

Enclosed Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

cryogenic & liquefied gas

steam

refrigeration

hydrogen

Type

94605 / 946H5 / 95605 / 956H5

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

Example Applications

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

Specifications

- **Inlet Connections**
 - 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**
 - 0° to 300°C as standard
 - -196°C to 300°C H₂ option
 - **Pressure Range**
 - 35.0 to 515 bar (9*605)
 - 35.0 to 1100 bar (9*6H5)
- *Maximum set pressure for steam is 85 bar

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	Ceramic	
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

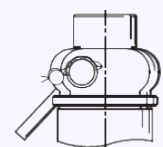
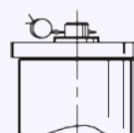
- Compact and space saving design
- Designed and built for repeatable operation
- Advanced sealing technology with super-lapped hard-faced seat and disc, designed to offer robust high-performance sealing
- Orientable gas-tight packed lever option (9*6H5 only)
- Simple and robust design with three moving parts
- Maintenance friendly design
- All wrought construction with no castings
- 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

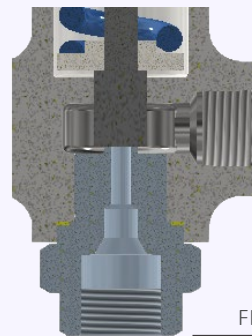
Top Fitting Options

- Sealed Cap (gas tight cap)
- Sealed lever (gas tight)



Technical information by bore size

Model No.	9*605		9*6H5		
Bore	4.6				
Inlet	1/2"	9/16"	1/2"	9/16"	3/4"
Outlet	1/2"		1/2"	3/4"	1"
Flow Area	16.6				
Height H	158		202		
Kdr	0.78				
Weight	1.5 kg		2.8 kg		



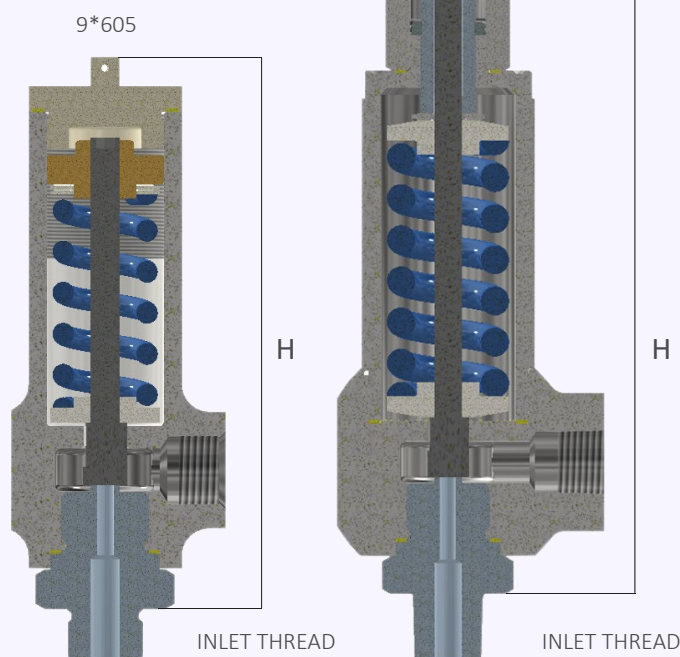
FEMALE CONE & THREAD INLET

Standard INLET Connection Types

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

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		Inlet Size	Inlet Connection	Outlet Size	Outlet Connection	Easing Lever (Sealed Lever)
	Yes	No					
9*605	5	4	9/16" & 3/4"	C&T	1/2"	NPT, BSP	9*6H5 only
			1/2"	NPT, BSP, BSPT			
			1/2"				
9*6H5			9/16" & 3/4"	C&T			

Example of Valve Selection Process for Order Code 956H5F1297

Example Selection	Approval	Materials from above Table	Bore	Inlet Size	Inlet Thread	Outlet Size	Outlet Thread	Duty	Set Pressure
	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 Pressure 		Flow of Air		
bar	psi	kg/s	Nm ³ /hr	scfm
35	507.5	0.121	336.8	209.4
50	725	0.171	477.5	296.9
75	1087.5	0.256	711.9	442.6
100	1450	0.340	946.3	588.4
150	2175	0.508	1415.2	879.9
200	2900	0.676	1884.0	1171.4
250	3625	0.844	2352.9	1462.9
300	4350	1.013	2821.7	1754.4
350	5075	1.181	3290.6	2045.9
400	5800	1.349	3759.4	2337.4
450	6525	1.518	4228.3	2628.9
500	7250	1.686	4697.1	2920.5
550	7975	1.854	5166.0	3212.0
600	8700	2.022	5634.8	3503.5
650	9425	2.191	6103.7	3795.0
700	10150	2.359	6572.5	4086.5
750	10875	2.527	7041.4	4378.0
800	11600	2.695	7510.2	4669.5
850	12325	2.864	7979.1	4961.0
900	13050	3.032	8447.9	5252.5
950	13775	3.200	8916.8	5544.0
1000	14500	3.369	9385.6	5835.5
1050	15225	3.537	9854.4	6127.0
1100	15950	3.705	10323.3	6418.6

Set Pressure 		Flow of Hydrogen		
bar	psi	kg/s	Nm ³ /hr	scfm
35	507.5	0.03	1258.83	782.68
50	725	0.04	1774.51	1103.31
75	1087.5	0.07	2621.46	1629.91
100	1450	0.09	3453.31	2147.11
150	2175	0.13	5074.04	3154.80
200	2900	0.17	6641.10	4129.13
250	3625	0.20	8158.40	5072.52
300	4350	0.24	9629.46	5987.16
350	5075	0.28	11057.42	6875.00
400	5800	0.31	12445.12	7737.81
450	6525	0.35	13795.13	8577.18
500	7250	0.38	15109.78	9394.57
550	7975	0.41	16391.19	10191.29
600	8700	0.44	17641.29	10968.55
650	9425	0.47	18861.85	11727.44
700	10150	0.50	20054.50	12468.97
750	10875	0.53	21220.73	13194.08
800	11600	0.56	22361.91	13903.61
850	12325	0.59	23479.32	14598.37
900	13050	0.62	24574.12	15279.07
950	13775	0.64	25647.41	15946.39
1000	14500	0.67	26700.20	16600.97
1050	15225	0.69	27733.43	17243.38
1100	15950	0.72	28747.98	17874.18