0		1081	1840	3238	9440
50.0		1126	1915	3370	9825

Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (inch)	0.276	0.414	0.591	0.907
	rated slope	0.862	1.517	2.769	7.55
	Medium	Air in SCFM			
50		60	102	180	524
60		70	118	208	607
70		79	134	236	690
80		89	150	265	772
90		98	167	294	855
100		107	183	322	938
110		117	199	350	1021
120		126	215	379	1103
130		136	231	407	1186
140		145	248	435	1269
150		155	264	464	1352
175		179	304	535	1558
200		202	344	606	1766
225		226	384	677	1972
250		250	425	748	2179
275		273	465	818	2386
300		297	506	889	2593
325		321	546	960	2800
350		345	586	1031	3007
375		368	626	1102	3213
400		392	667	1173	3420
425		416	707	1244	3627
450		439	748	1315	3834
475		463	788	1386	4041
500		487	828	1457	4248
525		510	869	1528	4455
550		534	909	1599	4662
575		558	949	1670	4868
625		605	1030	1812	5282
675		653	1111	1954	5696
725		700	1191	2096	6109

Safety Valves

Type 06388

HEROSE



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.0040

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.2040

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.5040

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.6040

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
- with additional drain hole at the outlet (1)



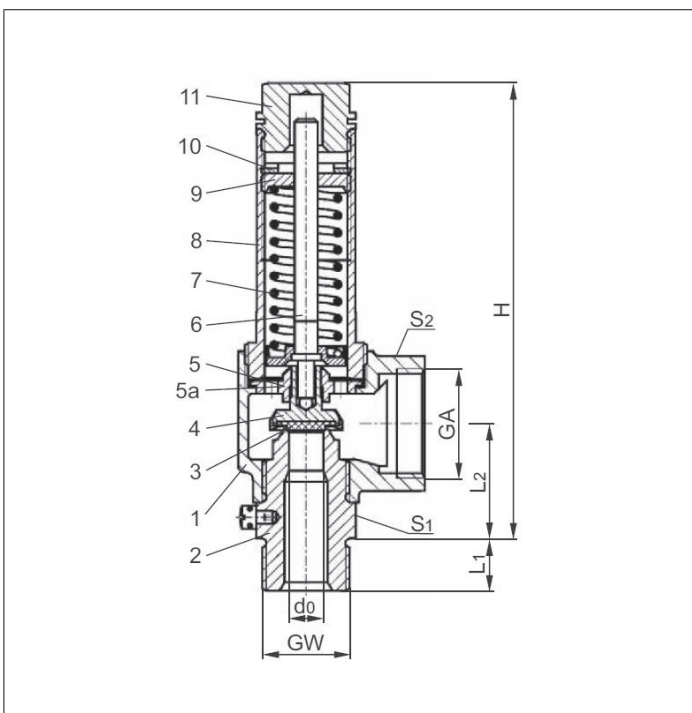
Applications:

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), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	CW614N	B 455 UNS C38500
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	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Cap	CW614N	B 455 UNS C38500

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								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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.

Safety Valves

Type 06388



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
	d ₀ (mm)	7.0	10.5	15.0	23.0
	A ₀ (mm ²)	38.48	86.6	176.63	415.27
	Medium	Air in m ³ /h			
2.0		-	-	-	563
2.9		-	143	252	737
3.0		-	147	259	756
3.3		93	158	279	814
4.0		108	185	325	949
5.0		130	222	391	1142
6.0		153	260	458	1335
7.0		174	298	524	1528
8.0		196	335	590	1721
9.0		219	373	656	1914
10.0		241	410	722	2107
12.0		285	486	855	2493
14.0		330	561	987	2879
16.0		373	636	1119	3265
18.0		418	711	1252	3651
20.0		461	787	1384	4037
22.0		507	862	1517	4422
24.0		550	937	1649	4808
26.0		595	1012	1781	5194
28.0		638	1088	1914	5580
30.0		683	1163	2046	5966
32.0		727	1238	2178	6352
34.0		772	1313	2311	6738
36.0		815	1389	2443	7124
38.0		860	1464	2576	7510
40.0		904	1539	2708	7896
42.0		949	1614	2840	8282
44.0		992	1690	2973	8668
46.0		1037	1765	3105	9054
48.0		1081	1840	3238	9440
50.0		1126	1915	3370	9825

Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (inch)	0.276	0.414	0.591	0.907
	rated slope	0.862	1.517	2.769	7.55
	Medium	Air in SCFM			
50		60	102	180	524
60		70	118	208	607
70		79	134	236	690
80		89	150	265	772
90		98	167	294	855
100		107	183	322	938
110		117	199	350	1021
120		126	215	379	1103
130		136	231	407	1186
140		145	248	435	1269
150		155	264	464	1352
175		179	304	535	1558
200		202	344	606	1766
225		226	384	677	1972
250		250	425	748	2179
275		273	465	818	2386
300		297	506	889	2593
325		321	546	960	2800
350		345	586	1031	3007
375		368	626	1102	3213
400		392	667	1173	3420
425		416	707	1244	3627
450		439	748	1315	3834
475		463	788	1386	4041
500		487	828	1457	4248
525		510	869	1528	4455
550		534	909	1599	4662
575		558	949	1670	4868
625		605	1030	1812	5282
675		653	1111	1954	5696
725		700	1191	2096	6109



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, with lifting device
"cleaned and degreased for oxygen service"

Part No. 06418.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. 06418.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. 06418.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. 06418.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



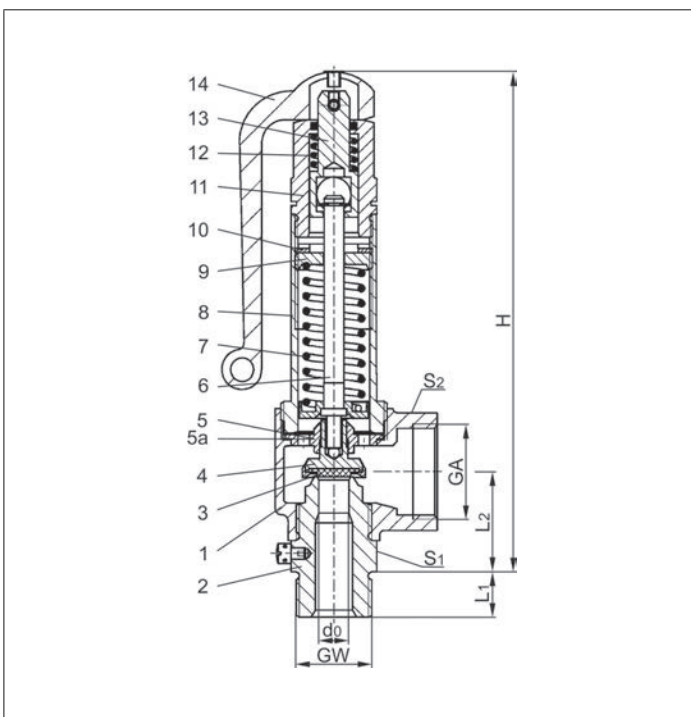
Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders 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), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 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	CW453K	SB 103 UNS C52100
6 Stem	CW453K	SB 103 UNS C52100
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Lifting cap	CW614N	B 455 UNS C38500
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	CW614N	B 455 UNS C38500
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) and ASME Code Section VIII.



Type 06418	Technical data								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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	175	175	175	175	194	270	270	268
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	1.00	1.02	0.98	1.01	1.52	3.80	3.85	4.28
Coefficient of discharge	α_w	0.82	0.82	0.58	0.58	0.5	0.62	0.62	0.62

Dimensions in mm.

Safety Valves

Type 06418



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
	d ₀ (mm)	7.0	10.5	15.0	23.0
	A ₀ (mm ²)	38.48	86.6	176.63	415.27
	Medium	Air in m ³ /h			
2.0		-	-	-	563
2.9		-	143	252	737
3.0		-	147	259	756
3.3		93	158	279	814
4.0		108	185	325	949
5.0		130	222	391	1142
6.0		153	260	458	1335
7.0		174	298	524	1528
8.0		196	335	590	1721
9.0		219	373	656	1914
10.0		241	410	722	2107
12.0		285	486	855	2493
14.0		330	561	987	2879
16.0		373	636	1119	3265
18.0		418	711	1252	3651
20.0		461	787	1384	4037
22.0		507	862	1517	4422
24.0		550	937	1649	4808
26.0		595	1012	1781	5194
28.0		638	1088	1914	5580
30.0		683	1163	2046	5966
32.0		727	1238	2178	6352
34.0		772	1313	2311	6738
36.0		815	1389	2443	7124
38.0		860	1464	2576	7510
40.0		904	1539	2708	7896
42.0		949	1614	2840	8282
44.0		992	1690	2973	8668
46.0		1037	1765	3105	9054
48.0		1081	1840	3238	9440
50.0		1126	1915	3370	9825

Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (inch)	0.276	0.414	0.591	0.907
	rated slope	0.862	1.517	2.769	7.55
	Medium	Air in SCFM			
50		60	102	180	524
60		70	118	208	607
70		79	134	236	690
80		89	150	265	772
90		98	167	294	855
100		107	183	322	938
110		117	199	350	1021
120		126	215	379	1103
130		136	231	407	1186
140		145	248	435	1269
150		155	264	464	1352
175		179	304	535	1558
200		202	344	606	1766
225		226	384	677	1972
250		250	425	748	2179
275		273	465	818	2386
300		297	506	889	2593
325		321	546	960	2800
350		345	586	1031	3007
375		368	626	1102	3213
400		392	667	1173	3420
425		416	707	1244	3627
450		439	748	1315	3834
475		463	788	1386	4041
500		487	828	1457	4248
525		510	869	1528	4455
550		534	909	1599	4662
575		558	949	1670	4868
625		605	1030	1812	5282
675		653	1111	1954	5696
725		700	1191	2096	6109



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, with lifting device
"cleaned and degreased for oxygen service"

Part No. 06418.X.0040

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

Part No. 06418.X.2040

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

Part No. 06418.X.5040

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

Part No. 06418.X.6040

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:

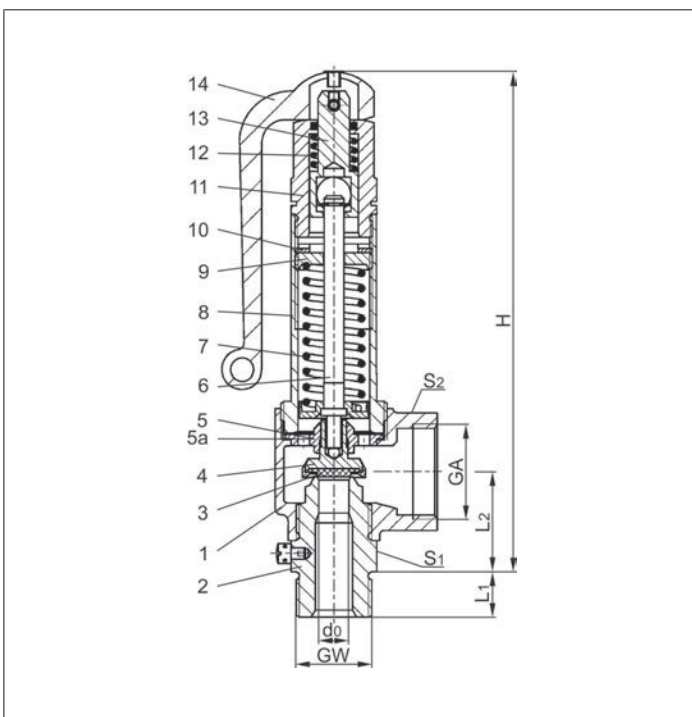
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.
Working temperature: -196°C / -321°F (77K) up to $+185^{\circ}\text{C}$ / $+365^{\circ}\text{F}$ (458K), suitable for horizontal installation



Materials	DIN EN	ASTM
1 Outlet body	CC491K	B 62 UNS C83600
2 Inlet body	CW614N	B 455 UNS C38500
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	CW453K	SB 103 UNS C52100
6 Stem	CW453K	SB 103 UNS C52100
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF 8
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Lifting cap	CW614N	B 455 UNS C38500
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	CW614N	B 455 UNS C38500
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) and ASME Code Section VIII.



Type 06418	Technical data								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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	175	175	175	175	194	270	270	268
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	1.00	1.02	0.98	1.01	1.52	3.80	3.85	4.28
Coefficient of discharge	α_w	0.82	0.82	0.58	0.58	0.5	0.62	0.62	0.62

Dimensions in mm.

Safety Valves

Type 06418



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
	d ₀ (mm)	7.0	10.5	15.0	23.0
	A ₀ (mm ²)	38.48	86.6	176.63	415.27
Air in m ³ /h					
2.0		-	-	-	563
2.9		-	143	252	737
3.0		-	147	259	756
3.3		93	158	279	814
4.0		108	185	325	949
5.0		130	222	391	1142
6.0		153	260	458	1335
7.0		174	298	524	1528
8.0		196	335	590	1721
9.0		219	373	656	1914
10.0		241	410	722	2107
12.0		285	486	855	2493
14.0		330	561	987	2879
16.0		373	636	1119	3265
18.0		418	711	1252	3651
20.0		461	787	1384	4037
22.0		507	862	1517	4422
24.0		550	937	1649	4808
26.0		595	1012	1781	5194
28.0		638	1088	1914	5580
30.0		683	1163	2046	5966
32.0		727	1238	2178	6352
34.0		772	1313	2311	6738
36.0		815	1389	2443	7124
38.0		860	1464	2576	7510
40.0		904	1539	2708	7896
42.0		949	1614	2840	8282
44.0		992	1690	2973	8668
46.0		1037	1765	3105	9054
48.0		1081	1840	3238	9440
50.0		1126	1915	3370	9825

Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (inch)	0.276	0.414	0.591	0.907
	rated slope Medium	0.862	1.517	2.769	7.55
Air in SCFM					
50		60	102	180	524
60		70	118	208	607
70		79	134	236	690
80		89	150	265	772
90		98	167	294	855
100		107	183	322	938
110		117	199	350	1021
120		126	215	379	1103
130		136	231	407	1186
140		145	248	435	1269
150		155	264	464	1352
175		179	304	535	1558
200		202	344	606	1766
225		226	384	677	1972
250		250	425	748	2179
275		273	465	818	2386
300		297	506	889	2593
325		321	546	960	2800
350		345	586	1031	3007
375		368	626	1102	3213
400		392	667	1173	3420
425		416	707	1244	3627
450		439	748	1315	3834
475		463	788	1386	4041
500		487	828	1457	4248
525		510	869	1528	4455
550		534	909	1599	4662
575		558	949	1670	4868
625		605	1030	1812	5282
675		653	1111	1954	5696
725		700	1191	2096	6109

Safety Valves

Type 06381



Cryogenic Safety Valves, angle type, stainless steel, PN40, type tested TÜV-SV.780. S/G

Standard safety valve

Metal to metal seated, closed bonnet

"cleaned and degreased for oxygen service"

Part No. 06381.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. 06381.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. 06381.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. 06381.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:

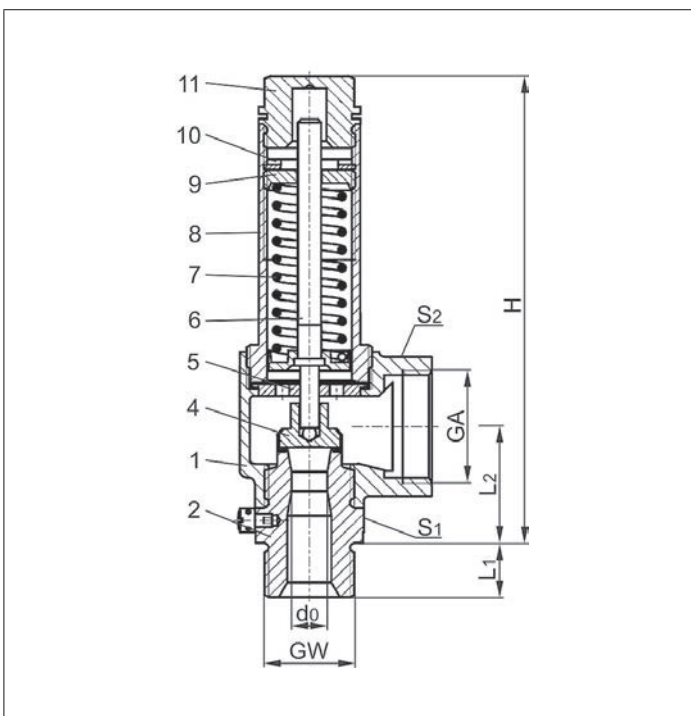
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K)

Materials	DIN EN	ASTM
1 Outlet body	1.4308	A 351 CF8
2 Inlet body	1.4301	A 276 Grade 304
4 Disc	1.4541	A 276 Grade 321
5 Guide plate	1.4301	A 276 Grade 304
6 Stem	1.4301	A 276 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF8
9 Spring clamp	1.4301	A 276 Grade 304
10 Thread ring	1.4301	A 276 Grade 304
11 Cap	1.4301	A 276 Grade 304

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 06381	Technical data		
Nominal size	GW	1/2	3/4
Orifice	d ₀	10.5	10.5
Dimension code	.X.	1004	1006
Set pressure range	bar	0.2-25.0	0.2-25.0
Outlet	GA	1	1
Height	H	140	140
Length	L ₁	14	16
Length	L ₂	36	36
Wrench size across flats	S ₁	30	30
Wrench size across flats	S ₂	41	41
Weight	ca. kg	0.75	0.78
Coeff. of discharge from 3.0 bar	α _w	0.67	0.67

Dimensions in mm.

Safety Valves

Type 06381



Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for a fully opened valve.

d_0 - orifice

A_0 - flow area

Set pressure in bar (g)	GW	1/2	3/4
	d_0 (mm)	10.5	10.5
	A_0 (mm ²)	86.6	86.6
	Medium	Air	
0.2		25	25
0.5		48	48
1.0		74	74
1.5		99	99
2.0		123	123
3.0		170	170
4.0		214	214
5.0		258	258
6.0		302	302
7.0		345	345
8.0		390	390
9.0		434	434
10.0		479	479
12.0		566	566
14.0		654	654
16.0		742	742
18.0		830	830
20.0		926	926
22.0		1015	1015
24.0		1103	1103
25.0		1148	1148
26.0		-	-
28.0		-	-
30.0		-	-
32.0		-	-
34.0		-	-
36.0		-	-
38.0		-	-
40.0		-	-



Safety Valves

Type 06383

HEROSE



Cryogenic Safety Valves, angle type, stainless steel, 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. 06383.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. 06383.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. 06383.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. 06383.X.6000

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



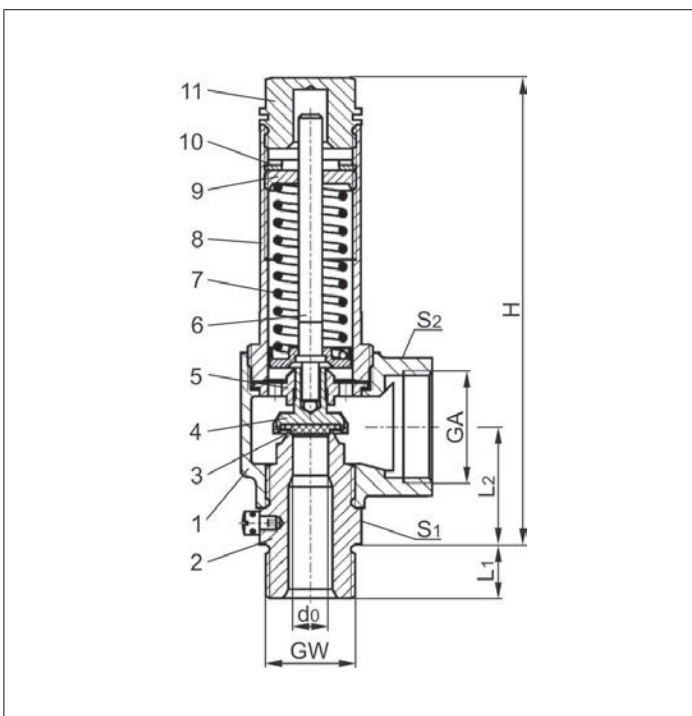
Applications:

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), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	1.4308	A 351 CF8
2 Inlet body	1.4301	A 479 Grade 304
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	1.4301	A 479 Grade 304
5 Guide plate	1.4301	A 479 Grade 304
6 Stem	1.4301	A 479 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF8
9 Spring clamp	1.4301	A 479 Grade 304
10 Thread ring	1.4301	A 479 Grade 304
11 Cap	1.4301	A 479 Grade 304

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 06383	Technical data								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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.



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		-	-	-	563	50		60	102	180	524
2.9		-	143	252	737	60		70	118	208	607
3.0		-	147	259	756	70		79	134	236	690
3.3		93	158	279	814	80		89	150	265	772
4.0		108	185	325	949	90		98	167	294	855
5.0		130	222	391	1142	100		107	183	322	938
6.0		153	260	458	1335	110		117	199	350	1021
7.0		174	298	524	1528	120		126	215	379	1103
8.0		196	335	590	1721	130		136	231	407	1186
9.0		219	373	656	1914	140		145	248	435	1269
10.0		241	410	722	2107	150		155	264	464	1352
12.0		285	486	855	2493	175		179	304	535	1558
14.0		330	561	987	2879	200		202	344	606	1766
16.0		373	636	1119	3265	225		226	384	677	1972
18.0		418	711	1252	3651	250		250	425	748	2179
20.0		461	787	1384	4037	275		273	465	818	2386
22.0		507	862	1517	4422	300		297	506	889	2593
24.0		550	937	1649	4808	325		321	546	960	2800
26.0		595	1012	1781	5194	350		345	586	1031	3007
28.0		638	1088	1914	5580	375		368	626	1102	3213
30.0		683	1163	2046	5966	400		392	667	1173	3420
32.0		727	1238	2178	6352	425		416	707	1244	3627
34.0		772	1313	2311	6738	450		439	748	1315	3834
36.0		815	1389	2443	7124	475		463	788	1386	4041
38.0		860	1464	2576	7510	500		487	828	1457	4248
40.0		904	1539	2708	7896	525		510	869	1528	4455
42.0		949	1614	2840	8282	550		534	909	1599	4662
44.0		992	1690	2973	8668	575		558	949	1670	4868
46.0		1037	1765	3105	9054	625		605	1030	1812	5282
48.0		1081	1840	3238	9440	675		653	1111	1954	5696
50.0		1126	1915	3370	9825	725		700	1191	2096	6109



Cryogenic Safety Valves, angle type, stainless steel, 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, with lifting device
"cleaned and degreased for oxygen service"

Part No. 06413.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. 06413.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. 06413.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. 06413.X.6000

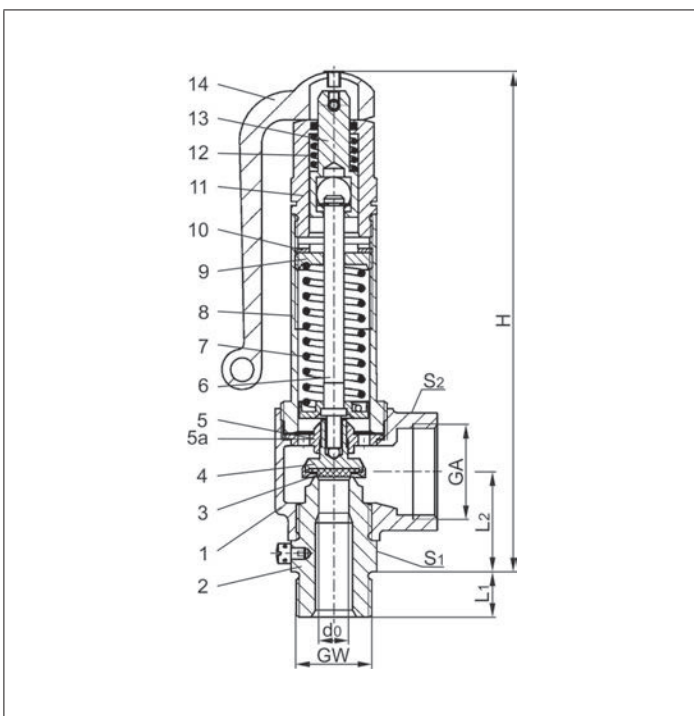
Inlet: male thread NPT acc. to ANSI B 1.20.1, Outlet: female thread NPT acc. to ANSI B 1.20.1



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), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	1.4308	A 351 CF8
2 Inlet body	1.4301	A 479 Grade 304
3 Valve seal	PTFE / Carbon filled (25%)	
4 Disc	1.4301	A 479 Grade 304
5 Guide plate	1.4301	A 479 Grade 304
5a Guide plate from GW 1	1.4301	A 479 Grade 304
6 Stem	1.4571	A 479 Grade 316Ti
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	A 351 CF8
9 Spring clamp	1.4301	A 479 Grade 304
10 Thread ring	1.4301	A 479 Grade 304
11 Lifting cap	1.4301	A 479 Grade 304
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	1.4301	A 479 Grade 304
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) and ASME Code Section VIII.



Type 06413	Technical data								
Nominal size	GW	1/2	3/4	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	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	175	175	175	175	194	270	270	268
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	1.00	1.02	0.98	1.01	1.52	3.80	3.85	4.28
Coefficient of discharge	α_w	0.82	0.82	0.58	0.58	0.5	0.62	0.62	0.62

Dimensions in mm.

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
	d ₀ (mm)	7.0	10.5	15.0	23.0
	A ₀ (mm ²)	38.48	86.6	176.63	415.27
	Medium	Air in m ³ /h			
2.0		-	-	-	563
2.9		-	143	252	737
3.0		-	147	259	756
3.3		93	158	279	814
4.0		108	185	325	949
5.0		130	222	391	1142
6.0		153	260	458	1335
7.0		174	298	524	1528
8.0		196	335	590	1721
9.0		219	373	656	1914
10.0		241	410	722	2107
12.0		285	486	855	2493
14.0		330	561	987	2879
16.0		373	636	1119	3265
18.0		418	711	1252	3651
20.0		461	787	1384	4037
22.0		507	862	1517	4422
24.0		550	937	1649	4808
26.0		595	1012	1781	5194
28.0		638	1088	1914	5580
30.0		683	1163	2046	5966
32.0		727	1238	2178	6352
34.0		772	1313	2311	6738
36.0		815	1389	2443	7124
38.0		860	1464	2576	7510
40.0		904	1539	2708	7896
42.0		949	1614	2840	8282
44.0		992	1690	2973	8668
46.0		1037	1765	3105	9054
48.0		1081	1840	3238	9440
50.0		1126	1915	3370	9825

Set pressure in psig	GW	1/2 & 3/4	1/2 & 3/4	1	1-1/4, 1-1/2 & 2
	d ₀ (inch)	0.276	0.414	0.591	0.907
	rated slope	0.862	1.517	2.769	7.55
	Medium	Air in SCFM			
50		60	102	180	524
60		70	118	208	607
70		79	134	236	690
80		89	150	265	772
90		98	167	294	855
100		107	183	322	938
110		117	199	350	1021
120		126	215	379	1103
130		136	231	407	1186
140		145	248	435	1269
150		155	264	464	1352
175		179	304	535	1558
200		202	344	606	1766
225		226	384	677	1972
250		250	425	748	2179
275		273	465	818	2386
300		297	506	889	2593
325		321	546	960	2800
350		345	586	1031	3007
375		368	626	1102	3213
400		392	667	1173	3420
425		416	707	1244	3627
450		439	748	1315	3834
475		463	788	1386	4041
500		487	828	1457	4248
525		510	869	1528	4455
550		534	909	1599	4662
575		558	949	1670	4868
625		605	1030	1812	5282
675		653	1111	1954	5696
725		700	1191	2096	6109

Safety Valves

Type 06420

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN40

d₀=7.0 & 10.5mm up to PN50

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal, (D₀7 = Metal to metal seated), 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.

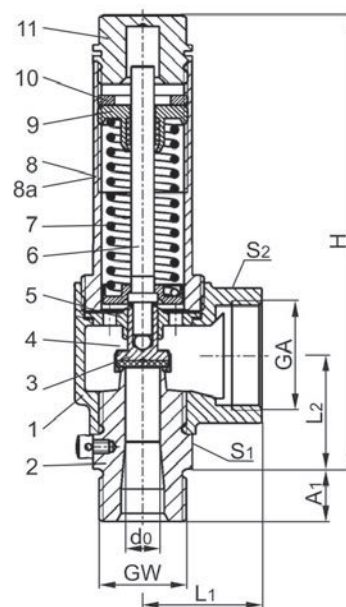
Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K), with PCTFE-seal

up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	SB62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 304
3 Valve seal	PCTFE	
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	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	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

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 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.

Discharge capacities

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

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 (g)	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
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
	Medium	Air				
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06425

HEROSE



Cryogenic Safety Valves, angle type, bronze, PN40

d₀=7.0 & 10.5mm up to PN50

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet, with lifting device

"cleaned and degreased for oxygen service"

Part No. 06425.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. 06425.X.2000

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

Part No. 06425.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. 06425.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.

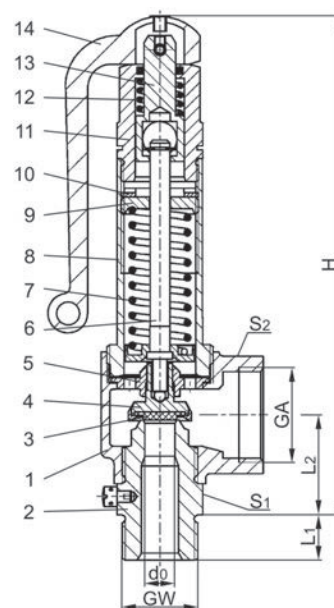
Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K), with PCTFE-seal

up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	SB 62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 304
3 Valve seal	PCTFE	
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	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	1.4301	A 276 Grade 304
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Lifting cap	CW614N	B 455 UNS C38500
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	CW614N	B 455 UNS C38500
14 Lever	1.4408	SA351 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 06425	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	176	176	176	176	196	196	239	240	239
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	1.00	1.02	0.98	1.01	1.50	1.56	2.51	2.63	2.52
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.

Discharge capacities

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

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 (g)	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
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
	Medium	Air				
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06421



Cryogenic Safety Valves, angle type, bronze, PN40

d₀=7,0 & 10,5mm up to PN50,

type tested TÜV-SV.1111. S/G

Standard safety valve,
with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet
"cleaned and degreased for oxygen service"

Part No. 06421.X.0000

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

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



Applications:

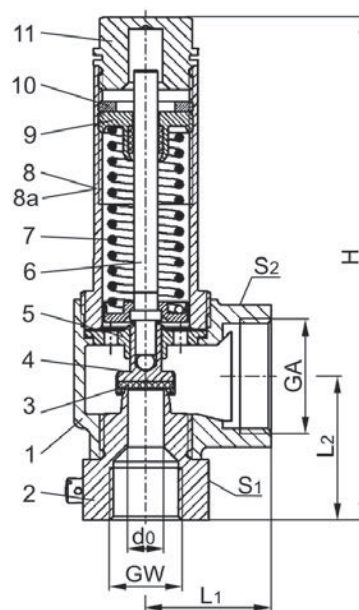
Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K), with PCTFE-seal up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	SB 62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 304
3 Valas seal	PCTFE	
4 Disc	CC493K	B 505 UNS C93200
5 Guide plate	CW493K	B 505 UNS C93200
6 Stem	CW453K	B 103 UNS C52100
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	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

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 06421	Technical data					
Nominal size	GW	1/2	1/2	3/4	1	1-1/4
Orifice	d ₀	7.0	10.5	14.0	18.0	23.0
Dimension Code	.X.	0704	1004	1406	1810	2312
Set pressure range	bar	0.4-50.0	0.4-50.0	0.4-40.0	0.4-40.0	0.4-10.0
Outlet	GA	1	1	1-1/4	1-1/2	1-1/2
Height	H	145	145	164	195	200
Length	L ₁	36	36	50	48	48
Length	L ₂	41.5	41.5	49	59.5	65
Wrench size across flats	S ₁	36	36	41	50	50
Wrench size across flats	S ₂	41	41	50	58	58
Weight	ca. kg	0.80	0.795	1.25	1.87	1.79
Coeff. of discharge from 3.0 bar	α _w	0.78	0.69	0.66	0.66	0.54

Dimensions in mm.

Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	3/4	1	1-1/4
	d ₀ (mm)	7.0	10.5	14.0	18.0	23.0
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
	Medium	Air				
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06426



Cryogenic Safety Valves, angle type, bronze, PN40

d₀=7,0 & 10,5mm up to PN50,

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet, with lifting device

"cleaned and degreased for oxygen service"

Part No. 06426.X.0000

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

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



Applications:

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

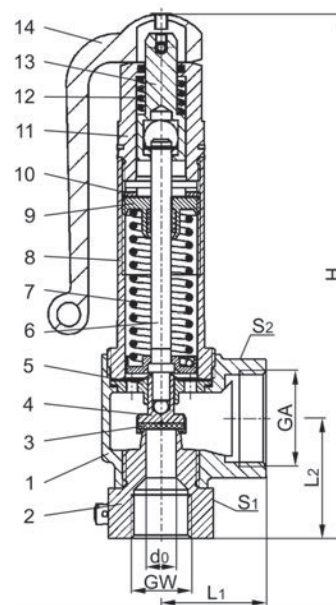
cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K), with PCTFE-seal up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	CC491K	SB 62 UNS C83600
2 Inlet body	1.4301	SA 479 Grade 304
3 Valve seal	PCTFE	
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	1.4308	SA351 CF8
9 Spring clamp	CW614N	B 455 UNS C38500
10 Thread ring	CW614N	B 455 UNS C38500
11 Lifting cap	CW614N	B 455 UNS C38500
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	CW614N	B 455 UNS C38500
14 Lever	1.4408	SA351 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 06426	Technical Data					
Nominal size	GW	1/2	1/2	3/4	1	1-1/4
Orifice	d ₀	7.0	10.5	14.0	18.0	23.0
Dimension code	.X.	0704	1004	1406	1810	2312
Set pressure range	bar	0.4-50.0	0.4-50.0	0.4-40.0	0.4-40.0	0.4-10.0
Outlet	GA	1	1	1-1/4	1-1/2	1-1/2
Height	H	181	181	201	247	252
Length	L ₁	36	36	50	48	48
Length	L ₂	41.5	41.5	49	59.5	65
Wrench size across flats	S ₁	36	36	41	50	50
Wrench size across flats	S ₂	41	41	50	58	58
Weight	ca. kg	1.02	1.01	1.50	2.45	2.40
Coeff. of discharge from 3.0 bar	α _w	0.78	0.69	0.66	0.66	0.54

Dimensions in mm.

Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	3/4	1	1-1/4
	d ₀ (mm)	7.0	10.5	14.0	18.0	23.0
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
Medium						
Air						
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06440

HEROSE



Cryogenic Safety Valves, angle type, stainless steel, PN40

d₀=7.0 & 10.5mm up to PN50

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal, (D₀7 = Metal to metal seated), closed bonnet

"cleaned and degreased for oxygen service"

Part No. 06440.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. 06440.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. 06440.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. 06440.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

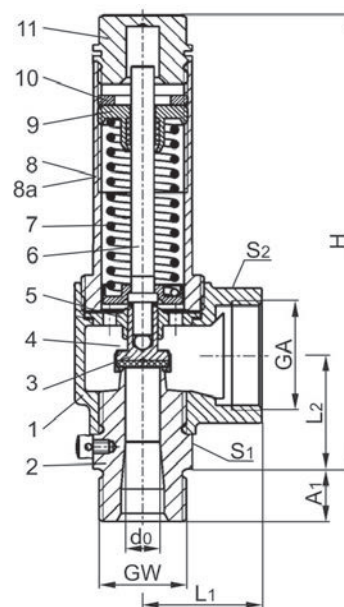
cylinders and pressure vessels. Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K), with PCTFE-seal up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	1.4308	SA351 CF8
2 Inlet body	1.4301	SA479 Grade 304
3 Valve seal	PCTFE	
4 Disc (D ₀ 7 only)	1.4571	A479 Grade 316Ti
4 Disc	1.4541	A276 Grade 321
5 Guide plate	1.4301	SA479 Grade 304
6 Stem	1.4301	SA479 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	1.4301	A 276 Grade 304
9 Spring clamp	1.4301	SA479 Grade 304
10 Thread ring	1.4301	SA479 Grade 304
11 Cap	1.4301	SA479 Grade 304

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 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.

Safety Valves

Type 06440



Discharge capacities

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

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 (g)	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
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
	Medium	Air				
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06445

HEROSE



Cryogenic Safety Valves, angle type, stainless steel, PN40

d₀=7.0 & 10.5mm up to PN50

type tested TÜV-SV.1111. S/G

Standard safety valve,

with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet, with lifting device

"cleaned and degreased for oxygen service"

Part No. 06445.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. 06445.X.2000

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

Part No. 06445.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. 06445.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°C / +365°F (458K), with PCTFE-seal

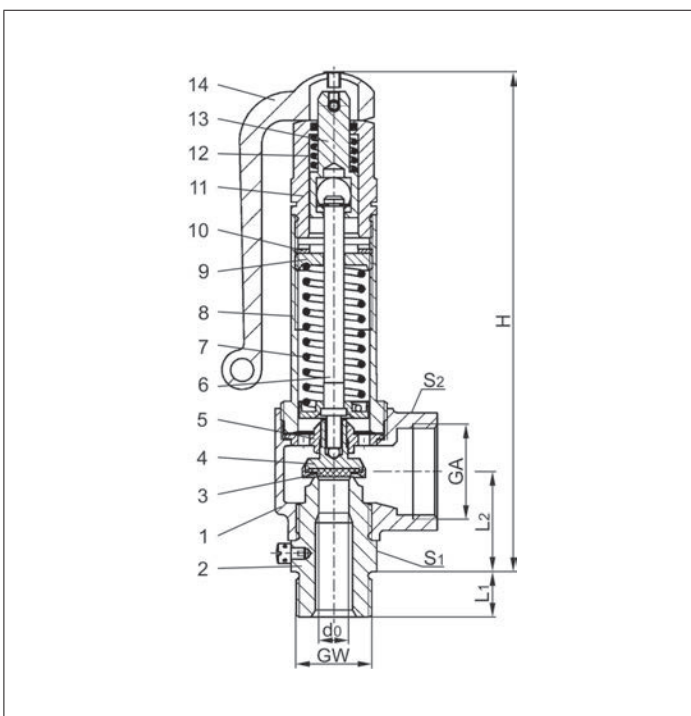
up to +150°C / 302°F (423K), suitable for horizontal installation



Materials	DIN EN	ASTM
1 Outlet body	1.4308	SA351 CF8
2 Inlet body	1.4301	A 479 Grade 304
3 Valve seal	PCTFE	
4 Disc (D ₀ 7 only)	1.4571	A 479 Grade 316Ti
4 Disc	1.4541	A 276 Grade 321
5 Guide plate	1.4301	A 479 Grade 304
6 Stem	1.4301	A 479 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	1.4301	A 276 Grade 304
9 Spring clamp	1.4301	A 479 Grade 304
10 Thread ring	1.4301	A 479 Grade 304
11 Lifting cap	1.4301	A 479 Grade 304
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	1.4301	A 479 Grade 304
14 Lever	1.4408	SA351 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 06425	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	176	176	176	176	196	196	239	240	239
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	1.00	1.02	0.98	1.01	1.50	1.56	2.51	2.63	2.52
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.

Discharge capacities

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

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 (g)	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
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
Medium						
Air						
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	679	1130	1510
9.0		224	447	684	1257	1680
10.0		247	493	760	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06441



Cryogenic Safety Valves, angle type, stainless steel, PN40
d₀=7,0 & 10,5mm up to PN50,
type tested TÜV-SV.1111. S/G

Standard safety valve,
 with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet
 "cleaned and degreased for oxygen service"

Part No. 06441.X.0000

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

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



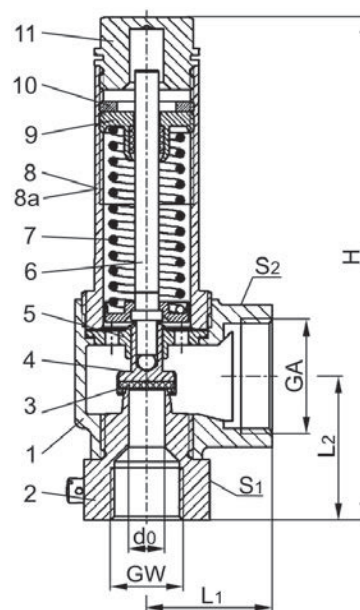
Applications:

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°C / +365°F (458K), with PCTFE-seal
 up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	1.4308	SA351 CF8
2 Inlet body	1.4301	A 479 Grade 304
3 Valas seal	PCTFE	
4 Disc (D ₀ 7 only)	1.4571	A 479 Grade 316Ti
4 Disc	1.4541	A 276 Grade 321
5 Guide plate	1.4301	A 479 Grade 304
6 Stem	1.4301	A 479 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	SA351 CF8
8a Bonnet from GW 1-1/4	1.4301	A 276 Grade 304
9 Spring clamp	1.4301	A 479 Grade 304
10 Thread ring	1.4301	A 479 Grade 304
11 Cap	1.4301	A 479 Grade 304

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 06421	Technical data					
Nominal size	GW	1/2	1/2	3/4	1	1-1/4
Orifice	d ₀	7.0	10.5	14.0	18.0	23.0
Dimension Code	.X.	0704	1004	1406	1810	2312
Set pressure range	bar	0.4-50.0	0.4-50.0	0.4-40.0	0.4-40.0	0.4-10.0
Outlet	GA	1	1	1-1/4	1-1/2	1-1/2
Height	H	145	145	164	195	200
Length	L ₁	36	36	50	48	48
Length	L ₂	41.5	41.5	49	59.5	65
Wrench size across flats	S ₁	36	36	41	50	50
Wrench size across flats	S ₂	41	41	50	58	58
Weight	ca. kg	0.80	0.795	1.25	1.87	1.79
Coeff. of discharge from 3.0 bar	α _w	0.78	0.69	0.66	0.66	0.54

Dimensions in mm.

Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	3/4	1	1-1/4
	d ₀ (mm)	7.0	10.5	14.0	18.0	23.0
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
Air						
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06446



Cryogenic Safety Valves, angle type, stainless steel, PN40
d₀=7,0 & 10,5mm up to PN50,
type tested TÜV-SV.1111. S/G

Standard safety valve,
 with PCTFE valve seal (D₀7 = Metal to metal seated), closed bonnet, with lifting device
 "cleaned and degreased for oxygen service"

Part No. 06446.X.0000

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

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



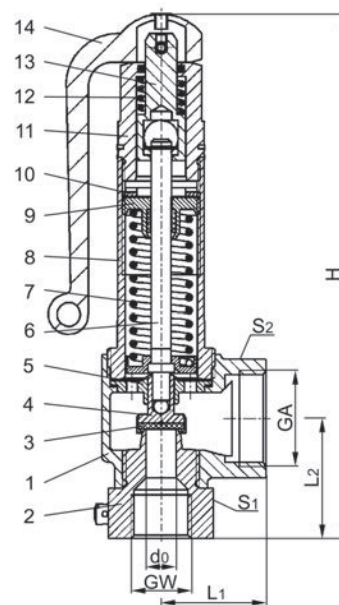
Applications:

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°C / +365°F (458K), with PCTFE-seal
 up to +150°C / 302°F (423K), suitable for horizontal installation

Materials	DIN EN	ASTM
1 Outlet body	1.4308	SA351 CF8
2 Inlet body	1.4301	A 479 Grade 304
3 Valve seal	PCTFE	
4 Disc (D ₀ 7 only)	1.4571	A 479 Grade 316Ti
4 Disc	1.4541	A 276 Grade 321
5 Guide plate	1.4301	A 479 Grade 304
6 Stem	1.4301	A 479 Grade 304
7 Spring	1.4571	A 313 Grade 316Ti
8 Bonnet	1.4308	SA351 CF8
9 Spring clamp	1.4301	A 479 Grade 304
10 Thread ring	1.4301	A 479 Grade 304
11 Lifting cap	1.4301	A 479 Grade 304
12 Lifting spring	1.4571	A 313 Grade 316Ti
13 Lifting stem	1.4301	A 479 Grade 304
14 Lever	1.4408	SA351 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 06426	Technical Data					
Nominal size	GW	1/2	1/2	3/4	1	1-1/4
Orifice	d ₀	7.0	10.5	14.0	18.0	23.0
Dimension code	.X.	0704	1004	1406	1810	2312
Set pressure range	bar	0.4-50.0	0.4-50.0	0.4-40.0	0.4-40.0	0.4-10.0
Outlet	GA	1	1	1-1/4	1-1/2	1-1/2
Height	H	181	181	201	247	252
Length	L ₁	36	36	50	48	48
Length	L ₂	41.5	41.5	49	59.5	65
Wrench size across flats	S ₁	36	36	41	50	50
Wrench size across flats	S ₂	41	41	50	58	58
Weight	ca. kg	1.02	1.01	1.50	2.45	2.40
Coeff. of discharge from 3.0 bar	α _w	0.78	0.69	0.66	0.66	0.54

Dimensions in mm.

Discharge capacities

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

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	3/4	1	1-1/4
	d ₀ (mm)	7.0	10.5	14.0	18.0	23.0
	A ₀ (mm ²)	38.48	86.6	153.9	254.5	415.3
Medium						
Air						
0.4		24	43	77	122	157
0.5		27	49	87	141	178
1.0		40	77	130	216	287
1.5		54	101	178	290	375
2.0		65	126	219	362	472
3.0		88	175	299	494	660
4.0		110	220	375	620	829
5.0		133	266	452	748	999
6.0		156	311	529	874	1168
7.0		178	356	605	1001	1337
8.0		202	402	684	1130	1510
9.0		224	447	760	1257	1680
10.0		247	493	839	1387	1853
12.0		293	583	992	1641	-
14.0		338	674	1146	1895	-
16.0		384	764	1300	2149	-
18.0		429	855	1453	2403	-
20.0		479	954	1623	2682	-
22.0		525	1045	1778	2939	-
24.0		571	1136	1933	3195	-
25.0		594	1182	2010	3324	-
26.0		617	1228	2088	3452	-
28.0		662	1319	2243	3708	-
30.0		715	1423	2421	4002	-
32.0		761	1516	2577	4261	-
34.0		807	1608	2734	4520	-
36.0		854	1700	2891	4779	-
38.0		900	1792	3047	5038	-
40.0		954	1900	3231	5342	-
42.0		1001	1993	-	-	-
44.0		1048	2086	-	-	-
46.0		1094	2179	-	-	-
48.0		1141	2272	-	-	-
50.0		1198	2385	-	-	-

Safety Valves

Type 06801 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. 06801.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. 06801.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. 06801.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. 06801.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 non-inflammable and inflammable vapours, gases and fluids.

Working temperature: -270°C / -454°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



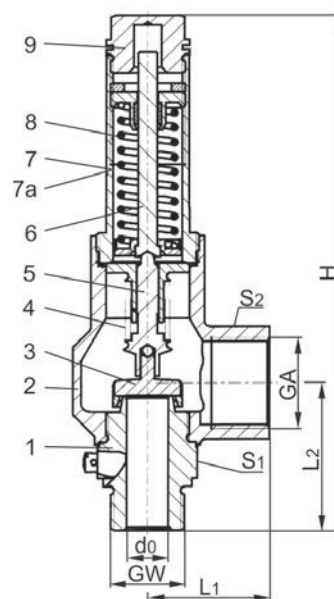
Materials	DIN EN	ASTM
1 Inlet body	1.4571	A 276 Grade 316Ti
2 Outlet body	1.4308	A 351 CF8
3 Disc	1.4541	A 276 Grade 321
4 Bellow	1.4571	A 276 Grade 316Ti
5 Bellow stem	1.4571	A 276 Grade 316Ti
6 Stem	CW453K	B 103 UNS C52100
7 Bonnet	1.4308	A 351 CF 8
7a Bonnet from GW 1	1.4301	A 276 Grade 304
8 Spring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

Important:

For nominal size GW 3/4, $d_0 = 15.0$ mm the back pressure reduces the blow off performance of the safety valve (see diagram 06801-3/4).

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 06801	Technical data				
Nominal size	GW	1/2	3/4	1	1
Orifice	d_0	12.5	15	20	23
Dimension code	.X.	1204	1506	2010	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	186	190	205	255
Length	L_1	44	44	51	56
Length	L_2	52	54	63	65
Wrench size across flats	S_1	36	36	41	50
Wrench size across flats	S_2	41	41	50	55
Weight	ca. kg	1.03	1.05	1.70	2.45
Coeff. of discharge vapours, gases	α_w	0.60	0.50	0.60	0.66
Coeff. of discharge fluids	α_w	-	0.39	0.45	0.48

Dimensions in mm.

Safety Valves

Type 06801 with bellow seal



Discharge capacities

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

Medium:

Air in m³/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.

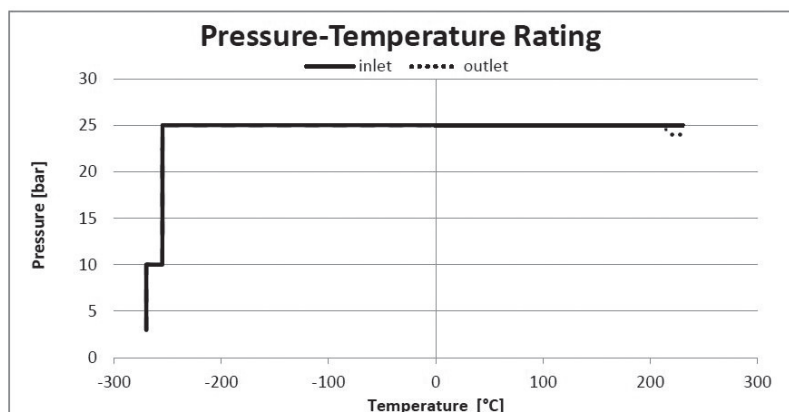
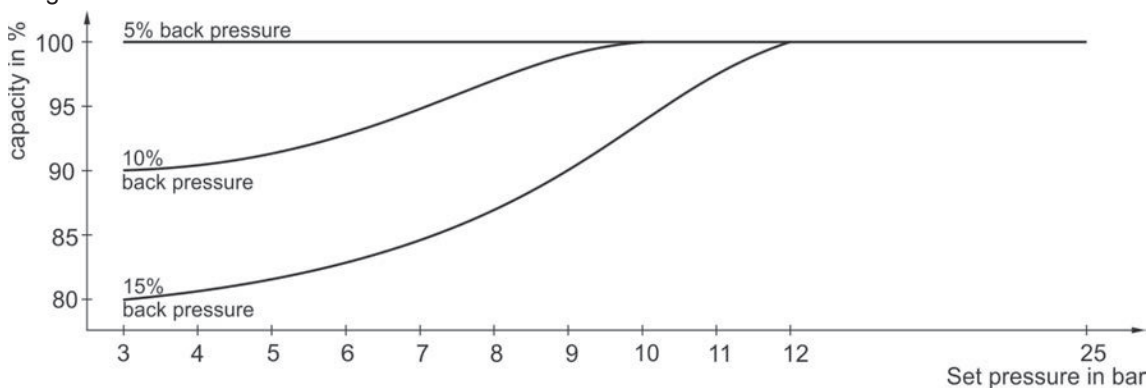
For nominal size GW 3/4 the back pressure reduces the blow off performance of the safety valve (see diagram 06801-3/4).

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	1	1	1/2	1/2	1	1	1/2	1	1
	d ₀ (mm)	12.5	15.0	20.0	23.0	12.5	15.0	20.0	23.0	15.0	20.0	23.0
	A ₀ (mm ²)	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		216	260	555	807	169	203	433	630	6374	13075	18445
4.0		272	326	696	1013	211	253	540	786	7360	15098	21298
5.0		328	393	839	1221	252	303	647	942	8229	16880	23812
6.0		383	460	981	1428	294	353	753	1096	9014	18491	26085
7.0		438	526	1123	1634	335	402	859	1249	9736	19973	28175
8.0		495	594	1269	1846	376	452	964	1403	10409	21352	30120
9.0		551	661	1411	2053	417	501	1069	1555	11040	22647	31947
10.0		608	729	1556	2265	458	550	1174	1708	11637	23872	33676
12.0		719	863	1842	2679	540	648	1384	2013	12748	26150	36890
14.0		830	997	2127	3094	622	746	1592	2317	13770	28246	39846
16.0		942	1130	2412	3509	703	844	1802	2621	14720	30196	42597
18.0		1053	1264	2697	3924	785	942	2010	2924	15613	32028	45181
20.0		1176	1411	3011	4380	866	1040	2219	3228	16458	33760	47625
22.0		1288	1546	3298	4799	948	1137	2427	3531	17261	35408	49949
25.0		1457	1748	3730	5427	1070	1284	2739	3985	18401	37745	53246

Diagram 06801-3/4



Safety Valves

Type 06806 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, with lifting device
"cleaned and degreased for oxygen service"

Part No. 06806.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. 06806.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. 06806.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. 06806.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 non-inflammable and inflammable vapours, gases and fluids.

Working temperature: -270°C / -454°F (3K) up to +225°C / +437°F (498K)

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



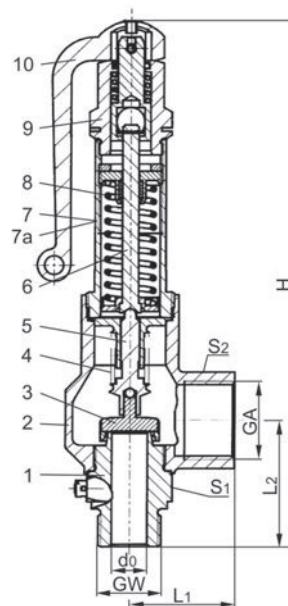
Materials	DIN EN	ASTM
1 Inlet body	1.4571	A 276 Grade 316Ti
2 Outlet body	1.4308	A 351 CF8
3 Disc	1.4541	A 276 Grade 321
4 Bellow	1.4571	A 276 Grade 316Ti
5 Bellow stem	1.4571	A 276 Grade 316Ti
6 Stem	CW453K	B 103 UNS C52100
7 Bonnet	1.4308	A 351 CF 8
7a Bonnet from GW 1	1.4301	A 276 Grade 304
8 Spring	1.4571	A 276 Grade 316Ti
9 Lifting cap	1.4301	A 276 Grade 304
10 Lever	1.4408	A 351 CF8M

Important:

For nominal size GW 3/4, d_0 = 15.0 mm the back pressure reduces the blow off performance of the safety valve (see diagram 06806-3/4).

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 06806	Technical data				
Nominal size	GW	1/2	3/4	1	1
Orifice	d_0	12.5	15	20	23
Dimension code	.X.	1204	1506	2010	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	221	225	250	305
Length	L_1	44	44	51	56
Length	L_2	52	54	63	65
Wrench size across flats	S_1	36	36	41	50
Wrench size across flats	S_2	41	41	50	55
Weight	ca. kg	1.23	1.25	1.95	3.10
Coeff. of discharge vapours, gases	α_w	0.60	0.50	0.60	0.66
Coeff. of discharge fluids	α_w	-	0.39	0.45	0.48

Dimensions in mm.

Safety Valves

Type 06806 with bellow seal



Discharge capacities

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

Medium:

Air in m³/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.

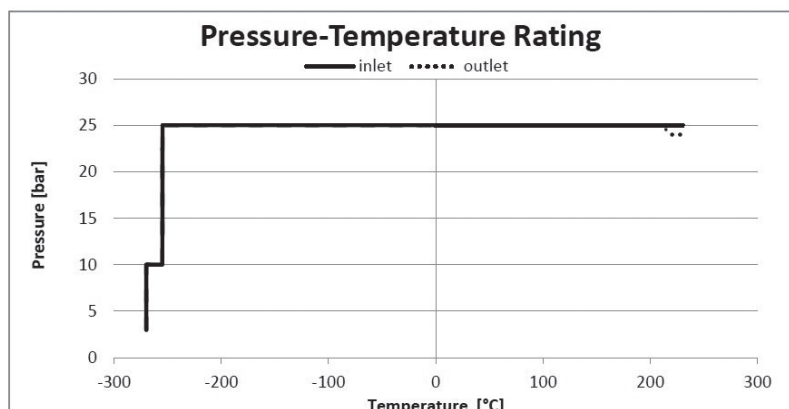
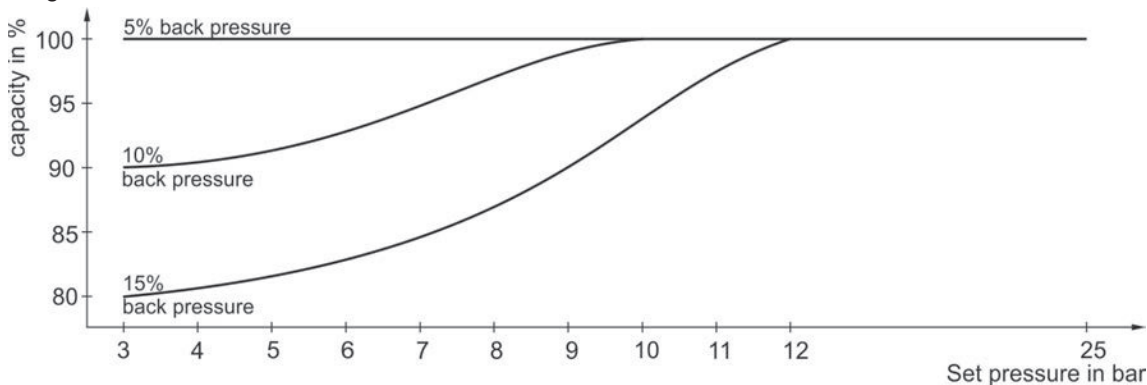
For nominal size GW 3/4 the back pressure reduces the blow off performance of the safety valve (see diagram 06806-3/4).

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2	1	1	1/2	1/2	1	1	1/2	1	1
	d ₀ (mm)	12.5	15.0	20.0	23.0	12.5	15.0	20.0	23.0	15.0	20.0	23.0
	A ₀ (mm ²)	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		216	260	555	807	169	203	433	630	6374	13075	18445
4.0		272	326	696	1013	211	253	540	786	7360	15098	21298
5.0		328	393	839	1221	252	303	647	942	8229	16880	23812
6.0		383	460	981	1428	294	353	753	1096	9014	18491	26085
7.0		438	526	1123	1634	335	402	859	1249	9736	19973	28175
8.0		495	594	1269	1846	376	452	964	1403	10409	21352	30120
9.0		551	661	1411	2053	417	501	1069	1555	11040	22647	31947
10.0		608	729	1556	2265	458	550	1174	1708	11637	23872	33676
12.0		719	863	1842	2679	540	648	1384	2013	12748	26150	36890
14.0		830	997	2127	3094	622	746	1592	2317	13770	28246	39846
16.0		942	1130	2412	3509	703	844	1802	2621	14720	30196	42597
18.0		1053	1264	2697	3924	785	942	2010	2924	15613	32028	45181
20.0		1176	1411	3011	4380	866	1040	2219	3228	16458	33760	47625
22.0		1288	1546	3298	4799	948	1137	2427	3531	17261	35408	49949
25.0		1457	1748	3730	5427	1070	1284	2739	3985	18401	37745	53246

Diagram 06806-3/4



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°C / -454°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



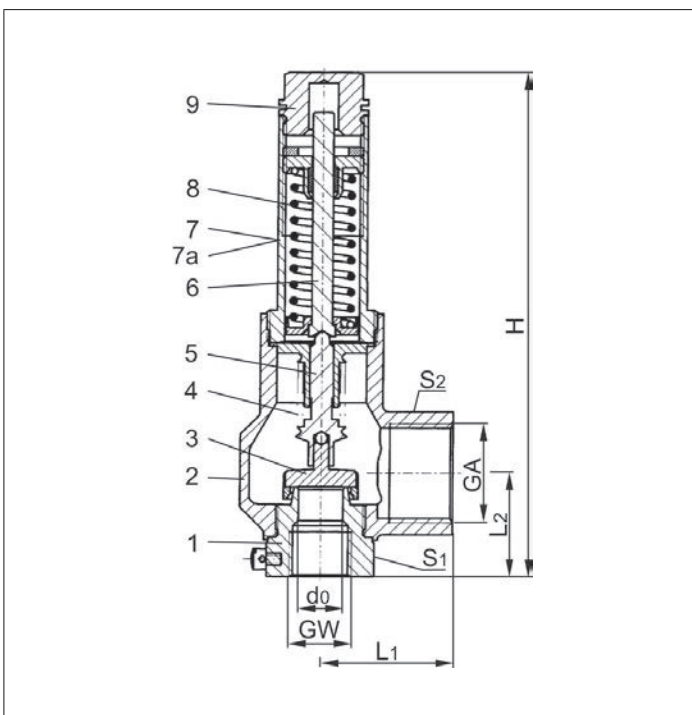
Materials	DIN EN	ASTM
1 Inlet body	1.4571	A 276 Grade 316Ti
2 Outlet body	1.4308	A 351 CF8
3 Disc	1.4541	A 276 Grade 321
4 Bellow	1.4571	A 276 Grade 316Ti
5 Bellow stem	1.4571	A 276 Grade 316Ti
6 Stem	CW453K	B 103 UNS C52100
7 Bonnet	1.4308	A 351 CF 8
7a Bonnet from GW 1	1.4301	A 276 Grade 304
8 Spring	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, $d_0 = 15.0$).

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 06800	Technical data				
Nominal size	GW	1/2	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	α_w	0.60	0.50	0.60	0.66
Coeff. of discharge fluids	α_w	-	0.39	0.45	0.48

Dimensions in mm.

Safety Valves

Type 06800 with bellow seal



Discharge capacities

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

Medium:

Air in m³/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.

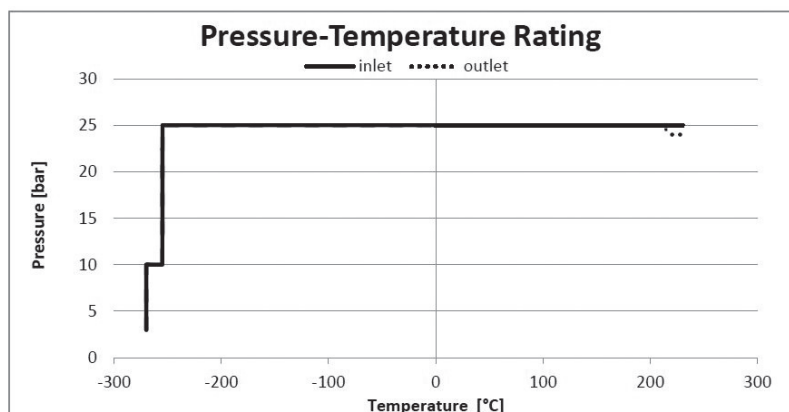
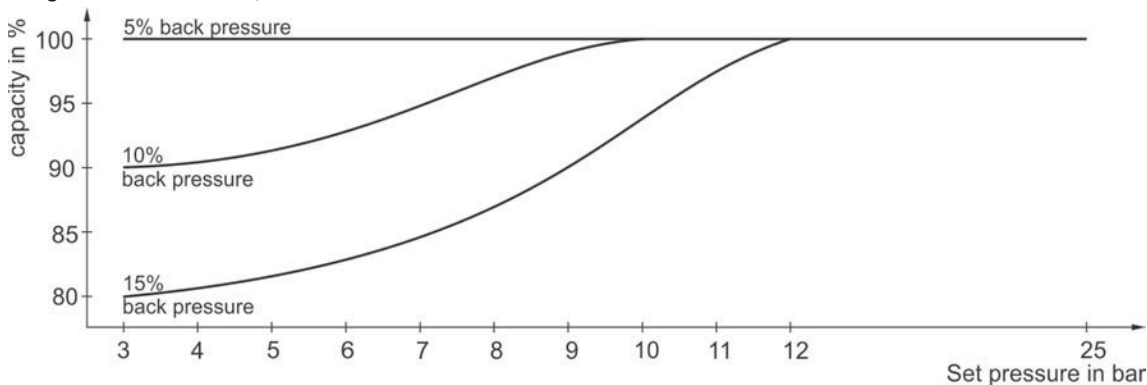
For nominal size GW 1/2, d₀ = 15.0 mm the back pressure reduces the blow off performance of the safety valve (see diagram 06800-1/2, d₀ = 15.0)

d₀ - orifice

A₀ - 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 ₀ (mm)	12.5	15.0	20.0	23.0	12.5	15.0	20.0	23.0	15.0	20.0	23.0
	A ₀ (mm ²)	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		216	260	555	807	169	203	433	630	6374	13075	18445
4.0		272	326	696	1013	211	253	540	786	7360	15098	21298
5.0		328	393	839	1221	252	303	647	942	8229	16880	23812
6.0		383	460	981	1428	294	353	753	1096	9014	18491	26085
7.0		438	526	1123	1634	335	402	859	1249	9736	19973	28175
8.0		495	594	1269	1846	376	452	964	1403	10409	21352	30120
9.0		551	661	1411	2053	417	501	1069	1555	11040	22647	31947
10.0		608	729	1556	2265	458	550	1174	1708	11637	23872	33676
12.0		719	863	1842	2679	540	648	1384	2013	12748	26150	36890
14.0		830	997	2127	3094	622	746	1592	2317	13770	28246	39846
16.0		942	1130	2412	3509	703	844	1802	2621	14720	30196	42597
18.0		1053	1264	2697	3924	785	942	2010	2924	15613	32028	45181
20.0		1176	1411	3011	4380	866	1040	2219	3228	16458	33760	47625
22.0		1288	1546	3298	4799	948	1137	2427	3531	17261	35408	49949
25.0		1457	1748	3730	5427	1070	1284	2739	3985	18401	37745	53246

Diagram 06800-1/2, d₀=15,0



Safety Valves

Type 06805 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, with lifting device
"cleaned and degreased for oxygen service"

Part No. 06805.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. 06805.X.5000

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

Part No. 06805.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°C / -454°F (3K) up to +225°C / +437°F (498K)

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



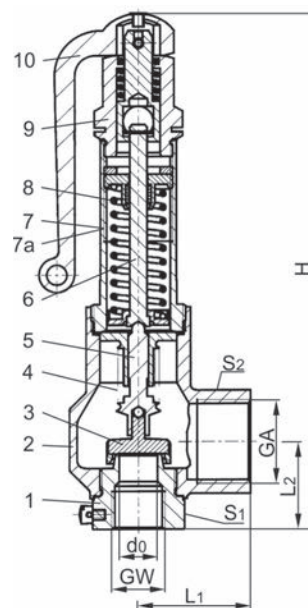
Materials	DIN EN	ASTM
1 Inlet body	1.4571	A 276 Grade 316Ti
2 Outlet body	1.4308	A 351 CF8
3 Disc	1.4541	A 276 Grade 321
4 Bellow	1.4571	A 276 Grade 316Ti
5 Bellow stem	1.4571	A 276 Grade 316Ti
6 Stem	CW453K	B 103 UNS C52100
7 Bonnet	1.4308	A 351 CF 8
7a Bonnet from GW 1	1.4301	A 276 Grade 304
8 Spring	1.4571	A 276 Grade 316Ti
9 Lifting cap	1.4301	A 276 Grade 304
10 Lever	1.4408	A 351 CF8M

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 06805-1/2, d_0 = 15.0).

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 6805	Technical data					
Nominal size	GW	1/2	1/2	3/4	3/4	1
Orifice	d_0	12.5	15	15	20	23
Dimension code	.X.	1204	1504	1506	2006	2310
Set pressure range	bar	3.0-25.0	3.0-25.0	3.0-25.0	3.0-25.0	3.0-25.0
Outlet	GA	G 1	G 1	G 1	G 1-1/4	G 1-1/2
Height	H	205	210	215	243	295
Length	L_1	44	44	44	51	56
Length	L_2	35	35	40	48	58
Wrench size across flats	S_1	36	36	41	41	50
Wrench size across flats	S_2	41	41	41	50	55
Weight	ca. kg	1.24	1.21	1.31	1.88	3.15
Coeff. of discharge vapours, gases	α_w	0.60	0.50	0.50	0.60	0.66
Coeff. of discharge fluids	α_w	-	0.39	0.39	0.45	0.48

Dimensions in mm.

Safety Valves

Type 06805 with bellow seal



Discharge capacities

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

Medium:

Air in m³/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.

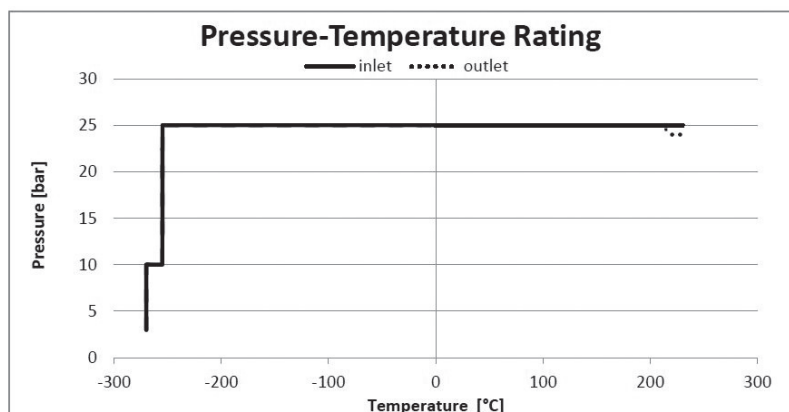
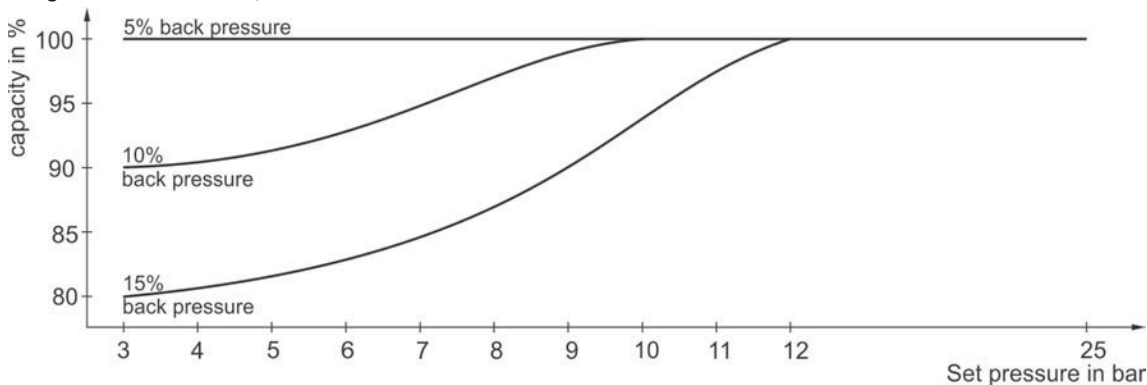
For nominal size GW 1/2, d₀ = 15.0 mm the back pressure reduces the blow off performance of the safety valve (see diagram 06805-1/2, d₀ = 15.0).

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2	1/2 & 3/4	3/4	1	1/2	1/2 & 3/4	3/4	1	1/2 & 3/4	3/4	1
	d ₀ (mm)	12.5	15.0	20.0	23.0	12.5	15.0	20.0	23.0	15.0	20.0	23.0
	A ₀ (mm ²)	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		216	260	555	807	169	203	433	630	6374	13075	18445
4.0		272	326	696	1013	211	253	540	786	7360	15098	21298
5.0		328	393	839	1221	252	303	647	942	8229	16880	23812
6.0		383	460	981	1428	294	353	753	1096	9014	18491	26085
7.0		438	526	1123	1634	335	402	859	1249	9736	19973	28175
8.0		495	594	1269	1846	376	452	964	1403	10409	21352	30120
9.0		551	661	1411	2053	417	501	1069	1555	11040	22647	31947
10.0		608	729	1556	2265	458	550	1174	1708	11637	23872	33676
12.0		719	863	1842	2679	540	648	1384	2013	12748	26150	36890
14.0		830	997	2127	3094	622	746	1592	2317	13770	28246	39846
16.0		942	1130	2412	3509	703	844	1802	2621	14720	30196	42597
18.0		1053	1264	2697	3924	785	942	2010	2924	15613	32028	45181
20.0		1176	1411	3011	4380	866	1040	2219	3228	16458	33760	47625
22.0		1288	1546	3298	4799	948	1137	2427	3531	17261	35408	49949
25.0		1457	1748	3730	5427	1070	1284	2739	3985	18401	37745	53246

Diagram 06805-1/2, d₀=15,0



Safety Valves

Type 06810, Type 06815



**Safety Valves, angle type, stainless steel,
type tested, TÜV-SV.1130. D/G/F**

Standard safety valve

metal to metal seated, "cleaned and degreased for oxygen service"

closed bonnet, gastight cap or lifting device

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

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

Part No. 06810.X.000000M (0.50 up to 15.99 bar)

Part No. 06810.X.000000H (16.00 up to 180.00 bar) seat & disc stellited

with gastight cap

Part No. 06815.X.000000M (0.50 up to 15.99 bar)

Part No. 06815.X.000000H (16.00 up to 180.00 bar) seat & disc stellited

with lifting device

Available options - on request only:

· Flange-, NPT- or Tri-Clamp connection for in- and outlet



Applications:

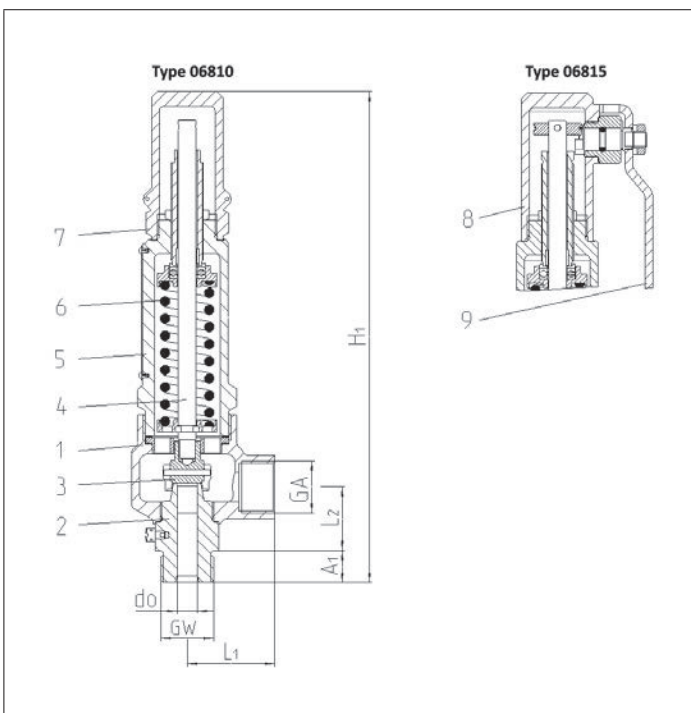
Provided as safety device for protection against excessive pressure

in gas cylinders and pressure vessels. Approved for gases, vapours and fluids.

Working temperature: -270°C / -454°F (3K) up to +400°C / +752°F (673K)

Pressure-temperature must be observed, suitable for horizontal installation from 20 bar

Materials	DIN EN	ASTM
1 Outlet body	1.4408	A 351 CF 8M
2 Inlet body	1.4571	A 276 Grade 316Ti
3 Disc	1.4571	A 276 Grade 316Ti
4 Stem	1.4404	A 276 Grade 316L
5 Bonnet	1.4404	A 276 Grade 316L
6 Spring	1.4571	A 313 Grade 316Ti
7 Cap	1.4404	A 276 Grade 316L
8 Lifting cap	1.4404	A 276 Grade 316L
9 Lever	1.4408	A 351 CF 8M



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 06810, 06815	Technical data			
Nominal size	GW	1/2	1/2	3/4
Orifice	d ₀	10.0	10.0	10.0
Dimension code	.X.	1022	1023	1033
Set pressure range	bar	0.5-180	0.5-180	0.5-180
Outlet	GA	1/2	3/4	3/4
Height	H ₁	230	230	230
Length	L ₁	44	44	44
Length	L ₂	29	29	29
Length	A ₁	14	14	16
Weight 06810	ca. kg	1.8	1.8	1.8
Weight 06815	ca. kg	2.0	2.0	2.0
Coeff. of discharge gases, vapours	α _w	0.5	0.5	0.5
Coeff. of discharge fluids	α _w	0.5	0.5	0.5

Dimensions in mm.

Safety Valves

Type 06810, Type 06815



Discharge capacities

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

Medium:

A = Saturated steam in kg/h

B = Air in m³/h at 0°C and 1013,25 mbar

C = Water in kg/h at 20°C

The capacity indicated below is for a fully opened valve.

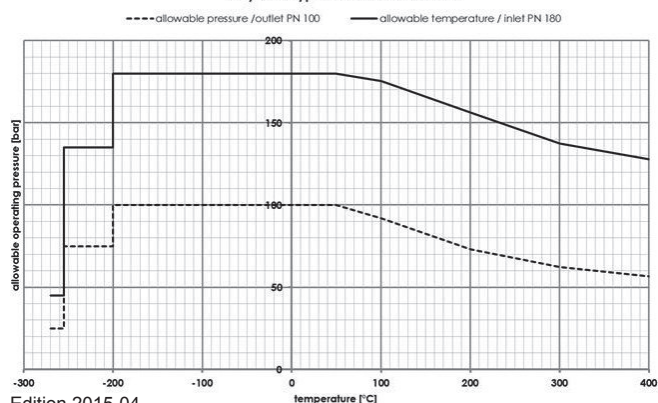
d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2 & 3/4		
	d ₀ (mm)	10.0		
	A ₀ (mm ²)	78.5		
	Medium	A	B	C
0.5		32	39	1548
1.0		44	55	2096
2.0		67	85	2965
3.0		90	115	3632
4.0		112	145	4193
5.0		134	174	4688
6.0		156	204	5136
7.0		178	234	5548
8.0		200	264	5931
9.0		222	294	6290
10.0		244	324	6631
12.0		288	383	7264
14.0		331	443	7846
16.0		375	502	8387
18.0		418	561	8896
20.0		462	627	9377
25.0		570	777	10484
30.0		680	935	11485
35.0		788	1087	12405
40.0		897	1249	13262
45.0		1008	1401	14066
50.0		1118	1567	14827
60.0		1341	1889	16243
70.0		1562	2216	17544
80.0		1788	2545	18755
90.0		2013	2878	19893
100.0		2244	3212	20969
120.0		2723	3876	22971
130.0		2972	4197	23909
140.0		-	4548	24811
160.0		-	5213	26524
180.0		-	5861	28133

Pressure-Temperature Rating

Allowable operating pressure at the valve inlet and outlet
Safety valve type 06810.10 and 06815.10



Edition 2015-04

Safety Valves

Type 06850, Type 06855



**Safety Valves, angle type, stainless steel,
type tested, TÜV-SV.1130. D/G/F**

Standard safety valve

metal to metal seated, "cleaned and degreased for oxygen service"

closed bonnet, gastight cap or lifting device

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

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

Part No. 06850.X.000000M (0.50 up to 19.99 bar)

Part No. 06850.X.000000H (20.00 up to 250.00 bar) seat & disc stellited

with gastight cap

Part No. 06855.X.000000M (0.50 up to 19.99 bar)

Part No. 06855.X.000000H (20.00 up to 250.00 bar) seat & disc stellited

with lifting device

Available options - on request only:

· Flange-, NPT- or Tri-Clamp connection for in- and outlet



Applications:

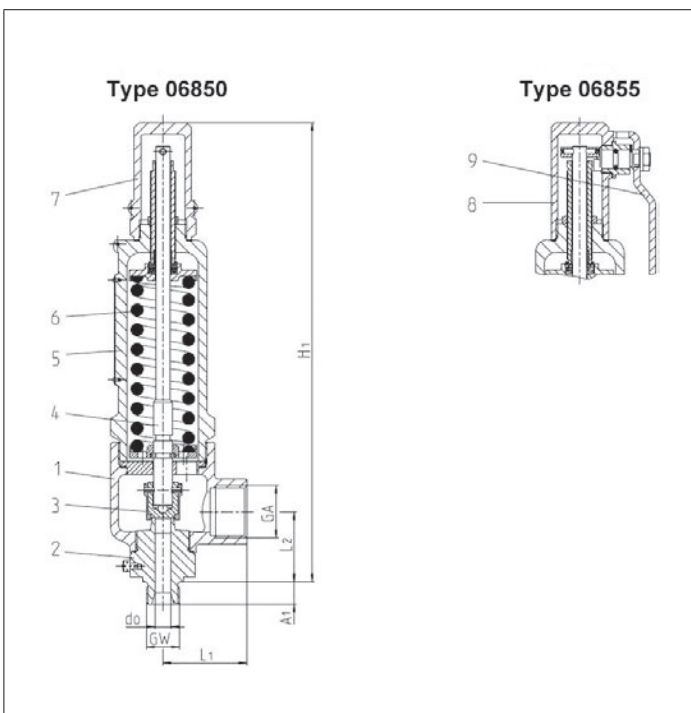
Provided as safety device for protection against excessive pressure

in gas cylinders and pressure vessels. Approved for gases, vapours and fluids.

Working temperature: -270°C / -454°F (3K) up to +400°C / +752°F (673K)

Pressure-temperature must be observed, suitable for horizontal installation from 20 bar

Materials	DIN EN	ASTM
1 Outlet body	1.4408	A 351 CF 8M
2 Inlet body	1.4571	A 276 Grade 316Ti
3 Disc	1.4571	A 276 Grade 316Ti
4 Stem	1.4404	A 276 Grade 316L
5 Bonnet	1.4404	A 276 Grade 316L
6 Spring	1.4571	A 313 Grade 316Ti
7 Cap	1.4404	A 276 Grade 316L
8 Lifting cap	1.4404	A 276 Grade 316L
9 Lever	1.4408	A 351 CF 8M



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 06850, 06855	Technical data			
Nominal size	GW	1/2	3/4	1
Orifice	d ₀	10.0	10.0	10.0
Dimension code	.X.	1024	1034	1044
Set pressure range	bar	0.5-250	0.5-250	0.5-250
Outlet	GA	1	1	1
Height	H ₁	291	291	291
Length	L ₁	53	53	53
Length	L ₂	44.5	44.5	44.5
Length	A ₁	14	16	18
Weight 06850	ca. kg	3.2	3.2	3.2
Weight 06855	ca. kg	3.4	3.4	3.4
Coeff. of discharge gases, vapours	α _w	0.84	0.84	0.84
Coeff. of discharge fluids	α _w	0.68	0.68	0.68

Dimensions in mm.

Safety Valves

Type 06850, Type 06855



Discharge capacities

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

Medium:

A = Saturated steam in kg/h

B = Air in m³/h at 0°C and 1013,25 mbar

C = Water in kg/h at 20°C

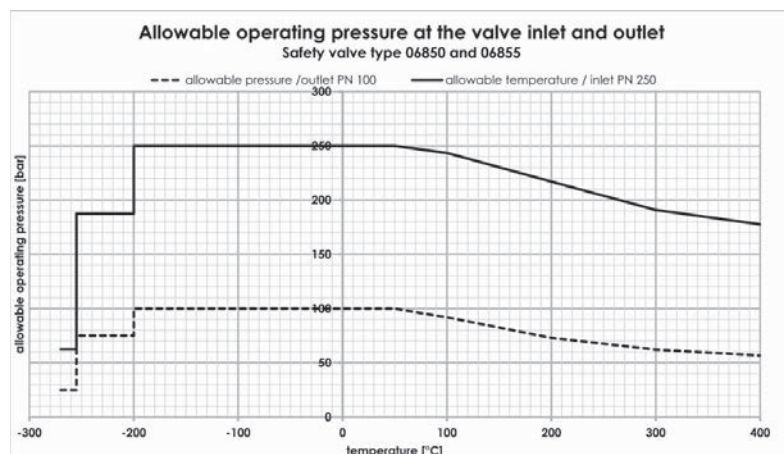
The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2, 3/4 & 1		
	d ₀ (mm)	10.0		
	A ₀ (mm ²)	78.5		
	Medium	A	B	C
0.5		46	56	2075
1.0		70	88	2851
2.0		112	142	4033
3.0		151	194	4939
4.0		189	243	5703
5.0		226	293	6377
6.0		263	343	6985
7.0		300	393	7545
8.0		337	444	8066
9.0		374	494	8555
10.0		411	544	9018
15.0		594	794	11045
20.0		776	1053	12754
30.0		1142	1572	15620
40.0		1508	2098	18036
50.0		1879	2633	20165
60.0		2253	3175	22090
70.0		2625	3723	23860
80.0		3004	4276	25508
90.0		3382	4835	27055
100.0		3770	5396	28518
120.0		4576	6512	31240
140.0		5428	7642	33744
160.0		6324	8758	36073
180.0		7287	9846	38262
200.0		-	10898	40331
220.0		-	11930	42300
240.0		-	12982	44181
250.0		-	13521	45092

Pressure-Temperature Rating



Overflow Valves

Type 06386



Cryogenic Overflow Valves, angle type, bronze, PN40, not type tested

with adjusting device, metal to metal seated, closed bonnet

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

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

"cleaned and degreased for oxygen service"

Part No. 06386.X.9005 (0.5 up to 1.5 bar)

Part No. 06386.X.9003 (1.0 up to 4.0 bar)

Part No. 06386.X.9001 (3.0 up to 8.0 bar)

Part No. 06386.X.9002 (7.0 up to 17.0 bar)

Part No. 06386.X.9004 (16.0 up to 21.0 bar)

Part No. 06386.X.9007 (21.0 up to 28.0 bar)

Part No. 06386.X.9006 (28.0 up to 35.0 bar)

Available options - on request only:

· other spring ranges acc. to customer specification



Applications:

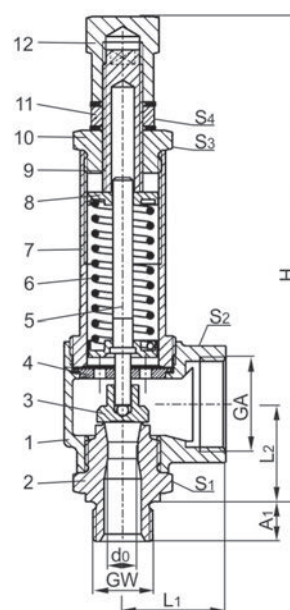
Provided as overflow valve for protection against excessive pressure in pipe systems and pressure vessels, which are not subject to approval.

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
3 Disc	1.4541	A 276 Grade 321
4 Guide plate	CW453K	B 103 UNS C52100
5 Stem	CW453K	B 103 UNS C52100
6 Spring	1.4571	A 313 Grade 316Ti
7 Bonnet	1.4305	A 314 Grade 303
8 Spring clamp	CW614N	B 283 UNS C38500
9 Adjusting screw	CW614N	B 283 UNS C38500
10 Plug	CW614N	B 283 UNS C38500
11 Nut	CW614N	B 283 UNS C38500
12 Closing cap	CW614N	B 283 UNS C38500

Important: Adjusting ranges of springs are marked with a label on the bonnet.

Not to use as equipment with safety function acc. to Pressure Equipment Directive 97/23/EC (PED) (No CE marking).



Type 06386	Technical data		
Nominal size	GW	1/2	3/4
Orifice	d ₀	10.5	10.5
Dimension code	.X.	1004	1006
Outlet	GA	1	1
Height	H	159	159
Length	L ₁	36	36
Length	L ₂	34	34
Length	A ₁	14	16
Wrench size across flats	S ₁	30	30
Wrench size across flats	S ₂	41	41
Wrench size across flats	S ₃	30	30
Wrench size across flats	S ₄	22	22
Weight	ca. kg	0.78	0.81

Dimensions in mm.

Overflow Valves

Type 06386



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 (g)	GW	1/2 & 3/4					
	d ₀ (mm)	10.5					
	A ₀ (mm ²)	86.6					
	Medium	Air					
Pressure range in bar		0.5 - 1.5	1.0 - 4.0	3.0 - 8.0	7.0 - 17.0	16.0 - 21.0	28.0 - 35.0
0.5		8	-	-	-	-	-
1.0		11	6	-	-	-	-
1.5		14	9	-	-	-	-
2.0		-	12	-	-	-	-
3.0		-	21	10	-	-	-
4.0		-	32	25	-	-	-
5.0		-	-	48	-	-	-
6.0		-	-	76	-	-	-
7.0		-	-	107	82	-	-
8.0		-	-	144	104	-	-
9.0		-	-	-	128	-	-
10.0		-	-	-	155	-	-
11.0		-	-	-	177	-	-
12.0		-	-	-	217	-	-
13.0		-	-	-	248	-	-
14.0		-	-	-	280	-	-
15.0		-	-	-	319	-	-
16.0		-	-	-	361	186	-
17.0		-	-	-	409	220	-
18.0		-	-	-	-	263	-
19.0		-	-	-	-	304	-
20.0		-	-	-	-	339	-
21.0		-	-	-	-	383	-
22.0		-	-	-	-	-	-
24.0		-	-	-	-	-	-
25.0		-	-	-	-	-	-
26.0		-	-	-	-	-	-
28.0		-	-	-	-	-	431
30.0		-	-	-	-	-	461
32.0		-	-	-	-	-	491
34.0		-	-	-	-	-	521
35.0		-	-	-	-	-	536

GW	1/2 & 3/4
Part No. spring	Pressure range of springs in bar
55345.0113.1767	0.5 - 1.5
55345.0116.2767	1.0 - 4.0
55345.0117.1767	3.0 - 8.0
55345.0118.1767	7.0 - 17.0
55345.0120.1767	16.0 - 21.0
55345.0237.0767	18.0 - 35.0

Overflow Valves

Type 06381



Cryogenic Safety Valves, angle type, stainless steel, PN40, not type tested

metal to metal seated, closed bonnet,

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

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

"cleaned and degreased for oxygen service"

Part No. 06381.X.9005 (0,5 up to 1,5 bar)

Part No. 06381.X.9003 (1,0 up to 4,0 bar)

Part No. 06381.X.9001 (3,0 up to 8,0 bar)

Part No. 06381.X.9002 (7,0 up to 17,0 bar)

Part No. 06381.X.9004 (16,0 up to 21,0 bar)

Part No. 06381.X.9007 (21,0 up to 28,0 bar)

Part No. 06381.X.9006 (28,0 up to 35,0 bar)

Available options - on request only:

· other spring ranges acc. to customer specification



Applications:

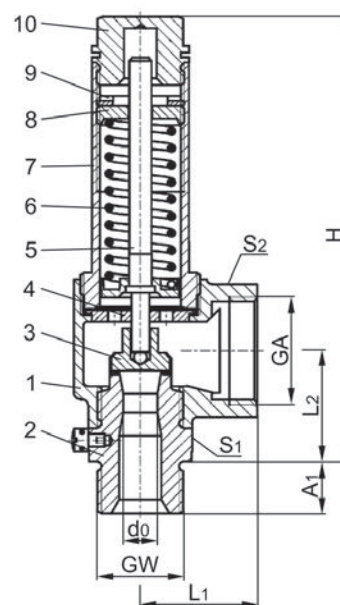
Provided as overflow valve for protection against excessive pressure in pipe systems and pressure vessels, which are not subject to approval.

Working temperature: -196°C / -321°F (77K) up to +185°C / +365°F (458K)

Materials	DIN EN	ASTM
1 Outlet body	1.4308	A 351 CF8
2 Inlet body	1.4301	A 276 Grade 304
3 Disc	1.4541	A 276 Grade 321
4 Guide plate	1.4301	A 276 Grade 304
5 Stem	1.4571	A 276 Grade 316Ti
6 Spring	1.4571	A 313 Grade 316Ti
7 Bonnet	1.4308	A 351 CF 8
8 Spring Clamp	1.4301	A 276 Grade 304
9 Adjusting screw	1.4571	A 276 Grade 316Ti
10 Cap	1.4301	A 276 Grade 304

Important: Adjusting ranges of springs are marked with a label on the bonnet.

Not to use as equipment with safety function acc. to Pressure Equipment Directive 97/23/EC (PED) (No CE marking).



Type 06381	Technical data		
Nominal size	GW	1/2	3/4
Orifice	d ₀	10.5	10.5
Dimension code	.X.	1004	1006
Outlet	GA	1	1
Height	H	137	137
Length	L ₁	36	36
Length	L ₂	34	34
Length	A ₁	14	16
Wrench size across flats	S ₁	30	30
Wrench size across flats	S ₂	41	41
Wrench size across flats	S ₃	30	30
Wrench size across flats	S ₄	22	22
Weight	ca. kg	0.77	0.79

Overflow Valves

Type 06381



Discharge capacities

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

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 (g)	GW	1/2 & 3/4						
	d ₀ (mm)	10.5						
	A ₀ (mm ²)	86.6						
	Medium	Air						
Pressure range in bar		0.5 - 1.5	1.0 - 4.0	3.0 - 8.0	7.0 - 17.0	16.0 - 21.0	21.0 - 28.0	28.0 - 35.0
0.5	8	-	-	-	-	-	-	-
1.0	11	6	-	-	-	-	-	-
1.5	14	9	-	-	-	-	-	-
2.0	-	12	-	-	-	-	-	-
3.0	-	21	10	-	-	-	-	-
4.0	-	32	25	-	-	-	-	-
5.0	-	-	48	-	-	-	-	-
6.0	-	-	76	-	-	-	-	-
7.0	-	-	107	82	-	-	-	-
8.0	-	-	144	104	-	-	-	-
9.0	-	-	-	128	-	-	-	-
10.0	-	-	-	155	-	-	-	-
11.0	-	-	-	177	-	-	-	-
12.0	-	-	-	217	-	-	-	-
13.0	-	-	-	248	-	-	-	-
14.0	-	-	-	280	-	-	-	-
15.0	-	-	-	319	-	-	-	-
16.0	-	-	-	361	186	-	-	-
17.0	-	-	-	409	220	-	-	-
18.0	-	-	-	-	263	-	-	-
19.0	-	-	-	-	304	-	-	-
20.0	-	-	-	-	339	-	-	-
21.0	-	-	-	-	383	227	-	-
22.0	-	-	-	-	-	244	-	-
24.0	-	-	-	-	-	278	-	-
25.0	-	-	-	-	-	296	-	-
26.0	-	-	-	-	-	314	-	-
28.0	-	-	-	-	-	353	431	-
30.0	-	-	-	-	-	-	461	-
32.0	-	-	-	-	-	-	491	-
34.0	-	-	-	-	-	-	521	-
35.0	-	-	-	-	-	-	536	-

GW	1/2 & 3/4
Part No. spring	Pressure range of springs in bar
55345.0113.1767	0.5 - 1.5
55345.0116.2767	1.0 - 4.0
55345.0117.1767	3.0 - 8.0
55345.0118.1767	7.0 - 17.0
55345.0120.1767	16.0 - 21.0
55345.0233.0767	21.0 - 28.0
55345.0237.0767	28.0 - 35.0