



GOE-455
Stainless Steel
Safety Relief Valve
Single High Lift
For Steam, Water, Oil, Air & Gasses
Flanged PN40 Inlet x PN16 Outlet



The Goetze 455 safety relief valve has a stainless steel body with various seal options that makes it a particularly economic option for high-capacity pressure relief duties.

This valve can be supplied either with open or closed cap. There is also an option with a bellows assembly in either elastomer or stainless steel.

Features, Benefits & Approvals

- TÜV test approval 2094
- DIN EN ISO 4126-1
- Optional bellows assembly
- Option of open or gas tight spring housing
- Lever or dome top
- Side discharge
- Set, tested and certified prior to despatch

Pressure & Temperature

Pressure range:-
0.2 to 40 bar

Temperature range:-

- Stainless Steel Disc : -60°C to 400°C
- EPDM Disc : -40°C to 170°C
- FKM Disc : -20°C to 200°C
- FFKM Disc : -10°C to 260°C
- PTFE Disc 0.2 - 10 bar : -60°C to 225°C
- PTFE Carbon Disc 10 - 40 bar : -60°C to 225°C

DN	15x25	20x32	25x40	32x50	40x65	50x80	65x100	80x125	100x150
Inlet Flange PN	40	40	40	40	40	40	40	40	40
Outlet Flange PN	16	16	16	16	16	16	16	16	16
L	80	95	100	110	115	120	140	160	180
h	90	85	105	115	140	150	170	195	220
D	95	105	115	140	150	165	185	200	235
K / nxd	65 / 4x14	75 / 4x14	85 / 4x14	100 / 4x18	110 / 4x18	125 / 4x18	145 / 8x18	160 / 8x18	190 / 8x22
D1	115	140	150	165	185	200	220	250	285
K1 / n1xd1	85 / 4x14	100 / 4x18	110 / 4x18	125 / 4x18	145 / 8x18	160 / 8x18	180 / 8x18	210 / 8x22	240 / 8x22
H / H1¹	167 / 207	165 / 205	190 / 230	260 / 300	302 / 330	352 / 378	427 / 462	486 / 530	577 / 624
H2² / H3³	206 / 246	204 / 244	229 / 269	321 / 361	363 / 391	413 / 439	497 / 532	556 / 600	647 / 694
Lmax	75	85	95	120	130	160	205	215	255
A02 (BSP)	1/4	1/4	1/4	1/4	1/2	1/2	1/2	1/2	1/2
do	15.0	18.0	22.5	29.3	36.0	45.0	59.0	72.0	90.0
Weight (Dome Top)	5.0	6.0	8.0	16.0	18.5	25.0	45.0	57.5	91.5
Weight (Lifting Lever)	5.5	6.5	8.5	18.00	20.5	27.0	48.5	61.0	95.0

¹ Figures with bellows ² Figures with lifting lever ³ Figures with bellows & lifting lever

Additional Data - Bellows Version

DN	15x25	20x32	25x40	32x50	40x65	50x80	65x100	80x125	100x150
Min Set Pressure (bar)	1.2	0.8	0.5	1.0	0.9	3.0	0.3	0.2	0.2
Max Counter Pressure (Ps < 5 bar)	4.0	4.0	4.0	4.0	4.0	4.0	3.0 ⁴	3.0 ⁴	3.0 ⁴
Max Counter Pressure (Ps ≥ 5 bar)	16.0	12.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0

⁴ Valid for Ps < 3.5 bar

Materials

Body & Spring Housing	Stainless Steel (CF8M)
Valve Seat	Stainless Steel (316L)
Spring	Stainless Steel (302)
Bellows (optional)	Stainless Steel (316 Ti)
Disc	Stainless Steel • EPDM • FKM • FFKM • PTFE

GOE-455
Capacity Charts/Sizing

ISO 4126-1 CAPACITY VALUES AIR (Nm³/h) @ 10% above set pressure

Set Pressure (bar)	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
0.2	71.7	118.1	184.5	312.9	472.4	738.1	1268.7	1889.4	2952.2
0.5	112.6	173.6	271.3	460.0	694.4	1085.0	1865.1	2777.6	4340.0
1.0	167.1	249.9	390.5	662.3	999.8	1562.2	2685.4	3999.1	6248.6
1.5	225.2	329.3	514.6	872.6	1317.3	2058.3	3538.2	5269.1	8233.0
2.0	278.0	404.6	632.2	1072.1	1618.5	2528.9	4347.2	6473.9	10115.5
2.5	325.9	479.7	749.5	1271.1	1918.8	2998.2	5153.9	7675.3	11992.7
3.0	373.8	553.2	864.4	1465.8	2212.8	3457.5	5943.5	8851.2	13830.0
4.0	469.7	695.2	1086.3	1842.1	2780.8	4345.0	7469.1	11123.2	17380.1
5.0	565.8	837.4	1308.4	2218.8	3349.6	5233.8	8997.0	13398.5	20935.2
7.0	758.4	1122.4	1753.7	2973.9	4489.6	7014.9	12058.8	17958.2	28059.7
8.0	854.8	1265.2	1976.8	3352.3	5060.7	7907.3	13592.7	20242.7	31629.2
10.0	1048.2	1551.4	2424.0	4110.6	6205.5	9696.1	16667.7	24821.9	38784.3
12.0	1242.2	1838.4	2872.5	4871.1	7353.6	11490.0	19751.5	29414.4	45960.1
16.0	1631.7	2414.9	3773.2	6398.6	9659.5	15093.0	25945.0	38638.0	60371.9
20.0	2023.4	2994.7	4679.2	7934.9	11978.8	18716.9	32174.5	47915.2	74867.4
24.0	2417.5	3577.8	5590.4	9480.1	14311.4	22361.5	38439.7	57245.5	89446.1
28.0	2813.8	4164.4	6506.9	11034.3	16657.7	26027.7	44741.9	66630.8	104110.6
32.0	3212.4	4754.4	7428.7	12597.5	19017.5	29714.9	51080.3	76070.2	118859.7
36.0	3613.4	5347.8	8356.0	14169.9	21391.3	33424.0	57456.2	85565.3	133695.8
40.0	4016.7	5944.7	9288.6	15751.5	23778.9	37154.5	63869.1	95115.5	148618.0

ISO 4126-1 CAPACITY VALUES STEAM (kg/h) @ 10% above set pressure

Set Pressure (bar)	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
0.2	60.5	99.6	155.6	263.8	389.2	622.3	1069.7	1593.0	2489.0
0.5	91.9	141.6	221.3	375.2	566.5	885.1	1521.5	2265.9	3540.4
1.0	133.1	199.1	311.1	524.5	796.3	1244.3	2138.9	3185.3	4977.0
1.5	178.2	260.5	407.0	690.2	1042.0	1628.1	2798.8	4168.0	6512.6
2.0	218.5	318.1	497.0	842.8	1272.3	1988.0	3417.4	5089.3	7952.0
2.5	254.9	375.2	586.3	994.2	1500.8	2345.0	4031.1	6003.3	9380.1
3.0	291.1	430.8	673.1	1141.5	1723.2	2692.5	4628.4	6892.7	10769.8
4.0	363.1	537.5	839.8	1424.1	2149.8	3359.1	5774.3	8599.2	13436.3
5.0	434.8	643.5	1005.5	1705.1	2574.1	4022.1	6914.0	10296.5	16088.3
7.0	577.4	854.5	1335.2	2264.2	3418.1	5340.7	9180.7	13672.2	21362.8
8.0	648.4	959.7	1499.5	2542.7	3836.6	5997.8	10310.3	15354.4	23991.3
10.0	790.3	1169.6	1827.5	3099.1	4678.4	7310.1	12566.1	18713.7	29240.2
12.0	931.5	1378.6	2154.1	3652.9	5514.5	8616.3	14811.6	22057.8	34465.4
16.0	1213.9	1796.5	2807.1	4760.2	7186.1	11228.3	19301.6	28744.5	44913.2
20.0	1496.1	2214.2	3459.8	5867.0	8857.0	13839.0	23789.5	35427.9	55356.1
24.0	1778.3	2631.9	4112.4	6973.7	10527.7	16449.5	28276.9	42110.7	65798.0
28.0	2061.3	3050.7	4766.7	8083.2	12202.7	19066.7	32775.9	48810.8	76266.8
32.0	2345.2	3470.8	5423.2	9196.5	13883.3	21692.7	37290.0	55533.3	86770.8
36.0	2630.4	3892.9	6082.7	10315.0	15571.8	24330.9	41825.1	62287.0	97323.5
40.0	2916.7	4316.8	6745.0	11438.0	17267.1	26979.8	46378.6	69068.3	107919.2

ISO 4126-1 CAPACITY VALUES WATER (m³/h) @ 10% above set pressure

Set Pressure (bar)	DN15	DN20	DN25	DN32	DN40	DN50	DN65	DN80	DN100
0.2	2.4	3.7	5.9	9.9	15.0	23.4	40.3	60.0	93.7
0.5	3.4	5.4	8.4	14.2	21.5	33.5	57.6	85.8	134.1
1.0	4.6	7.3	11.4	19.3	29.2	45.6	78.4	116.8	182.5
1.5	5.6	9.0	14.0	23.7	35.8	56.0	96.2	143.3	224.0
2.0	6.5	10.4	16.2	27.4	41.4	64.7	111.2	165.7	258.9
2.5	7.3	11.6	18.1	30.7	46.3	72.4	124.5	185.3	289.6
3.0	8.0	12.7	19.8	33.6	50.8	79.3	136.4	203.1	317.4
4.0	9.2	14.7	22.9	38.9	58.7	91.7	157.6	234.7	366.6
5.0	10.3	16.4	25.6	43.5	65.6	102.5	176.2	262.4	410.0
7.0	12.2	19.4	30.3	51.4	77.7	121.3	208.6	310.6	485.3
8.0	13.1	20.8	32.4	55.0	83.0	129.7	223.0	332.1	518.9
10.0	14.6	23.2	36.3	61.5	92.8	145.1	249.4	371.4	580.2
12.0	16.0	25.4	39.7	67.4	101.7	158.9	273.2	406.8	635.7
16.0	18.5	29.4	45.9	77.8	117.5	183.5	315.5	469.8	734.1
20.0	20.7	32.8	51.3	87.0	131.3	205.2	352.8	525.3	820.8
24.0	22.7	36.0	56.2	95.3	143.9	224.8	386.4	575.5	899.2
28.0	24.5	38.9	60.7	102.9	155.4	242.8	417.4	621.6	971.3
32.0	26.2	41.5	64.9	110.1	166.1	259.6	446.3	664.6	1038.4
36.0	27.8	44.1	68.8	116.7	176.2	275.4	473.3	704.9	1101.4
40.0	29.3	46.4	72.6	123.1	185.8	290.3	498.9	743.0	1161.0