

# Technical Data Sheet

## Thermostatic Heads



01/03/2018

### TT2302

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#### Function

Thermostatic valves allow to make each room independent with a specific set temperature, thus enhancing comfort and actual energy saving, as prescribed by national and international regulations.

The sensor inside the head and the external control regulate the opening and closing of the valve by reacting proportionally to temperature changes, thus allowing for room temperature adjustment. The range of adjustment can be limited or blocked.

It is vitally important not to install thermostatic heads under barriers such as shelves, curtains and pieces of furniture, or in a vertical position. These obstacles can store heat and thus distort the detection of room temperature.

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#### Technical Data

Max. working pressure:	10 bar
Max. differential pressure:	1 bar
Max. working temperature:	120 °C
Hysteresis (C):	< 0.6 K
Response time (Z):	22 min.
Water temperature influence (W):	0.8 K
Inalterability range:	-15 °C ÷ +60 °C
Intermediate position:	Pos. "3" = 20 °C
Length of capillary:	2 m
Working fluids:	Water in compliance with UNI 8065:1989

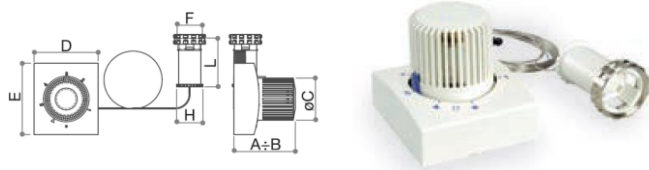
#### Materials

Sensor:	Liquid
Head:	RAL9016 white ABS
Collar:	CW 614 N UNI-EN 12164-2016

## Dimensional Drawings

### TT 2302

In-wall thermostatic head with control and remote sensor.  
Standard length of capillary 2 m.



Code	Size	A	B	C	D	E
69011005	M30 x 1,5	63	68	45	67	75

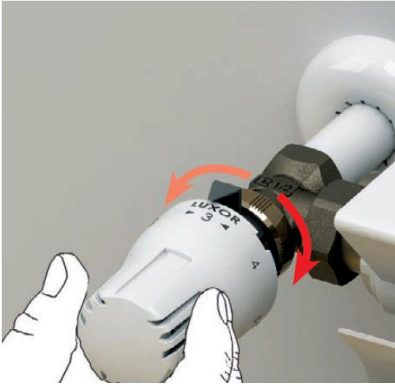
  

Code	Size	F	G	H	L
69011005	M30 x 1,5	M30x1,5	-	28	51

## Function

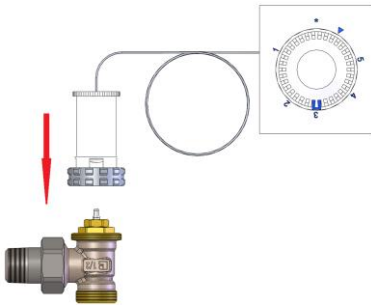
The thermostatic head consists of a sensor filled with a highly expandable liquid. This liquid, which is placed inside the adjustment knob, expands or contracts in proportion to room temperature changes, reacting even to the smallest variation. When the surrounding temperature increases, the element expands and acts on the obturator with an axial thrust movement (3), thus controlling the valve's action. The flow of the heating medium can be adjusted by opening and closing the valve. When the temperature decreases, the opposite occurs thanks to the thrust generated by the return spring. Thermostatic heads precisely maintain the set room temperature. The required value is set by turning the adjustment knob, the numbers on it correspond to different temperatures. The TT 2302 thermostatic head is classified as a "low thermal inertia" device and therefore complies with the requirements set out in the Italian Decreto del Ministero dell'Economia e delle Finanze del 19 febbraio 2007, "Disposizioni in materia di detrazioni per le spese di riqualificazione energetica del patrimonio edilizio esistente, ai sensi dell'art. 1, comma 349, legge 27/12/2006, n. 296".

## Range of Adjustment



6 °C	12 °C	16 °C	20 °C	24 °C	28 °C
*	1	2	3	4	5

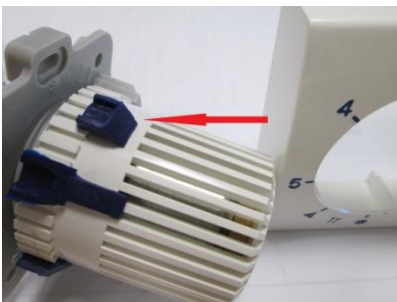
## Working Instructions



How to install the In-wall thermostatic head with control and remote sensor:

- Remove the protection cap from the thermostatic valve.
- Set the head to the maximum value so as to facilitate the installation and screw the head to the valve.
- Do not place the control behind curtains.

## Limiting and Blocking Temperature



It is possible to block the temperature to any number of the scale or to limit its stroke.

Simply use the pins at the bottom of the head to limit or block the temperature:

- Remove the collar with the scale.
- Remove the two plastic pins from the bottom of the head;
- Set the head to the desired maximum temperature and insert one pin into the slot aligned with the first line printed on the body. Set the head to the desired minimum temperature and insert the other pin into the slot aligned with the second line printed on the body.
- To block only the maximum or minimum temperature, perform the corresponding operation only. Select the temperature and insert both pins into the slots in order to block the head on a fixed desired value.

## Conditions for a Proper Functioning



Fig.1



Fig.2



Fig.3



Fig.4



Fig.5



Fig.6

Thermostatic heads must be installed away from the heat streams surrounding the heating body (fig. 1) and direct sunlight (fig. 2). Do not install thermostatic heads under shelves (fig. 3), in a recess (fig. 4), within the heat stream (fig. 5) or behind curtains (fig. 6).

These kinds of installation are not proper, as they may cause the head to measure temperature values which do not coincide with the actual room temperature.

In order for the system to function properly, it is advisable to install a pressure relief valve between the inlet and the outlet. To avoid excessive noise in the system it is recommended not to use thermostatic valves with  $\Delta P$  value above 0,2-0,25 bar.

## Item Specifications

### TT 2302

Low thermal inertia in-wall thermostatic head with remote control. Length of capillary 2 metres. Expandable liquid thermostatic element. Scale from antifreeze "❄" to 5 corresponding to a 6°C to 28°C range of adjustment. Connection to valve screw via M30x1,5 collar. Possibility to limit and block the temperature.



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