Seetru Safety Relief Valves



Seetru Limited



Seetru Limited was founded in 1949 with the aim of producing the finest liquid level gauges so customers could "see the true" level even under the most severe conditions. This philosophy of making the finest through innovation continued with the introduction of the Seetru range of pressure relief devices, circa 1950 the Seetru Tutchtite-sealing system revolutionized the safety valve market with valves that do not leak even after repeated popping even at high pressures.

Today, Seetru have an extensive range of Pressure Relief Valves and Liquid Level Gauges which carry a wide range of international approvals and are supplied worldwide.

Our Products

Seetru are Bristol-based manufacturers of safety relief valves and other special purpose ancillary valves for a wide range of compressed air, industrial gas, refrigerants, powder, steam, liquid and liquefied gas applications. These valves meet important international standards which include: ISO-4126-1 &-7 and ASME BPVC VIII.1 & XIII design codes as well as type test approvals from TÜV and the National Board. These products comply with the requirements of the European Pressure Equipment Directive (PED) and are available with both the CE mark as well as the UV stamp, and have wide international approvals. Seetru products are fully compliant with the requirements of the UK Pressure Equipment (Safety) Regulations and come with the UKCA mark.

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Seetru also have a wide range of special purpose valves. The range includes Change-Over Valves (designed for switching parallel safety valves without interrupting operation), Minimum Pressure Check Valves (typically suitable for application on compressors), Air-Start Valves (designed to handle a two-stage operation for air starting of engines). We also manufacture a range of Air Receiver & In-line Check Valves.

Seetru liquid level gauges are primarily of two types, sight gauges and magnetic float by-pass gauges. Many of the gauges are direct reading though most have optional electronic remote reading systems and computer interfaces. The range includes the Quickmount, Seemag and CPI gauges for industrial and chemical applications, and the Seeflex and Seemag for marine applications. The Company's substantial design and development department, which includes TÜV approved testing facilities, enable us to provide extensive bespoke design, advisory and manufacturing services to develop or adapt individual products for new applications.



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TYPE	PRODUCT / DESIGN	MATERIALS	INLET CONNECTIONS	PRESSURES	PAGE
LGS &	5 1 10:1	Bronze With Brass Inlet	DN45 (4 (21)) + DN55 (2 4 (21))	0.07.04.01	6.0
LGS HI FLOW	Enclosed Discharge	PTFE Or Elastomer Sealing	DN15 (1/2") to DN65 (2 1/2")	0.2 To 24.0 bar	<u>6-9</u>
63608	Enclosed Discharge	Brass With PPS Plastic Outlet Body	1/4 to 1/2" BSP, BSPT OR NPT	0.3 To 13.2 bar	<u>10-12</u>
936/946	Enclosed Discharge	Bronze Stainless Steel			40.40
Threaded	Threaded Connections	Metal To Metal Sealing	1/2" to 2" BSP, BSPT OR NPT	0.3 To 28.0 bar	<u>13-18</u>
94605 / 946H5 / 95605 / 956H5	Enclosed Discharge	Stainless Steel	∘ ½" NPT, BSP & BSPT ∘ 9/16" CONE & THREAD ∘ 3/4" CONE & THREAD	35.0 to 1100.0 bar	<u>19-21</u>
6G6	Enclosed Discharge	Stainless Steel	1/3"+0 1" TDL CLAMAD	0.32 To 55.2 bar	22.25
CLEAN SERVICE	Tri-Clamp Connections	FDA Compliant Elastomer Sealing	1/2" to 1" TRI-CLAMP	0.32 10 55.2 bar	<u>23-25</u>
946 FLANGED	Enclosed Discharge	Stainless Steel	DN20 (3/4") or DN25 (1") DIN OR	0.3 To 28.0 bar	26-28
946 FLANGED	Flanged Connections	Stanness Steen	ANSI FLANGES	U.3 10 ZO.U Dd1	<u> 20-26</u>
75008	Atmospheric Discharge	Brass	1/4" TO 1/2" BSP, BSPT OR NPT INLET	0.27 To 5.0 bar	<u>29-31</u>







Optimal Performance & Safety

Seetru safety relief valves play a critical role in safeguarding autoclaves and sterilizers, the workhorses of sterilization processes in healthcare and research facilities. Here's how Seetru valves contribute to optimal performance and safety



Precise Pressure Relief

Seetru valves excel at delivering exceptional pressure control. They open rapidly and completely when pressure exceeds the preset limit, preventing dangerous overpressurization within your autoclave or sterilizer. This protects your equipment from potential damage and safeguards personnel from accidents.



Leak-Tight Sealing

Seetru valves boast exceptional leak-tight performance, crucial for maintaining sterility within your sterilization chamber. This minimizes the risk of product contamination and ensures the effectiveness of your sterilization processes.





About the LGS Range

The Seetru LGS® Multi-Purpose Safety Relief Valve range represents a state-of-the-art design with dual guided spindle as well as the Seetru Rock-Seal™ seal technology for repeatable high-performance sealing. It is a high-quality valve of modular design and construction incorporating the Seetru proprietary compact design technology — providing a highly cost-effective range of valve solutions. LGS® valves have a robust and reliable construction designed for the widest range of industrial applications.



LGS® Safety Relief Valves

hot water compressed air & gas

Seetru Limited

LGS®

Safety valves made from Brass < Enclosed discharge with threaded connections <

Example Applications

- Hot water, including boilers (vented and unvented)
- Steam boilers and steam plants
- Pump and thermal relief
- Bypass relief
- Process liquids and gases
- Pressure vessels and lines

- Heating and cooling systems
- Heat exchangers and industrial cooling systems
- Refrigeration systems
- Pressure booster systems
- Solar power systems
- District heating systems



Specifications

Size range: DN15 to DN65 (1/2" to 2 1/2" BSP female connections)

Temperature: -60°C to +200°C (with PTFE seals (EPDM-45°C to +140°C)

Pressure range: 0.2 to 24 bar (depending on seal and duty)

Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- WRAS
- KUKReg 4



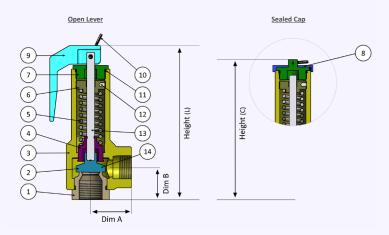




Materials of Construction

	COMPONENT	MATERIAL
1	Seat	Dezincification Resistant Material
	Lift Aid Assembly	Dezincification Resistant Material
	Body	Bronze CC491K / C83600
4	Piston	Dezincification Resistant Material
5	Spring	Steel 1.4401
6	Adjuster	Brass
	Сар	Brass
8	Cover	Brass
9	Lever	Brass
10	Wire Lock	Steel & Lead
11	O-Ring	EPDM
12	Locking Slug	Nylon
13	Spindle	Stainless Steel
14	Seal	PTFE or EPDM

Valve Drawing



Dimensions

Size (Inlet x Outlet)	Dim A mm (inches)	Dim B mm (inches)	Height (L) mm (inches)	Height (C) mm (inches)
DN15 (½")	33.0 (1.29)	26.0 (1.02)	124.0 (4.88)	114.5 (4.51)
DN20 (¾")	37.0 (1.46)	32.0 (1.26)	130.0 (5.12)	120.5 (4.74)
DN25 (1")	42.0 (1.65)	37.0 (1.46)	156.0 (6.14)	146.5 (5.77)
DN32 (1 ¼")	50.0 (1.97)	42.0 (1.65)	174.0 (6.85)	164.5 (6.48)
DN40 (1 ½")	59.0 (2.32)	50.0 (1.97)	222.5 (8.76))	211.5 (8.33)
DN50 (2")	69.0 (2.72)	59.0 (2.32)	256.5 (9.70)	246.5 (9.70)
DN65 (2 ½")	78.0 (3.07)	83.5 (3.28)	320 (12.60)	310 (12.20)

Easing Gear / Lifting Gear Options

Options:



Sealed lever (gas tight)



Sealed Cap (gas tight cap)



Discharge Capacities: LGS Safety Relief Valves



Discharge ca	apacity for <u>W</u>	ATER at 1	0% over-p	ressure ^{1,2}								Kd	lr = 0.26
	DN In						n (1")	32mm					m (2")
Valve size	DN Out	15mn	n (½")	20mr	n (¾")	25mr	n (1")	32mm	(1¼")	40mm (1½")			
	d _o (mm)	13	.5	1						32			10
Set pressure (bar)	Set pressure (psi)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)
0.2	2.9	849.7	3.7	1097.2	4.8	1950.6	8.6	3047.8	13.4	4993.4	22.0	7802.3	34.4
1.0	14.5	1899.9	8.4	2453.4	10.8	4361.6	19.2	6815.0	30.0	11165.7	49.2	17446.4	76.9
2.0	29.0	2686.9	11.8	3469.6	15.3	6168.2	27.2	9637.9	42.5	15790.7	69.6	24672.9	108.8
4.0	58.0	3799.8	16.8	4906.8	21.6	8723.2	38.5	13630.0	60.1	22331.4	98.5	34892.8	153.8
6.0	87.0	4653.8	20.5	6009.6	26.5	10683.7	47.1	16693.3	73.6	27350.2	120.6	42734.7	188.4
8.0	116.0	5373.8	23.7	6939.3	30.6	12336.5	54.4	19275.7	85.0	31581.3	139.2	49345.8	217.6
10.0	145.0	6008.0	26.5	7758.3	34.2	13792.6	60.8	21550.9	95.0	35309.0	155.7	55170.3	243.3
12.0	174.0	6581.5	29.0	8498.8	37.5	15109.0	66.6	23607.8	104.1	38679.1	170.5	60436.0	266.5
15.0	217.5	7358.3	32.4	9502.0	41.9	16892.4	74.5	26394.4	116.4	43244.5	190.7	67569.6	297.9
20.0	290.0	8496.7	37.5	10971.9	48.4	19505.7	86.0	30477.6	134.4	49934.5	220.2	78022.6	344.0
24.0	348.0	9307.6	41.0	12019.1	53.0	21367.4	94.2	33386.5	147.2	54700.5	241.2	85469.5	376.9

Metric units are calculated to BS EN ISO4126-7:2013 and displayed in their customary units
 Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units

Discharge c	apacity for Ho	OT WATER	at 10% ov	er-pressu	re (Unven	ted Syster	ns)¹					Ko	dr = 0.38
	DN In	15mn	n (½")	20mr	n (¾")	25m	m (1")	32mn	ı (1¼")	40mn	n (1½")	50mi	m (2")
	DN Out	15mn	n (½")	20mr	n (¾")	25m	m (1")	32mn	า (1¼")	40mn	า (1½")	50mi	m (2")
	d₀(mm)	13		1			20	25		32			
Set pressure (bar)	Set pressure (psi)	kW	BTU/sec		BTU/sec		BTU/sec				BTU/sec	kW	BTU/sec
0.2	2.9	21.1	20.0	27.2	25.8	48.4	45.9	75.7	71.7	124.0	117.5	193.7	183.6
1.0	14.5	36.2	34.3	46.7	44.2	83.0	78.7	129.7	122.9	212.5	201.4	332.0	314.6
2.0	29.0	55.0	52.1	71.0	67.3	126.2	119.6	197.2	186.9	323.1	306.2	504.8	478.4
4.0	58.0	92.6	87.8	119.6	113.3	212.6	201.5	332.2	314.9	544.3	515.9	850.4	806.0
6.0	87.0	130.2	123.5	168.2	159.4	299.0	283.4	467.2	442.8	765.5	725.5	1196.0	1133.6
8.0	116.0	167.9	159.1	216.8	205.5	385.4	365.3	602.2	570.8	986.7	935.2	1541.7	1461.2
10.0	145.0	205.5	194.8	265.4	251.6	471.8	447.2	737.2	698.8	1207.9	1144.8	1887.3	1788.8
12.0	174.0	243.2	230.5	314.0	297.6	558.2	529.1	872.2	826.7	1429.1	1354.5	2232.9	2116.4
15.0	217.5	299.6	284.0	386.9	366.7	687.8	652.0	1074.8	1018.7	1760.9	1669.0	2751.4	2607.8
20.0	290.0	393.7	373.2	508.4	481.9	903.9	856.7	1412.3	1338.6	2313.9	2193.1	3615.5	3426.8
24.0	348.0	469.0	444.5	605.6	574.0	1076.7	1020.5	1682.3	1594.5	2756.3	2612.5	4306.7	4082.0

¹ Calculations based on Hot Water at or above 100°C, using the Kdr of Gas ² Calculations are in accordance to BS EN ISO 4126-1:2004 National Annex NA

Discharge C	apacity for Al	K at 10%	over- press	ure									dr = 0.38
	DN In	15mn	n (½")	20mr	n (¾")	25m	n (1")	32mn	า (1¼")	40mn	n (1½")	50mr	m (2")
	DN Out						n (1")	32mn	า (1¼")		า (1½")		
		13	3.5					2			32		10
Set pressure (bar)	Set pressure (psi)		SCFM		SCFM		SCFM		SCFM		SCFM		SCFM
0.2	2.9	12.5	26.5	16.1	34.2	28.6	60.7	44.7	94.9	73.2	155.5	114.4	243.0
1.0	14.5	21.4	45.3	27.6	58.6	49.0	104.1	76.6	162.7	125.5	266.5	196.1	416.4
2.0		32.5	69.0	41.9	89.0	74.5	158.3	116.5	247.3	190.8	405.2	298.2	633.2
4.0	58.0	54.7	116.2	70.6	150.0	125.6	266.7	196.2	416.7	321.5	682.7	502.3	1066.7
6.0	87.0	76.9	163.4	99.3	211.0	176.6	375.1	276.0	586.0	452.1	960.1	706.5	1500.2
8.0	116.0	99.2	210.6	128.1	271.9	227.7	483.4	355.7	755.4	582.8	1237.6	910.6	1933.7
	145.0	121.4	257.8	156.8	332.9	278.7	591.8	435.5	924.7	713.5	1515.0	1114.8	2367.3
12.0	174.0	143.6	305.0	185.5	393.9	329.7	700.2	515.2	1094.1	844.1	1792.5	1318.9	2800.8
15.0	217.5	177.0	375.8	228.5	485.3	406.3	862.8	634.8	1348.1	1040.1	2208.7	1625.2	3451.1
20.0	290.0	290.0	493.8	300.3	637.7	533.9	1133.7	834.2	1771.4	1366.8	2902.3	2135.6	4534.9
24.0	348.0	277.0	588.3	357.7	759.6	636.0	1350.5	993.7	2110.1	1628.1	3457.2	2543.9	5401.9

Metric units are calculated to BS EN ISO4126-7:2013 and converted to l/sec at 1.013 bar a. @ 15°C
 Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units
 To convert from l/sec (1.013 bar a. @ 15°C) to Nm3/hr (1.013 bar a. @ 0°C) multiply by 3.413

	apacity for <u>SA</u>												
	DN In	15mn	ı (½")	20mr		25mr	n (1")	32mm	า (1¼")	40mm	າ (1½")	50mr	m (2")
	DN Out	15mn	n (½")	20mr			n (1")	32mm	n (1¼")	40mm	າ (1½")		
	d₀ (mm)	13		1						32		40 (
Set pressure (bar)	Set pressure (psi)	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr
0.2	2.9	29.1	74.2	37.6	95.8	66.9	170.4	104.5	266.2	171.3	436.2	267.6	681.6
1.0	14.5	59.7	127.2	77.1	164.2	137.0	292.0	214.1	456.2	350.8	747.5	548.1	1167.9
2.0	29.0	89.7	193.4	115.8	249.7	205.9	444.0	321.7	693.7	527.1	1136.6	823.6	1775.9
4.0	58.0	148.8	325.8	192.1	420.7	341.5	748.0	533.7	1168.7	874.4	1914.8	1366.2	2991.9
6.0	87.0	207.3	458.2	267.6	591.7	475.8	1052.0	743.4	1643.7	1218.0	2693.0	1903.1	4207.9
8.0	116.0	265.4	590.7	342.7	762.7	609.2	1356.0	951.9	2118.7	1559.5	3471.3	2436.8	5423.8
10.0	145.0	323.3	723.1	417.5	933.7	742.3	1660.0	1159.8	2593.7	1900.3	4249.5	2969.2	6639.8
12.0	174.0	381.1	855.5	492.1	1104.7	874.8	1963.9	1366.9	3068.7	2239.5	5027.7	3499.2	7855.8
14.0	203.0	438.9	987.9	566.7	1275.7	1007.5	2267.9	1574.2	3543.7	2579.2	5805.9	4030.0	9071.8

Metric units are calculated to BS EN ISO4126-7:2013 and displayed in their customary units

*Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units

*Calculations for saturated steam only

*PTFE seals up to 14 bar, EPDM seals up to 2.5 bar - contact Seetru for details on maximum steam pressure for other seal materials



LGS® HI-FLOW Safety Relief Valves

hot water

compressed air & gas

Seetru Limited

LGS®HI-FLOW

Safety valves made from Brass < Enclosed discharge with threaded connections <

Example Applications

- Hot water, including boilers (vented and unvented)
- Steam boilers and steam plants
- Pump and thermal relief
- Bypass relief
- Process liquids and gases
- Pressure vessels and lines

- Heating and cooling systems
- Heat exchangers and industrial cooling systems
- Refrigeration systems
- Pressure booster systems
- Solar power systems
- District heating systems



Specifications

Size range: DN15 to DN50 (½" BSP to 2" BSP)

Temperature: -60°C to +200°C (with PTFE seals (EPDM-45°C to +140°C)

Pressure range: 0.2 to 24 bar (depending on seal and duty)

Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- WRAS
- KUKReg 4



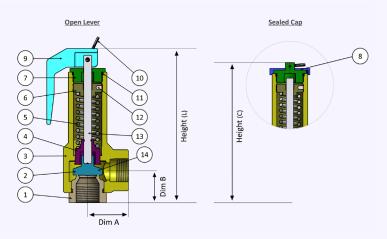




Materials of Construction

	COMPONENT	MATERIAL
1	Seat	Dezincification Resistant Material
	Lift Aid Assembly	Dezincification Resistant Material
3	Body	Bronze CC491K / C83600
4	Piston	Dezincification Resistant Material
5	Spring	Steel 1.4401
6	Adjuster	Brass
	Сар	Brass
8	Cover	Brass
9	Lever	Brass
10	Wire Lock	Steel & Lead
11	O-Ring	EPDM
12	Locking Slug	Nylon
13	Spindle	Stainless Steel
14	Seal	PTFE or EPDM

Valve Drawing



Dimensions

Size (Inlet x Outlet)	Dim A mm (inches)	Dim B mm (inches)	Height (L)	Height (C)
DN15 (½") x DN20 (¾")	37.0 (1.46)	32.0 (1.26)	130.0 (5.12)	120.5 (4.74)
DN20 (¾") x DN25 (1")	42.0 (1.65)	37.0 (1.46)	156.0 (6.14)	146.5 (5.77)
DN25 (1") x DN32(1 ¼")	50.0 (1.97)	42.0 (1.65)	174.0 (6.85)	164.5 (6.48)
DN32 (1 ¼") x DN40 (1 ½")	59.0 (2.32)	50.0 (1.97)	222.5 (8.76)	211.5 (8.33)
DN40 (1 ½") x DN50 (2")	69.0 (2.72)	59.0 (2.32)	256.5 (9.70)	246.5 (9.70)
DN50 (2") x DN65 (2 ½")	78 (3.07)	83.5 (3.28)	320.0 (12.60)	310 (12.20)

Easing Gear / Lifting Gear Options

Options:



Sealed lever (gas tight)



Sealed Cap (gas tight cap)



Discharge Capacities: LGS HI-FLOW Safety Relief Valves



HI-FLOW Di	scharge capac	ity for WA	ATER at 10	% over-pr	essure ^{1,2}						Kdr	= 0.26	
	DN In	15mn	n (½")	20mn	n (¾")	25mr	m (1")	32mn	า (1¼")	40mm	າ (1½")	50mn	n (2")
	DN Out	20mn	n (¾")	25mr	n (1")	32mm	า (1¼")	40mn	า (1½")	50mr	n (2")	65mm (2 1/2")
	d _o (mm)	1		2	0			32		40		50	
Set pressure (bar)	Set pressure (psi)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM (US)	kg/hr	GPM(US)
0.2	2.9	1097.2	4.8	1950.6	8.6	3047.8	13.4	4993.4	22.0	7802.3	34.4	12191.0	53.7
1.0	14.5	2453.4	10.8	4361.6	19.2	6815.0	30.0	11165.7	49.2	17446.4	76.9	27260.0	120.0
2.0	29.0	3469.6	15.3	6168.2	27.2	9637.9	42.5	15790.7	69.6	24672.9	108.8	38551.4	169.7
3.0	43.5	4249.4	18.7	7554.5	33.3	11803.9	52.0	19339.5	85.1	30218.0	133.1	47215.7	207.9
4.0	58.0	4906.8	21.6	8723.2	38.5	13630.0	60.1	22331.4	98.5	34892.8	153.8	54519.9	240.0
6.0	87.0	6009.6	26.5	10683.7	47.1	16693.3	73.6	27350.2	120.6	42734.7	188.4	66773.0	294.0
8.0	116.0	6939.3	30.6	12336.5	54.4	19275.7	85.0	31581.3	139.2	49345.8	217.6	77102.8	339.5
10.0	145.0	7758.3	34.2	13792.6	60.8	21550.9	95.0	35309.0	155.7	55170.3	243.3	86203.6	379.5
12.0	174.0	8498.8	37.5	15109.0	66.6	23607.8	104.1	38679.1	170.5	60436.0	266.5	94431.3	415.7
15.0	217.5	9502.0	41.9	16892.4	74.5	26394.4	116.4	43244.5	190.7	67569.6	297.9	105577.4	464.8
20.0	290.0	10971.9	48.4	19505.7	86.0	30477.6	134.4	49934.5	220.2	78022.6	344.0	121910.3	536.7
24.0	348.0	12019.1	53.0	21367.4	94.2	33386.5	147.2	54700.5	241.2	85469.5	376.9	133546.0	588.0

	DN In	15mn		20mn	2 (3/")	25mr	n (1")	22mm	n (1¼")	40mm	n (1½")	50mn	n (2")
Valve size	DN Out	20mn		25mr		32mm			1 (1½") 1 (1½")			65mm (
valve size	d _o (mm)										m (2") IO	5	
Catanassuna			<u> </u>		U	25		32		-	l	3	
Set pressure (bar)	Set pressure (psi)		BTU/sec		BTU/sec		BTU/sec						
0.2	2.9	27.2	25.8	48.4	45.9	75.7	71.7	124.0	117.5	193.7	183.6	302.7	286.9
1.0	14.5	46.7	44.2	83.0	78.7	129.7	122.9	212.5	201.4	332.0	314.6	518.7	491.6
2.0	29.0	71.0	67.3	126.2	119.6	197.2	186.9	323.1	306.2	504.8	478.4	788.7	747.6
	43.5	95.3	90.3	169.4	160.6	264.7	250.8	433.6	411.0	677.6	642.3	1058.8	1003.5
4.0	58.0	119.6	113.3	212.6	201.5	332.2	314.9	544.3	515.9	850.4	806.0	1328.8	1259.4
6.0	87.0	168.2	159.4	299.0	283.4	467.2	442.8	765.5	725.5	1196.0	1133.6	1868.8	1771.3
8.0	116.0	216.8	205.5	385.4	365.3	602.2	570.8	986.7	935.2	1541.7	1461.2	2408.9	2283.2
	145.0	265.4	251.6	471.8	447.2	737.2	698.8	1207.9	1144.8	1887.3	1788.8	2948.9	2795.1
12.0	174.0	314.0	297.6	558.2	529.1	872.2	826.7	1429.1	1354.5	2232.9	2116.4	3489.0	3306.9
15.0	217.5	386.9	366.7	687.8	652.0	1074.8	1018.7	1760.9	1669.0	2751.4	2607.8	4299.0	4074.7
20.0	290.0	508.4	481.9	903.9	856.7	1412.3	1338.6	2313.9	2193.1	3615.5	3426.8	5649.2	5354.4
24.0	348.0	605.6	574.0	1076.7	1020.5	1682.3	1594.5	2756.3	2612.5	4306.7	4082.0	6729.3	6378.1

Calculations based on Hot Water at or above 100°C, using the Kdr of Gas
 Calculations are in accordance to BS EN ISO 4126-1:2004 National Annex NA

HI-FLOW Di	scharge capac	ity for AIF	R at 10% c	ver-pressi	ure ^{1,2,3}						Kdr	= 0.38	
								32mn	n (1¼")				n (2")
	DN Out	20mm	า (¾")	25mr	n (1")	32mm	า (1¼")	40mm	n (1½")	50mr	m (2")	65mm (2 1/2")
	d₀(mm)		5	2	0	2		3	2	4	10	5	0
Set pressure (bar)	Set pressure (psi)	l/sec	SCFM	l/sec	SCFM		SCFM		SCFM	l/sec	SCFM		SCFM
	2.9	16.1	34.2	28.6	60.7	44.7	94.9	73.2	155.5	114.4	243.0	163.3	346.6
1.0	14.5	27.6	58.6	49.0	104.1	76.6	162.7	125.5	266.5	196.1	416.4	306.4	650.1
	29.0	41.9	89.0	74.5	158.3	116.5	247.3	190.8	405.2	298.2	633.2	495.9	988.5
	43.5	56.2	119.4	100.0	212.3	156.3	331.7	256.1	543.5	400.2	849.2	625.4	1327.0
4.0	58.0	70.6	150.0	125.6	266.7	196.2	416.7	321.5	682.7	502.3	1066.7	784.9	1665.4
6.0	87.0	99.3	211.0	176.6	375.1	276.0	586.0	452.1	960.1	706.5	1500.2	1103.9	2342.2
8.0	116.0	128.1	271.9	227.7	483.4	355.7	755.4	582.8	1237.6	910.6	1933.7	1422.9	3019.1
	145.0	156.8	332.9	278.7	591.8	435.5	924.7	713.5	1515.0	1114.8	2367.3	1741.8	3695.9
	174.0	185.5	393.9	329.7	700.2	515.2	1094.1	844.1	1792.5	1318.9	2800.8	2060.8	4372.7
15.0	217.5	228.5	485.3	406.3	862.8	634.8	1348.1	1040.1	2208.7	1625.2	3451.1	2539.3	5388.0
20.0	290.0	300.3	637.7	533.9	1133.7	834.2	1771.4	1366.8	2902.3	2135.6	4534.9	3336.8	7080.1
24.0	348.0	357.7	759.6	636.0	1350.5	993.7	2110.1	1628.1	3457.2	2543.9	5401.9	3974.8	8433.8

Metric units are calculated to BS EN ISO4126-7:2013 and converted to l/sec at 1.013 bar a. @ 15°C
 Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units
 To convert from l/sec (1.013 bar a. @ 15°C) to Nm3/hr (1.013 bar a. @ 0°C) multiply by 3.413

HI-FLOW DI	scnarge capac	ity for SA	y for SATURATED STEAM at 10% over-pressure ^{1,2,3,4}								Kdr = 0.38			
	DN In	1 5mn	า (½")	20mn	า (¾")		n (1")	32mm	n (1¼")	40mm	1 (1½")	50mr	n (2")	
	DN Out	20mm (¾")		25mm (1")		32mm (1¼")		า (1½")	50mm (2")		65mm (2 1/2")			
	d _o (mm)			2	0	2			32	4	0	5	0	
Set pressure (bar)	Set pressure (psi)	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	kg/hr	lb/hr	
0.2	2.9	37.6	95.8	66.9	170.4	104.5	266.2	171.3	436.2	267.6	681.6	426.4	940.2	
1.0	14.5	77.1	164.2	137.0	292.0	214.1	456.2	350.8	747.5	548.1	1167.9	856.7	1888.6	
	29.0	115.8	249.7	205.9	444.0	321.7	693.7	527.1	1136.6	823.6	1775.9	1286.6	2836.4	
3.0	43.5	154.0	339.6	273.9	603.9	428.0	943.6	701.2	1545.9	1095.7	2415.6	1712.0	3774.3	
4.0	58.0	192.1	420.7	341.5	748.0	533.7	1168.7	874.4	1914.8	1366.2	2991.9	2134.6	4705.9	
	87.0	267.6	591.7	475.8	1052.0	743.4	1643.7	1218.0	2693.0	1903.1	4207.9	2973.6	6555.6	
8.0	116.0	342.7	762.7	609.2	1356.0	951.9	2118.7	1559.5	3471.3	2436.8	5423.8	3807.4	8393.8	
10.0	145.0	417.5	933.7	742.3	1660.0	1159.8	2593.7	1900.3	4249.5	2969.2	6639.8	4639.3	10227.8	
12.0	174.0	492.1	1104.7	874.8	1963.9	1366.9	3068.7	2239.5	5027.7	3499.2	7855.8	5467.4	12053.5	
14.0	217.5	566.7	1275.7	1007.5	2267.9	1574.2	3543.7	2579.2	5805.9	4030.0	9071.8	6296.9	13882.1	

¹ Metric units are calculated to BS EN ISO4126-7:2013 and displayed in their customary units
2 imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units
3 Calculations for saturated steam only
4 PTFE seals up to 14 bar, EPDM seals up to 2.5 bar - contact Seetru for details on maximum steam pressure for other seal materials



Atmospheric Discharge Safety Relief Valves

Compressed Air & Gas

Steam

Seetru Limited

Type 63608

Safety valves with brass body and plastic outlet < Enclosed discharge valve with threaded connections <

Example Applications

- Air / gas compressors
- Pressure vessels
- Pneumatic systems
- Medical gases (non-flammable)
- Technical gases (non-flammable)



Specifications



• Temperature:-40°C to +200°C (depending on seal material)

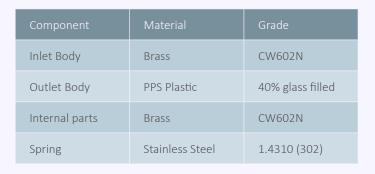
• Pressure range: 0.3 to 13.2 bar

Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)

C€ FR EHI

Materials of Construction



Seal Materials

Seal Material	Temperature Range
Viton® (FKM)	-15°C to +200°C
Nitrile (NBR)	-40°C to +120°C

Standard seal materials shown, others are available.

Easing Gear / Lifting Gear Options

Standard option – Rota-lift cap, twist type





Bore size	7.9mm (63608)					
Inlet Size	1/4" 3/8" 1/2"					
Outlet Size	3/8"					
Flow Area	49.02mm²					
H - Height (Rota-lift cap version)	57mm					
TÜV alloted outflow coefficient	0.68					
Weight (approximate) Kg	0.5					
Set Pressure range - PED (CE) bar	0.3 to 13.2					
Relieving pressure/fully open pressure	Set pressure +10% (Below 1 bar = 0.1 bar)					
Reseating pressure	Set pres	sure-10% (0.3 bar m	inimum)			

Maximum permissible built up back pressure = 10% of set pressure at or below which flow is not reduced. Stable operation on flows down to 50% of valve rated capacity.

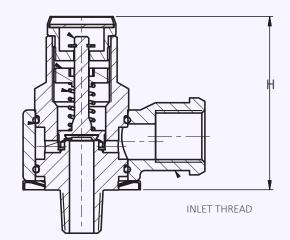
Standard Thread Connection Types



- BSP Parallel male thread
- BSP Taper male thread
- NPT male thread

Standard OUTLET Thread Connection Types

BSP Parallel female thread



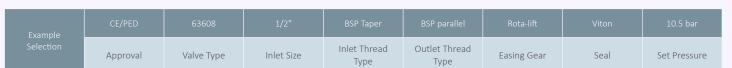
Valve Selection Guide



EAC marking available upon request

*Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Example of Valve Selection Process





Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour Type 63608: Flow rates at 10% above the set pressure



Cat Duasauus	*	Bore Size (D0)	
Set Pressure		7.9mm	
bar	psi	Nm³/Hour	
0.3	4.35	29.4	
0.8	11.6	43.4	
1.4	20.3	57.9	
2	29	72.9	
3	43.5	97.9	
4	58	122.9	
5	72.50	147.9	
6	87	172.9	
7	101.5	197.3	
8	116	222.8	
9	130.5	247.7	
10	145	272.7	
13.2	191.4	352.7	

For any intermediate pressures/flows please contact Seetru



Enclosed Discharge Safety Relief Valves

for compressed air or gases steam cryogenics & liquefied gases

Seetru Limited

Safety valves made with brass inlets< Enclosed discharge valve with threaded connections< Type 936 Threaded Metal to metal sealing<

Example Applications

- Air / gas compressors
- Pressure vessels
- Medical gases/Technical gases
- Thermal relief
- Steam systems

Specifications

- Inlet connections: 1/2" to 2" threaded connections (depending on valve bore size) (for flanged connections see 946 Flanged datasheet).
- Temperature range: -60°C to +250°C (depending on body o'ring material)
- Pressure range: 0.3 to 28.0 bar (depending on valve bore size)



Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1
- Materials meet the requirements of BAM (Germany) for oxygen service



Materials of Construction

Component	Material	Grade
Inlet	Brass	CZ132 / CW602N
Outlet Body (10mm bore valve)	Bronze	SB-62 C8360
Outlet Body (15, 20 & 25mm bore valves)	Stainless Steel	1.4408 (316)
Spring	Stainless Steel	1.4310 (302)
Disc	Stainless Steel	S20910

Seal Materials

Viton® (FKM) -20°C to +250°C Nitrile (NBR) -20°C to +120°C Silicone -50°C to +200°C -60°C to +200°C PTFE -55°C to +130°C **EPDM**

Standard seal materials shown, others are available.

Easing Gear / Lifting Gear / Top Fitting Options

Sealed Cap (gas tight cap)



Sealed lever (gas tight)



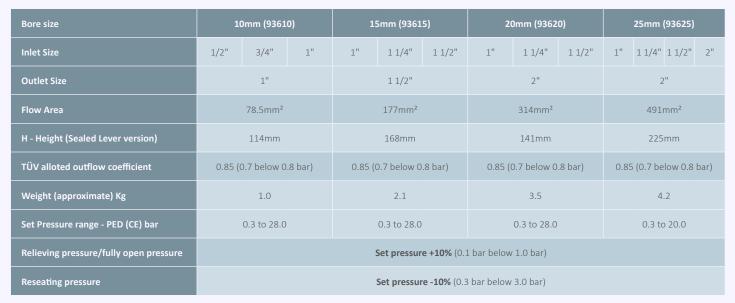
Rota-lift (not gas tight)



Open Lever (not gas tight)







- TÜV alloted outflow coefficients for pressures above 3.0/4.0 bar, for lower pressures please see the flow rate tables or contact Seetru.
- Maximum permissible built up back pressure = 10% of set pressure at or below which flow is not reduced.
- Stable operation on flows down to 50% of valve rated capacity.
- Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1

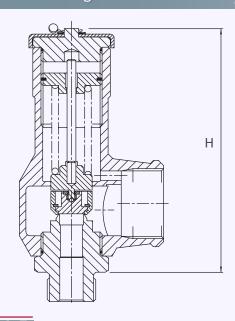
Standard INLET Connection Types

- BSP parallel male thread
- BSP taper male thread
- NPT male thread
- BSP parallel female thread (limited option)

Standard OUTLET Connection Types

BSP parallel female thread

Valve Drawing



Valve Selection Guide

Valve type	Select Bore	Inlet Size	Inlet Thread Type	Top Fitting	O'ring material (for cap)	Set pressure
936	Select bore size from above table	Select inlet size from above table	Select Inlet Thread type	Select easing gear/top fitting	See table	Set pressure from available range

EAC marking available upon request

Example of Valve Selection Process

	936	15	1"	BSP parallel	Rota Lift	Viton	17.5 bar
Selection	Valve Type	Bore = 15mm	Inlet Size	Inlet Thread Type	Top Fitting	O'ring	Set Pressure



^{*}Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour Type 936: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)					
		10mm	15mm	20mm	25mm		
bar	psi	Nm³/Hour	Nm³/Hour	Nm³/Hour	Nm³/Hour		
0.3	4.35	48.5	109.2	194.2	303.5		
0.5	7.25	59.0	132.9	236.2	369.1		
1	14.5	96.1	216.2	384.4	600.6		
2	29	146.1	328.7	584.4	913.2		
3	43.5	196.1	441.3	784.5	1225.8		
4	58	246.1	553.8	948.6	1538.4		
5	72.5	296.1	666.4	1184.7	1851.1		
6	87.00	346.2	778.9	1384.8	2163.7		
7	101.5	396.2	891.4	1584.8	2476.3		
8	116	446.2	1004.0	1784.9	2788.9		
9	130.5	496.2	1116.5	1985.0	3101.6		
10	145	546.7	1229.1	2185.1	3414.2		
15	217.5	796.3	1791.8	3185.5	4977.3		
20	290	1046.4	2354.6	4185.9	6540.4		
25	362.5	1296.5	2917.3	5186.3			
28	406	1446.6	3254.9	5786.5			

For any intermediate pressures/flows please contact Seetru

Capacity Table - In accordance with TÜV, STEAM. Kg/hour Type 936: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)					
		10mm	15mm	20mm	25mm		
bar	psi	Kg/hour of Steam	Kg/hour of Steam	Kg/hour of Steam	Kg/hour of Steam		
0.3	4.35	37.6	84.5	150.2	234.7		
0.5	7.25	46.6	104.8	186.3	291.1		
1	14.5	76.6	172.5	306.6	479.0		
2	29	115.1	259.0	460.5	719.5		
3	43.5	153.2	344.6	612.7	957.4		
4	58	190.9	429.7	763.9	1193.7		
5	72.5	228.6	514.3	914.4	1428.7		
6	87.00	266.1	598.6	1064.2	1662.9		
7	101.5	303.4	682.6	1213.5	1896.2		
8	116	340.6	766.5	1362.6	2129.1		
9	130.5	377.9	850.4	1511.8	2362.2		
10	145	415.1	933.9	1660.4	2594.4		
15	217.5	600.3	1350.7	2401.3	3752.0		
20	290	785.4	1767.2	3141.7	4909.0		
25	362.5	970.5	2183.7	3882.2			
28	406	1081.9	2434.4	4327.9			

For any intermediate pressures/flows please contact Seetru



Enclosed Discharge Safety Relief Valves

for compressed air or gases steam cryogenics & liquefied gases

Seetru Limited

Type 946 Threaded

Safety valves made from Stainless Steel < Enclosed discharge valve with threaded connections < Metal to metal sealing <

Example Applications

- Air / gas compressors
- Pressure vessels
- Medical gases/Technical gases
- Refrigeration (including ammonia)
- Thermal relief
- Steam systems
- Hydrogen

Specifications

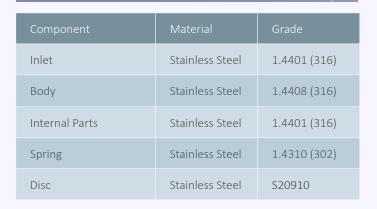
- Inlet connections: 1/2" to 2" threaded connections (depending on valve bore size) *For flanged connections see datasheet 946 Flanged
- Temperature range: -196°C to +250°C (depending on body o'ring material)
- Pressure range: 0.3 to 28.0 bar (depending on valve bore size)



Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1

Materials of Construction



Seal Materials

O'ring material – Top cap	Temperature Range
Viton® (FKM)	-20°C to +200°C
Nitrile (NBR)	-20°C to +120°C
Silicone	-50°C to +200°C
EPDM	-55°C to +130°C
PTFE	-196°C to +200°C

Standard seal materials shown, others are available.

Easing Gear / Lifting Gear / Top Fitting Options

Sealed Cap (gas tight cap)



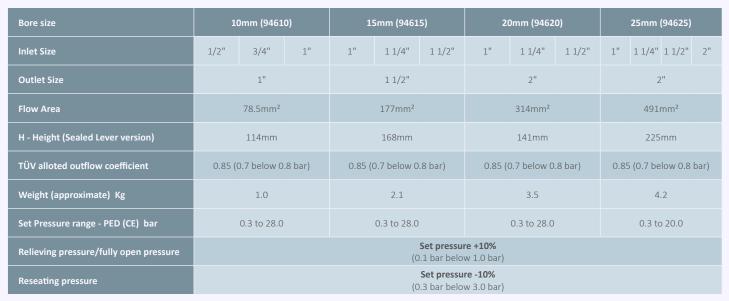
Sealed lever (gas tight)



Rota-lift (not gas tight)







- TÜV alloted outflow coefficients for pressures above 3.0/4.0 bar, for lower pressures please see the flow rate tables or contact Seetru.
- Maximum permissible built up back pressure = 10% of set pressure at or below which flow is not reduced.
- Stable operation on flows down to 50% of valve rated capacity. Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1

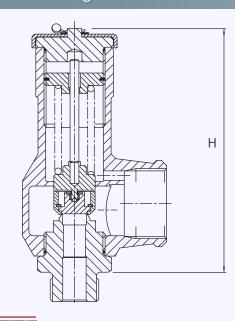
Standard INLET Connection Types

- BSP parallel male thread
- BSP taper male thread
- NPT male thread
- BSP parallel female thread (limited option)

Standard OUTLET Connection Types

BSP parallel female thread

Valve Drawing



Valve Selection Guide

Valve type	Select Bore	Inlet Size	Inlet Thread Type	Top Fitting	O'ring material (for cap)	Set pressure
946	Select bore size from above table	Select inlet size from above table	Select Inlet Thread type	Select easing gear/top fitting	See table	Set pressure from available range

EAC marking available upon request

Example of Valve Selection Process

Example	946	15	1"	BSP parallel	Sealed Lever	Viton	17.5 bar
Selection	Valve Type	Bore = 15mm	Inlet Size	Inlet Thread Type	Top Fitting	O'ring	Set Pressure



^{*}Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour Type 946: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
		10mm	15mm	20mm	25mm	
bar	psi	Nm³/Hour	Nm³/Hour	Nm³/Hour	Nm³/Hour	
0.3	4.35	48.5	109.2	194.2	303.5	
0.5	7.25	59.0	132.9	236.2	369.1	
1	14.5	96.1	216.2	384.4	600.6	
2	29	146.1	328.7	584.4	913.2	
3	43.5	196.1	441.3	784.5	1225.8	
4	58	246.1	553.8	948.6	1538.4	
5	72.5	296.1	666.4	1184.7	1851.1	
6	87.00	346.2	778.9	1384.8	2163.7	
7	101.5	396.2	891.4	1584.8	2476.3	
8	116	446.2	1004.0	1784.9	2788.9	
9	130.5	496.2	1116.5	1985.0	3101.6	
10	145	546.7	1229.1	2185.1	3414.2	
15	217.5	796.3	1791.8	3185.5	4977.3	
20	290	1046.4	2354.6	4185.9	6540.4	
25	362.5	1296.5	2917.3	5186.3		
28	406	1446.6	3254.9	5786.5		

For any intermediate pressures/flows please contact Seetru

Capacity Table - In accordance with TÜV, STEAM. Kg/hour Type 946: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
		10mm	15mm	20mm	25mm	
bar	psi	Kg/hour of Steam	Kg/hour of Steam	Kg/hour of Steam	Kg/hour of Steam	
0.3	4.35	37.6	84.5	150.2	234.7	
0.5	7.25	46.6	104.8	186.3	291.1	
1	14.5	76.6	172.5	306.6	479.0	
2	29	115.1	259.0	460.5	719.5	
3	43.5	153.2	344.6	612.7	957.4	
4	58	190.9	429.7	763.9	1193.7	
5	72.5	228.6	514.3	914.4	1428.7	
6	87.00	266.1	598.6	1064.2	1662.9	
7	101.5	303.4	682.6	1213.5	1896.2	
8	116	340.6	766.5	1362.6	2129.1	
9	130.5	377.9	850.4	1511.8	2362.2	
10	145	415.1	933.9	1660.4	2594.4	
15	217.5	600.3	1350.7	2401.3	3752.0	
20	290	785.4	1767.2	3141.7	4909.0	
25	362.5	970.5	2183.7	3882.2		
28	406	1081.9	2434.4	4327.9		

For any intermediate pressures/flows please contact Seetru



Enclosed Discharge Safety Relief Valves

for compressed air or gases

cryogenic & liquefied gas

hydrogen

Seetru Limited

Type 94605 / 946H5 / 95605 / 956H5

Safety valves made from stainles steel < Enclosed discharge with threaded connections <

Example Applications

- Air/Gas Compression
- Air/Gas Boosters
- Natural Gas
- Pressure Vessels
- Hydrogen Production
- Hydrogen Storage

Specifications



- ½" NPT, BSP & BSPT
- 9/16" Cone & Thread
- 3/4" Cone & Thread

• Outlet Connections

- ½" NPT & BSP
- ¾" NPT & BSP
- 1" NPT & BSP

Temperature Range

- Type 94605 and 946H5 = 0° to 250°C
- Type 95605 and 956H5 (H2 option) =-196°C to 250°C

• Temperature Range (Special Options)

- High temperature option, up to 300°C, available upon request
- -269°C version (up to 300 bar) available upon request

Pressure Range

- 35.0 to 515 bar (9*605)
- 35.0 to 1100 bar (9*6H5)

Materials of Construction

Component	Valve Type 2nd Digit	Material	Grade
Seat	4	Stainless	1.4057
	5		S20910
Body	4 & 5	Stainless	1.4401
Disc	4	Stainless	1.4057
	5	Cera	mic
Spring	4 & 5	Stainless	1.4401
Gaskets	4 & 5	PTFE	

For Hydrogen applications above 515 bar, a ceramic disc is required, use type 956H5



Key Features

- Compact and space saving design
- Designed and built for repeatable operation
- Advanced sealing technology with super-lapped hard-faced seat and disc, designed to offer robust high-performance sealing
- Orientable gas-tight packed lever option (9*6H5 only)
- Simple and robust design with three moving parts
- Maintenance friendly design
- Designed with Hydrogen embrittlement resistant materials (H₂ option)

Approvals

- BS EN ISO 4126-1
- PED 2014/68/EU
 - Module B TÜV Rheinland
 - Module D LRQA Deutschland
- PE(S)R 2016 (UKCA)
 - ∘ Module B TÜV UK
 - ∘ Module D LRQA UK
- Seat tightness better than API 527 EAC marking available upon request

Top Fitting Options

• Sealed Cap (gas tight cap)



Sealed lever (gas tight)

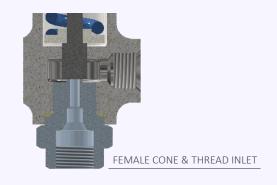




^{*}Maximum set pressure for steam is 85 bar

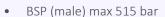


Model No.	9*6	9*6H5			
Bore	4.6mm				
Inlet	1/2" 9/16"		1/2"	9/16"	3/4"
Outlet	1/	1/2"	3/4"	1"	
Flow Area	16.6 mm²				
Height H	15	58		202	
Kdr	0.75				
Weight	1.5	i kg	2.8 kg		



9*6H5

Standard INLET Connection Types

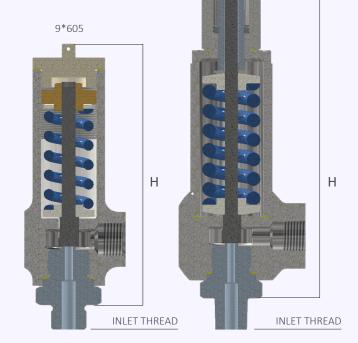


- BSPT (male) max 515 bar
- NPT (male) max 1034 bar
- Cone & Thread (female) max 1100 bar

KI

Standard OUTLET Connection Types

- BSP (female)
- NPT (female)



Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Valve Selection Guide - Type 94605, 946H5, 95605 & 956H5

Valve type	H ₂ or low temperature valve type 2 nd digit				Outlet Size	Outlet Connection	Easing Lever
	Yes	No					(Sealed Lever)
9*605			9/16" & 3/4"	C&T	C&T 1/2" NPT, BSP, BSPT NPT, BSP	NOT SEC.	
33	_		1/2"	NOT DOD DOOT			NOT DOD
	5	4	1/2"	NP1, BSP, BSP1		9*6H5 only	
9*6H5			9/16" & 3/4"	C&T	1/2", 3/4", 1"	1/2", 3/4", 1"	

Example of Valve Selection Process for Order Code 956H5F1297

Example	Approval	Materials from above Table	Bore	Inlet Size	Inlet Thread	Outlet Size	Outlet Thread	Duty	Set Pressure
Selection	PED and UKCA (ASME in process)	5 = Body=1.4401, Seat=S20910, Disc=Ceramic	4.6mm	1/2"	NPT	3/4"	NPT	Hydrogen	1000 bar



Capacity Table -Per EN 4126-7 and at 10% Overpressure Type 94605 / 946H5 / 95605 / 956H5: Flow rates at 10% above the set pressure.



Set Pres	ssure	Flow of Air
bar	psi	Nm³/hr
35	507.5	335.5
50	725	475.5
75	1087.5	709.0
100	1450	942.5
150	2175	1409.4
200	2900	1876.4
250	3625	2343.3
300	4350	2810.3
350	5075	3277.2
400	5800	3744.2
450	6525	4211.1
500	7250	4678.1
550	7975	5145.1
600	8700	5612.0
650	9425	6078.9
700	10150	6545.9
750	10875	7012.8
800	11600	7479.8
850	12325	7946.7
900	13050	8413.7
950	13775	8880.6
1000	14500	9347.6
1050	15225	9814.5
1100	15950	10281.5

Set Pres	ssure	Flow of Hydrogen
bar	psi	Nm³/hr
35	507.5	1273.2
50	725	1804.9
75	1087.5	2691.1
100	1450	3577.2
150	2175	5349.5
200	2900	7121.8
250	3625	8894.1
300	4350	10666.3
350	5075	12438.6
400	5800	14210.9
450	6525	15983.3
500	7250	17755.5
550	7975	19527.8
600	8700	21300.1
650	9425	23072.4
700	10150	24844.7
750	10875	26617.1
800	11600	28389.2
850	12325	30161.5
900	13050	31933.8
950	13775	33706.1
1000	14500	35478.5
1050	15225	37250.7
1100	15950	39023.0







Safety & Precision

Seetru Limited understands the critical nature of safety and precision in the pharmaceutical industry. We manufacture safety relief valves specifically designed to meet the stringent demands of your clean processing applications.

Our valves are constructed from materials that resist corrosion by various process fluids, they minimize contamination risks and ensure long-term functionality. Furthermore, these valves deliver precise pressure control to prevent dangerous overpressurisation, while their exceptional leak-tight sealing safeguards both product integrity and personnel.



Enclosed Discharge Safety Relief Valves

for compressed air or gases

steam

hygienic

Seetru Limited

Type 6G6 / 6G1

Clean Service/Hygienic Safety valves with Stainless Steel body < Enclosed discharge valve with Tri-Clamp inlet connections <

Safety valve for food industry & other hygienic applications including clean steam & gas applications

Example Applications

- Compressed air or gas
- Food production plants
- Hygienic applications
- Pressure vessels
- Medical gases
- Technical gases
- Steam systems

Specifications

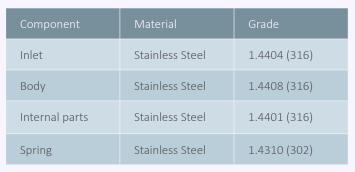
- Inlet connections: 1/2" to 1" Tr-Clamp (depending on bore size)
- Temperature:-15°C to +200°C (depending on seal material)
- Pressure range: 0.32 to 55.2 bar (depending on bore size)
 - Maximum 12 bar for Steam Applications.

Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- ASME BPVC VIII.1 & XIII (UV)
- CRN



Materials of Construction



SURFACE FINISH

Process Contact Surface

In accordance with ASME BPE-2005 Table SF-5. Surface designation Ra Max 15 $\mu inches,\,0.4~\mu m,\,Electropolished.$

Other Surfaces

Not greater than 60 $\mu inches,\, 1.5~\mu m.$

Seal Materials

Seal Material	Temperature Range
Perfluoroelastomer (FFKM)	-15°C to +200°C

Standard seal materials shown, others are available. Elastomer soft sealing specifically developed for food & pharmaceutical industries.

Compliant to:

- 1. FDA 21 CFR 177.2600
- 2. United States Pharmacopoeia (USP) Class VI
- 3. SP3A Sanitary Standards for Multiple Use Rubber Dairy Equipment No 18-03.

Easing Gear / Lifting Gear Options

Standard option:



Other Options:



Cooled lover (see tight)





Bore size	9.5mm (6G	610/6G110)	13.7mm (66	6613/6G113)
Inlet Size	1/2"	3/4"	3/4"	1"
Outlet Size	3/	4"	1	"
Flow Area	70.9	mm²	147.7	7mm²
H - Height (Sealed cap version)	160	mm	180mm	
TÜV alloted outflow coefficient	0.77 abov	e 1.55 bar	0.77	
NB Certified rated slope (ASME)	1.71 sc	1.71 scfm/psia		fm/psia
Weight (approximate) Kg	0	.9	1.3	
Set Pressure range - PED (CE) bar	0.48 to 55.2 (max	12 bar for Steam)	0.32 to 49.0 (max 12 bar for Steam)	
Set Pressure range - ASME (UV) psi	22.5 to 800.4		20.3 to 710.5	
Relieving pressure/fully open pressure	Set pressure +10% (0.1 bar below 1.0 bar)		Set pressure + 10% (0.3 bar below 1.4 bar)	
Reseating pressure		Set pressure -10%	(0.3 bar minimum)	

Stable operation on flows down to 50% of valve rated capacity.

Standard Thread Connection Types



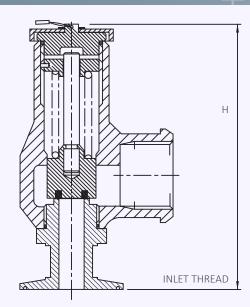
 Tri-Clamp® compatable generally in accordance with ASME BPE 2005 & BS 4825-3.

Standard Outlet Connection Types



BSP Female Pipe threads (G)

Valve drawing

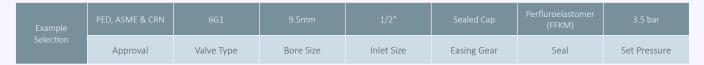


Valve Selection Guide



EAC marking available upon request

Example of Valve Selection Process





^{*}Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour

Type 6G6: Flow rates at 10% above the set pressure

Sot Proceuro		Bore Size (D0)		
Set Pressu	re Mil	9.5mm (6G610)	13.7mm (6G613)	
bar	psi	Nm³∕Hour	Nm³/Hour	
0.32	4.64		123.9	
0.48	6.96	46.5	138.2	
1	14.5	71.4	178.8	
2	29	119.5	248.4	
3	43.5	160.4	333.5	
4	58	201.3	418.5	
5	72.5	242.1	503.6	
6	87	283.0	588.6	
7	101.5	323.9	673.6	
8	116	364.8	758.7	
9	130.5	405.7	843.7	
10	145	446.6	928.8	
15	217.5	651.1	1354.0	
20	290	855.5	1779.2	
25	362.5	1060.0	2204.5	
30	435	1264.5	2629.7	
35	507.5	1468.9	3054.9	
40	580	1673.4	3480.2	
45	652.5	1877.9	3905.4	
49	710.5	2041.5	4245.6	
50	725	2082.4		
55.2	800.4	2295.0		

For any intermediate pressures/flows please contact Seetru

Capacity Table - In accordance ASME section VIII Div I, AIR at 60°F and 14.7 psia/scfm. SCFM

Type 6G1: Flow rates at 10% above the set pressure

Cat Duage	Set Pressure		
Set Pressu		9.5mm (6G610)	13.7mm (6G613)
psi	bar	SCFM	SCFM
20.3	1.40		131.9
22.5	2.50	68.7	139.4
30	2.07	81.5	165.5
34.8	2.80	90.6	183.8
40	2.76	100.4	203.7
43.5	3.00	106.9	217.0
50	3.45	119.2	241.8
82	5.66	179.3	363.9
100	6.90	213.2	432.6
150	10.34	307.2	623.4
200	13.79	401.2	814.2
250	17.24	495.3	1005.0
300	20.69	589.3	1195.8
350	24.14	683.3	1386.6
400	27.59	777.4	1577.4
435	30.00	843.2	1711.0
450	31.03	871.4	1768.2
500	34.48	965.4	1959.0
507.5	35.00	979.5	1987.6
550	37.93	1059.4	2149.8
600	41.38	1153.4	2340.6
650	44.83	1247.5	2531.4
700	48.28	1341.5	2722.2
710.5	49.00	1361.3	2762.3
750	51.72	1435.5	
800.4	55.20	1530.3	

For any intermediate pressures/flows please contact Seetru



Enclosed Discharge Safety Relief Valves

for compressed air or gases | cryogenic & liquefied gas | steam | refrigeration

hydrogen

Seetru Limited

Type 946 Flanged

Safety valves made from Stainless Steel < Enclosed discharge valve with flanged connections < Metal to metal sealing <

Example Applications

- Air / gas compressors
- Pressure vessels
- Medical gases/Technical gases
- Refrigeration (including ammonia)
- Thermal relief
- Steam systems
- Hydrogen

Specifications

- Inlet connections: DN15 (1/2), DN20 (3/4") or DN25 (1") flange – DIN EN1092 and ANSI flanges are available
- Temperature range: -196°C to +250°C (depending on body o'ring material)
- Pressure range: 0.3 to 28.0 bar

Materials of Construction

Component	Material	Grade
Inlet & Outlet Flanges	Stainless Steel	1.4401 (316)
Body	Stainless Steel	1.4408 (316)
Internal Parts	Stainless Steel	1.4401 (316)
Spring	Stainless Steel	1.4310 (302)
Disc	Stainless Steel	S20910



Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)
- Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1

C€ HR FAI

Seal Materials

O'ring material – Top cap	Temperature Range
Viton® (FKM)	-20°C to +200°C
Nitrile (NBR)	-20°C to +120°C
Silicone	-50°C to +200°C
EPDM	-55°C to +130°C
PTFE	-196°C to +200°C

Standard seal materials shown, others are available.

Easing Gear / Lifting Gear / Top Fitting Options

Sealed Cap (Gas Tight Cap)

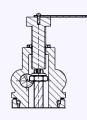


Sealed lever (Gas Tight)



Sealed lever (With Test Gag)

A test gag is used to prevent the valve from opening at the set pressure during hydraulic testing when commissioning a system. Once tested, the gag screw is removed and replaced with a short blanking plug before the valve is place in service.









Valve Drawing



- TÜV alloted outflow coefficients for pressures above 3.0 bar, for lower pressures please see the flow rate tables or contact Seetru.
- Maximum permissible built up back pressure = 10% of set pressure at or below which flow is not reduced.
- Stable operation on flows down to 50% of valve rated capacity.
- Leak tightness at 90% set pressure to API 527 and in accordance with EN ISO 4126-1.

Standard INLET Connection Types

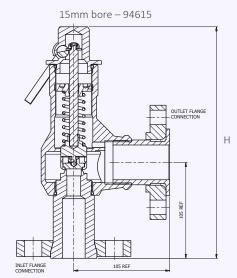


- DIN EN1092 Flange PN16, PN25 or PN40
- ASME Flange CL150, CL300 or CL600

Standard OUTLET Connection Types

- DIN EN1092 Flange PN16, PN25 or PN40
- ASME Flange CL150 or CL300

10mm bore — 94610 OUTLET FLANCE CONNECTION BLET FLANCE SORNECTION 95 REF

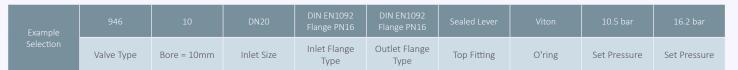


Valve Selection Guide

Valve type	Select Bore	Inlet Size	Inlet Flange Type	Outlet Flange Type	Easing Gear	O'ring material (for cap)
946	Select bore size from above table	Select inlet size from above table	Select Inlet Flange type	Select Outlet Flange type	Select easing gear/top fitting	See table

EAC marking available upon request

Example of Valve Selection Process





^{*}Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour Type 946: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
		10mm	15mm			
bar	psi	Nm³/Hour	Nm³/Hour			
0.3	4.35	48.5	109.2			
0.5	7.25	59.0	132.9			
1	14.5	96.1	216.2			
2	29	146.1	328.7			
3	43.5	196.1	441.3			
4	58	246.1	553.8			
5	72.5	296.1	666.4			
6	87.00	346.2	778.9			
7	101.5	396.2	891.4			
8	116	446.2	1004.0			
9	130.5	496.2	1116.5			
10	145	546.7	1229.1			
15	217.5	796.3	1791.8			
20	290	1046.4	2354.6			
25	362.5	1296.5	2917.3			
28	406	1446.6	3254.9			

For any intermediate pressures/flows please contact Seetru

Capacity Table - In accordance with TÜV, STEAM. Kg/hour Type 946: Flow rates at 10% above the set pressure



	S-A Durant		Bore Size (D0)				
Set Pressure		10mm	15mm				
bar	psi	Kg/hour of Steam	Kg/hour of Steam				
0.3	4.35	37.6	84.5				
0.5	7.25	46.6	104.8				
1	14.5	76.6	172.5				
2	29	115.1	259.0				
3	43.5	153.2	344.6				
4	58	190.9	429.7				
5	72.5	228.6	514.3				
6	87.00	266.1	598.6				
7	101.5	303.4	682.6				
8	116	340.6	766.5				
9	130.5	377.9	850.4				
10	145	415.1	933.9				
15	217.5	600.3	1350.7				
20	290	785.4	1767.2				
25	362.5	970.5	2183.7				
28	406	1081.9	2434.4				

For any intermediate pressures/flows please contact Seetru



Atmospheric Discharge Safety Relief Valves

for steam

Seetru Limited

Type 75008

Safety valves made from Brass < Atmospheric discharge with threaded connections <

Example Applications

- Small steam vessels
- Industrial coffee machines
- Autoclaves / Steam sterilisers
- Small steam boilers



Specifications

- Inlet connections: 1/4" to 1/2"
- Temperature: Up to 150°C (depending on seal material)
- Pressure range: 0.27 to 5.0 bar

Approvals

- Designed in accordance with BS EN ISO-4126-1 &-7
- PED 2014/68/EU (CE)
- PE(S)R UK SI 2016 No. 1105 (UKCA)

Materials of Construction

Component	Material	Grade
Body	Brass	BS2874 CZ132
Internal Parts	Brass	BS2874 CZ132
Spring	Stainless Steel	302 S56)

Seal Materials

Seal Material	Temperature Range
Silicone	-40°C to +150°C
EPDM	-45°C to +140°C
Aflas	-20°C to +200°C

Easing Gear / Lifting Gear Options

- Standard option Ring Pull
- Other options Rota Lift or Spindle lift

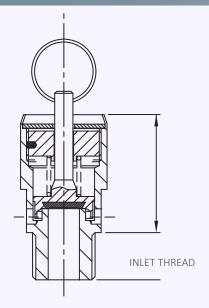




Valves with Rota-lift Easing Gear



Bore size	7.9mm				
Inlet Size	1/4" 3/8" 1/2"				
Flow Area	49mm²				
TÜV alloted outflow coefficient	0.66				
Weight (approximate) Kg	0.1				
Set Pressure range - PED (CE) bar	0.27 to 5.0 bar				
Relieving Pressure/Fully Open Pressure	Set pressure +10% (0.1 bar below 1.0 bar)				
Reseating Pressure	Set pressure -10% (0.3 bar below 3.0 bar)				



Standard Thread Connection Types



- BSP Parallel male thread
- BSP Taper male thread
- NPT male thread

Valve Selection Guide



Approval Required	Valve type	Inlet Size	Thread Type	Easing Gear	Seal Material
				Ring-Pull is	Silicone
PED (CE)	Select inlet size from above table Select thread type	75008 Select inlet size from above table Select thread type	Select thread type	the standard option (see other	EPDM
	Wode mon			options)	Aflas

EAC marking available upon request

Example of Valve Selection Process



Example	CE	75008	1/4"		Pull-Ring		
Selection	Approval	Valve Type	Inlet Size	Thread Type	Easing Gear	Seal	Set Pressure



^{*}Please send your selected details to Seetru and we can provide the full ordering code, price and lead-time.

Capacity Table - In accordance with TÜV, STEAM Kg/Hr Type 75008 Flow rates at 10% above the set pressure



		Bore Size (D0)		
Set Pressure		3.2mm		
bar	psi	Kg/Hr of Steam		
0.27	3.9	21.1		
0.5	7.3	27.4		
1.0	14.5	37.1		
1.5	21.8	46.5		
2.0	29.0	55.8		
3.0	43.5	74.2		
4.0	58.0	92.5		
5.0	72.5	110.7		



Supplied by Seetru

Pressure Reducing Valves / Pressure Regulating Valve / Overflow Valves





Reliable products ... sourced and supplied by Seetru

Alongside our own manufactured items, Seetru also offers a range of pressure regulating valves, pressure reducing valves, and overflow valves. They are mainly used in industrial plants, plant engineering, and process engineering. Pressure-reducing valves can be supplied with flanges, weld ends, or threaded connections.



About SCHLEY Products

SCHLEY valves are first-class quality and therefore of long lifetime and low maintenance. Thanks to their self-regulating mode of operation, they work extremely reliably and accurately in a compact design. We not only offer valves for your standard applications, but also customized valve solutions are one of our strengths. We will be pleased to design the valves precisely according to your specifications and support you in project management.







Same-Day Despatch

Order Before 2pm on a Seetru Business Day

About the Seetru Same-Day Despatch Range

Seetru offers atmospheric and piped discharge relief valves with brass or stainless steel construction. Also available is our LGS and LGS HI-FLOW range, these multi-purpose safety valves are manufactured in bronze and are suitable for liquid, gas, and steam applications. The Seetru P3W Pressure & Temperature Relief Valve provides protection against both excess temperature as well as over pressurisation.





Seetru Distributor Network

Find Your Local Supplier for Seetru Products

Global Reach, Local Support

Seetru is a global company with an extensive distributor network. This means that wherever you are on the planet, you can access our industry-leading safety valves and receive exceptional service.

www.seetru.com/our-distributors

