

## Description

Type	Safety relief valves
Connections	ASME/ANSI B16.5
Rating	ANSI150/300 600/900/1500/2500
Material	Carbon steel A 216 WCB/ WCC Carbon steel A 217 WC6 S.S. A 351 CF3M Duplex
Temperature range in S.S.	-28°C to +425°C -96°C to +427°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

## Construction and materials

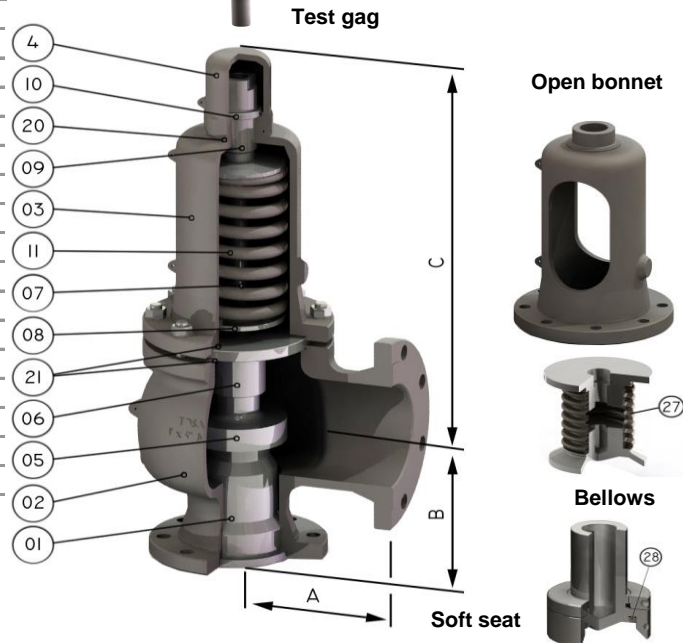
Pos	Description	Material C. steel	Material S.S.
1	Nozzle	AISI-316L	AISI-316L
2	Body	A216 WCB	A351 CF-3M
3	Bonnet	A216 WCB	A351 CF-3M
4	Cap	A351 CF 8	A351 CF 8
5	Disc	AISI-316L	AISI-316L
6	Guide	AISI-316L	AISI-316L
7	Push Road	AISI-316L	AISI-316L
8	Spring Button	Ac carbono	AISI-303
9	Ajusting Screw	AISI-420	AISI-303
10	Lock Nut	AISI-303	AISI-303
11	Spring	Ac carbono	AISI-302
12	Lever	A351 CF 8	A351 CF 8
17	Release nut	AISI-316L	AISI-316
18	Lever axis	AISI-303	AISI-303
19	Packing lever axis	AISI-303	AISI-303
20	Gasket cap	NBR+MF	PTFE
21	Gasket bonnet	NBR+MF	PTFE
22	Gasket pack. lever	Viton	Viton
27	Bellows	AISI-316 TI	AISI-316 TI
28	Soft seat	Viton / PTFE	Viton / PTFE

   Recommended spare parts

Lifting device



Sealed packing lever



## Technical information

Applications	Steam, gases, vapours and liquids
Min. Set pressure	0,2 barg; With bellows 2 barg
Seat	metal-metal, PTFE, Viton, Nozzle SS+Stellite
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= 0,975 for gases k= 0,64 for liquids

## Dimensions

DN	TOSACA Model	DN Inlet x Outlet	ANSI flanges Rating		Orif. (mm)	Area (mm <sup>2</sup> )	(mm)			W (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	10
	1415 ANSI 150	3/4" D/E 1"	150	150	9,6 / 13	71/133	95	95	275	10
	1415 ANSI 150	1" D/E 1"	150	150	9,6 / 13	71/133	95	95	275	10
	1415 ANSI 300	1/2" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	10
	1415 ANSI 300	3/4" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	10
	1415 ANSI 300	1" D/E 1"	300	150	9,6 / 13	71/133	95	95	275	10
	1415 ANSI 600	1/2" D/E 1"	600	150	9,6 / 13	71/133	95	100	275	10
	1415 ANSI 600	3/4" D/E 1"	600	150	9,6 / 13	71/133	95	100	275	10
1415 ANSI 600	1" D/E 1"	600	150	9,6 / 13	71/133	95	100	275	10	

**Dimensions**

DN	TOSACA Model	DN Inlet x Outlet	ANSI Flanges		Orif. (mm)	Area (mm <sup>2</sup> )	(mm)			Weight (kg) W
			Rating E	S			A	B	C	
D/E	1415 ANSI 150	1" D/E 2"	150	150	9,6 / 13	71/133	114	105	275	14
	1415 ANSI 300	1" D/E 2"	300	150	9,6 / 13	71/133	114	105	275	16
	1415 ANSI 600	1" D/E 2"	600	150	9,6 / 13	71/133	114	105	275	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	26
	1415 ANSI 300	1 1/2" G 3"	300	150	21	346	121	124	400	26
	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	26
	1415 ANSI 300	1 1/2" H 3"	300	150	26	531	124	130	400	26
	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	45
J	1415 ANSI 150	2" J 3"	150	150	32,5	830	124	137	400	28
	1415 ANSI 300	2" J 3"	300	150	32,5	830	124	137	400	29
	1415 ANSI 300	3" J 4"	300	150	32,5	830	181	184	595	56
	1415 ANSI 600	3" J 4"	600	150	32,5	830	181	184	595	62
	1415 ANSI 900	3" J 4"	900	150	32,5	830	181	184	595	62
	1415 ANSI 1500	3" J 4"	1500	300	32,5	830	181	184	595	65
K	1415 ANSI 150	3" K 4"	150	150	40	1195	162	156	595	56
	1415 ANSI 300	3" K 4"	300	150	40	1195	162	156	595	56
	1415 ANSI 600	3" K 4"	600	150	40	1195	181	184	595	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 150/300	3" L 4"	150	150	49	1.866	165	156	595	56
	1415 ANSI 300	4" L 6"	300	150	49	1.866	181	179	630	56
	1415 ANSI 600	4" L 6"	600	150	49	1.866	203	179	630	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	630	88
	1415 ANSI 300	4" M 6"	300	150	55	2376	184	178	630	90
	1415 ANSI 600	4" M 6"	600	150	55	2376	203	178	630	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	630	88
	1415 ANSI 300	4" N 6"	300	150	60	2827	210	197	630	90
	1415 ANSI 600	4" N 6"	600	150	60	2827	222	197	630	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	630	88
	1415 ANSI 300	4" P 6"	300	150	73	4185	229	181	630	90
	1415 ANSI 600	4" P 6"	600	150	73	4185	254	225	630	120
	1415 ANSI 900	4" P 6"	900	150	73	4185	254	225	630	120
Q	1415 ANSI 150	6" Q 8"	150	150	96	7238	241	240	690	140
	1415 ANSI 300	6" Q 8"	300	150	96	7238	241	240	690	140
	1415 ANSI 600	6" Q 8"	600	150	96	7238	241	240	690	190
R	1415 ANSI 150	6" R 8"	150	150	115	10387	241	240	690	140
	1415 ANSI 300	6" R 8"	300	150	115	10387	241	240	690	140
	1415 ANSI 300/600	6" R 10"	600	150	115	10.387	267	240	795	198
T	1415 ANSI 150	8" T 10"	150	150	147	16.972	279	276	800	210
	1415 ANSI 300	8" T 10"	300	150	147	16.972	279	276	800	220
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	800
	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	900
	1415 ANSI 300	16" X 20"	300	150	304	72.950	533	432	1943	950

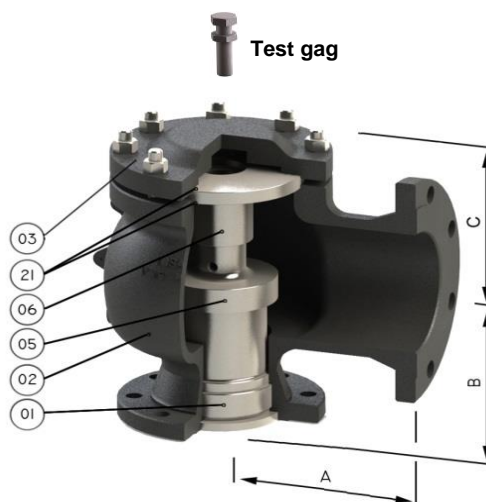
# Model 1415 LP Low pressure

Description		Requirements	
Type	Safety relief valves	Calculation	EN 4126 / API RP 520
Connections	ASME B16.5	Design	EN 12516 / API STD 526 / ASME Section VIII
Rating	ANSI150	Materials	EN / ASTM / ASME
Material	A216 WCB / S.S.	Inspection	EN 4126 / API STD 527 / MSS-SP-55
Temperature range	-96°C to +427°C	Tolerances	EN 4126 / ASME UG-126

## Materials ANS150

Pos	Description	Material	
			S.S.
1	Nozzle	AISI-316L	AISI-316L
2	Body	A216 WCB	A351 CF-3M
3	Cover	Carbon steel	AISI-304
5	Disc	AISI-316L	AISI-316L
6	Guide	AISI-316L	AISI-316L
7	Push Road	AISI-316L	AISI-316L
21	Gasket cover	GRAPHITE+SS	GRAPHITE+SS
28	Soft seat	PTFE	PTFE

Recommended spare parts



## Technical information

Applications	Steam, gases and vapours
Set pressure range	5 mbarg to 200 mbarg
Seat	metal-metal, PTFE
Overpressure	10% for steam, gas and vapour
Blowdown	10%
Tolerance Set pressure	± 3%
Discharge coefficients	k= 0,975 for gases

## Dimensions ANS150

E	1415 LP ANS150	1" E 2"	150 / 150	13	133	114	105	75	10
F	1415 LP ANS150	1 1/2" F 2"	150 / 150	16	201	121	124	105	12
G	1415 LP ANS150	1 1/2" G 3"	150 / 150	21	346	121	124	110	21
H	1415 LP ANS150	1 1/2" H "3	150 / 150	26	531	124	130	110	21
J	1415 LP ANS150	2" J 3"	150 / 150	32,5	830	124	137	110	23
K	1415 LP ANS150	3" K 4"	150 / 150	40	1195	162	156	175	48
L	1415 LP ANS150	3" L 4"	150 / 150	49	1.866	165	156	175	48
M	1415 LP ANS150	4" M 6"	150 / 150	55	2376	184	178	180	72
N	1415 LP ANS150	4" N 6"	150 / 150	60	2827	210	197	180	72
P	1415 LP ANS150	4" P 6"	150 / 150	73	4185	229	181	180	72
Q	1415 LP ANS150	6" Q 8"	150 / 150	96	7238	241	240	200	102
R	1415 LP ANS150	6" R 8"	150 / 150	115	10387	241	240	200	102
T	1415 LP ANS150	8" T 10"	150 / 150	147	16.972	279	276	225	135
V	1415 LP ANS150	10" V 14"	150 / 150	200	31.415	406	305	250	515
W	1415 LP ANS150	12" W 16"	150 / 150	228	40.828	406	359	375	600
X	1415 LP ANS150	16" X 20"	150 / 150	304	72.950	533	432	400	900