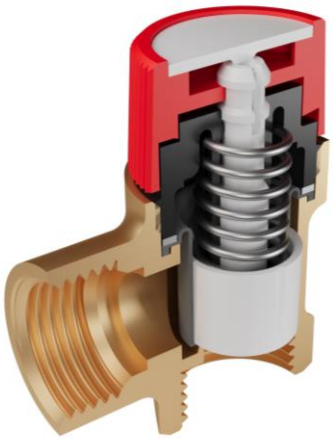
Safety relief valves

Art. 575 - 576 - 577 - 581 - 582 - 582dzr - 583 - 584 - 592 - 593 - 594 - 597 - 1581 - 1582 - 1583 - 1584

100% MADE IN ITALY

Function

Pintossi+C safety relief valve is designed in order to open automatically when the internal pressure of the system exceeds a pre-set maximum pressure value, by discharging the fluid throught it. Once the pressure of the system returns below the pre-set maximum value the safety valve closes automatically. This safety feature prevents reaching dangerous pressure levels which may damage and affect the components installed in the system.
In addition to the venting capacity expressed in thermal kW or in Kg/h of steam referred to in the table in the "technical data" section, the choice of the type of valve to be used must be made considering that the increased calibration pressure value of 10% must not be higher than the maximum operating pressure value of the component on which they will be installed for protection.
The performance of the safety valves is guaranteed even in the event of deterioration or tearing of the diaphragm (positive action safety).
Thanks to the ergonomic handwheel the valve can be manually open anytime, for checking the correct functioning
This kind of valves are tipically installed on boilers in heating systems and on hot storage cylinders in water systems and in hydraulic systems in general.
Pintossi+C safety relief valves are designed in compliance with the essential safety requirements stipulated in the EU Pressure Equipment Directive PED 2014/68/EU (Pressure Equipment Directive) and marked with CE logo.
Yellow brass finishing.



Product range

Art. 581	1/2"	FF safety valve
Art. 582	1/2"	MF safety valve
Art. 582dzr	1/2"	MF DZR safety valve
Art. 597	1/2" x Ø15	Compression safety valve
Art. 583	1/2"	FF safety valve with manometer connection
Art. 584	1/2"	MF safety valve with manometer connection
Art. 592	1/2" x Ø15	Compression safety valve with manometer connection
Art. 593	1/2"	FF safety valve with manometer
Art. 594	1/2"	MF safety valve with manometer
Art. 575	1/2" x 3/4"	FF safety valve
Art. 576	1/2" x 3/4"	MF safety valve
Art. 577	1/2" x 3/4"	FF safety valve with manometer connection
Art. 1581	3/4"	FF safety valve
Art. 1582	3/4"	MF safety valve
Art. 1583	3/4"	FF safety valve with manometer connection
Art. 1584	3/4"	MF safety valve with manometer connection
Art. 581	1“	FF safety valve

Technical specifications

Fluids:	Water or glycol solutions - Air
Max. glycol:	50%
Max. working temp.:	100°C
Minimum temp.:	5°C
Max. working pressure:	10 bar
Opening overpressure:	10% (1“ 20%)
Closing differential:	20%
Tolerance	10% for valves with pre-set pressure <5bar 0,5bar for valves with pre-set pressure >5bar
Certifications:	WRAS - CE

Materials

Body:	Brass CW617N
Stem, breech:	Polyacetal (1“ polypropilene)
Membrane:	EPDM
Spring:	Steel UNI 3823
Wheelhandle:	ABS

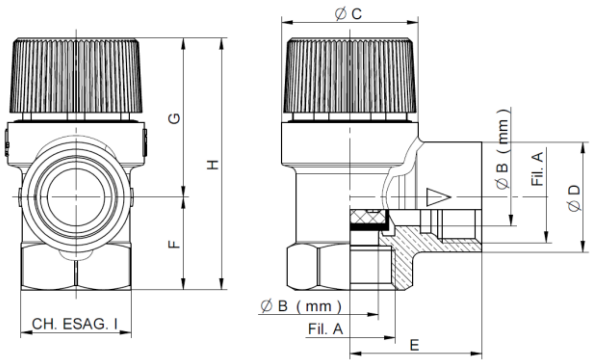
Technical data

Measure	Cross section (cm2)	Pressure of setting (bar)	Coeff. of outflow (K)	Generator potential (kW)	Flow rate of discharge (kg/h)
1/2''	1,327	1,5	0,49	50	86
1/2''	1,327	2	0,49	61	105
1/2''	1,327	2,5	0,49	71	122
1/2''	1,327	3	0,49	83	143
1/2''	1,327	3,5	0,49	93	160
1/2''	1,327	4	0,49	102	176
1/2''	1,327	6	0,49	144	248
1/2''	1,327	7	0,49	165	284
1/2''	1,327	8	0,49	188	323
1/2''	1,327	10	0,49	200	344
1/2''x3/4“	1,327	3	0,50		205
1/2''x3/4“	1,327	6	0,50		310
3/4''	3,142	1,5	0,66	151	260
3/4''	3,142	2,5	0,66	186	320
3/4''	3,142	3	0,66	247	425
3/4''	3,142	3,5	0,66	273	470
3/4''	3,142	4	0,66	310	533
3/4''	3,142	6	0,66	422	726
3/4''	3,142	7	0,66	487	838
3/4''	3,142	8	0,66	540	929
3/4''	3,142	10	0,66	662	1140
1“	4,909	3			290
1“	4,909	4			360
1“	4,909	6			495
1“	4,909	7			565

Dimensions

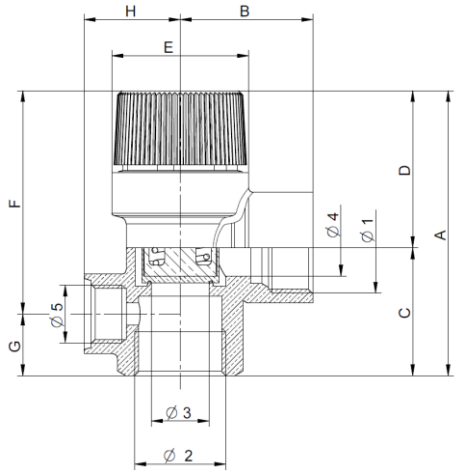
Safety valve. F-F connections art.581 - 1581								
Misura	ØB	ØC	D	E	F	G	H	I
1/2''	13	31	25	30	21	36	57	25
3/4''	20	44	31	34	25	72	97	31
1“	25	38,5			32	53	85	38

Safety valve. M-F connections art.582 - 1582								
Misura	ØB	ØC	D	E	F	G	H	I
1/2''	13	31		30	21	36	57	
3/4''	20			32	36	54,5	90,5	



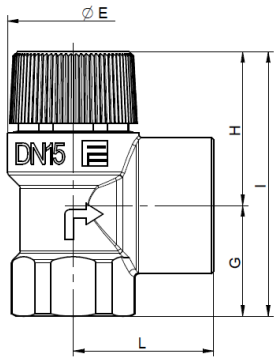
FF safety valve with manometer connection. Art. 583 - 1583										
Misura	Ø3	Ø5	A	B	C	D	E	F	G	H
1/2"	13	1/4"	65	30	29	36	31	51	14	22
3/4"	20	1/4"	90	32	35	56				26

M-F safety valve with manometer connection. Art. 584 - 1584										
Misura	Ø3	Ø5	A	B	C	D	E	F	G	H
1/2"	13	1/4"	70	30	28	42	31	49	21	22
3/4"	20	1/4"	96	32	41	55				26



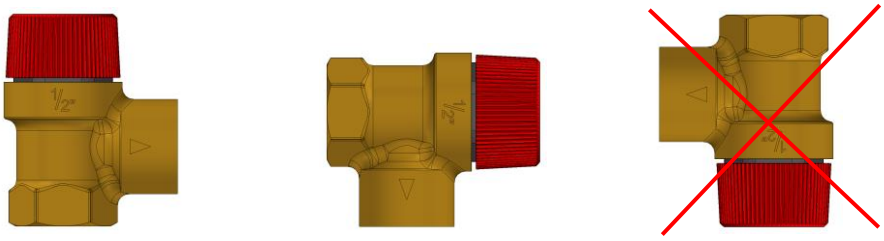
FF safety valve with higher discharge capacity. Art. 575						
Misura 1	Misura 2	E	G	H	I	L
1/2"	3/4"	31	26	36	62	33

M-F FF safety valve with higher discharge capacity. Art. 576						
Misura 1	Misura 2	E	G	H	I	L
1/2"	3/4"	31	31	36	67	33



Installation

Install the safety valve respecting the direction of flow indicated by the arrow on the valve body, positioning the drain as indicated in the figures below. The outlet mouth of the safety valves must be conveyed with a specific discharge pipe, in order to guarantee correct functionality and at the same time avoid damage to people or things during the discharge phase.
A device (funnel or glass) must always be inserted on the drain pipe to avoid any possible back pressure to the regular flow.
Avoid installing shut-off valves between the system and the safety valve.
All safety valves can be installed either vertically or horizontally; avoid the upside down position which would allow impurities to settle on the membrane and could lead to malfunctions.



The safety valves must be positioned in the immediate vicinity of the component to be protected or directly if a dedicated connection is provided on it.

Maintenance

The safety valve during its life cycle does not require particular maintenance. Run once a year a manual actuation on the handwheel causing a controlled discharge. If after this operation the valve suffers no loss of fluid, it is still perfectly working. If after this operation the valve has a leak, it might not be working correctly; in this case it is necessary a control by a qualified person.

Fluid characteristics

Reference standard for water treatments in heating systems is Norm UNI 8065:2019 which regulates the parameters that must be observed to avoid scale and corrosion phenomena.
In order to grant product warranty, the fluid characterstics must comply with the rules in force in the country of relevance or at least present features not less to the ones prescribed by the Norm UNI 8065:2019.
In particular, minimum standards necessary but not sufficient to control are the following:

Fluid aspect:	Limpid
PH:	Between 7 and 8
Iron (FE):	< 0,5 mg/kg (< 0,1 mg/kg for steam)
Copper (CU):	< 0,1 mg/kg (< 0,05 mg/kg for steam)
Antifreeze:	Passiveted Propylene Glycol
Conditioning:	as indicated by the producer

In any case when using antifreeze and conditioning solutions, is required to control and verify the correct compatibility between these substances and the construction materials stated in Pintossi+C technical datasheet.