

R468H



Energy
Management

Thermostatic head R468HX051 with connection M30 x 1,5 mm and anti-tamper ring nut

Datasheet
0785EN 11/2021



To use heating energy only where and when it is actually needed, the most simple, cheap and reliable independent thermoregulation solution is to equip each radiator in the building with valves with thermostatic option and thermostatic heads.

Thermostatic heads serve to keep constant the ambient temperature of the room in which they are present, according to the set value.

The R468HX051 thermostatic head is equipped with liquid sensor and connection to the valve body with threaded ring nut M30 x 1,5 mm.

In addition, the anti-tamper ring nut prevents the head from being removed from the valve's body (except with special key). For this reason, **the R468HX051 thermostatic head is used mainly in the public sector**, where thermostatic heads are often vandalized and are dismantled and removed from the heating elements in buildings.

➤ Versions and product codes

PRODUCT CODE	CONNECTION
R468HX051	Threaded ring nut M30 x 1,5 mm

➤ Operation

The temperature variation of the environment causes a consequent variation in the volume of the liquid contained in the sensor inside the head.

This volume change causes the movement of an internal mechanism with the consequent closing or opening of the valve and therefore with modulation of the flow of water that enters the heating element.

When the temperature in the room is approaching the required value, the head gradually closes the valve, letting through just the minimum amount of water needed to keep the room temperature constant; this means guaranteed energy savings.

NOTE. The thermostatic head is equipped with an indication in Braille of the number 3 on the knob, and the + and - signs are also raised, so the adjustment can also be made by blind and/or partially-sighted people.



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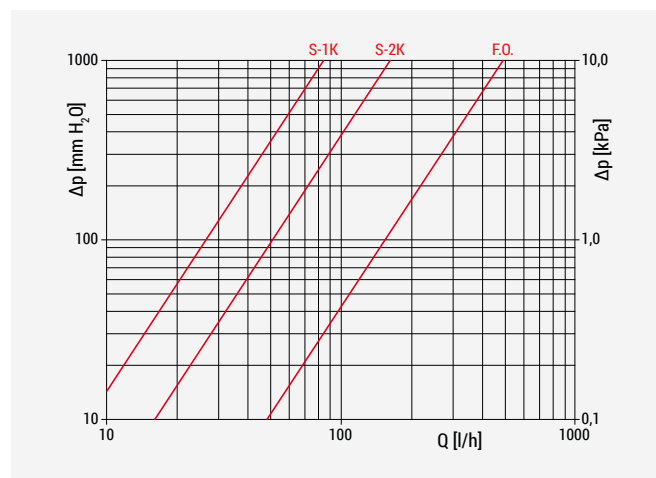
Technical data

- Can be installed on all valves with thermostatic option, series H
- Temperature range in combination with the valve bodies: 5÷110 °C
- Storage temperature range: -20÷55 °C
- Max. working pressure in combination with the valve bodies: 10 bar
- Max. differential pressure in the valve: 1,4 bar (1/2"); 0,7 bar (3/4")
- Min. head regulation: 8 °C in position *
- Max. head regulation: 28 °C in position ⚙
- Mechanical lockout position (shut-off): fully closed in position "o"

Hydraulic characteristics

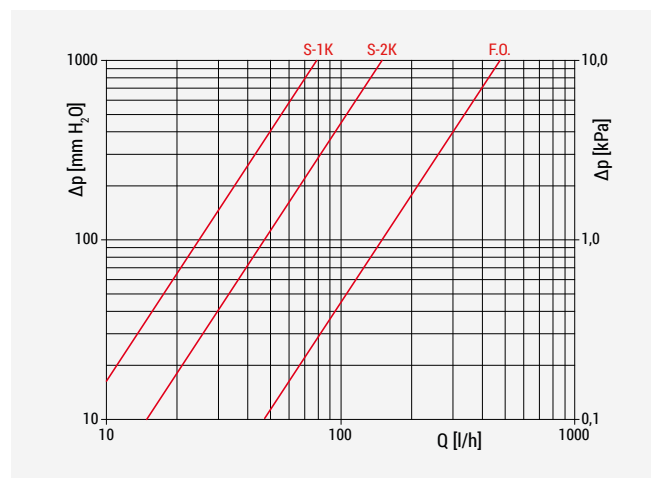
NOTE. The data shown are obtained according to the specifications of the EN215 Standard.

• R468HX051 in combination with the valve bodies 1/2" (R401H, R402H, R403H)



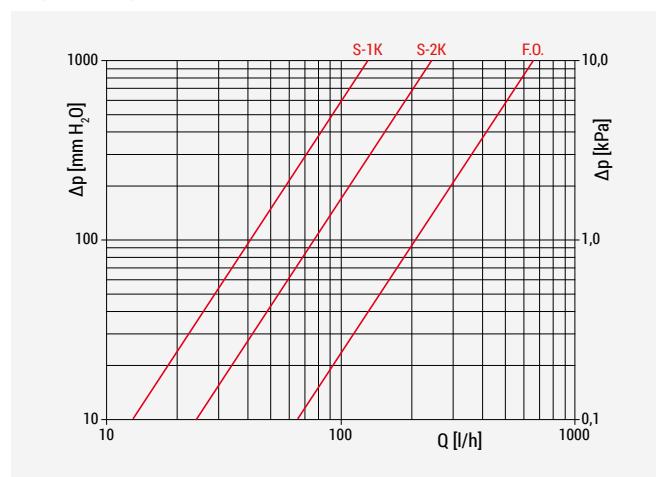
CURVE	S-1K	S-2K	F.O.
Kv	0,27	0,51	1,64

• R468HX051 in combination with the valve bodies 1/2" (R415H)



CURVE	S-1K	S-2K	F.O.
Kv	0,25	0,47	1,58

• R468HX051 in combination with the valve bodies 3/4" (R401H, R402H)



CURVE	S-1K	S-2K	F.O.
Kv	0,41	0,76	2,15

➤ Installation and adjustment

Allowed installation positions



⚠ These positions are not recommended due to the influence of the radiator temperature on the thermostatic head.

- Thermostatic heads must be installed in the horizontal position.
- In order to prevent inaccurate temperature detections, thermostatic heads should not be installed in recesses, in curtain boxes or behind curtains, and should not be exposed to direct sunlight.

Installation on valves with thermostatic options

To install the thermostatic heads on the valve body, proceed as follows:



- 1) Screw the 2 threaded pins included in the sack with the package, into the female threaded holes of the metal ring nut, using an Allen wrench 2 mm.

DO NOT fully tighten the pins.



- 2) Fully open the head by turning the handwheel to position ⚙.



- 3) Insert the thermostatic head on the hexagon of the valve body and turn the ring nut to tighten it.



- 4) Tighten the anti-tamper ring nut, **fully screwing the 2 pins previously inserted**, using a 2 mm Allen wrench.



- 5) The head is now installed to the valve and can be moved to the required adjustment position by turning the handwheel.

Removal of the thermostatic head

To remove the thermostatic heads from the valve body, proceed as follows:

- 1) Fully open the head by turning the handwheel to position ⚙.
- 2) Unscrew the two pins using a 2 mm Allen wrench.
- 3) Unscrew the threaded ring nut.
- 4) Unhook the thermostatic head with a light strength.

Handwheel opening limit / locking

The handwheel limit and locking operations are carried out with the thermostatic head already installed on the valve body.



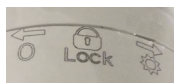
- 1) Turn the handwheel to the **position that you want to partially limit/lock**, and disconnect the limiter ring with the aid of a screwdriver.

Example: in this figure, you want to lock/partially limit it to position 3.



- 2) Rotate the limiter ring. Using the "T" notch as a reference (see figure), connect the ring in line with one of the 3 icons on the back of the handwheel:

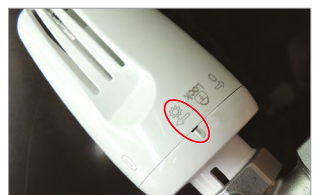
1. →
2. ←
- 3.



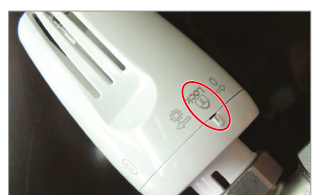
3a) Achieving **partial opening/closure** of the thermostatic head:



- in position ← the required position is limited to (shut-off).
Example: fix the handwheel in position 3 and the limiter ring in position ←. In this way, the head can be fully closed, or opened up to 3.

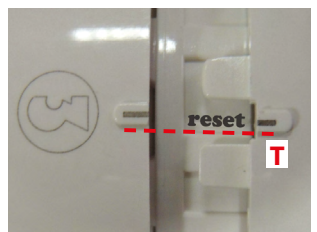


- in position → the required position is limited to (fully open).
Example: fix the handwheel in position 3 and the limiter ring in position →. In this way, the head can be fully opened, or closed as far as 3.



3b) **Locking** the adjustment range:

- in the position, the adjustment is locked in the required position.
Example: fix the handwheel in position 3 and the limiter ring in the position. In this way, the head is locked in position 3 and cannot be adjusted.



- NOTE.** When it is necessary to return the limiter ring to the default position:
- 1) position the indicator (T) in correspondence to the word "reset".
 - 2) set position 3 on the thermostatic head in correspondence to the word "reset".

Adjusting the temperature

The correct adjustment position for thermostatic heads is obtained by referring to the following table, which matches the numbering on the handwheel to the corresponding room temperatures.

Thermostatic head position	0	*	1	2	3	4	
Temperature adjusted [°C]	SHUT OFF	8	12	16	20	24	28

NOTE. The values shown in the table refer to the optimum conditions obtained in a climatic chamber. In the room itself, these values may be altered by factors such as the type of installation, the environmental conditions, the degree of insulation in the building, and the characteristics of the radiators.

If the radiator is positioned where there is cold air or draughts, the calibration temperature will not correspond to the average room temperature because the head sensor is influenced by the local temperature and therefore commands the closure of the valve too early or not at all. In these cases, the handwheel must be repositioned with the aid of a mercury thermometer positioned in the middle of the room.

In example: if the head is in position 3 and the room temperature is lower than the 20 °C envisaged while the system is working, this means the valve has been prematurely closed due to local excess temperature. In this case, turn the handwheel slightly until it is halfway between number 3 and number 4. Vice versa, if the temperature is higher than the 20 °C when the head is in position 3, this means the it is positioned in a cold draught and therefore keeps the valve open. In this case, turn the handwheel until it is halfway between number 2 and number 3.

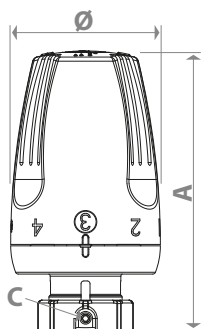
If the thermostatic head is installed in rooms that are not in use, you can ensure the best energy savings by turning the handwheel to position (corresponding to the 8 °C anti-freeze protection temperature).

In case of radiator maintenance, is possible to use the thermostatic head "shut off" function (position "0").

The mechanical closure allows to shut off the radiator valve without having to disassemble the thermostatic head and reassemble the manual handwheel.

WARNING. To avoid excessive loads on the seal gasket of the thermostatic bonnet (with the resulting risk of jamming and locking) during the summer months, is recommended to place the handwheel in the fully open position, as marked by the symbol .

➤ Dimensions



PRODUCT CODE	A [mm]	Ø [mm]	C [mm]
R468HX051	99	53	Allen Wrench 2 mm

➤ Product specifications

R468HX051

Thermostatic head with liquid sensor and anti-tamper ring nut. Connection to the valve body with threaded ring nut M30 x 1.5 mm. Adjustment positions from * a ⚙, corresponding to a temperature range of 8÷28 °C. Position "0" for shut-off function. Possibility to block or achieve partial opening and/or closure via the limiter ring supplied. Can be installed on all valves with thermostatic option, series H. Temperature range combined with valve bodies 5÷110 °C. Max. working pressure in combination with the valve bodies 10 bar.

⚠ **Safety Warning.** Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

♻ **Package Disposal.** Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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♻ **Product Disposal.** Do not dispose of product as municipal waste at the end of its life cycle. Dispose of product at a special recycling platform managed by local authorities or at retailers providing this type of service.