

Enclosed Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

steam

refrigeration

hydrogen

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: -50°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	AISI 440B

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)
- EAC
- Leak tightness at 90% set pressure to API 527 and in
accordance with EN ISO 4126-1

CE UK EAC

Seal Materials

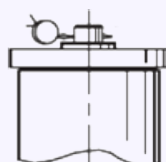
This valve using metal to metal sealing. There is a choice of o-ring used for the sealed cap/lever.

O-ring material – Top cap	Temperature Range
Viton® (FKM)	-20°C to +250°C
Nitrile (NBR)	-30°C to +150°C
Silicone	-50°C to +250°C
EPDM	-40°C to +150°C

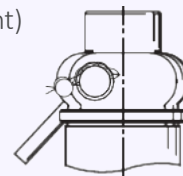
Standard seal materials shown, others are available.

Easing Gear / Lifting Gear / Top Fitting Options

- Sealed Cap (gas tight cap)



- Sealed lever (gas tight)



Technical information by bore size

Bore size	10mm (94610)			15mm (94615)
Inlet Size	DN15 (1/2")	DN20 (3/4")	DN25 (1")	DN25 (1")
Outlet Size	DN25 (1")			DN40 (1 1/2")
Flow Area	78.5mm ²			177mm ²
H - Height (Sealed Lever version)	200mm			253mm
TÜV allotted outflow coefficient	0.83 (above 3.0 bar)			0.74 (above 3.0 bar)
Weight (approximate) Kg	3.0			5.3
Set Pressure range - PED (CE) bar	0.3 to 28.0			0.3 to 28.0
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 allotted 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

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

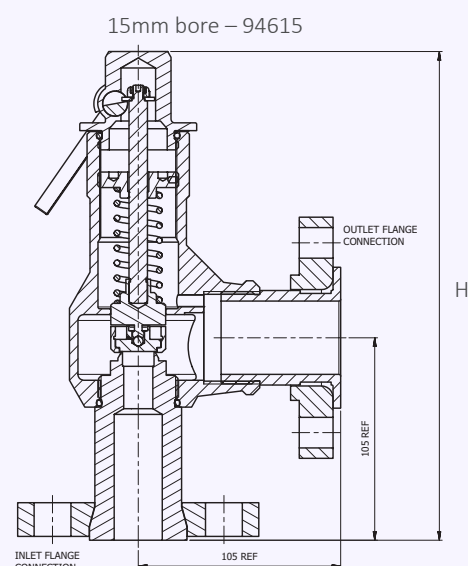
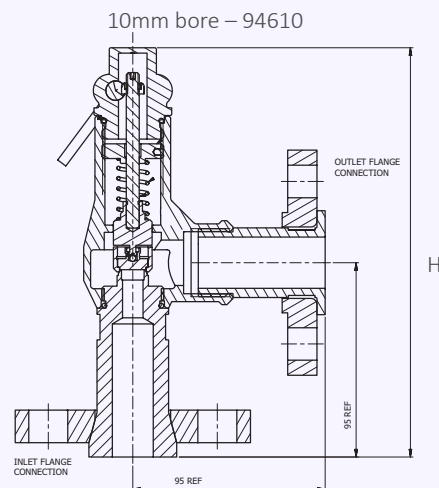
EAC marking available upon request

***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	946	10	DN20	DIN EN1092 Flange PN16	DIN EN1092 Flange PN16	Sealed Lever	Viton	10.5 bar	16.2 bar
	Valve Type	Bore = 10mm	Inlet Size	Inlet Flange Type	Outlet Flange Type	Top Fitting	O'ring	Set Pressure	Set Pressure

Valve Drawing



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	39	76		
0.5	7.25	56	104		
1	14.5	84	155		
2	29	135	270		
3	43.5	191	384		
4	58	240	482		
5	72.5	289	580		
6	87.00	338	678		
7	101.5	386	776		
8	116	425	874		
9	130.5	484	972		
10	145	533	1070		
15	217.5	777	1560		
20	290	1021	2049		
25	362.5	1266	2539		
28	406	1412	2833		

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		
bar	psi	Kg/hour of Steam	Kg/hour of Steam		
0.3	4.35	32.5	63.3		
0.5	7.25	44.5	82.5		
1	14.5	66.1	121.7		
2	29	106.2	213.4		
3	43.5	149	299		
4	58	186	373		
5	72.5	222	446		
6	87.00	259	520		
7	101.5	295	592		
8	116	332	666		
9	130.5	368	738		
10	145	405	812		
15	217.5	585	1174		
20	290	765	1535		
25	362.5	947	1900		
28	406	1055	2116		

For any intermediate pressures/flows please contact Seetru