

**TOSACA**  
Safety relief valves

## Model 1415 – Safety Relief Valve

### Description

Type Safety and Relief valve  
 Connections Flanged ASME/ANSI B16.5  
 Rating 150#/300# 600#/900#/1500#/2500#  
 Material Carbon steel A 216 WCB / WCC  
 Carbon steel A 217 WC6  
 Special constructions  
 Temperature range -28°C to +400°C  
 Stainless steel -96°C to +400°C

### Requirements

Calculation API RP 520  
 Design/Size API STD 526, ASME Section VIII  
 Materials EN / ASTM / ASME  
 Inspection EN-4126-1 / 7 API STD 527 MSS-SP-55  
 Tolerances EN-4126-1 and ASME UG-126

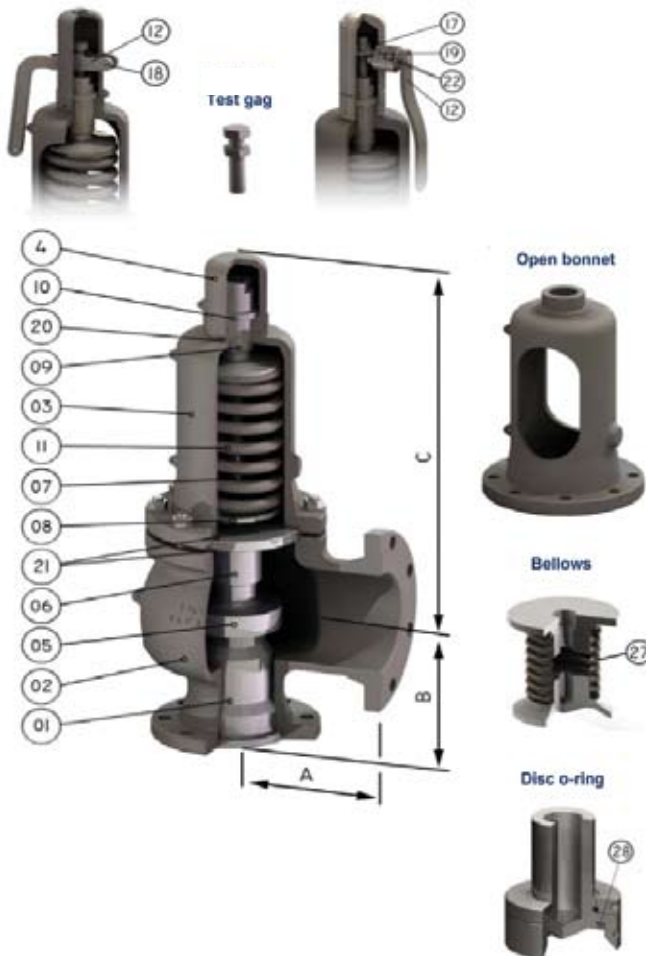


### Technical Information

Applications Steam, gases, vapours and liquids  
 Min. Set pressure 0,2 barg  
 Seat metal-metal, PTFE, Viton,  
 Nozzle SS+Stellite (600#, 900#, 1500# & 2500#)  
 Overpressure 10% for steam, gas and vapour  
 20% for fire exposure  
 25% for liquid on thermal relief  
 Blowdown 7%  
 Tolerance Set pressure ± 3%  
 Discharge coefficients k= 0,94 for gases  
 k= 0,6 for liquids

Lifting device

Sealed packing lever



### Construction and Materials

Item	Description	Material	
		Carbon steel	Stainless steel
1	Nozzle	AISI-316L	AISI-316L
2	Body	A216 WCB	A351 CF-3M
3	Bonnet	A216 WCB	A351 CF-3M
4	Cap	A351 CF 8	A351 CF 8
5 *	Disc	AISI-316L	AISI-316L
6	Guide	AISI-316L	AISI-316L
7	Push Rod	AISI-316L	AISI-316L
8	Spring Button	C. Steel zn.	AISI-304
9	Adjusting Screw	AISI-420	AISI-303
10	Tension Nut	Carbon Steel	AISI-303
11 *	Spring	Carbon Steel	AISI-302
12	Lever	A351 CF 8	A351 CF 8
17	Release nut	AISI-316L	AISI-316L
18	Lever axis	AISI-303	AISI-303
19	Packing lever axis	AISI-303	AISI-303
20 *	Gasket	NBR+MF	NBR
21 *	Gasket	NBR+MF	NBR
22 *	Gasket	Viton	Viton
27 *	Bellow	AISI-316 TI	AISI-316 TI
28 *	Soft seat	Viton / PTFE	Viton / PTFE
	Screw Nut	Carbon Steel	AISI-316

\* Recommended spare parts



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SAFETY RELIEF VALVES

Size - Inlet / Outlet	ANSI 150 Flanged - Carbon Steel		ANSI 150 Flanged - Stainless Steel		ANSI 300 Flanged - Carbon Steel		ANSI 300 Flanged - Stainless Steel	
	Price £	Price €	Price £	Price €	Price £	Price €	Price £	Price €
1/2" x 1"	£614.90	€645.60	£1,516.10	€1,592.00	£644.50	€676.70	£1,718.10	€1,804.00
3/4" x 1"	£658.40	€691.30	£1,516.10	€1,592.00	£707.80	€743.20	£1,751.70	€1,839.20
1" x 1"	£822.50	€863.60	£1,516.10	€1,592.00	£862.00	€905.10	£1,765.50	€1,853.80
1" x 2"	£846.20	€888.50	£1,531.00	€1,607.50	£885.70	€930.00	£1,811.00	€1,901.50
1 1/2" x 2"	£1,338.50	€1,405.40	£2,003.60	€2,103.80	£1,382.00	€1,451.10	£2,485.20	€2,609.40
1 1/2" x 3"	£1,939.50	€2,036.50	£2,580.10	€2,709.10	£1,973.10	€2,071.80	£3,200.80	€3,360.90
2" x 3"	£2,022.50	€2,123.70	£2,846.90	€2,989.30	£2,147.10	€2,254.40	£3,535.00	€3,711.70
3" x 4"	£3,094.10	€3,248.80	£4,618.90	€4,849.80	£3,232.50	€3,394.10	£5,735.40	€6,022.20
4" x 6"	£5,150.20	€5,407.70	£9,276.70	€9,740.50	£5,508.10	€5,783.50	£10,083.00	€10,587.10
6" x 8"	£8,792.00	€9,231.60	£16,028.90	€16,830.40	£10,045.40	€10,547.70	£19,588.60	€20,568.10
6" x 10"					£12,625.40	€13,256.70	£21,381.80	€22,450.90
8" x 10"	£13,578.40	€14,257.30	£18,798.10	€19,738.00	£15,691.80	€16,476.40	£22,662.90	€23,796.10
10" x 14"	£44,767.20	€47,005.50	£49,309.70	€51,775.20	£46,255.50	€48,568.30	£52,597.00	€55,226.90
12" x 16"	£49,482.20	€51,956.40	£52,369.70	€54,988.20	£50,545.40	€53,072.60	£55,861.00	€58,654.10

Size - Inlet / Outlet	ANSI 600 Flanged - Carbon Steel		ANSI 600 Flanged - Stainless Steel		ANSI 900 Flanged - Carbon Steel		ANSI 900 Flanged - Stainless Steel	
	Price £	Price €	Price £	Price €	Price £	Price €	Price £	Price €
1/2" x 1"	£969.90	€1,018.40	£1,872.30	€1,965.90				
3/4" x 1"	£982.90	€1,032.10	£1,913.80	€2,009.50				
1" x 1"	£1,038.90	€1,090.80	£1,953.30	€2,051.00				
1" x 2"	£1,139.60	€1,196.60	£1,994.80	€2,094.60				
1 1/2" x 2"	£2,465.70	€2,589.00	£3,258.20	€3,421.10	£3,683.70	€3,867.80	£4,325.80	€4,542.10
1 1/2" x 3"	£3,610.90	€3,791.50	£4,830.70	€5,072.30	£4,364.40	€4,582.70	£4,499.80	€4,724.80
2" x 3"	£3,795.60	€3,985.30	£4,918.90	€5,164.90	£4,457.70	€4,680.60	£5,537.70	€5,814.60
3" x 4"	£5,468.60	€5,742.00	£7,694.70	€8,079.40	£7,684.40	€8,068.60	£8,246.30	€8,658.60
3" x 6"					£9,073.90	€9,527.60	£10,822.40	€11,363.50
4" x 6"	£8,160.00	€8,568.00	£12,399.50	€13,019.40	£9,736.00	€10,222.80	£14,645.00	€15,377.30
6" x 8"	£11,698.20	€12,283.10	£21,152.50	€22,210.10				
6" x 10"	£13,440.00	€14,112.00	£21,585.40	€22,664.70				

Size - Inlet / Outlet	ANSI 1500 Flanged - Carbon Steel		ANSI 1500 Flanged - Stainless Steel		ANSI 2500 Flanged - Carbon Steel		ANSI 2500 Flanged - Stainless Steel	
	Price £	Price €	Price £	Price €	Price £	Price €	Price £	Price €
1 1/2" x 2"	£3,683.70	€3,867.80	£5,017.80	€5,268.70				
1 1/2" x 3"	£4,364.40	€4,582.70	£5,191.70	€5,451.30	£4,756.10	€4,993.90	£5,191.70	€5,451.30
2" x 3"	£4,457.70	€4,680.60	£6,229.70	€6,541.20	£5,278.40	€5,542.30	£6,413.50	€6,734.20
3" x 4"	£7,684.40	€8,068.60	£8,479.60	€8,903.60				
3" x 6"	£9,073.90	€9,527.60	£11,362.10	€11,930.20				
4" x 6"	£9,726.70	€10,213.10	£14,905.00	€15,650.20				



# Model 1415 – Safety Relief Valve

DN	Tosaca Model	DN Inlet x Outlet	ANSI Flange Rating		Orif. (mm)	Area (mm <sup>2</sup> )	Dimensions			Weight Kg
			E	S			A	B	C	
D/ E	1415 ANSI 150	1/2" D/E 1"	150	150	9,6 / 13	71/133	95	95	275	8
	1415 ANSI 150	3/4" D/E 1"	150	150	9,6 / 13	71/133	95	95	275	8
	1415 ANSI 150	1" D/E 1"	150	150	9,6 / 13	71/133	95	95	275	8
	1415 ANSI 300	1/2" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	9
	1415 ANSI 300	3/4" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	9
	1415 ANSI 300	1" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	9
	1415 ANSI 600	1/2" D/E 1"	600	150	9,6 / 13	71/133	115	100	275	18
	1415 ANSI 600	3/4" D/E 1"	600	150	9,6 / 13	71/133	115	100	275	18
	1415 ANSI 600	1" D/E 1"	600	150	9,6 / 13	71/133	115	100	275	18
	1415 ANSI 150	1" D/E 2"	150	150	9,6 / 13	71/133	114	105	305	14
	1415 ANSI 300	1" D/E 2"	300	150	9,6 / 13	71/133	114	105	305	16
	1415 ANSI 600	1" D/E 2"	600	150	9,6 / 13	71/133	114	105	305	18
	1415 ANSI 900	1 1/2" D/E 2"	900	300	9,6 / 13	71/133	140	105	315	19
	1415 ANSI 1500	1 1/2" D/E 2"	1500	300	9,6 / 13	71/133	140	105	315	24
	1415 ANSI 2500	1 1/2" D/E 3"	2500	300	9,6 / 13	71/133	178	140	325	30
F	1415 ANSI 150	1 1/2" F 2"	150	150	16	201	121	124	315	17
	1415 ANSI 300	1 1/2" F 2"	300	150	16	201	121	124	315	17
	1415 ANSI 600	1 1/2" F 2"	600	150	16	201	152	124	315	20
	1415 ANSI 900	1 1/2" F 3"	900	300	16	201	165	124	315	22
	1415 ANSI 1500	1 1/2" F 3"	1500	300	16	201	165	124	315	22
	1415 ANSI 2500	1 1/2" F 3"	2500	300	16	201	178	140	325	30
	G	1415 ANSI 150	1 1/2" G 3"	150	150	21	346	121	124	400
1415 ANSI 300		1 1/2" G 3"	300	150	21	346	121	124	400	25
1415 ANSI 600		1 1/2" G 3"	600	150	21	346	152	124	400	28
1415 ANSI 900		1 1/2" G 3"	900	300	21	346	165	124	430	28
1415 ANSI 1500		2" G 3"	1500	300	21	346	175	156	444	41
H	1415 ANSI 150	1 1/2" H "3	150	150	26	531	124	130	400	25
	1415 ANSI 300	1 1/2" H "3	300	150	26	531	124	130	400	25
	1415 ANSI 300	2" H 3"	300	150	26	531	124	130	400	27
	1415 ANSI 600	2" H 3"	600	150	26	531	162	154	400	32
	1415 ANSI 900	2" H 3"	900	150	26	531	162	154	400	32
1415 ANSI 1500	2" H 3"	1500	300	26	531	162	154	430	35	
J	1415 ANSI 150	2" J 3"	150	150	32,5	830	124	137	400	27
	1415 ANSI 300	2" J 3"	300	150	32,5	830	124	137	400	27
	1415 ANSI 300	3" J 4"	300	150	32,5	830	181	184	570	56
	1415 ANSI 600	3" J 4"	600	150	32,5	830	181	184	570	62
	1415 ANSI 900	3" J 4"	900	150	32,5	830	181	184	570	62
	1415 ANSI 1500	3" J 4"	1500	300	32,5	830	181	184	570	65
K	1415 ANSI 150	3" K 4"	150	150	40	1195	162	156	570	56
	1415 ANSI 300	3" K 4"	300	150	40	1195	162	156	570	56
	1415 ANSI 600	3" K 4"	600	150	40	1195	181	184	570	62
	1415 ANSI 900	3" K 6"	900	150	40	1195	216	198	610	90
	1415 ANSI 1500	3" K 6"	1500	300	40	1195	216	198	610	105
L	1415 ANSI 150	3" L 4"	150	150	49	1.866	165	156	570	56
	1415 ANSI 300	4" L 6"	300	150	49	1.866	181	179	610	56
	1415 ANSI 600	4" L 6"	600	150	49	1.866	203	179	610	90
	1415 ANSI 900	4" L 6"	900	150	49	1.866	222	197	820	120
	1415 ANSI 1500	4" L 6"	1500	150	49	1.866	222	197	820	120
M	1415 ANSI 150	4" M 6"	150	150	55	2376	184	178	610	88
	1415 ANSI 300	4" M 6"	300	150	55	2376	184	178	610	90
	1415 ANSI 600	4" M 6"	600	150	55	2376	203	178	610	110
	1415 ANSI 900	4" M 6"	900	150	55	2376	222	197	820	120
N	1415 ANSI 150	4" N 6"	150	150	60	2827	210	197	610	88
	1415 ANSI 300	4" N 6"	300	150	60	2827	210	197	610	90
	1415 ANSI 600	4" N 6"	600	150	60	2827	222	197	610	110
	1415 ANSI 900	4" N 6"	900	150	60	2827	222	197	820	120
P	1415 ANSI 150	4" P 6"	150	150	73	4185	229	181	610	88
	1415 ANSI 300	4" P 6"	300	150	73	4185	229	181	610	90
	1415 ANSI 600	4" P 6"	600	150	73	4185	254	225	610	94
	1415 ANSI 900	4" P 6"	900	150	73	4185	254	225	610	120
Q	1415 ANSI 150	6" Q 8"	150	150	96	7238	241	240	659	156
	1415 ANSI 300	6" Q 8"	300	150	96	7238	241	240	659	160
	1415 ANSI 600	6" Q 8"	600	150	96	7238	241	240	659	190
R	1415 ANSI 150	6" R 8"	150	150	115	10387	241	240	659	156
	1415 ANSI 300	6" R 8"	300	150	115	10387	241	240	659	160
	1415 ANSI 600	6" R 10"	600	150	115	10.387	267	240	659	190
T	1415 ANSI 150	8" T 10"	150	150	147	16.972	279	276	795	190
	1415 ANSI 300	8" T 10"	300	150	147	16.972	279	276	795	195
V	1415 ANSI 150	10" V 14"	150	150	200	31.415	406	305	1390	750
	1415 ANSI 300	10" V 14"	300	150	200	31.415	406	305	1390	750
W	1415 ANSI 150	12" W 16"	150	150	228	40.828	406	359	1432	850
	1415 ANSI 300	12" W 16"	300	150	228	40.828	406	359	1432	850
X	1415 ANSI 150	16" X 20"	150	150	304	72.950	533	432	1943	1850
	1415 ANSI 300	16" X 20"	300	150	304	72.950	533	432	1943	1850