

# Enclosed Discharge Safety Relief Valves

for compressed air & gas

hydrogen

## Type B4605 / B6605 / 359

Safety valves made from Stainless Steel <  
Enclosed discharge valve with threaded connections <

### Example Applications

- Air/Gas compressors
- Natural Gas
- Pressure vessels
- Medical gases
- Technical Gases
- Hydrogen production/generation

### Specifications

- Inlet connections: 3/8" and 1/2"
- Temperature range:
  - 0°C to 200°C (with 1.4057 (431) stainless steel inlet)
  - -50°C to 150°C (with 1.4401 (316) stainless steel inlet)
- Pressure range: 35.0 to 500.0 bar

### Materials of Construction

Component	Material	Grade
Inlet	Stainless Steel	1.4057 (431)
		1.4401 (316)
Body	Stainless Steel	1.4408 (316)
Internal Parts	Stainless Steel	1.4305 (303)
Spring	Stainless Steel	1.4310 (302)

### 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
- CRN



### Inlet Seat Material

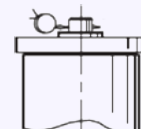
This valve seals using a metal ball design

Seal Material	Temperature Range
Stainless steel 1.4057 (431)	0°C to +200°C
Stainless steel 1.4401 (316)	-50C to +150°C

Standard seal materials shown, others are available.

### Top Fitting Options

- Standard Option  
Sealed Cap (gas tight cap)

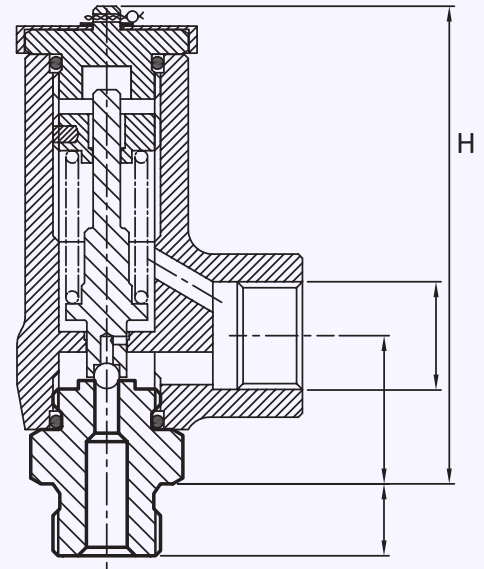


## Technical information by bore size

Bore size	4.6mm	
Inlet Size	3/8"	1/2"
Outlet Size	1/2"	
Flow Area	16.6mm <sup>2</sup>	
H - Height	96mm	
TÜV alloted outflow coefficient	0.402	
NB Certified rated slope (ASME)	0.34 scfm/psia	
Weight (approximate) Kg	0.8	
Set Pressure range - PED (CE) bar	35.0 to 500.0	
Set Pressure range - ASME (UV) psi	507.5 to 7250.0	
Relieving pressure/fully open pressure	Set pressure +10%	
Reseating pressure	Set pressure -10%	

Maximum permissible built up back pressure = 10% of set pressure at or below which flow is not reduced

## Valve drawing



### IMPORTANT NOTE:

These valves should only be tested for set pressure on liquid prior to final installation. Valves that are tested on air & fully lifted will cause damage to the sealing face.

## Standard Thread Connection Types

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

## Standard Outlet Connection Types

- BSP Parallel female thread
- NPT female thread

## Valve Selection Guide

Valve Type	Inlet Material	Approval Required (Available for both Inlet materials)	Select Bore	Inlet Size	Inlet Thread Type	Outlet Thread Type	Easing Gear	Seal Material
B6605	Stainless Steel 1.4057 (431)	PED (CE)	4.66mm	Select inlet size from above table	Select Inlet thread type	Select Outlet thread type	Sealed cap	Metal ball seal
B4405	Stainless Steel 1.4401 (316)	PED (CE)						
B6105	Stainless Steel 1.4057 (431)	PED (CE), ASME (UV, NB), CRN						
B4105	Stainless Steel 1.4401 (316)	PED (CE), ASME (UV, NB), CRN						

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	1.4057 (431)	359	PED (CE)	4.66	1/2"	BSP taper	BSP	Sealed Cap	Ball Seal	385 bar
	Inlet Material	Valve Type	Approval	Bore = 4.6mm	Inlet Size	Inlet Thread Type	Outlet Thread Type	Top Fitting	Seal	Set Pressure

## Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m<sup>3</sup>/hour Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
bar	psi		Nm <sup>3</sup> /Hour			
35	507.5	4.6mm	179.8			
50	725.0	4.6mm	254.9			
100	1450.0	4.6mm	505.2			
150	2175.0	4.6mm	755.5			
200	2900.0	4.6mm	1005.8			
250	3625.0	4.6mm	1256.0			
300	4350.0	4.6mm	1506.3			
350	5075.0	4.6mm	1756.6			
400	5800.0	4.6mm	2006.9			
450	6525.0	4.6mm	2257.2			
500	7250.0	4.6mm	2507.5			

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 Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
psi	bar		SCFM			
507.5	35	4.6mm	195			
725	50	4.6mm	276			
1450	100	4.6mm	547			
2175	150	4.6mm	818			
2900	200	4.6mm	1090			
3625	250	4.6mm	1361			
4350	300	4.6mm	1632			
5075	350	4.6mm	1903			
5800	400	4.6mm	2174			
6525	450	4.6mm	2445			
7250	500	4.6mm	2716			

For any intermediate pressures/flows please contact Seetru