

# Safety relief valves for heating and hot water systems

series 311-312-313-314-513-514-527



cert. n° 0003  
ISO 9001

01053/03 GB



## General

Series 311, 312, 313, 314, 513, 514, 527 safety (pressure relief) valves are made by Caleffi S.p.A. in compliance with the essential safety requirements laid down by Directive 97/23/CE of the European Parliament and the Council of the European Union for harmonisation of member States with regard to pressurised equipment.

## Function

Safety relief valves are typically used for controlling pressure on boilers in heating systems, on stored hot water cylinders in domestic hot water systems and in water systems generally. When the calibrated pressure is reached, the valve opens, and, by means of the discharge to atmosphere, prevents the pressure of the system from reaching levels which would be dangerous for the boiler and the components in the system itself. Series 527 valves are fail-safe devices, i.e. they are guaranteed to operate even in the case of wear or breakage of the diaphragm.



I.S.P.E.S.L.

## Product range

Series 311 Standard safety relief valve. F-F connections	_____	Sizes 1/2" , 3/4"
Series 312 Standard safety relief valve. M-F connections	_____	Size 1/2"
Series 313 Standard safety relief valve with pressure gauge or pressure gauge connection. F-F connections	_____	Sizes 1/2" , 3/4"
Series 314 Standard safety relief valve with pressure gauge or pressure gauge connection. M-F connections	_____	Size 1/2"
Series 513 Standard safety relief valve. F-F connections	_____	Sizes 1/2"x3/4" , 1"x1 1/4" , 1 1/4"x 1 1/2"
Series 514 Standard safety relief valve. M-F connections	_____	Size 1/2"
Series 527 I.S.P.E.S.L. approved fail-safe safety relief valve. F-F connections	_____	Sizes 1/2"x3/4" , 3/4"x1" , 1"x1 1/4" , 1 1/4"x 1 1/2"

## Technical specification

### Materials:

Body:	1/2"-3/4"; brass EN 12165 CW617N 1"-1 1/4"; brass EN 1982 CB753S
Cover:	brass EN 12165 CW617N 513-514 (1/2"); PA 6 G 30
Control spindle:	brass EN 12164 CW614N
Obturator seal:	EPDM
Diaphragm:	EPDM
Spring:	steel UNI 3823
Control knob:	311-312-313-314-513 (1/2")-514; ABS 513 (1" and 1 1/4")-527; PA 6 G 20
Nominal pressure:	PN 10
Temperature range:	5÷110°C

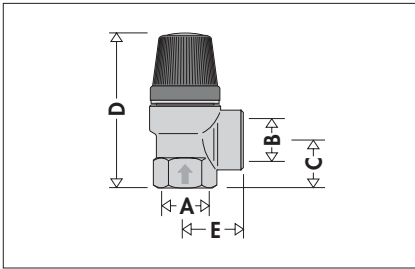
### Performance:

Max opening pressure:	527; $P_{set} + 10\% \cdot P_{set}$ 311-312-313-513-514; $P_{set} + 20\% \cdot P_{set}$
Min closing differential:	$P_{set} - 20\% \cdot P_{set}$ water, air
Medium:	
PED Category:	IV

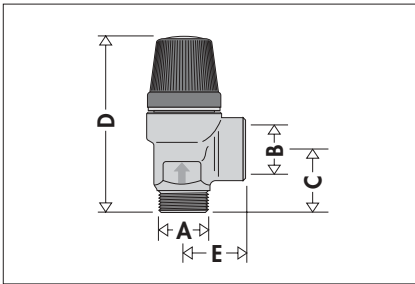
### Calibrations:

Series 311	2-2,5-3-3,5-4-5-6-7-8 bar (2 - 5 bar only 3/4")
Series 312	2,5-3-3,5-4-6-7-8 bar
Series 313 with pressure gauge	2,5-3-6-7-8 bar
Series 314 with pressure gauge	2,5-3-6-7-8 bar
Series 313 with pressure gauge connection	3 bar
Series 314 with pressure gauge connection	3-6 bar
Series 513	1,5-2-2,5-3-3,5-6-7-8 bar
Series 514	2-2,5-2,7-3-3,5-4-6-7-8 bar
Series 527 standard	2,25-2,5-2,7-3-3,5-4-4,5-5-5,4-6 bar
Series 527 special	1-1,5-2-7-8 bar

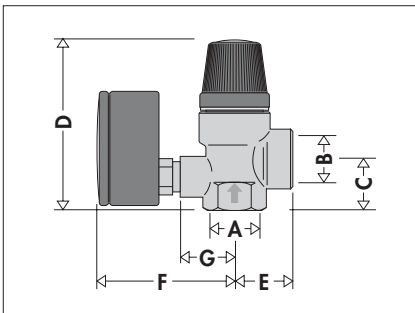
## Dimensions



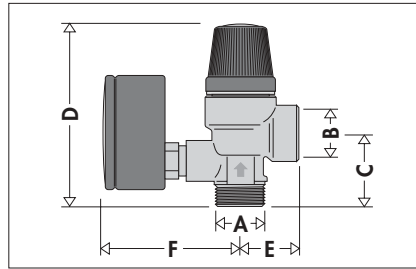
Code	A	B	C	D	E
3114..	1/2"	1/2"	19,5	65,5	25,5
3115..	3/4"	3/4"	24	74,5	27,5



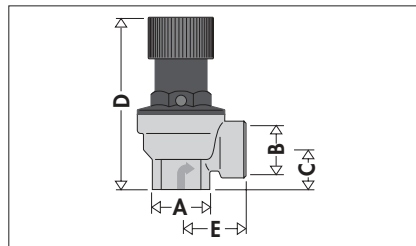
Code	A	B	C	D	E
3124..	1/2"	1/2"	23,5	69,5	25,5



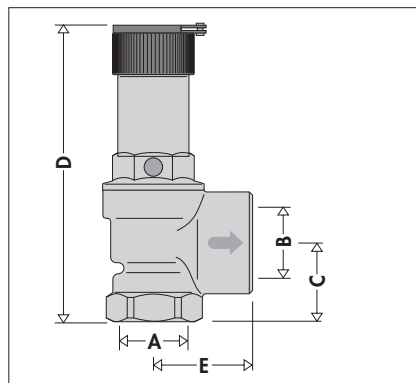
Code	A	B	C	D	E	F	G
3134..	1/2"	1/2"	21,5	72	25,5	61	24
3135..	3/4"	3/4"	24	74,5	27,5	61	24



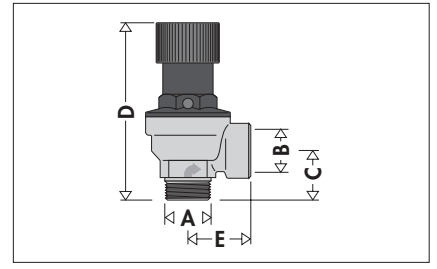
Code	A	B	C	D	E	F
3144..	1/2"	1/2"	32	78	25,5	61



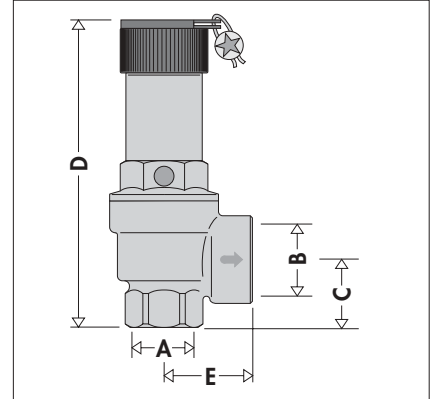
Code	A	B	C	D	E
5134..	1/2"	1/2"	19	78,5	29,5



Code	A	B	C	D	E
5136..	1"	1 1/4"	38	144	48
5137..	1 1/4"	1 1/2"	44	187	57,5



Code	A	B	C	D	E
5144..	1/2"	1/2"	23	81,5	29,5



Code	A	B	C	D	E
5274..	1/2"	3/4"	26	93	33
5275..	3/4"	1"	30	136	39,5
5276..	1"	1 1/4"	39	166	48
5277..	1 1/4"	1 1/2"	42,5	185	56

### • • Code completion

bar	• •	bar	• •	bar	• •
1	10	2,7	27	5	50
1,5	15	3	30	5,4	54
2	20	3,5	35	6	60
2,25	22	4	40	7	70
2,5	25	4,5	45	8	80

## Safety relief valves for heating systems, I.S.P.E.S.L. approved and calibrated

Series 527 safety relief valves meet the technical requirements of point 2, chapter R.2.A. of section "R" 1982 Edition, technical application specification of Part II - D.M.:1/12/75.

### Operating details

#### Discharge overpressure <10%

The full discharge capacity of the valve must be reached at pressure values  $P_s < 1,1 \cdot P_{set}$ . This characteristic, combined with the particular range of calibration values, enables the correct valve to be selected for the maximum working pressure value of the system or the boiler.

#### Closing differential <20%

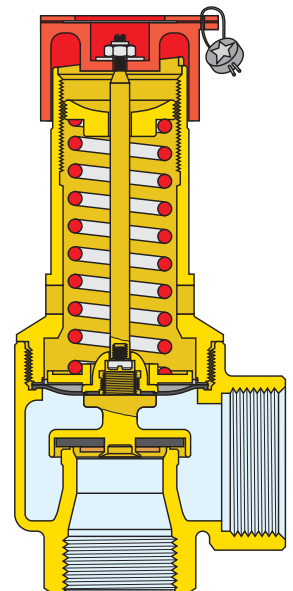
The valve must close again within pressure values  $P_r > 0,8 \cdot P_{set}$ . This characteristic makes it possible to limit the water loss from the system if the valve opens.

#### Fail-safe action

The performance of the valve is guaranteed even in the case of wear or breakage of the diaphragm.

#### Increased outlet diameter

This feature makes the reduction in the discharge capacity or the variation in behaviour on opening or closing negligible due to the fitting of discharge pipework.



# TECHNICAL DATA SERIES 527

Size	Outl. Ø (mm)	Nett area (cm²)	Calibr. press. (bar)	Nom. disch. press. (bar)	Clos. press. (bar)	Oufl. coeff. K	Disch. flow rate W (kg/h)	Maximum boiler rating (kW)	Maximum boiler rating (kcal/h)
1/2"	15	1,767	1	1,10	0,80	0,79	140,38	81,6	70.100
1/2"	15	1,767	1,50	1,65	1,20	0,79	175,73	102,1	87.800
1/2"	15	1,767	2	2,20	1,60	0,79	211,17	122,7	105.500
1/2"	15	1,767	2,25	2,475	1,80	0,79	226,39	131,6	113.100
1/2"	15	1,767	2,50	2,75	2,00	0,79	246,36	143,2	123.100
1/2"	15	1,767	2,70	2,97	2,16	0,79	261,76	152,2	130.800
1/2"	15	1,767	3	3,30	2,40	0,79	282,35	164,1	141.100
1/2"	15	1,767	3,50	3,85	2,80	0,79	318,09	184,9	159.000
1/2"	15	1,767	4	4,40	3,20	0,79	353,93	205,8	176.900
1/2"	15	1,767	4,50	4,95	3,60	0,79	386,60	224,8	193.200
1/2"	15	1,767	5	5,50	4,00	0,79	425,91	247,6	212.900
1/2"	15	1,767	5,40	5,94	4,32	0,79	456,89	265,6	228.400
1/2"	15	1,767	6	6,60	4,80	0,79	483,25	281,0	241.600
1/2"	15	1,767	7	7,70	5,60	0,79	558,42	324,7	279.200
1/2"	15	1,767	8	8,80	6,40	0,79	628,22	365,3	314.100
3/4"	20	3,1416	1	1,10	0,80	0,67	211,66	123,0	105.800
3/4"	20	3,1416	1,50	1,65	1,20	0,67	264,95	154,0	132.400
3/4"	20	3,1416	2	2,20	1,60	0,67	318,38	185,1	159.100
3/4"	20	3,1416	2,25	2,475	1,80	0,67	341,33	198,4	170.600
3/4"	20	3,1416	2,50	2,75	2,00	0,67	371,45	215,9	185.700
3/4"	20	3,1416	2,70	2,97	2,16	0,67	394,66	229,4	197.300
3/4"	20	3,1416	3	3,30	2,40	0,67	425,70	247,5	212.800
3/4"	20	3,1416	3,50	3,85	2,80	0,67	479,59	278,8	239.700
3/4"	20	3,1416	4	4,40	3,20	0,67	533,63	310,3	266.800
3/4"	20	3,1416	4,50	4,95	3,60	0,67	582,89	338,9	291.400
3/4"	20	3,1416	5	5,50	4,00	0,67	642,16	373,4	321.000
3/4"	20	3,1416	5,40	5,94	4,32	0,67	688,87	400,5	344.400
3/4"	20	3,1416	6	6,60	4,80	0,67	728,61	423,6	364.300
3/4"	20	3,1416	7	7,70	5,60	0,67	841,95	489,5	420.900
3/4"	20	3,1416	8	8,80	6,40	0,67	947,19	550,7	473.500
1"	25	4,9087	1	1,10	0,80	0,88	434,38	252,5	217.100
1"	25	4,9087	1,50	1,65	1,20	0,88	543,74	316,1	271.800
1"	25	4,9087	2	2,20	1,60	0,88	653,40	379,9	326.600
1"	25	4,9087	2,25	2,475	1,80	0,88	700,49	407,3	350.200
1"	25	4,9087	2,50	2,75	2,00	0,88	762,30	443,2	381.100
1"	25	4,9087	2,70	2,97	2,16	0,88	809,94	470,9	404.900
1"	25	4,9087	3	3,30	2,40	0,88	873,65	508,0	436.800
1"	25	4,9087	3,50	3,85	2,80	0,88	984,23	572,3	492.100
1"	25	4,9087	4	4,40	3,20	0,88	1095,13	636,8	547.500
1"	25	4,9087	4,50	4,95	3,60	0,88	1196,22	695,6	598.100
1"	25	4,9087	5	5,50	4,00	0,88	1317,87	766,3	658.900
1"	25	4,9087	5,40	5,94	4,32	0,88	1413,72	822,0	706.800
1"	25	4,9087	6	6,60	4,80	0,88	1495,28	869,5	747.600
1"	25	4,9087	7	7,70	5,60	0,88	1727,88	1004,7	863.900
1"	25	4,9087	8	8,80	6,40	0,88	1943,86	1130,3	971.900
1 1/4"	32	8,0424	1	1,10	0,80	0,74	598,47	348,0	299.200
1 1/4"	32	8,0424	1,50	1,65	1,20	0,74	749,13	435,6	374.500
1 1/4"	32	8,0424	2	2,20	1,60	0,74	900,22	523,4	450.100
1 1/4"	32	8,0424	2,25	2,475	1,80	0,74	965,10	561,2	482.500
1 1/4"	32	8,0424	2,50	2,75	2,00	0,74	1050,25	610,7	525.100
1 1/4"	32	8,0424	2,70	2,97	2,16	0,74	1115,89	648,8	557.900
1 1/4"	32	8,0424	3	3,30	2,40	0,74	1203,66	699,9	601.800
1 1/4"	32	8,0424	3,50	3,85	2,80	0,74	1356,02	788,5	678.000
1 1/4"	32	8,0424	4	4,40	3,20	0,74	1508,81	877,3	754.400
1 1/4"	32	8,0424	4,50	4,95	3,60	0,74	1648,09	958,3	824.000
1 1/4"	32	8,0424	5	5,50	4,00	0,74	1815,69	1055,8	907.800
1 1/4"	32	8,0424	5,40	5,94	4,32	0,74	1947,74	1132,6	973.800
1 1/4"	32	8,0424	6	6,60	4,80	0,74	2060,11	1197,9	1.030.000
1 1/4"	32	8,0424	7	7,70	5,60	0,74	2380,57	1384,3	1.190.200
1 1/4"	32	8,0424	8	8,80	6,40	0,74	2678,14	1557,3	1.339.000

## Certification

### CE mark

Series 527 safety relief valves meet the requirements of Directive 97/23/CE for pressurised equipment (also referred to as the PED).

They are therefore classified in Category IV and granted the CE mark.



### I.S.P.E.S.L. mark

The series 527 safety relief valve is a component which is "I.S.P.E.S.L. approved". Devices of this type are covered by the following types of document:

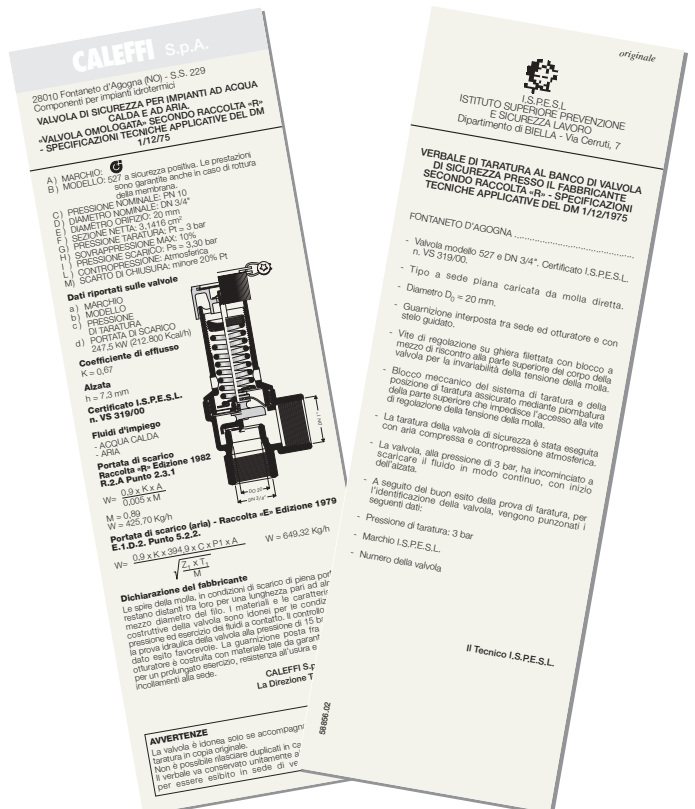
**The approval certificate** is the document issued by the I.S.P.E.S.L., which attests to the positive result of the tests carried out on the prototype sample and consequently certifies that the series in question has been approved.

The document is valid for five years. Every item of the series covered by the certificate which is manufactured during the five years' validity period is approved for an indefinite period.

**The bench calibration report** is the document confirming the testing of each individual device included in the approved series. The test is carried out in the presence of an I.S.P.E.S.L. inspector who draws up the report after the test has been passed.

The document gives the serial number of the valve, which is also to be found on the plate fixed to the valve body.

**There is only one copy of the report and it is therefore vital for it to be kept with the valve.**

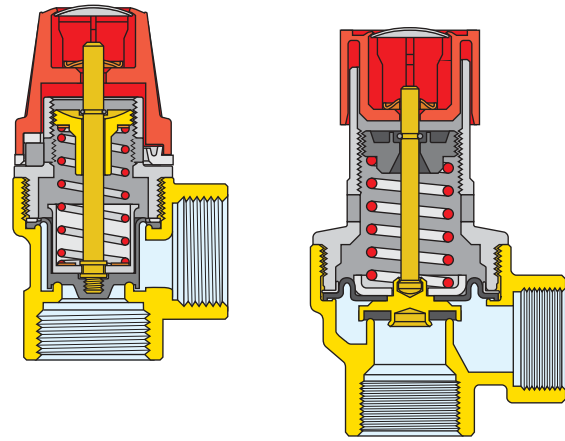


## Standard safety relief valves

The series 311, 312, 313, 314, 513 and 514 standard safety relief valves are used in heating systems, domestic hot water systems protecting the hot water cylinder and in water systems generally.

## Heating systems

Standard safety relief valves, in compliance with Italian regulations, can be applied to heat generators of capacity below 35 kW.

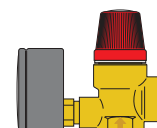


## TECHNICAL DATA SERIES 311-312-313-314

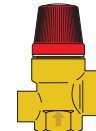
Size	Outl. Ø (mm)	Nett area (cm <sup>2</sup> )	Calibr. press. (bar)	Nom. disch. press. (bar)	Clos. press. (bar)	Outfl. coeff. K	Disch. flow rate W (kg/h)	Maximum boiler rating (kW)	Maximum boiler rating (kcal/h)
1/2"	13	1,327	2,50	3,00	2,00	0,5	124,4	72,3	62.200
1/2"	13	1,327	3	3,60	2,40	0,5	142,17	82,5	71.000
1/2"	13	1,327	3,50	4,20	2,80	0,5	161,39	93,6	80.600
1/2"	13	1,327	4	4,80	3,20	0,5	178,25	103,3	89.000
1/2"	13	1,327	6	7,20	4,80	0,5	248,81	144,6	124.400
1/2"	13	1,327	7	8,40	5,60	0,5	284,35	165,2	142.100
1/2"	13	1,327	8	9,60	6,40	0,5	322,78	187,5	161.300
3/4"	13	1,327	2	2,40	1,60	0,5	106,63	61,8	53.300
3/4"	13	1,327	2,50	3,00	2,00	0,5	124,4	72,3	62.200
3/4"	13	1,327	3	3,60	2,40	0,5	142,17	82,5	71.000
3/4"	13	1,327	3,50	4,20	2,80	0,5	161,39	93,6	80.600
3/4"	13	1,327	4	4,80	3,20	0,5	178,25	103,3	89.000
3/4"	13	1,327	5	6,00	4,00	0,5	213,26	123,6	106.600
3/4"	13	1,327	6	7,20	4,80	0,5	248,81	144,6	124.400
3/4"	13	1,327	7	8,40	5,60	0,5	284,35	165,2	142.100
3/4"	13	1,327	8	9,60	6,40	0,5	322,78	187,5	161.300



- 311425 1/2" 2,5 bar
- 311430 1/2" 3 bar
- 311435 1/2" 3,5 bar
- 311440 1/2" 4 bar
- 311460 1/2" 6 bar
- 311470 1/2" 7 bar
- 311480 1/2" 8 bar
- 311520 3/4" 2 bar
- 311525 3/4" 2,5 bar
- 311530 3/4" 3 bar
- 311535 3/4" 3,5 bar
- 311540 3/4" 4 bar
- 311550 3/4" 5 bar
- 311560 3/4" 6 bar
- 311570 3/4" 7 bar
- 311580 3/4" 8 bar



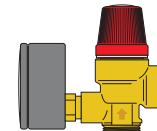
- 313425 1/2" 2,5 bar
- 313430 1/2" 3 bar
- 313460 1/2" 6 bar
- 313470 1/2" 7 bar
- 313480 1/2" 8 bar
- 313525 3/4" 2,5 bar
- 313530 3/4" 3 bar
- 313560 3/4" 6 bar
- 313570 3/4" 7 bar
- 313580 3/4" 8 bar



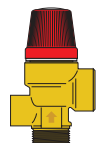
- 313432 1/2" 3 bar
- 313532 3/4" 3 bar



- 312425 1/2" 2,5 bar
- 312430 1/2" 3 bar
- 312435 1/2" 3,5 bar
- 312440 1/2" 4 bar
- 312460 1/2" 6 bar
- 312470 1/2" 7 bar
- 312480 1/2" 8 bar



- 314425 1/2" 2,5 bar
- 314430 1/2" 3 bar
- 314460 1/2" 6 bar
- 314470 1/2" 7 bar
- 314480 1/2" 8 bar



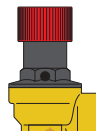
- 314432 1/2" 3 bar
- 314462 1/2" 6 bar

## TECHNICAL DATA SERIES 513-514

Size	Outl. Ø (mm)	Nett area (cm <sup>2</sup> )	Calibr. press. (bar)	Nom. disch. press. (bar)	Clos. press. (bar)	Outfl. coeff. K	Disch. flow rate W (kg/h)	Maximum boiler rating (kW)	Maximum boiler rating (kcal/h)
1/2"	15	1,767	1,50	1,80	1,20	0,5	117,80	68,3	58.900
1/2"	15	1,767	2	2,40	1,60	0,5	141,99	82,3	70.900
1/2"	15	1,767	2,50	3,00	2,00	0,5	165,65	96,2	82.800
1/2"	15	1,767	2,70	3,24	2,16	0,5	176,70	102,4	88.300
1/2"	15	1,767	3	3,60	2,40	0,5	189,32	110,0	94.600
1/2"	15	1,767	3,50	4,20	2,80	0,5	214,90	124,6	107.400
1/2"	15	1,767	4	4,80	3,20	0,5	237,35	137,6	118.600
1/2"	15	1,767	6	7,20	4,80	0,5	331,31	192,5	165.600
1/2"	15	1,767	7	8,40	5,60	0,5	378,64	220,1	189.300
1/2"	15	1,767	8	9,60	6,40	0,5	429,81	249,8	214.900



- 513415 1/2" 1,5 bar
- 513420 1/2" 2 bar
- 513425 1/2" 2,5 bar
- 513430 1/2" 3 bar
- 513435 1/2" 3,5 bar
- 513460 1/2" 6 bar
- 513470 1/2" 7 bar
- 513480 1/2" 8 bar



- 514420 1/2" 2 bar
- 514425 1/2" 2,5 bar
- 514427 1/2" 2,7 bar
- 514430 1/2" 3 bar
- 514435 1/2" 3,5 bar
- 514440 1/2" 4 bar
- 514460 1/2" 6 bar
- 514470 1/2" 7 bar
- 514480 1/2" 8 bar

## Domestic hot water systems

Series 513 and 514 valves comply with the requirements of "Section R" for safety standards of equipment containing hot liquids under pressure (Italian standard):

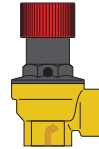
*"in the case of water heaters intended for domestic use, the expansion system protecting the vessel should consist of a vent valve, understood as a counter-weight or spring valve whose outlet*

has a diameter, in mm, not less than  $\sqrt{\frac{V}{5}}$

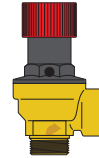
where V is the volume of the heater in litres, with a minimum of 15 mm".

To illustrate the above, see the table with the hot water storage capacity limits for each type of valve.

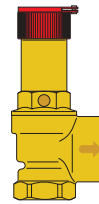
TECHNICAL DATA SERIES 513-514						
Size	Outl. Ø (mm)	Nett area (cm <sup>2</sup> )	Calibr. press. (bar)	Nom. disch. press. (bar)	Clos. press. (bar)	Capacity of heater (l)
1/2"	15	1,767	6	7,20	4,80	1.000
1/2"	15	1,767	7	8,40	5,60	1.000
1/2"	15	1,767	8	9,60	6,40	1.000
1"	25	4,9087	6	7,20	4,80	3.000
1"	25	4,9087	7	8,40	5,60	3.000
1"	25	4,9087	8	9,60	6,40	3.000
1 1/4"	32	8,0424	6	7,20	4,80	5.000
1 1/4"	32	8,0424	7	8,40	5,60	5.000
1 1/4"	32	8,0424	8	9,60	6,40	5.000



513460 1/2" 6 bar  
513470 1/2" 7 bar  
513480 1/2" 8 bar



514460 1/2" 6 bar  
514470 1/2" 7 bar  
514480 1/2" 8 bar

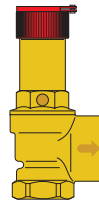


513660 1" 6 bar  
513670 1" 7 bar  
513680 1" 8 bar  
513760 1 1/4" 6 bar  
513770 1 1/4" 7 bar  
513780 1 1/4" 8 bar

## Water systems

These safety relief valves can also be used for discharging cold water; in this case, the discharge capacities indicated are the results of experimental testing, without the use or any conversion formula for fluids of different types.

TECHNICAL DATA SERIES 513						
Size	Outl. Ø (mm)	Nett area (cm <sup>2</sup> )	Calibr. press. (bar)	Nom. disch. press. (bar)	Clos. press. (bar)	Capacity of heater (l)
1"	25	4,9087	2,50	3,00	2,00	8,3
1"	25	4,9087	3	3,60	2,40	8,7
1"	25	4,9087	3,50	4,20	2,80	9,1
1"	25	4,9087	6	7,20	4,80	10,5
1"	25	4,9087	7	8,40	5,60	11,5
1"	25	4,9087	8	9,60	6,40	12,3
1 1/4"	32	8,0424	2,50	3,00	2,00	13,2
1 1/4"	32	8,0424	3	3,60	2,40	13,8
1 1/4"	32	8,0424	3,50	4,20	2,80	14,1
1 1/4"	32	8,0424	6	7,20	4,80	17,5
1 1/4"	32	8,0424	7	8,40	5,60	18,6
1 1/4"	32	8,0424	8	9,60	6,40	19,4



513625 1" 2,5 bar  
513630 1" 3 bar  
513635 1" 3,5 bar  
513660 1" 6 bar  
513670 1" 7 bar  
513680 1" 8 bar  
513725 1 1/4" 2,5 bar  
513730 1 1/4" 3 bar  
513735 1 1/4" 3,5 bar  
513760 1 1/4" 6 bar  
513770 1 1/4" 7 bar  
513780 1 1/4" 8 bar

## Certification

### CE mark

Series 311, 312, 313, 314, 513 and 514 safety relief valves meet the requirements of Directive 97/23/CE for pressurised equipment (also referred to as the PED). They are therefore classified in Category IV and granted the CE mark.



## Installation

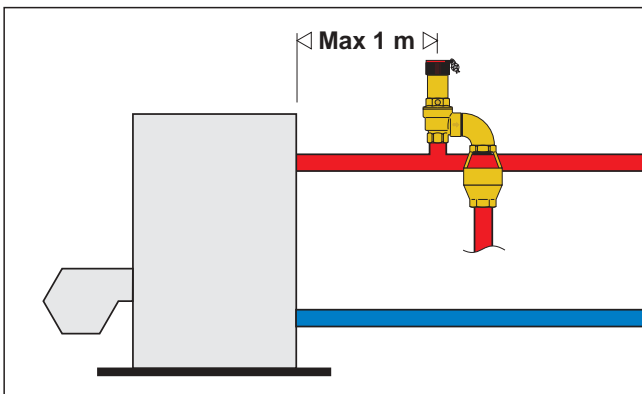
Before installing a safety relief valve, correct sizing must be carried out by specialist technical personnel in accordance with the current legislation governing the specific applications. It shall not be used other than for its stated purpose.

Safety relief valves must be installed by competent technical personnel qualified in accordance with current legislation.

The safety relief valve must be installed in line with the flow direction indicated by the arrow on the valve body.

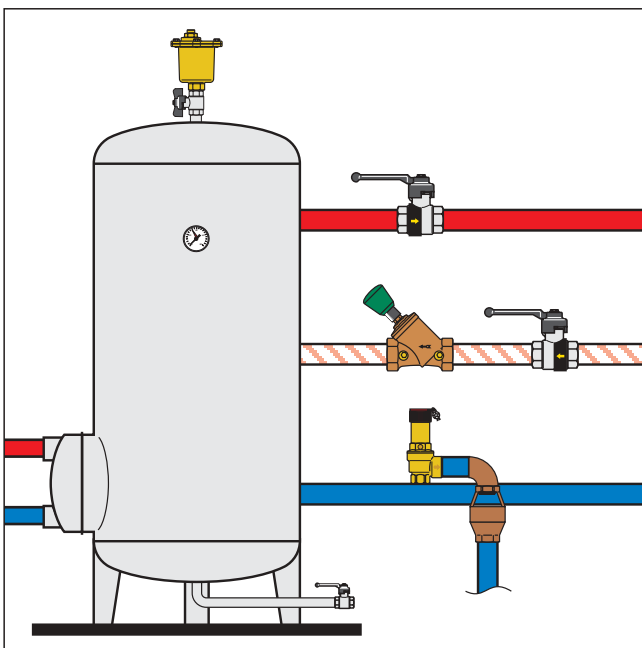
## Heating system

The safety relief valve must be installed on the top of the boiler or in the flow pipework at a distance of not more than one metre from the boiler (section R). The connecting pipework between the safety relief valve and the boiler must not be interrupted.



## Domestic hot water system

The safety relief valve must be installed close to the hot water storage, taking care not to fit any shut-off devices between the valve and the storage cylinder.

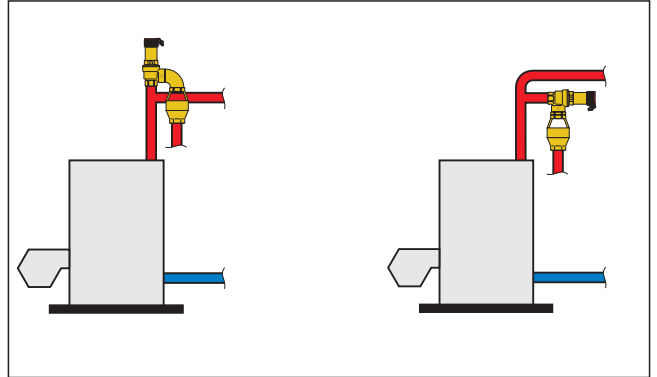


## Fitting

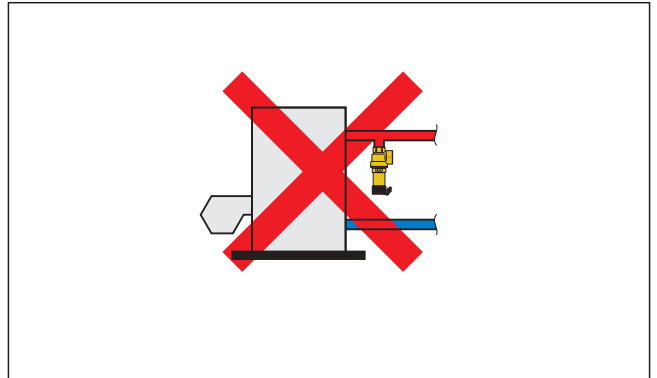
The safety relief valve can be fitted vertically or horizontally, but not upside down.

This prevents deposits of impurities from affecting correct functioning.

## Correct installations



## Incorrect installation

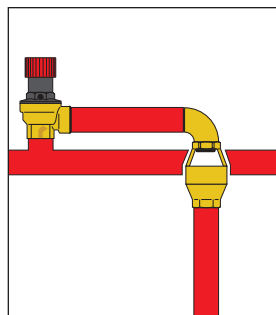


## Discharge pipework

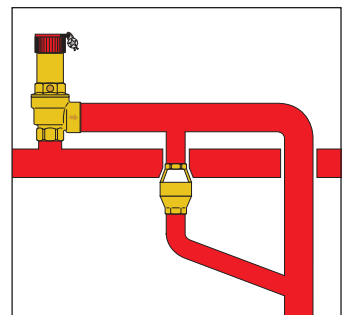
The discharge pipework from the safety relief valve must be fitted in such a way as not to prevent the correct operation of the valve and not to cause damage or injury.

In accordance with current legislation, the safety relief valve discharge must be visible and carried in suitable collection pipework. As shown in the diagrams, it is advisable to install a tundish directly in the discharge pipework for low capacity valves, as diagram 1. In the case of larger capacities, proceed as shown in diagram 2.

## Diagram 1



## Diagram 2





## SPECIFICATION SUMMARIES

### Series 311

Standard diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" F x 1/2" F (1/2"x1/2" and 3/4"x3/4"). Calibration 2,5 bar (calibrations available: 2,5 – 3 – 3,5 – 4 – 6 – 7 – 8 for 1/2" and 3/4", 2 - 5 bar only for 3/4"). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 312

Standard diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" M x 1/2" F. Calibration 2,5 bar (calibrations available: 2,5 – 3 – 3,5 – 4 – 6 – 7 – 8). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 313

Standard diaphragm safety relief valve with pressure gauge connection. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" F x 1/2" F (1/2" and 3/4"). Calibration 3 bar. Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 313

Standard diaphragm safety relief valve with pressure gauge. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" F x 1/2" F (1/2" and 3/4"). Calibration 2,5 bar (calibrations available: 2,5 – 3 – 6 – 7 – 8). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 314

Standard diaphragm safety relief valve with pressure gauge connection. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" M x 1/2" F. Calibration 3 bar (calibrations available 3 and 6). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 314

Standard diaphragm safety relief valve with pressure gauge. Bearing CE mark as per Directive 97/23/CE. Threaded connections 1/2" M x 1/2" F. Calibration 2,5 bar (calibrations available: 2,5 – 3 – 6 – 7 – 8). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Control knob in ABS.

### Series 513

Standard diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Connections 1/2" M x 1/2" F. Calibration 1,5 bar (calibrations available: 1,5 - 2 - 2,5 - 3 - 3,5 - 6 - 7 - 8). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Cover and control knob in glass-fiber re-inforced nylon.

### Series 513

Standard diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Connections 1" F x 1 1/4" F (1" x 1 1/4" and 1 1/4" x 1 1/2"). Calibration 2,5 bar (calibrations available: 2,5 - 3 - 3,5 - 6 - 7 - 8). Maximum temperature 110°C. Body and cover in brass. Diaphragm and seal in EPDM. Cover and control knob in glass-fiber re-inforced nylon.

### Series 514

Standard diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Connections 1/2" M x 1/2" F. Calibration 2 bar (calibrations available: 2 - 2,5 - 2,7 - 3 - 3,5 - 6 - 7 - 8). Maximum temperature 110°C. Brass body. Diaphragm and seal in EPDM. Cover in glass-fiber re-inforced nylon, control knob in ABS.

### Series 527

I.S.P.E.S.L. approved and calibrated diaphragm safety relief valve. Bearing CE mark as per Directive 97/23/CE. Connections 1/2" F x 3/4" F (available 1/2" x 3/4", 3/4" x 1", 1" x 1 1/4", 1 1/4" x 1 1/2"). Calibration 1 bar (calibrations available: 1 – 1,5 – 2 – 2,25 – 2,5 – 2,7 – 3 – 3,5 – 4 – 4,5 – 5 – 5,4 – 6 – 7 – 8). Maximum temperature 110°C. Body and cover in brass. Diaphragm and seal in EPDM. Control knob in glass-fiber re-inforced nylon. Discharge overpressure 10%, closing differential 20%. Fail-safe. Accompanied by bench calibration report.

## Accessories



### 5521

Discharge tundish with rotating elbow, male-female. Sizes: 1/2", 3/4", 1", 1 1/4".



### 5520

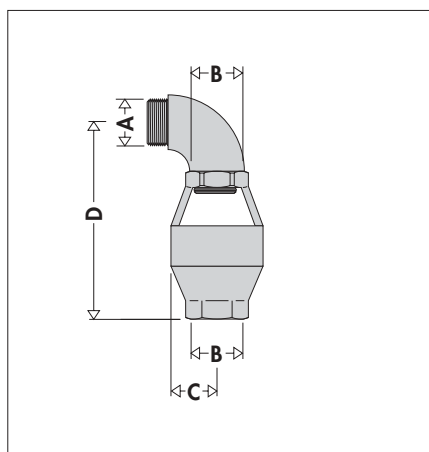
Straight discharge tundish, female-female. Sizes: 3/4" and 1 1/4".



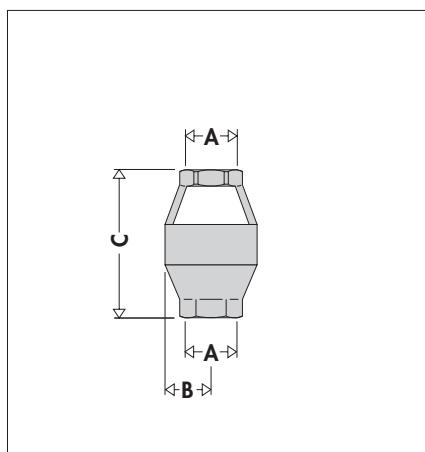
### 5520

Discharge collector. In coated sheet metal. Size: 1 1/2".

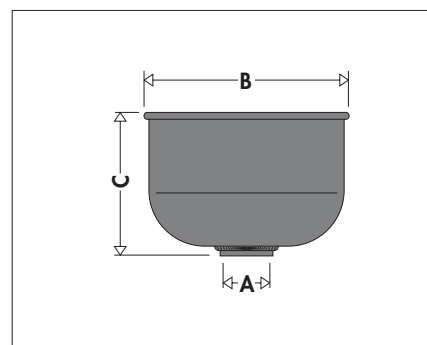
## Dimensions



Code	A	B	C	D
552140	1/2"	3/4"	25	125
552150	3/4"	1"	25	125
552160	1"	1 1/4"	40	180
552170	1 1/4"	1 1/2"	40	180



Code	A	B	C
552050	3/4"	25	96
552070	1 1/4"	40	134



Code	A	B	C
552080	1 1/2"	210	150

## SPECIFICATION DETAILS

### Series 5520

Straight discharge tundish. Connections 3/4" F x 3/4" F (3/4" x 3/4" and 1 1/4" x 1 1/4"). Body in die-cast aluminium. Visible discharge.

### Series 5520

Discharge collector. Connection 1 1/2" F. Body in coated sheet metal.

### Series 5521

Discharge tundish with rotating elbow. Connections 1/2" M x 1/2" F (from 1/2" to 1 1/4"). Body in die-cast aluminium. Visible discharge.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.

