

Enclosed Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

steam

cryogenics & liquefied gases

hydrogen

Type 936 Threaded

Safety valves made with brass inlets
Enclosed discharge valve with threaded connections
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: -196°C to +250°C (depending on body o'ring material)
- Pressure range: 0.3 to 28.0 bar (depending on valve bore size)

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	1.4401 (316)

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



Seal Materials

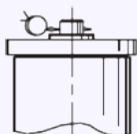
This valve using metal to metal sealing. There is a choice of o'ring used for the sealed cap/lever.

O'ring material	Temperature Range
Viton® (FKM)	-20°C to +250°C
Nitrile (NBR)	-196°C to +150°C
Silicone	-50°C to +250°C
PTFE	-196°C to +250°C
EPDM	-40°C to +150°C

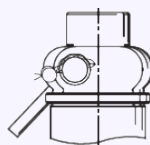
-196°C is only suitable for sealed cap/sealed lever valves
Standard seal materials shown, others are available.

Easing Gear / Lifting Gear / Top Fitting Options

- Sealed Cap (gas tight cap)



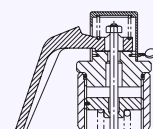
- Sealed lever (gas tight)



- Rota-lift (not gas tight)



- Open Lever (not gas tight)

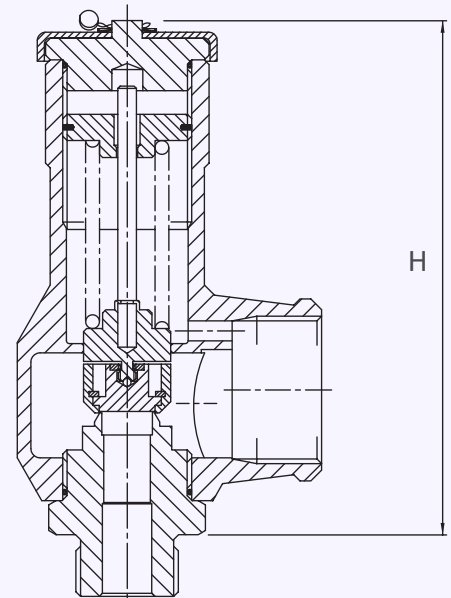


Technical information by bore size

Bore size	10mm (93610)			15mm (93615)			20mm (93620)			25mm (93625)			
	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	2"
Inlet Size	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	2"
Outlet Size	1"			1 1/2"			2"			2"			
Flow Area	78.5mm ²			177mm ²			314mm ²			491mm ²			
H - Height (Sealed Lever version)	114mm			168mm			141mm			225mm			
TÜV alloted outflow coefficient	0.85 (0.7 below 0.8 bar)			0.85 (0.7 below 0.8 bar)			0.85 (0.7 below 0.8 bar)			0.85 (0.7 below 0.8 bar)			
Weight (approximate) Kg	1.0			2.1			3.5			4.2			
Set Pressure range - PED (CE) bar	0.3 to 28.0			0.3 to 28.0			0.3 to 28.0			0.3 to 20.0			
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)												

- 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

Valve Drawing



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 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	Select pressure from available range

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

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

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	Nm ³ /Hour	Nm ³ /Hour	Nm ³ /Hour	Nm ³ /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