

Enclosed Discharge Safety Relief Valves

for compressed air or gases

Type 636 / 631

Safety valves with bronze body <
Enclosed discharge valve with threaded connections <

Example Applications

- Air / gas compressors
- Pressure vessels
- Pneumatic systems
- Medical gases
- Technical gases

Specifications

- Inlet connections: 3/8" to 2" (depending on bore size)
- Temperature: -40°C to +200°C (depending on seal material)
- Pressure range: 0.32 to 55.2 barg (depending on bore size)

Materials of Construction

Component	Material	Grade
Inlet	Brass	CW614N
	Stainless Steel	1.4401 (316)
Body	Bronze	CC491K SB-62 C83600
Internal parts	Brass	CW614N
	Stainless Steel	1.4401 (316)
Spring	Stainless Steel	1.4310 (302)



Approvals

- TÜV Type test approval 728 (10mm nominal bore)
- TÜV Type test approval 761 (13mm nominal bore)
- TÜV Type test approval 916 (18mm nominal bore)
- TÜV Type test approval 892 (20mm nominal bore)
- TÜV Type test approval 830 (25mm nominal bore)
- Designed in accordance with BS EN SO 4126-1.
- PED 2014/68/EU
- A.S.M.E. Boiler & Pressure Vessel code section VIII for air/gas
- CRN
- EAC



Seal Materials

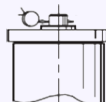
Seal Material	Temperature Range
Viton® (FKM)	-15°C to +200°C
Nitrile (NBR)	-40°C to +120°C

Standard seal materials shown, others are available.

Easing Gear / Lifting Gear Options

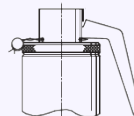
• **Standard option:**

Rota-lift, twist type (not gas tight)

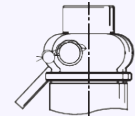


• **Other Options:**

Sealed Cap (gas tight cap)



Unsealed lever (not gas tight)



Sealed lever (gas tight)

Technical information by bore size

Bore size	9.5/10mm			13.7mm			17mm			20mm			25mm		
Inlet Size	3/8"	1/2"	3/4"	1/2"	3/4"	1"	1"	1 1/4"	1 1/2"	1"	1 1/4"	1 1/2"	1 1/4"	1 1/2"	2"
Outlet Size	3/4"			1"			1 1/2"			2"			2"		
Flow Area	70.9mm ² (above 1.55 barg)			147.7mm ²			227mm ²			314mm ²			490.4mm ²		
H - Height (Rota-lift cap version)	102mm (up to 33 bar) 116mm (33-55.2 bar)			143mm (up to 35 bar) 172.5mm (35-49 bar)			204mm			227mm			252mm		
TÜV alloted outflow coefficient	0.78			0.71			0.74 (1.0 to 2.4 bar) 0.84 (2.4 to 35.0 bar)			0.76 (3.0 to 22.0 bar) 0.80 (22.0 to 35.0 bar)			0.85		
NB Certified rated slope (ASME)	1.74 scfm/psia			3.47 scfm/psia			5.60 scfm/psia			7.77 scfm/psia			12.26 scfm/psia		
Weight (approximate) Kg	0.8			1.1			3.6			4.0			5.1		
Set Pressure range - PED (CE) Bar g	0.48 to 55.2			0.32 to 49.0			1.0 to 35.0			3.0 to 35.0			5.65 to 30.0		
Set Pressure range - ASME (UV) psi g	22.5 to 800.4			20.3 to 710.5			34.8 to 507.5			43.5 to 507.5			82.0 to 435.0		
Relieving pressure/fully open pressure	Set Pressure +10%														
Reseating pressure	Set Pressure -10% (0.3 Bar g minimum)														

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.

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

Approval Required	Valve type	Select Bore	Inlet Size	Thread Type	Outlet Thread Type	Easing Gear	Seal Material
PED (CE)	636 (Brass inlet)	Select bore size from above table	Select inlet size from above table	Select Inlet thread type	Select Outlet thread type	Select easing gear/top fitting	Viton® (FKM)
	656 (St. Steel inlet)						Nitrile (NBR)
PED (CE), ASME (UV) & CR	631 (Brass inlet)						Other
	651 (St. Steel inlet)						

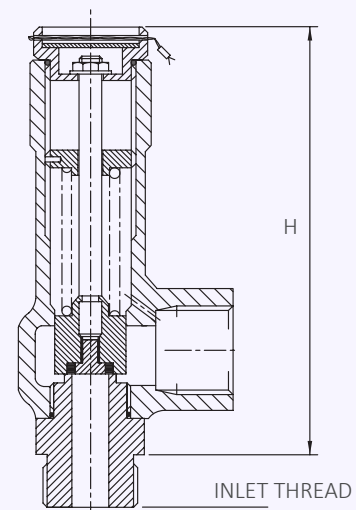
EAC marking available upon request

***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/PED	636	20	1 1/2"	BSP Taper	BSP parallel	Rota-lift	Viton	10.5 barg
	Approval	Valve Type	Bore = 20mm	Inlet Size	Inlet Thread Type	Outlet Thread Type	Easing Gear	Seal	Set Pressure

Valves with Rota-lift Easing Gear



Capacity Table - In accordance with TÜV, AIR at 0°C and 1013mbar. Normal m³/hour
 Type 636/656: Flow rates at 10% above the set pressure



Set Pressure 		Bore Size (D0)				
		9.5mm	13.7mm	17mm	20mm	25mm
Bar g	Psi g	Nm ³ /Hour	Nm ³ /Hour	Nm ³ /Hour	Nm ³ /Hour	Nm ³ /Hour
0.32	4.64		114.2			
0.48	6.96	48.9	124.5			
1	14.5	76.9	164.9	241.8		
2	29	121.0	229.1	367.6		
3	43.5	162.4	307.5	560.2	701.4	
4	58	203.8	385.9	703.0	880.3	
5	72.5	245.3	464.3	845.9	1059.2	
5.65	81.93	272.2	515.3	938.7	1175.5	2054.3
6	87	286.7	542.7	988.7	1238.2	2163.7
7	101.5	328.1	621.2	1131.6	1417.0	2476.4
8	116	369.5	699.6	1274.5	1596.0	2789.0
9	130.5	410.9	778.0	1417.3	1774.9	3101.7
10	145	452.4	856.4	1560.2	1953.8	3414.3
15	217.5	659.5	1248.5	2274.5	2848.2	4977.5
20	290	866.6	1640.6	2988.7	3742.8	6540.7
25	362.5	1073.8	2032.7	3703.0	4881.2	8103.9
30	435	1280.9	2424.8	4417.3	5823.0	9667.1
35	507.5	1488.1	2816.9	5131.6	6764.6	
40	580	1695.2	3209.0			
45	652.5	1902.3	3601.1			
49	710.5	2068.0	3914.8			
50	725	2109.4				
55.2	800.4	2324.8				

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
 Type 631/651: Flow rates at 10% above the set pressure



Set Pressure		Bore Size (D0)				
		9.5mm	13.7mm	17mm	20mm	25mm
Psi g	Bar g	SCFM	SCFM	SCFM	SCFM	SCFM
20.3	1.40		131.9			
22.5	2.50	68.7	139.4			
30	2.07	81.5	165.5			
34.8	2.80	90.6	183.8	296.7		
40	2.76	100.4	203.7	328.7		
43.5	3.00	106.9	217.0	350.2	486.0	
50	3.45	119.2	241.8	390.3	541.5	
82	5.66	179.3	363.9	587.3	814.9	1285.8
100	6.90	213.2	432.6	698.1	968.7	1528.4
150	10.34	307.2	623.4	1006.1	1395.9	2202.6
200	13.79	401.2	814.2	1314.0	1823.2	2876.8
250	17.24	495.3	1005.0	1621.9	2250.4	3550.8
300	20.69	589.3	1195.8	1929.8	2677.6	4224.9
350	24.14	683.3	1386.6	2237.8	3104.9	4899.1
400	27.59	777.4	1577.4	2545.7	3532.2	5573.3
435	30.00	843.2	1711.0	2761.2	3831.2	6045.2
450	31.03	871.4	1768.2	2853.6	3959.3	
500	34.48	965.4	1959.0	3161.5	4386.6	
507.5	35.00	979.5	1987.6	3207.7	4450.7	
550	37.93	1059.4	2149.8			
600	41.38	1153.4	2340.6			
650	44.83	1247.5	2531.4			
700	48.28	1341.5	2722.2			
710.5	49.00	1361.3	2762.3			
750	51.72	1435.5				
800.4	55.20	1530.3				

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