



Multi-Purpose Safety Relief Valves,  
for Liquid, Gas & Steam Applications



### Features

The Seetru LGS® Safety Relief Valve range represents 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. The LGS® range is suitable for a wide variation in flow characteristics, coping with both low volume and high relief capacity applications. The single trim design means that the components are all common across liquid, gas and steam; and that any LGS® valve can be used in any of these applications.

- Bronze body with dezincification resistant brass wetted parts; stainless steel spring, spindle and seal retainer
- Supplied with Declaration of conformity, EN 10204 3.1 material certification available on request
- Test certificate supplied free of charge
- Size range DN15 to DN50 (½" BSP to 2" BSP)
- Degrease for oxygen available on request
- PTFE or EPDM sealing as standard (other seal materials available upon request)
- Easy to fit spares kit
- Self-draining design
- Adaptors available to give male connections
- Open Lever or Sealed Cap
- Designed in accordance with the requirements of BS EN ISO 4126 Part 1 and CE marked as a Category IV Safety Accessory
- WRAS approved

### HI-FLOW

### Open Lever / Sealed Cap



### Pressures & Temperatures

PRESSURE RANGE	TEMPERATURE RANGE
<b>0.2 to 24 bar g.</b> <small>(steam up to 14 bar g. with PTFE seals, contact Seetru for information on other seals)</small>	<b>-60°C to +200°C</b> <small>with PTFE seals (EPDM -45°C to +140°C)</small>

### Applications

Applications		HI-FLOW
<ul style="list-style-type: none"> <li>• Hot water, including boilers (vented and unvented)</li> <li>• Steam boilers and steam plants</li> <li>• Pump and thermal relief</li> <li>• Bypass relief</li> </ul>	<ul style="list-style-type: none"> <li>• Process liquids and gases</li> <li>• Pressure vessels and lines</li> <li>• Heating and cooling systems</li> <li>• Heat exchangers and industrial cooling systems</li> <li>• Refrigeration systems</li> </ul>	<ul style="list-style-type: none"> <li>• Refrigeration systems</li> <li>• Pressure booster systems</li> <li>• Solar power systems</li> <li>• District heating systems</li> <li>• Water supply systems</li> </ul>
		<ul style="list-style-type: none"> <li>• Sewage systems</li> <li>• Pressure control and regulation</li> <li>• Chemical plants</li> <li>• District heating systems</li> <li>• Ship building and marine applications</li> </ul>

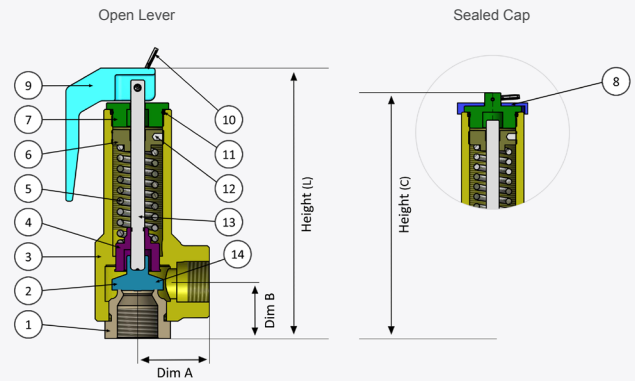
### Materials Of Construction

### HI-FLOW

COMPONENT	MATERIAL
1 Seat	Dezincification Resistant Material
2 Lift Aid Assembly (Recommended Spare)	Dezincification Resistant Material
3 Body	Bronze CC491K / C83600
4 Piston	Dezincification Resistant Material
5 Spring	Steel 1.4401
6 Adjuster	Brass
7 Cap	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

### Dimensional Drawing

### HI-FLOW



### Dimensions & Weights

### HI-FLOW

Size (Inlet x Outlet)	Dim A mm (inches)	Dim B mm (inches)	Height (L) mm (inches)	Height (C) mm (inches)
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)

### Standards & Approvals

### HI-FLOW

Name	Region	Logo	Description
PED	EU		PED approved to Category 4, Modules B and D (by TUV & Lloyds) In accordance with BS EN ISO 4126, CE-Marked as standard.
EAC	Russia, Belarus & Kazakhstan		EAC Customs Union Declaration TR TS 010-2011 & EAC Customs Union Certificate of Conformity TR TS 032-2013.
WRAS	UK		WRAS approved, meeting the requirements of the UK Water Supply Regulations.

HI-FLOW Discharge capacity for WATER at 10% over-pressure <sup>1,2</sup>											Kdr = 0.26	
Valve size	DN In	15mm (½")		20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		
	DN Out	20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		50mm (2")		
	d <sub>o</sub> (mm)	15		20		25		32		40		
Set pressure (bar g.)	Set pressure (psi g.)	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	
1.0	14.5	2453.4	10.8	4361.6	19.2	6815.0	30.0	11165.7	49.2	17446.4	76.9	
2.0	29.0	3469.6	15.3	6168.2	27.2	9637.9	42.5	15790.7	69.6	24672.9	108.8	
4.0	58.0	4906.8	21.6	8723.2	38.5	13630.0	60.1	22331.4	98.5	34892.8	153.8	
6.0	87.0	6009.6	26.5	10683.7	47.1	16693.3	73.6	27350.2	120.6	42734.7	188.4	
8.0	116.0	6939.3	30.6	12336.5	54.4	19275.7	85.0	31581.3	139.2	49345.8	217.6	
10.0	145.0	7758.3	34.2	13792.6	60.8	21550.9	95.0	35309.0	155.7	55170.3	243.3	
12.0	174.0	8498.8	37.5	15109.0	66.6	23607.8	104.1	38679.1	170.5	60436.0	266.5	
15.0	217.5	9502.0	41.9	16892.4	74.5	26394.4	116.4	43244.5	190.7	67569.6	297.9	
20.0	290.0	10971.9	48.4	19505.7	86.0	30477.6	134.4	49934.5	220.2	78022.6	344.0	
24.0	348.0	12019.1	53.0	21367.4	94.2	33386.5	147.2	54700.5	241.2	85469.5	376.9	

<sup>1</sup> Metric units are calculated to BS EN ISO4126-7:2013 and displayed in their customary units

<sup>2</sup> Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units

HI-FLOW Discharge capacity for HOT WATER at 10% over-pressure (Unvented Systems) <sup>1</sup>											Kdr = 0.38	
Valve size	DN In	15mm (½")		20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		
	DN Out	20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		50mm (2")		
	d <sub>o</sub> (mm)	15		20		25		32		40		
Set pressure (bar g.)	Set pressure (psi g.)	kW	BTU/sec	kW	BTU/sec	kW	BTU/sec	kW	BTU/sec	kW	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	
1.0	14.5	46.7	44.2	83.0	78.7	129.7	122.9	212.5	201.4	332.0	314.6	
2.0	29.0	71.0	67.3	126.2	119.6	197.2	186.9	323.1	306.2	504.8	478.4	
4.0	58.0	119.6	113.3	212.6	201.5	332.2	314.9	544.3	515.9	850.4	806.0	
6.0	87.0	168.2	159.4	299.0	283.4	467.2	442.8	765.5	725.5	1196.0	1133.6	
8.0	116.0	216.8	205.5	385.4	365.3	602.2	570.8	986.7	935.2	1541.7	1461.2	
10.0	145.0	265.4	251.6	471.8	447.2	737.2	698.8	1207.9	1144.8	1887.3	1788.8	
12.0	174.0	314.0	297.6	558.2	529.1	872.2	826.7	1429.1	1354.5	2232.9	2116.4	
15.0	217.5	386.9	366.7	687.8	652.0	1074.8	1018.7	1760.9	1669.0	2751.4	2607.8	
20.0	290.0	508.4	481.9	903.9	856.7	1412.3	1338.6	2313.9	2193.1	3615.5	3426.8	
24.0	348.0	605.6	574.0	1076.7	1020.5	1682.3	1594.5	2756.3	2612.5	4306.7	4082.0	

<sup>1</sup> Calculations based on Hot Water at or above 100°C, using the Kdr of Gas

<sup>2</sup> Calculations are in accordance to BS EN ISO 4126-1:2004 National Annex NA

HI-FLOW Discharge capacity for AIR at 10% over-pressure <sup>1,2,3</sup>											Kdr = 0.38	
Valve size	DN In	15mm (½")		20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		
	DN Out	20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		50mm (2")		
	d <sub>o</sub> (mm)	15		20		25		32		40		
Set pressure (bar g.)	Set pressure (psi g.)	l/sec	SCFM	l/sec	SCFM	l/sec	SCFM	l/sec	SCFM	l/sec	SCFM	
0.2	2.9	16.1	34.2	28.6	60.7	44.7	94.9	73.2	155.5	114.4	243.0	
1.0	14.5	27.6	58.6	49.0	104.1	76.6	162.7	125.5	266.5	196.1	416.4	
2.0	29.0	41.9	89.0	74.5	158.3	116.5	247.3	190.8	405.2	298.2	633.2	
4.0	58.0	70.6	150.0	125.6	266.7	196.2	416.7	321.5	682.7	502.3	1066.7	
6.0	87.0	99.3	211.0	176.6	375.1	276.0	586.0	452.1	960.1	706.5	1500.2	
8.0	116.0	128.1	271.9	227.7	483.4	355.7	755.4	582.8	1237.6	910.6	1933.7	
10.0	145.0	156.8	332.9	278.7	591.8	435.5	924.7	713.5	1515.0	1114.8	2367.3	
12.0	174.0	185.5	393.9	329.7	700.2	515.2	1094.1	844.1	1792.5	1318.9	2800.8	
15.0	217.5	228.5	485.3	406.3	862.8	634.8	1348.1	1040.1	2208.7	1625.2	3451.1	
20.0	290.0	300.3	637.7	533.9	1133.7	834.2	1771.4	1366.8	2902.3	2135.6	4534.9	
24.0	348.0	357.7	759.6	636.0	1350.5	993.7	2110.1	1628.1	3457.2	2543.9	5401.9	

<sup>1</sup> Metric units are calculated to BS EN ISO4126-7:2013 and converted to l/sec at 1.013 bar a. @ 15°C

<sup>2</sup> Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units

<sup>3</sup> To convert from l/sec (1.013 bar a. @ 15°C) to Nm<sup>3</sup>/hr (1.013 bar a. @ 0°C) multiply by 3.413

HI-FLOW Discharge capacity for SATURATED STEAM at 10% over-pressure <sup>1,2,3,4</sup>											Kdr = 0.38	
Valve size	DN In	15mm (½")		20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		
	DN Out	20mm (¾")		25mm (1")		32mm (1¼")		40mm (1½")		50mm (2")		
	d <sub>o</sub> (mm)	15		20		25		32		40		
Set pressure (bar g.)	Set pressure (psi g.)	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	
1.0	14.5	77.1	164.2	137.0	292.0	214.1	456.2	350.8	747.5	548.1	1167.9	
2.0	29.0	115.8	249.7	205.9	444.0	321.7	693.7	527.1	1136.6	823.6	1775.9	
4.0	58.0	192.1	420.7	341.5	748.0	533.7	1168.7	874.4	1914.8	1366.2	2991.9	
6.0	87.0	267.6	591.7	475.8	1052.0	743.4	1643.7	1218.0	2693.0	1903.1	4207.9	
8.0	116.0	342.7	762.7	609.2	1356.0	951.9	2118.7	1559.5	3471.3	2436.8	5423.8	
10.0	145.0	417.5	933.7	742.3	1660.0	1159.8	2593.7	1900.3	4249.5	2969.2	6639.8	
12.0	174.0	492.1	1104.7	874.8	1963.9	1366.9	3068.7	2239.5	5027.7	3499.2	7855.8	
14.0	217.5	566.7	1275.7	1007.5	2267.9	1574.2	3543.7	2579.2	5805.9	4030.0	9071.8	

<sup>1</sup> Metric units are calculated to BS EN ISO4126-7:2013 and displayed in their customary units

<sup>2</sup> Imperial units are calculated to ASME Section VIII Division 1 and displayed in their customary units

<sup>3</sup> Calculations for saturated steam only

<sup>4</sup> PTFE seals up to 14 bar g., EPDM seals up to 2.5 bar g. - contact Seetru for details on maximum steam pressure for other seal materials