

Atmospheric Discharge Safety Relief Valves

Seetru Limited

for compressed air or gases

Type 616 / 611

Safety valves made from Brass <
Atmospheric discharge with threaded connections <

Example Applications

- Compressors
- Pressure vessels
- Pneumatic systems
- Transport and railway systems

Specifications

- Inlet connections: ¼" to 2" (depending on bore size)
- Temperature: -40°C to +200°C (depending on seal material)
- Pressure range: 2.0 to 55.0 bar (depending on bore size)

Materials of Construction

Component	Material	Grade
Inlet	Brass	CW614N
	Stainless Steel	1.4401 (316)
Body	Brass	CW614N
Internal parts	Brass	CW614N
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)
- ASME BPVC VIII.1 & XIII (UV)
- CRN (for 18mm & 20mm bore valves only)



Seal Materials

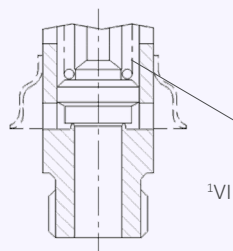
Seal Material	Temperature Range
Viton® (FKM)	-15°C to +200°C
Nitrile (NBR)	-40°C to +120°C

Easing Gear / Lifting Gear Options

- Standard option – Rota-lift cap, twist type
- None – No easing gear
- Lever lift – available on request (10-20mm bores)

Other options:

¹Downward deflecting shroud available for valves with 10 to 20mm bores



¹VIEW SHOWING OPTIONAL SHROUD AVAILABLE

Technical information by bore size



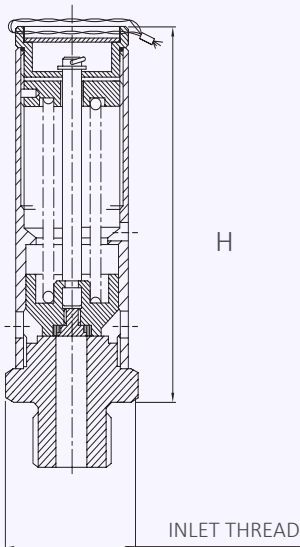
Bore Size	8mm			10mm (9.6mm)				13mm			18mm			20mm			
Inlet Size	1/4"	3/8"	1/2"	3/8"	1/2"	3/4"	1"	3/4"	1"	1 1/4"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	2"
Flow Area	50.27mm²			72.4mm²				132.7mm²			254.5mm²			314.0mm²			
H - Height (Rota-lift cap version)	81mm			109mm (up to 19 bar) 119.5mm (19-44 bar)				124.5 bar			148mm (up to 18 bar) 156mm (18-36 bar)			166mm			
TÜV allotted outflow coefficient ¹	0.77			0.77				0.77			0.77			0.77			
NB Certified rated slope (ASME)	X			X				X			6.04 scfm/psia			7.32 scfm/psia			
Weight (approximate) Kg	0.4			0.8				1.0			1.8			2.1			
Set Pressure range - PED (CE) bar	14.5- 55.0			2.3- 44.0				2.8- 41.4			2.1- 36.0			2.0- 18.0			
Set Pressure range - ASME (UV) psi	X			X				X			30.45- 522.0			29.0- 261.0			
Relieving pressure/fully open pressure								Set pressure +10%									
Reseating pressure								Set pressure -10%									

Valves with Rota-lift Easing Gear



Standard Thread Connection Types

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



Valve Selection Guide



Approval Required	Valve Type	Select Bore	Inlet Size	Thread Type	Easing Gear	Seal Material
PED (CE)	616 (Brass inlet)	82 = 8mm	Select inlet size from above table	Select thread type	Select easing gear (rota-lift is the standard option)	Viton® (FKM)
	626 (St. Steel inlet)	10 = 9.6mm				
		13 = 13mm				
PED (CE), ASME (UV) & CRN	611 (Brass inlet)	18 = 18mm				Nitrile (NBR)
	621 (St. Steel inlet)	20 = 20mm				

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	CE	616	13	1"	BSP Taper	Rota-lift	Viton	10.5 bar
	Approval	Valve Type	Bore = 13mm	Inlet Size	Thread Type	Easing Gear	Seal	Set Pressure

Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour

Type 616: Flow rates at 10% above the set pressure.



Set Pressure		Bore Size (D0)				
		8mm	9.6mm	13mm	18mm	20mm
bar	psi	Nm³/Hour	Nm³/Hour	Nm³/Hour	Nm³/Hour	Nm³/Hour
2	29					529.5
2.1	30.45				443.5	547.6
2.3	33.35		134.5		472.9	583.8
2.8	40.6		155.4	284.9	546.3	674.5
3	43.5		163.7	300.2	575.6	710.7
4	58		205.5	376.8	722.4	891.9
5	72.5		247.2	453.4	869.3	1073.2
10	145		456.1	836.3	1603.3	1979.4
14.5	210.25	447.2	644.0	1180.9	2264.0	2795.0
15	217.5	461.7	664.8	1219.2	2337.4	2885.7
20	290	606.7	873.6	1602.1	3071.4	
25	362.5	751.7	1082.4	1984.9	3805.5	
30	435	896.7	1291.2	2367.8	4539.5	
35	507.5	1041.7	1500.0	2750.7	5273.6	
36	522	1070.7	1541.8	2827.3	5420.4	
40	580	1186.7	1708.8	3133.6		
41.4	600.3	1227.3	1767.3	3240.8		
44	638	1302.7	1875.9			
45	652.5	1331.7				
50	725	1476.7				
55	797.5	1621.7				

Capacity Table In accordance with ASME BPVC.XIII, AIR at 60°F and 14.7 psia/scfm. SCFM

Type 616 (611): Flow rates at 10% above the set pressure.



Set Pressure		Bore Size (D0)				
		8mm	9.6mm	13mm	18mm	20mm
psi	bar	SCFM	SCFM	SCFM	SCFM	SCFM
29	2.00					341
30.45	2.50				291	525
35	2.41				321	389
40	2.80				355	429
50	3.45				421	510
60	4.14				487	590
70	4.83				554	671
80	5.52				620	751
90	6.21				687	832
100	6.90	Not ASME Approved	Not ASME Approved	Not ASME Approved	753	912
150	10.34				1085	1315
200	13.79				1418	1717
250	17.24				1750	2120
300	20.69				2082	
350	24.14				2414	
400	27.59				2746	
450	31.03				3079	
500	34.48				3411	
522	36.00				3557	