



Description

The K470H chronothermostat for radiators is a technologically advanced device that is quiet and compact - it measures no more than a normal thermostatic head. The K470H chronothermostat is equipped with a ring nut with standard thread M30x1,5 mm and one adaptor, for use with a wide range of radiator valves. The function keys, wheel selector and LCD display enable easy menu navigation for programming the chronothermostat and selecting the various operating modes.

Versions and product codes

Product code	Description
K470HX001	Chronothermostat for radiators
K471X001	Programming key for chronothermostat K470H

Technical data

Chronothermostat K470H

- Power supply: 2 AA batteries 1,5 V
- Regulation type: PID with answer time lower than 3 minutes.
- Serial port to programmer K471: proprietary interface and protocol
- No. of programmable time bands: 4 daily time bands
- Protection degree: IP30
- Working temperature: 0÷50 °C
- Storage temperature: -20÷70 °C
- Type of casing: White ABS
- Casing dimensions (LxHxW): 52x86x65 mm
- Ring nut connection: M30x1,5 mm (with adaptor for other valve bodies)



Attention.
Use alkaline batteries only.
Do not use any type of rechargeable battery.

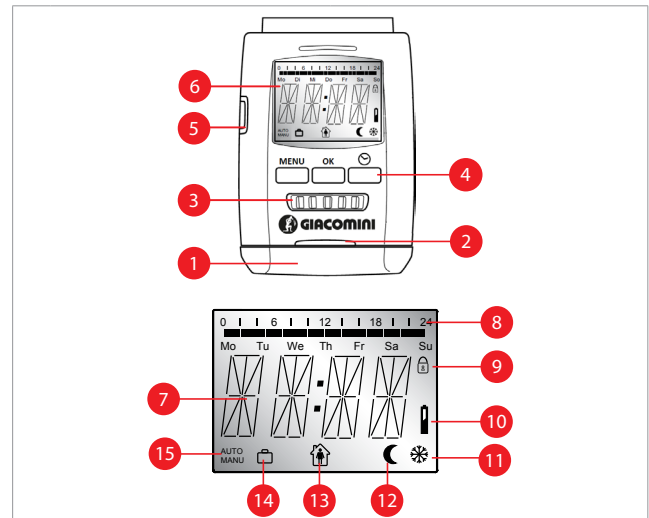
Programming key K471

- Power supply: 5V DC max. 100 mA via USB port
- Serial port to PC: USB 2.0
- Serial port to K470H: proprietary interface and protocol
- System requisites: Windows XP® SP3 or higher
- Local signalling: 2 LEDs
- Protection degree: IP30
- Working temperature: 0÷50 °C
- Storage temperature: -20÷70 °C
- Casing: plastic



Attention.
The device's "Mini-USB" connector is only compatible with the cable of the programmer K471; do not connect any other devices fitted with a Mini-USB port, as this could irreversibly damage the chronothermostat. The key K471 cannot be used as a portable mass memory.

Components



Legend		
1	Battery compartment	9 "Child protection" function indicat.
2	Temperature sensor	10 Battery replacement indicator
3	Wheel selector	11 Indicator of active "anti-freeze / window open" function
4	Function keys: MENU - OK -	12 Indicator of active ECONOMY
5	Mini-USB connector for connecting K471	13 Indicator of active COMFORT
6	LCD display	14 Indicator of active TRAVEL
7	Area with the 4 alphanumerical figures	15 Indicator of AUTO or MANUAL mode
8	Profile indicators: day and time bands for comfort/economy mode	

Operation

Manual mode

In manual mode, the chronothermostat adjust the temperature set via the wheel selector.

Auto mode (automatic program)

In automatic program mode, the chronothermostat adjusts the temperature on the basis of the "comfort" or "economy" functions defined in the relative time bands of the programmed ambient profile. The comfort and economy times can be defined via programmed timing. Up to eight daily switchovers can be selected (four "comfort" and four "economy").
The chronothermostat has the following factory settings:
• heating at "comfort" temperature, with the first switchover at 7.00 am
• reduction to "economy" temperature, with the first switchover at 10.00 pm
In this way, one daily heating time band is set (from 7.00 am to 10.00 pm) for the whole week.

Setting the comfort/economy times





Up to four daily "comfort" switchovers (heating active) and four "economy" switchovers (temperature reduction) can be defined for each of the seven days of the week, or for three groups of several days.
In the menu, the indications "DAY1"-"DAY7" refer to the days of the week (from DAY1 Monday to DAY7 Sunday). The days are also shown in abbreviated form (Mo, Tu, We, Th, Fr, Sa, Su) beneath the hourly timings bar.
The indications "D1-5", "D1-6" and "D1-7" refer to groups of several days, allowing you to quickly program a number of days at the same time:
D1-5 = group of days from Monday to Friday
D1-6 = group of days from Monday to Saturday
D1-7 = group of days from Monday to Sunday



Note:
Any days that are not programmed remain set with the factory values. The "comfort" and "economy" temperatures are factory-set at 21 °C and 16 °C respectively.


Advanced functions

TIMER function

The timer function is selected with the timer-button . With this function a user-defined temperature for a programmable period can be entered. This can be very useful in case of a party, for example. Press . First, the time for which the time programme has been deactivated is shown. Confirm with . Now, the desired temperature can be set. Confirm with . In the selected period it is not possible to change the temperature manual, the wheel is locked. Press Menu and unlock it.

Setting the OFFSET

Elements like shelves and curtains near a radiator can impede good heat diffusion, inevitably affecting the room temperature detected by the chronothermostat and its subsequent adjustment. In these cases, if the room temperature is very different from the temperature set on the chronothermostat, you can insert a correction factor (called OFFSET):



Note:
Before implementing an OFFSET value, it is necessary to measure the room temperature with the aid of a precision thermometer.
Example: if the "comfort" temperature set on the chronothermostat is 21 °C but the real temperature in the room is only 19 °C, enter a correction factor of +2 °C.

WINDOW function

The chronothermostat has an "open window" function: when the window is opened and the temperature therefore drops suddenly, the chronothermostat temporarily closes the valve (for a set time) to save energy. During this time, the "anti-freeze" symbol will be shown on the display. At the end of the timed period, the chronothermostat returns to normal operating mode.

TRAVEL function

In the event of a prolonged absence, you can set the temperature for that period (or even the closure of the valve), along with the date and time of your return.

CHILDREN SAFETY function

This function allows you to deactivate the keys and wheel selector to prevent unauthorised persons from accessing the menu.

Heating shut-off (valve closure)

If necessary, you can close the valve to deactivate the heating in a room. The valve closes and thereby deactivates the heating function, but the anti-calcification function still remains active. By resetting "AUTO" mode at any time, the chronothermostat will start up again and implement the programmed profile.

Restoring the factory configurations

With this function, you can delete all the programming operations made and thereby restore the chronothermostat's initial factory programming conditions.

Automatic protection functions

Regardless of the programming and operating modes, the chronothermostat has two automatic protection functions:

Anti-freeze function: if the room temperature falls below 6 °C, the chronothermostat opens the valve until the temperature rises to 8 °C. This prevents the water in the pipes from freezing.

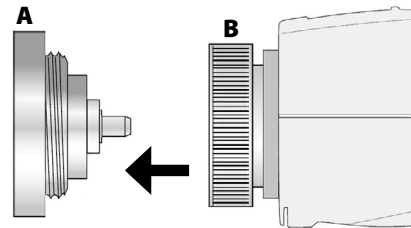
Anti-calcification function: once a week (on Friday morning), the chronothermostat performs a valve opening/closing cycle to prevent the valve from calcifying.

Installation

Installation on Giacomini valves with thermostatic option, with connection M30x1,5 mm

The chronothermostat is installed on all the Giacomini valves with thermostatic option of the H series, with connection M30x1,5 as shown below:

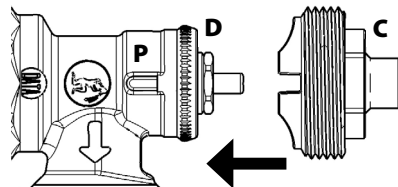
- Tighten the ring nut (B) of the chronothermostat on the radiator valve (A).



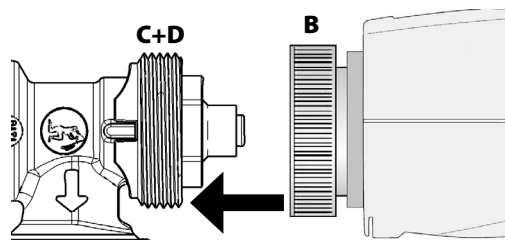
Installation on other Giacomini valves with thermostatic option


When installing on other Giacomini valves with thermostatic option, use the contents of the bag R453HY012 (included in the chronothermostat package).

- Fit the threaded ring nut (C), coupling it with the reference pins (P) on the radiator valve (D).



- Tighten the ring nut (B) of the chronothermostat on the radiator valve (C+D).



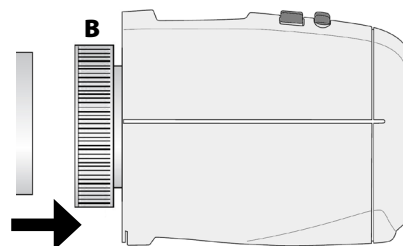


Note:
The chronothermostat must be in "INST" or "ON" mode in order to fix it to the ring nut without too much effort.
If the chronothermostat is installed at a later time, select the "INST" menu before fixing it to the ring nut.
To ensure better temperature adjustment, you are advised to install the chronothermostat with the display facing upwards.

Removing the chronothermostat

To remove the chronothermostat from the ring nut:

- Set the maximum temperature via the wheel selector (the display will show "ON") and wait at least one minute.
- Unscrew the ring nut (B) of the chronothermostat from the radiator valve.



Programming via key K471

The chronothermostat can be directly programmed via the programming key K471, ensuring quick and easy chronothermostat configuration thanks to the exchange of data via the Mini-USB connector.

Using the key K471 and viewing the graphic interface on the PC, you can easily programme the daily time bands for the "comfort" (Tmax) and "economy" (Tmin) temperatures of the chronothermostat.

Once the temperature profiles of the various rooms have been stored on the key K471, they can be uploaded onto the chronothermostat K470H which thus automatically acquires the current time and date.

This means that any pre-setting by the user is superfluous.



Note:

Initial chronothermostat start-up. The transfer of the weekly profile to a chronothermostat presupposes that the device is already installed on the valve, as its good functioning depends on the positive outcome of the initial start-up sequence. For more details, refer to the installation and user instructions of the chronothermostat K470H.



Insert the "Mini-USB" connector of the programmer in the relevant connector on the side of the chronothermostat.

The standard indications disappear from the display and are replaced with the code "P01" ("Ambient profile 1").

Using the chronothermostat knob, select the required ambient profile; choose the numerical index of the ambient profile from those previously programmed with the software.

When you press the "OK" key, the parameters of the selected profile are transferred from the key to the chronothermostat.

As soon as the chronothermostat has been programmed, the standard information returns to the display.



Note:

If the list of ambient profiles is not viewed via the chronothermostat wheel within 10 seconds, the display will resume the usual indications. In this case (and if necessary), take the key out and then insert it again.

Reference Standards

- The "Chronothermostat K470H" meets the requisites laid down by Directive 2004/108/EC.
- The "Programming key K471" meets the requisites laid down by Directive 2004/108/EC.

Product specifications

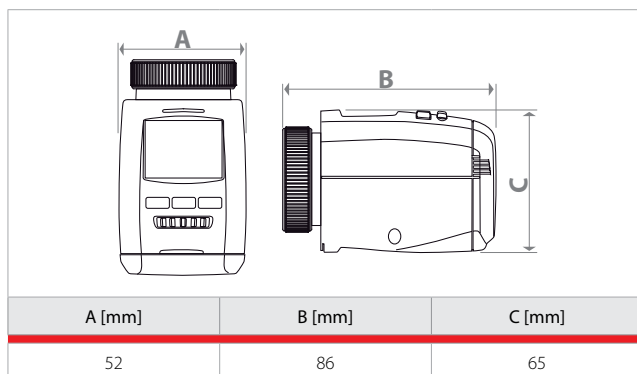
K470H

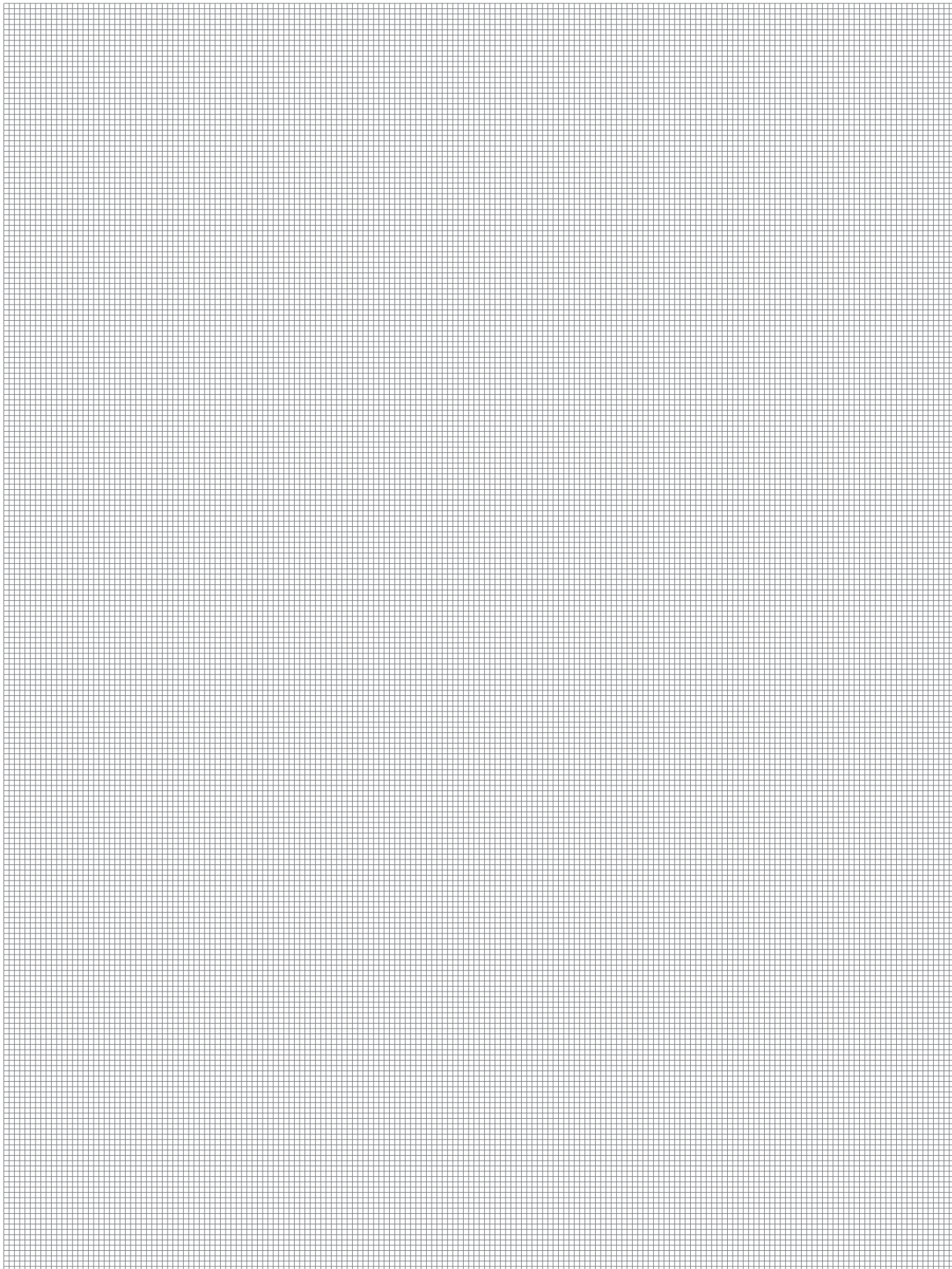
Chronothermostat for radiators equipped with adaptors for the installation on Giacomini "TG" or "H" series valves. Complete with function keys, wheel selector and LCD display for easy menu navigation. The menu is used to programme the chronothermostat and select the various operating modes. Power supply - 2 AA batteries 1,5 V. Regulation PID with answer time lower than 3 minutes. Serial port to the programmer K471 (proprietary interface and protocol). 4 programmable daily time bands. Protection degree IP30. Working temperature 0÷50 °C. Storage temperature -20÷70 °C. Casing in white ABS. Dimensions (LxHxW) 52x86x65 mm. Compliance with Directive 2004/108/EC.

K471

Programming key for chronothermostat for radiators (K470H series). USB connection to the PC and Mini-USB to the chronothermostat. Using the key K471 and viewing the graphic interface on the PC, you can easily programme the daily time bands for the "comfort" (Tmax) and "economy" (Tmin) temperatures of the chronothermostat. Once the temperature profiles of the various rooms have been stored on the key K471, they can be uploaded onto the chronothermostat K470H which thus automatically acquires the current time and date. This means that any pre-setting by the user is superfluous.

Dimensions





Additional information

For more information, go to www.giacomini.com or contact our technical assistance service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
This document provides only general indications. Giacomini S.p.A. may change at any time, without notice and for technical or commercial reasons, the items included herewith.
The information included in this technical sheet do not exempt the user from strictly complying with the rules and good practice standards in force.
Giacomini S.p.A. Via per Alzo, 39 - 28017 San Maurizio d'Opaglio (NO) Italy