

Single and double pipe thermostatic radiator valves

Art. 267 – 270 – 284 – 285



100% MADE IN ITALY

Function

Pintossi+C one pipe and two pipe thermostatic radiator valves can be used in one pipe as well as two pipe heating systems. In one pipe systems the radiator are connected in series so the valves are designed in order to convey part of the flow directly to the radiator where as the remaining part to the next radiator. In two pipe systems the radiators are connected in parallel so 100% of the flow rate is conveyed to the radiator.

The valves are designed and built for **low thermal inertia** operation, as prescribed by the **EN215 standard**.

Pintossi+C valves art. 267 and 270 are equipped with a brass probe to allow the fluid going inside all the radiators elements. When it's not possible to install a probe because of the configuration of the radiator, Pintossi+C art. 284 or 285 must be chosen.

Pintossi+C art. 267 and 270 incorporate in a single product the dual function of the radiator valve and lockshield.

When it's not possible to install a probe because of the configuration of the radiator, Pintossi+C art. 284 - 285 must be chosen.

Nickel plated finishing.

Product range

Art. 267	1/2" x 24x19	One pipe thermostatic radiator valve with probe
Art. 270	1/2" x 24x19	One pipe and two pipe thermostatic radiator valve with probe
Art. 279	1/2" x 24x19	One pipe distributor
Art. 284	1/2" x 24x19	One pipe thermostatic group with lateral wheelhead
Art. 285	1/2" x 24x19	One pipe thermostatic group with front wheelhead

Technical specifications

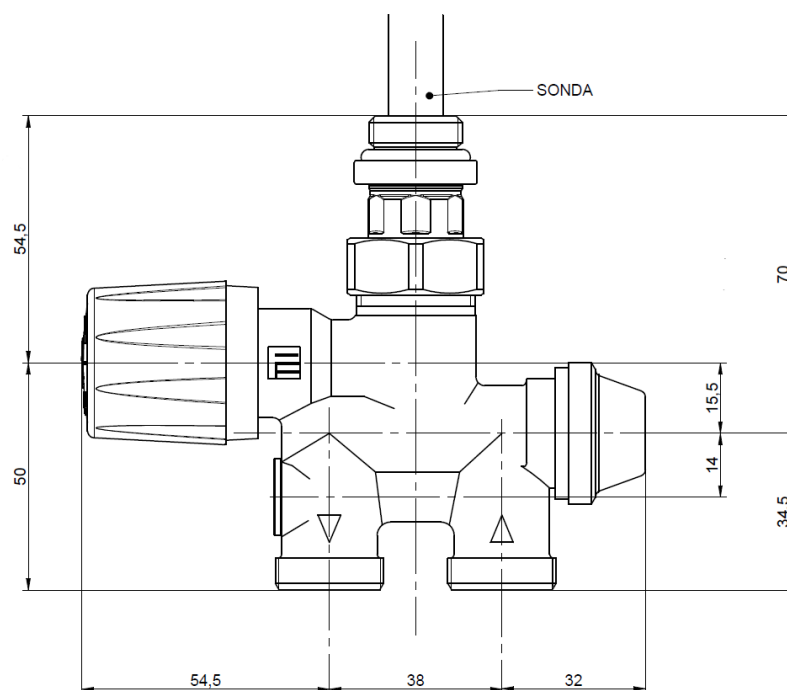
Fluids:	Water or glycol solutions
Max. glycol:	30%
Max. working temp.:	100°C
Max. working pressure:	10 bar
Max differential pressure:	1 bar
Supply coeff. manual:	50%
Supply coeff. thermostatic:	36%
Probe lenght:	290mm
Interaxis:	38mm
Thermostatic head thread:	Ø 26x1,5
Connections:	Copper, pex and multilayer pipes

Materials

Body:	Brass CW617N
Nut and tail:	Brass CW617N
Gaskets:	EPDM/NBR
Separator:	Plastic
Probe:	Brass CW617N
Wheelhandle:	ABS

Dimensions

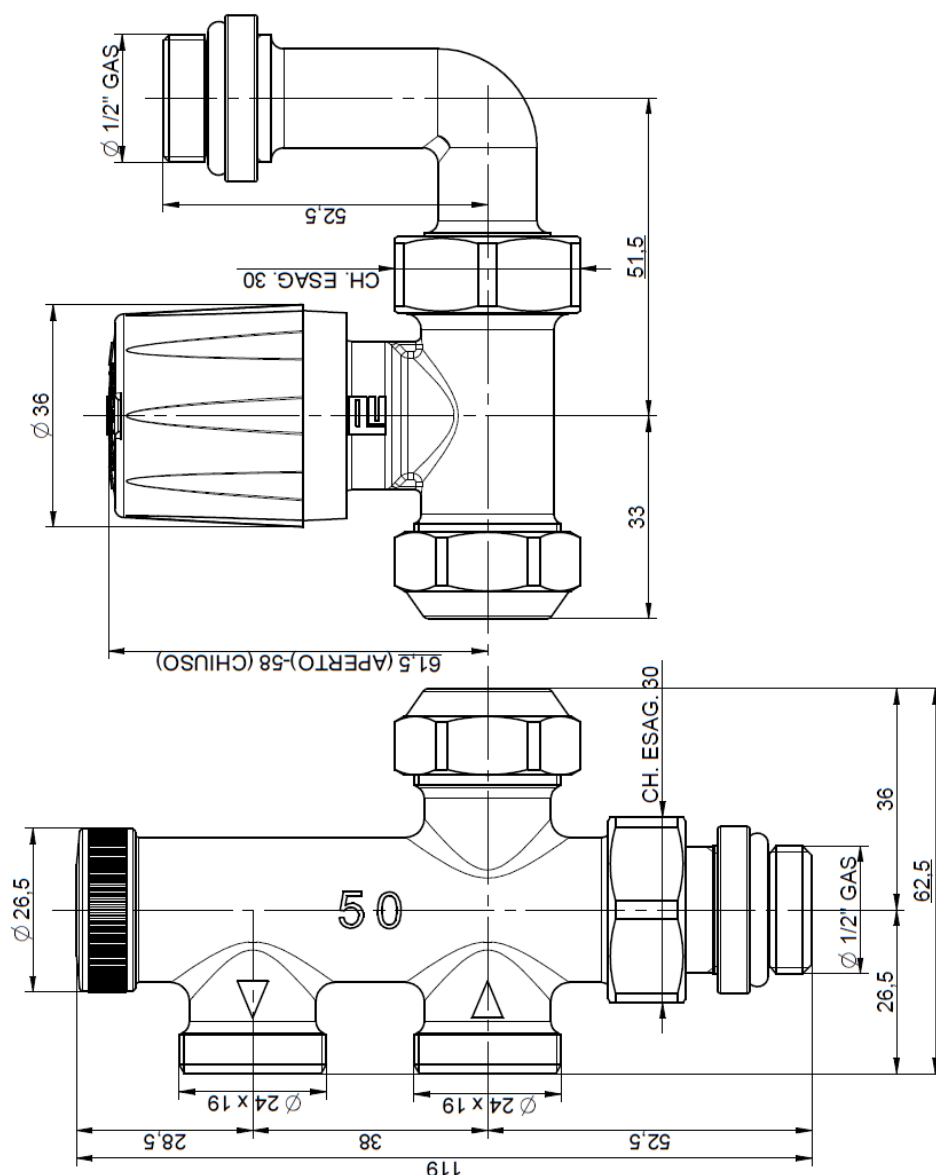
ART. 268



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The technical drawing illustrates the ESAG 30 gas valve assembly from two perspectives: a top view (left) and a side view (right).

- Top View Dimensions:**
 - Total width: 67
 - Distance from left edge to centerline: 52.5
 - Left flange diameter: $\varnothing 36$
 - Right flange diameter: $\varnothing 1\frac{1}{2}" \text{ GAS}$
 - Overall height: 46
- Side View Dimensions:**
 - Total length: 119
 - Distance from left end to first vertical support: 28.5
 - Distance between vertical supports: 38
 - Distance from second vertical support to right end: 52.5
 - Left end diameter: $\varnothing 26.5$
 - Vertical support diameter: $\varnothing 24 \times 19$
 - Centerline dimension: 50
 - Gas inlet connection label: CH. ESAG 30
 - Gas inlet diameter: $\varnothing 1\frac{1}{2}" \text{ GAS}$
 - Distance from left end to gas inlet: 62.5
 - Distance from gas inlet to right end: 36



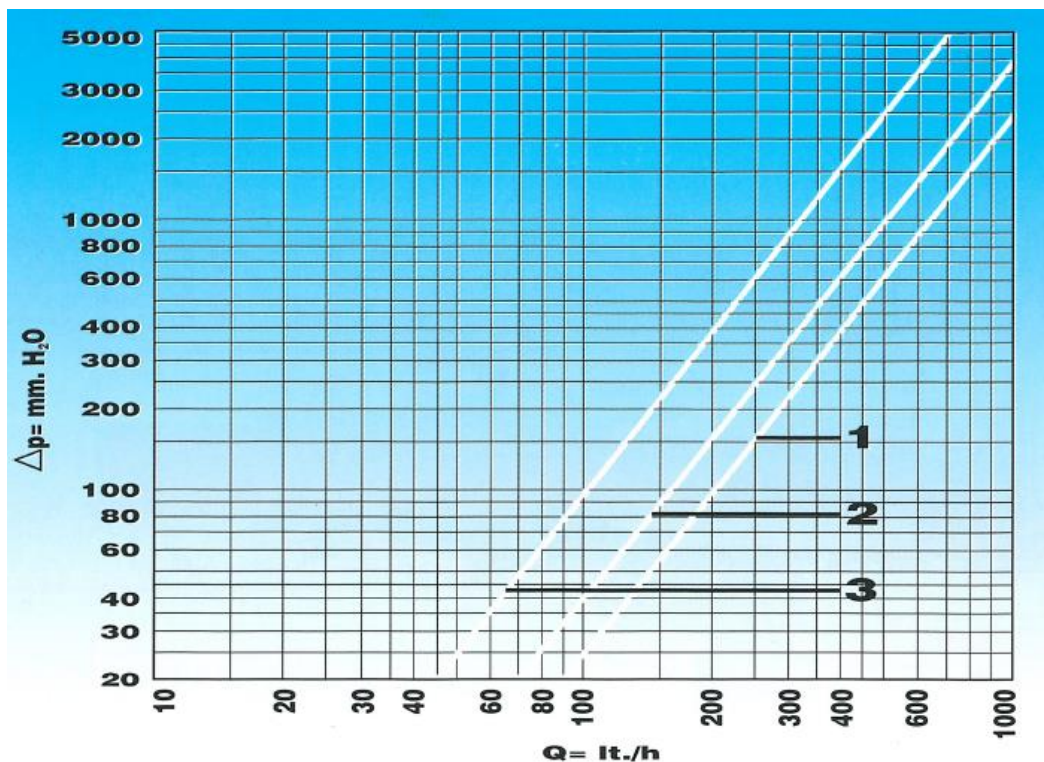
Installation

One pipe radiator valves must be installed respecting the flow direction indicated by the arrow marked on the body. Any inversion of the flows could cause an incorrect functioning of the valve in cases where the differential pressure between the inlet and outlet of the radiator is >1 bar.

Fluid flow inversion

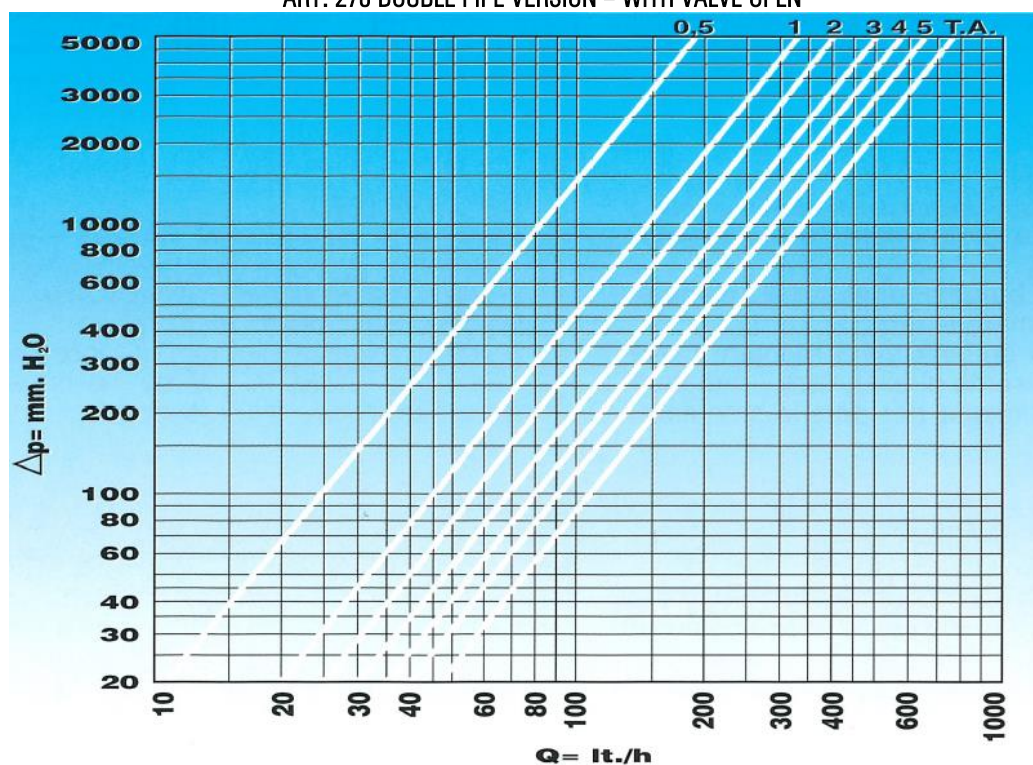
Each single and double pipe system valve has a specific distribution coefficient, defined by the internal components design. This coefficient is maintained when the inlet and outlet fluid flow is followed as marked on the valve's body. Fluid flow inversion is anyway allowed in the case the inlet and outlet fluid pressure differential is <1 bar. Fluid inversion produce a slight decrease in the valve's thermal efficiency.

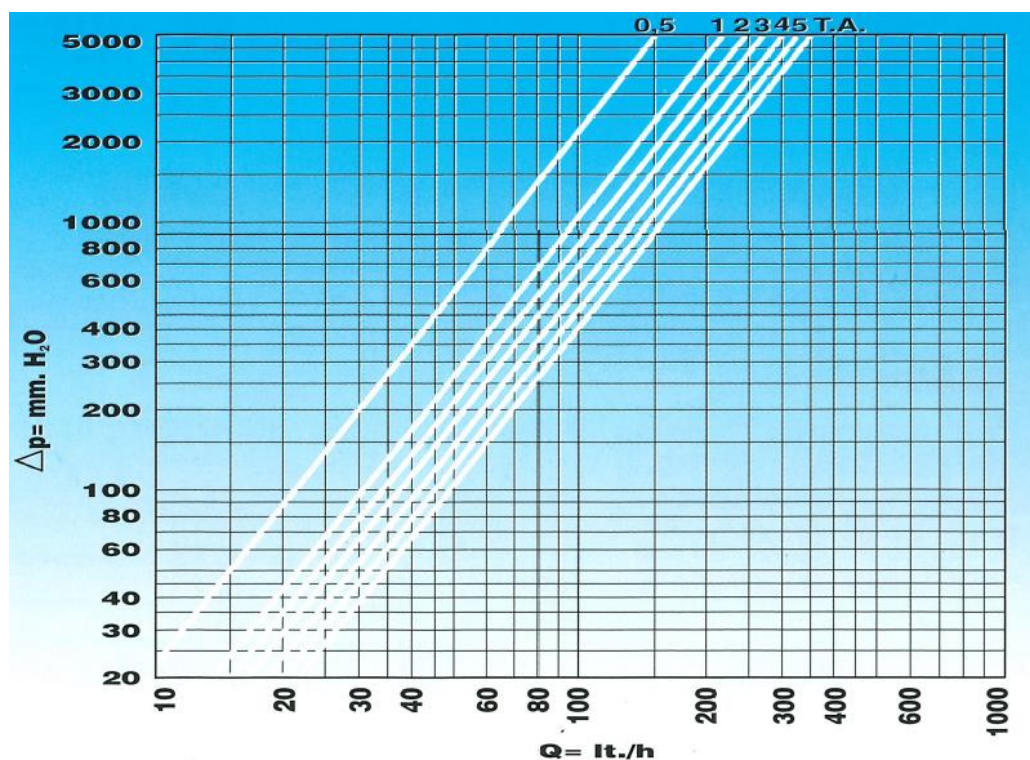
ART.267 – 270 SINGLE PIPE VERSION



1. With valve and lockshield fully open Kv 2,01 – supply coeff. 49%
2. With valve open at $\Delta t = 2^\circ\text{C}$ Kv 1,61 – supply coeff. 36%
3. With valve close and open lockshield Kv 1,02

ART. 270 DOUBLE PIPE VERSION – WITH VALVE OPEN





A	0,5	1	2	3	4	5	TA
B	0,25	0,44	0,54	0,64	0,79	0,91	1,07
C	0,21	0,33	0,36	0,39	0,42	0,44	0,47

A: Number of turns of the internal lockshield

B: Kv with handwheel fully open

C: Kv with handwheel open at $\Delta t = 2^{\circ}\text{C}$

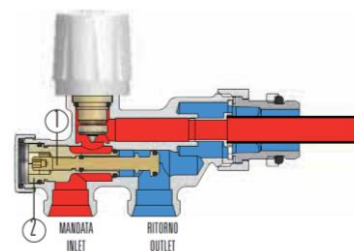
One pipe to two pipe conversion

The Pintossi + C valve art. 270 is supplied in the single-tube version with the by-pass (2) open and the lockshield (1) completely closed. In order to be put into operation, the lockshield must be opened. The valve can be converted from single-pipe to double-pipe by repositioning the by-pass (2).

SINGLE PIPE CONFIGURATION

Instructions to use the valve in a single pipe system:

1. Using a 3mm allen key control that the lockshield inner stem is completely unscrew;
2. Using a 10mm allen key totally unscrew the external lockshield sleeve;
3. Using a 3mm allen key regulate the lockshield inner stem to balance the system and radiator flow or totally screw it to close the lockshield and shut off the radiator.



DOUBLE PIPE CONFIGURATION

Instructions to use the valve in a double pipe system:

1. Using a 3mm allen key control that the lockshield inner stem is completely unscrew;
2. Using a 10mm allen key totally screw the external lockshield sleeve to block the fluid by-pass;
3. Using a 3mm allen key regulate the lockshield inner stem to balance the radiator flow or totally screw it to close the lockshield and shut off the radiator.

Manual adjustment wheelhandle

All thermostatic valves of the series 267-270-284-285 series are supplied with a manual operating wheelhandle art.125. This wheelhandle is made by 3 specific components:

1. An **anchoring mechanism** to the valve containing the rotation pin which simplifies the micrometric regulation of the flow;
2. An **ergonomic wheelhandle**, for regulating the flow rate to the radiator;
3. A **locking plate** of the wheelhandle on the anchoring mechanism, in order to prevent accidental unthreading and tampering.



Assembling of thermostatic head

- 1- Remove the protection cap. Keep the handwheel (or the protection cap) for the possibility of removing the radiator without necessarily empty the heating system.
- 2- Adjust the thermostatic head to the maximum opening position.
- 3- Apply the thermostatic control on the valve by matching hexagons, manually tighten the ring nut on the body and pull it with a pipe wrench. The tightening must be easy; otherwise do not use excessive force and repeat operation 2.
1. Turn the handle until the desired setting and move the clamps fittings into the slots on the right and left of indicator: left clamp limits the minimum temperature and right clamp the maximum one.



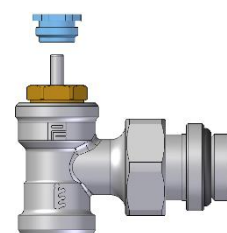
Replacing the screw ring nut

Pintossi+C thermostatic valves are equipped with a thermostatic screw with double seal mounted on the stem, which guarantees an efficient seal even after many years of use. In case of a leak on the part of the screw, and in order to fix the replacement of the complete valve and the emptying of the system, you can decide for the replacement only of the internal sealing ring nut, art.9348.

The replacement operations must be carried out by qualified personnel and only with a system completely switched off and cooled down.

The steps to follow to carry out the replacement are the following:

1. Unscrew the valve protection cap (for items 100-101-104-105), the manual operating wheelhandle (for items 110-111-114-115-116-276-267-278) or the head thermostatic, according to the used valve configuration;
2. Identify the internal ring nut of the screw, marked in light blue in the image alongside;
3. Unscrew the ring nut using a CH14 spanner;
4. Screw in the new ring nut paying attention to insert it properly in the seat of the screw;
5. Reposition the protection cap, the manual wheelhandle or the thermostatic valve.



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 characteristics 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: Passivated 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.