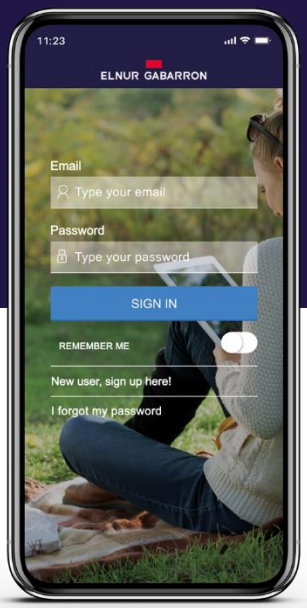
ELNUR GABARRON®

ADVANCED USER MANUAL

ELNUR GABARRON HEATING SYSTEMs CONTROL APP

ELNUR GABARRON WIFI CONTROL APP



Available on the App Store

ANDROID APP ON Google play

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1. 1. INTRODUCTION. FIRST STEPS.

The Elnur Gabarron Wifi Control app is a mobile app available on Android and iOS, which allows you to control your Elnur Gabarron heating equipment compatible with the G Control system:

- Ecombi Plus, Ecombi ARC and Ecombi Solar storage heaters.
- Ingenium and Diligens radiators.
- CTM20 Thermostat.
- G Control PM power meters.

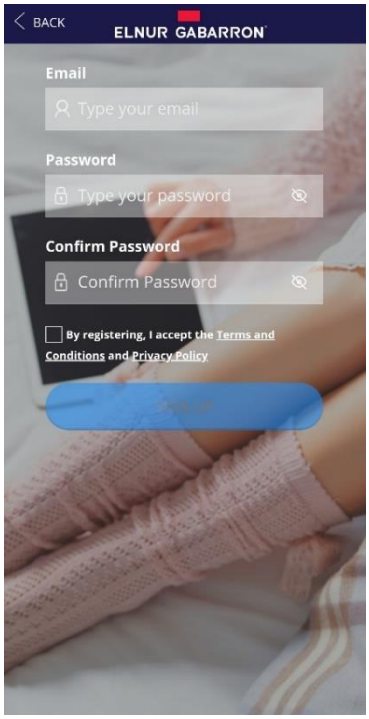
To connect and control your heating equipment through the app, you will need a **G Control Hub** accessory. This Control Hub runs communications between the wireless heating equipment via an RF network and connects to the internet using your home internet network.

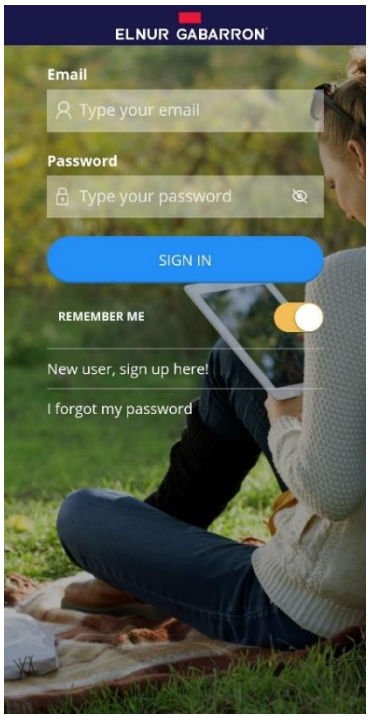
To register and configure your heating system, follow these initial steps:

- 1.1. Creating your user account.
- 1.2. Registering your home.
- 1.3. Installing your G Control HUB.
    - 1.3.1. G Control HUB USB.
    - 1.3.2. G Control HUB EU.
- 1.4. Linking of heating equipment.

1.1. Creating your user account.

Registration and creation of a user account is required for remote control of your heating installation. If you do not have a user account, you should first register on the Elnur Gabarron Wifi Control app available on the App Store and Play Store.





Enter a valid email address, which you will need to verify, and a password. An email will automatically be sent to your inbox to verify the requested email address.

Available on the App Store

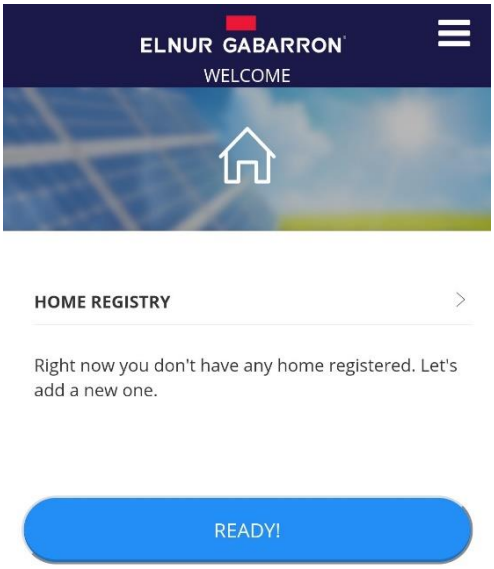
ANDROID APP ON Google play

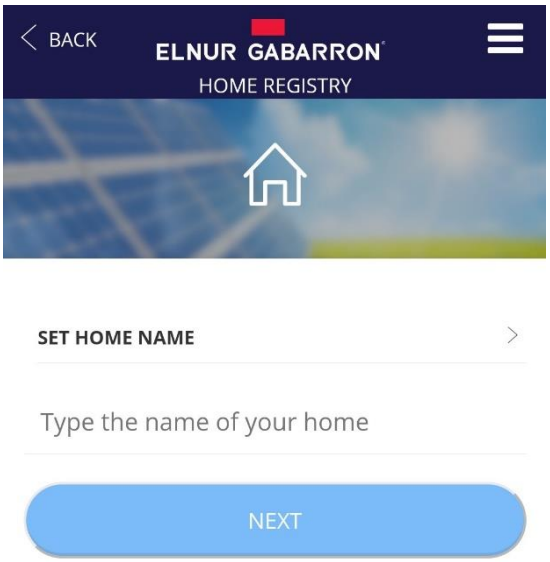
You can also access your heating devices at any time by going to remotecontrol.elnur.es.

1.2. Registering your home.

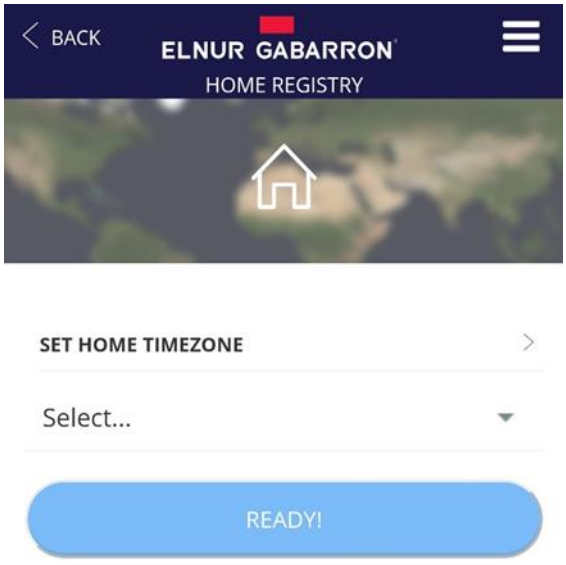
Once you have created an account and confirmed your email address, access the app with your details. The installation wizard will guide you in setting up your equipment. The first step will be to register your home.

Set a name for your home.





Select your time zone.



1.3. Installing your G Control Hub.

To connect and control the devices via the app, a **G Control Hub** accessory is required. This control unit communicates with the devices wirelessly via an RF network and connects to the internet using your home's internet network.

Only one control unit is necessary for each heating installations, being able to control up to 30 heating devices with a single control unit.

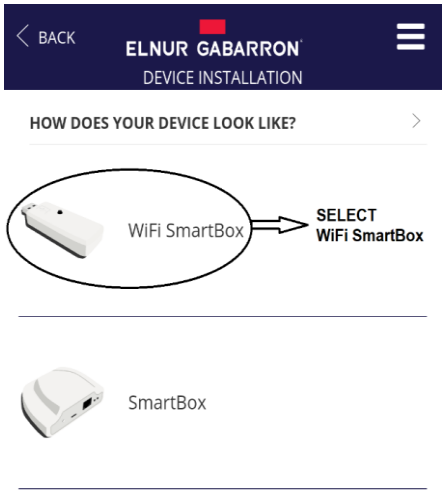
There are two versions of the control hub available:

- G Control HUB USB. USB-type Control Hub for internet connection by configuring the Wifi network of your home.
- G Control HUB EU. Control Panel for wired connection to an ethernet port on your router.

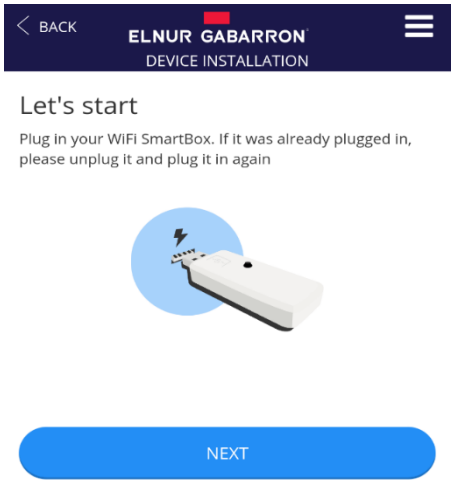
In the next step, the application will ask you for the type of Control Hub, select the type of Control Hub you have purchased and follow the instructions of the installation wizard.

1.3.1. G Control HUB USB.

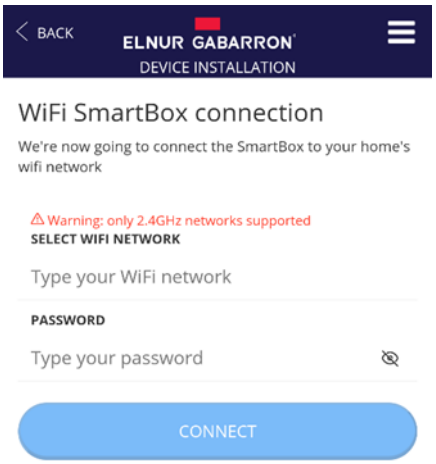
Select the WIFI Smartbox device and follow the installation wizard's instructions.



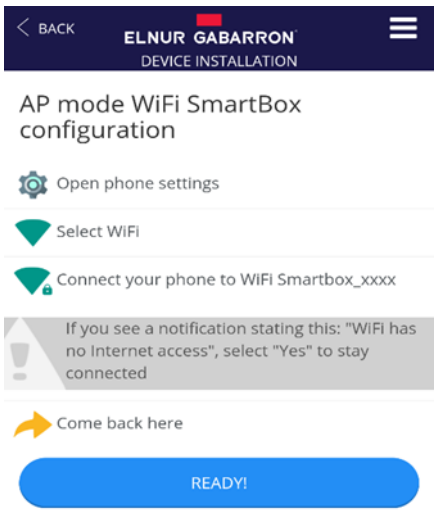
In the next step, the installation wizard will ask you to connect your USB to an electricity source (this can be the USB port in the router or, for example, a mobile charger). If it is already connected, it will ask to disconnect and connect again.



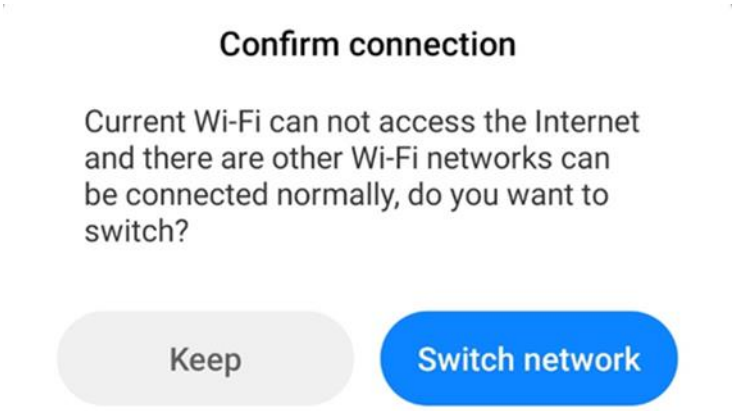
In the following window, enter the Wifi network details to which your G Control Hub USB will connect.

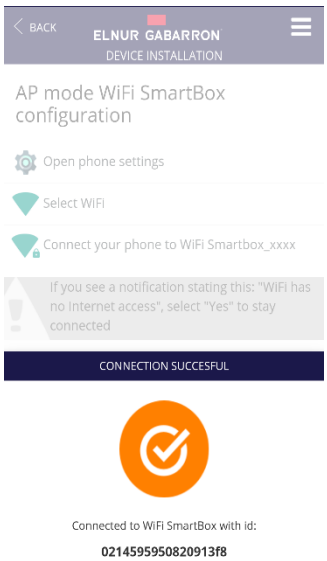


Next, the installation wizard will ask you to open your phone settings, go to Wifi settings and connect to the Wifi network named *Smartbox_xxx*. No password is required for this network.

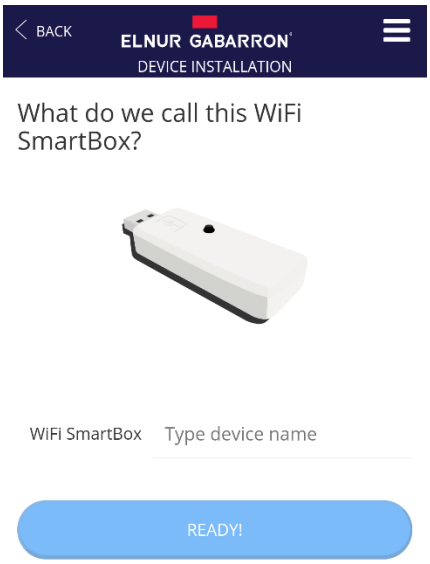


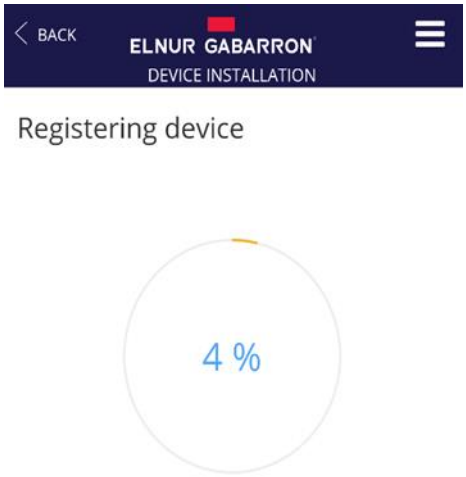
If the app asks you if you want to stay connected to the *Smartbox_xxx* Wifi network because you have no internet connection, answer Yes. Go back to the application, the device will be detected automatically.





Finally, the application will ask for the name of the G Control Hub USB device. It can be different from the name of the home and will only be used when several control hubs are linked to the same home. The last step is the automatic registration of the control hub, this process can take a few moments. It ends when the percentage reaches 100%.



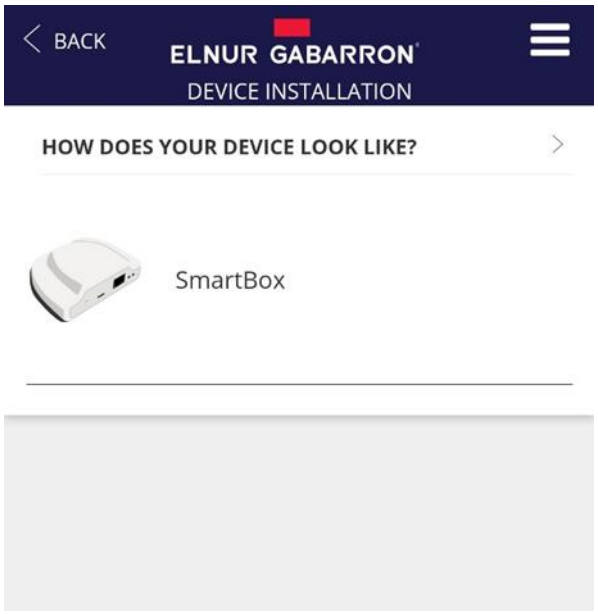


In the final step, configure the energy tariff according to the tariff contracted with your electricity company. By default, it will first show a preconfigured Spanish tariff. You can select another tariff from the pull-down list and subsequently, once the home has been registered, you can edit the tariff if it does not match any of the preconfigured ones.

The installation of the G Control Hub USB is now complete.

1.3.2. G Control HUB EU.

Choose the Smartbox control hub and follow the assistant wizard's instructions.



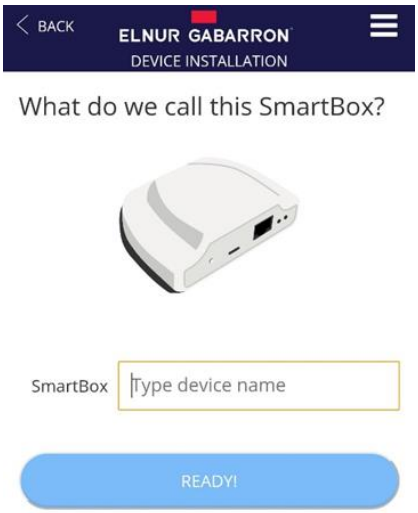
Next, the wizard will ask you to press the button located at the back of the control panel to locate it and automatically associate the registered account with the G Control Hub device ID.

To do this, the G Control Hub device must already be connected, the correct control panel light sequence must be on and the mobile device from which you are performing the configuration must be connected to the same Wifi network as the router to which the control panel is connected.

If you are not connected to the same Wifi network, after several seconds, the automatic Wifi search will be cancelled, allowing the user to manually enter the device ID, an 18-position alphanumeric code, which can be found on the sticker on the bottom of the device and on its original packaging.

As a last step, assign a name to your control panel when prompted by the wizard, and make sure to add in the electricity tariff that you are signed onto. By default, the most common hourly rate in Spain is preconfigured into the settings:

Afterwards, once the home has been registered, you can modify the tariff if it does not match the preconfigured ones.



The installation of the G Control Hub EU is now complete.

1.4. Linking up your heating equipment.

The last step in registering and configuring your heating system is connecting the various heating devices you have purchased. These devices communicate via radio frequency with the Control Hub and are controlled remotely via the hub.

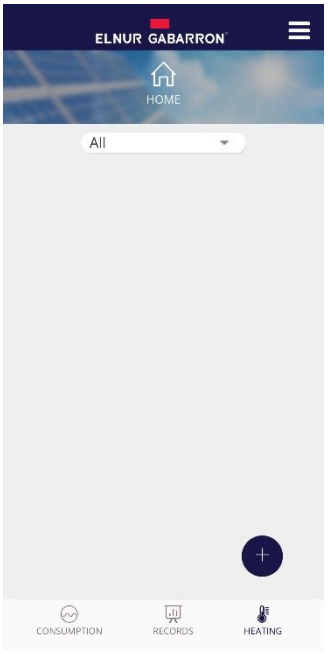
Warning: *The G Control Hub is only compatible with devices equipped with the G Control system.*

To add new heating equipment, click the install button in the application, select the type of heating equipment you are installing, and follow the instructions of the installation wizard. For more details on the linking up, control and configuration of each piece of heating equipment, please refer to the corresponding section of this advanced user manual.

3. G Control PM Power Meters.
4. Storage heaters.
5. Radiators.
6. Thermostat.
7. G Control Hub Control Panel.

2. THE APP: GENERAL OVERVIEW.

On the app, once the home has been registered and the G Control HUB device has been linked up as described in section "1. Introduction: First Steps" section of this manual, the following screen will appear.



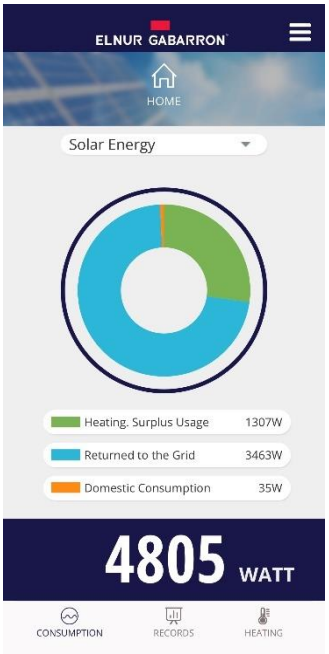
2.1. Lower Menu.

On the lower bar, you can find the following submenus:

2.1.1. Consumption.

Depending on which power meters you have installed, the app will show you:

- Grid consumption: Current consumption from the electricity grid in real time.
- Solar energy: Total solar production and its use: consumption in the rest of the house, consumption of the heating system and grid surpluses.

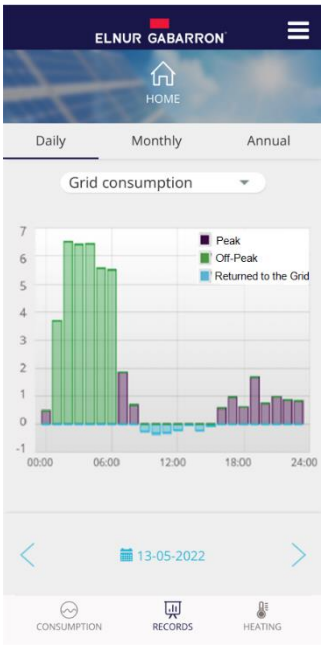


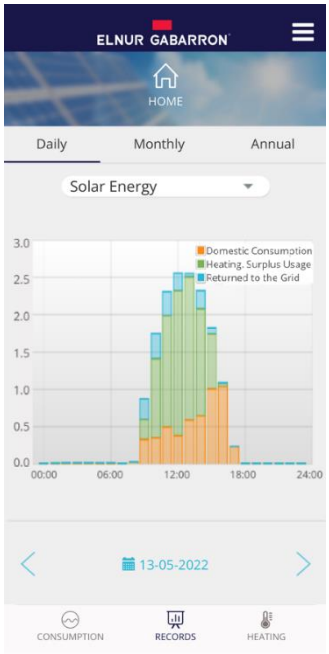
Note: Consumption data will only be available if the corresponding G Control PM power meters have been installed and linked to the system.

2.1.2. Records.

Depending on the power meters you have installed, in this section, you will be able to consult your consumption and solar production data in daily, monthly or annual view.

- Grid consumption: The grid energy consumed will be shown according to the time slots you have established when configuring your home.
- Solar energy: Solar energy produced and its use: consumption of the rest of the house, consumption of the heating system and energy surpluses.

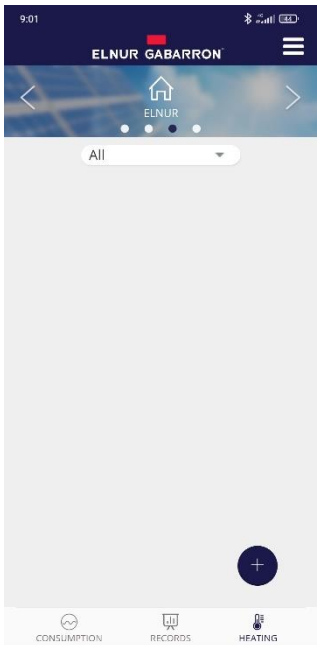


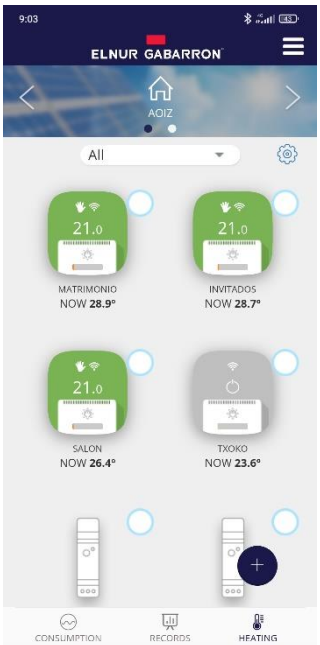


Note: Consumption data will only be available if the corresponding G Control PM power meters have been installed and linked to the system.

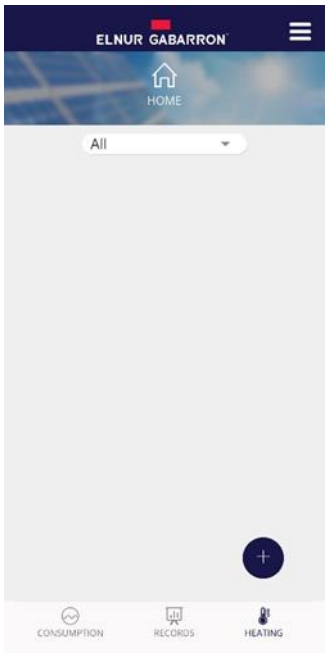
2.1.3. Heating.

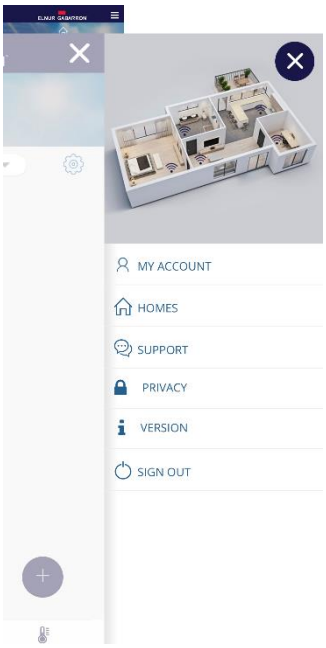
This section shows the devices that you have linked to your home. The image on the left shows the home without any equipment and the image on the right shows the home with equipment already linked.





2.2. Top right menu.





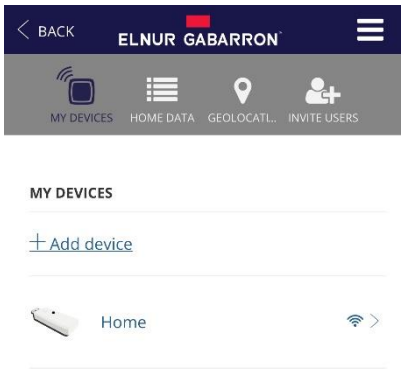
2.2.1. My Account.

In this menu, you can see and change your user account settings:

- Language.
- Email.
- Password.

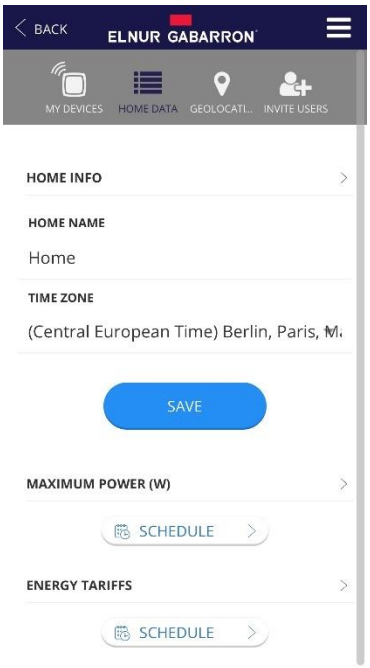
2.2.2. Homes.

This section shows the different homes that you have linked to your account. Choose the home that you want to edit.



a. Devices: The different G Control HUB units linked to the home are shown here. Normally, the user will have only one control hub per home, but depending on the configuration, the app allows several control hubs to be used within the same home.

b. Home data: In this section, you can edit your house's details. These include:

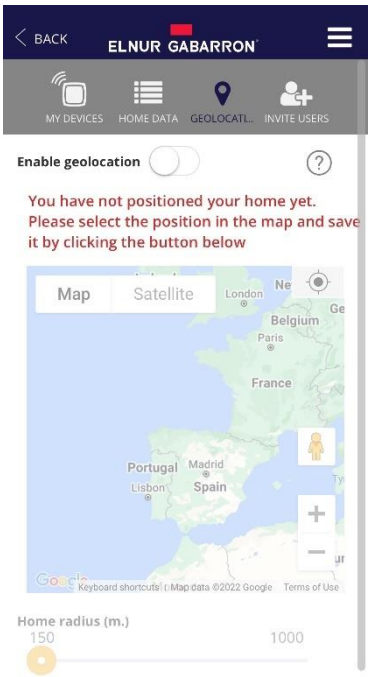


- The name of the house.
- Time zone.
- Energy tariff: This allows you to program the different time slots of your electricity tariff. Based on the configuration of the energy tariff that you program, the consumption recorded by the different heating equipment and linked power meters will be classified in the corresponding bracket. (Flat, Peak, Off-Peak...). (More details in section "*2.3. Energy tariff: Configuration*").
- Maximum power: You can programme the maximum power 24/7, so that the connected heating equipment restricts usage and does not exceed the power limits. (More details in section "*2.4. Contracted power: Configuration*").

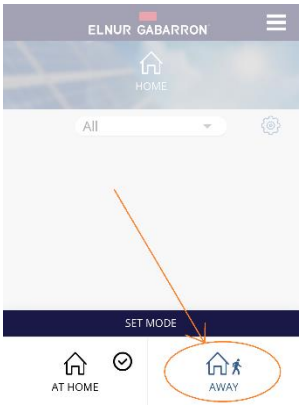
c. Geolocation: You can enable the geolocation function. When this function is activated, 'away' mode will automatically be activated in your home when you move the set radius away from your home.

When your home is in 'absent' mode, each heating unit automatically lowers the selected setpoint temperature.

The degrees (°C) that each unit lowers by when 'away' mode is active can be configured in the configuration section of each heating unit.

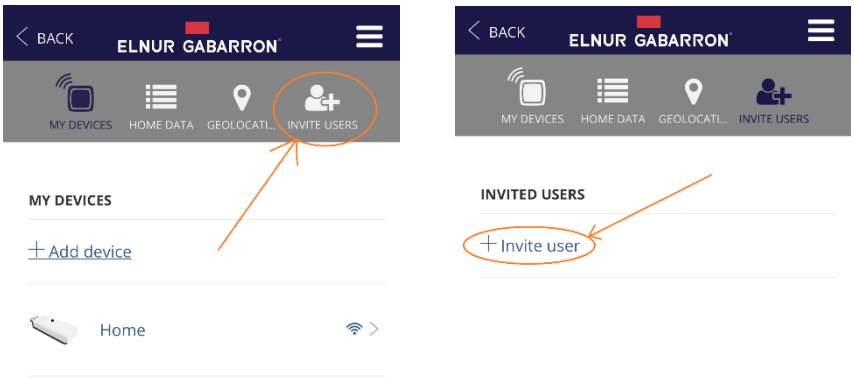


'Away' mode can be activated manually from the app's home screen.

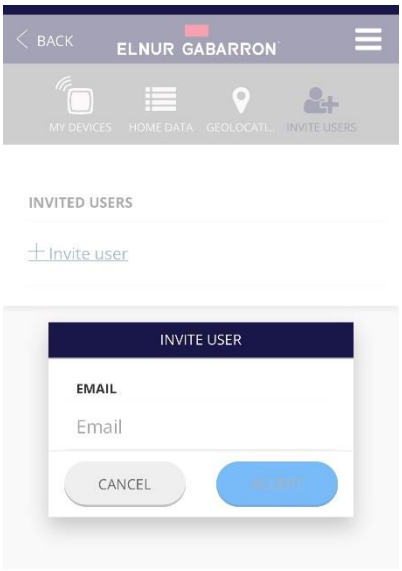


d. Invite other users:

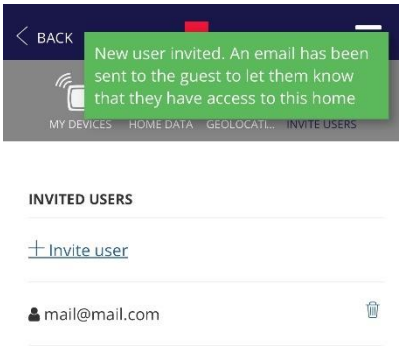
In this section, you can invite other users to have control over your home's heating system. Choose "invite user" to add email accounts to those who need access.



On the next screen, enter the email details of the new user and press "accept".



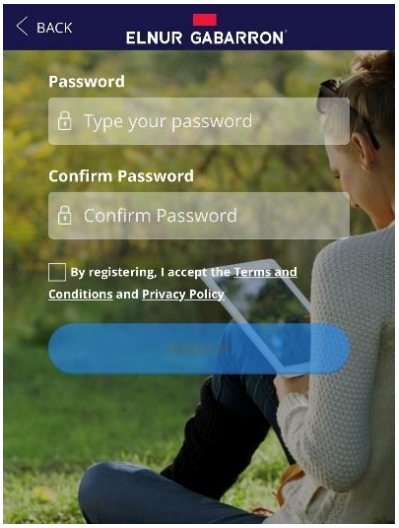
The home appears on screen with the details of the invited user and this message in the green box.

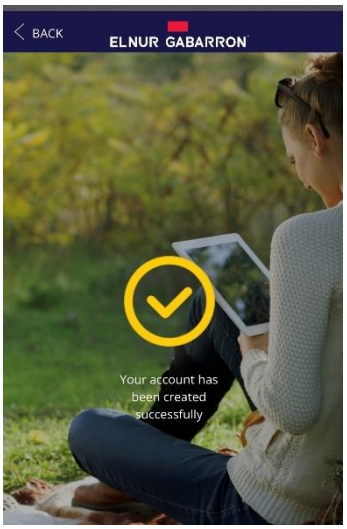


The invited user should go to their email inbox, where an invitation will be sent.

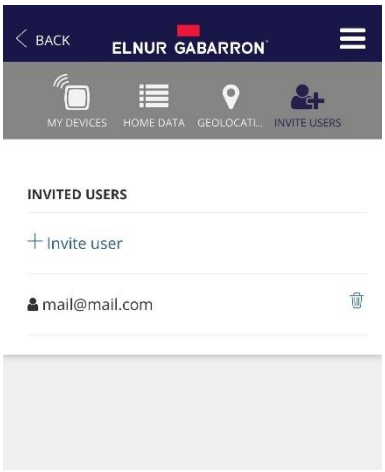
If the user was not previously registered on the app the email will contain a link that must be followed to confirm the invitation and registration of the email account in the app. When opening the link, the following screen will be displayed, in which you must enter and confirm the password you set to log in to the app. You must accept the terms and privacy policy. Click on the "*register*" button. The guest account is now created.

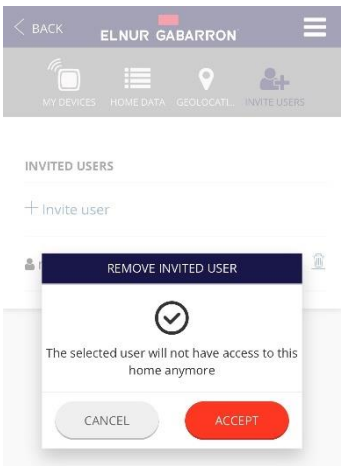
The invited user can now begin a session on the app, access the home and manage it.

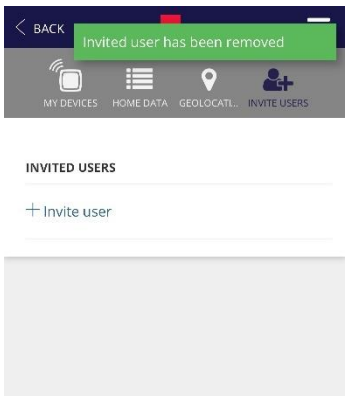




At any time, the owner of the account can remove access for the guest accounts accessing the user invite section. You will see the accounts that are invited, then you can click on the bin to the right of the email address to remove access to the home of the selected account.







2.2.3 Support.

In “Support”, you can find the email address for technical help with the app. You can write an email to support@elnurgcontrol.com with any issues you experience with the app.

2.2.4 Privacy.

Privacy policy, terms and conditions.

2.2.5 Version.

Details about the version of the app installed on your phone.

2.2.6 Sign out.

2.3. Energy tariff: Configuration.

It is necessary to program the energy tariff of your home in order to display and correctly classify the electricity consumption of your home and of each heating appliance by time (off-peak, peak, flat).

If you have not configured the energy tariff for your home, when accessing any heating equipment in the application, the consumption of the equipment will not be shown, and the following message will be displayed on a blue background: "*There is no energy tariff defined on this device. Configure it here*".

Click on the horizontal bar with a blue background to access the electricity tariff configuration or go to the "*Energy Tariff*" section as specified in point *"2.2.2 Homes"* to enter or modify your configured energy tariff.

If you have not yet set up a configuration, the following menu will be displayed, where you can choose a default tariff, which coincides with the regulated electricity tariff in Spain, as the initial tariff (that can be edited afterwards); or configure your own tariff from scratch.

Once you have set your tariff, you will be shown the programming screen on the left-hand side.

You can adapt the energy tariff schedules by assigning the Off-Peak, Peak and Flat time slots if you have them, according to your electricity tariff.

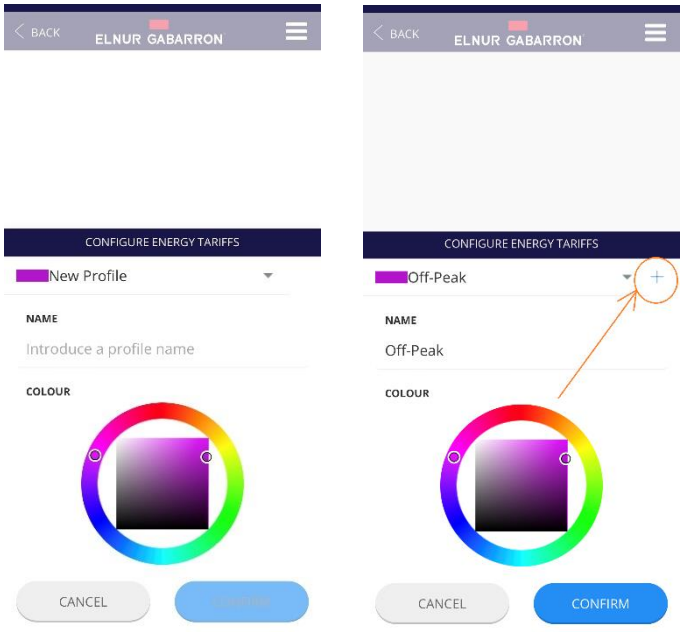
You can also delete or create time slots (Profiles) according to the electricity tariff for each phase.

The example shows the regulated energy tariff profile in Spain (Mainland, Balearic and Canary Islands).

2.3.1. Profiles: (Off-Peak, Peak, Flat).

A profile is considered to be each different time period that your electricity tariff has (Off-Peak, Peak...). By selecting profiles in the lower menu, you can:

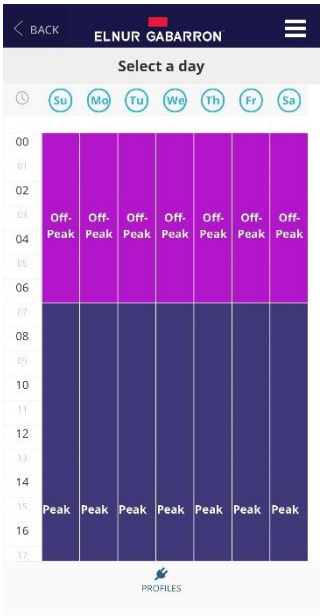
- Edit existing profiles: Change the name of the Profile and its colour.
- Create New Profiles: By selecting "New Custom Profile" the following screen appears. Select the name and colour.



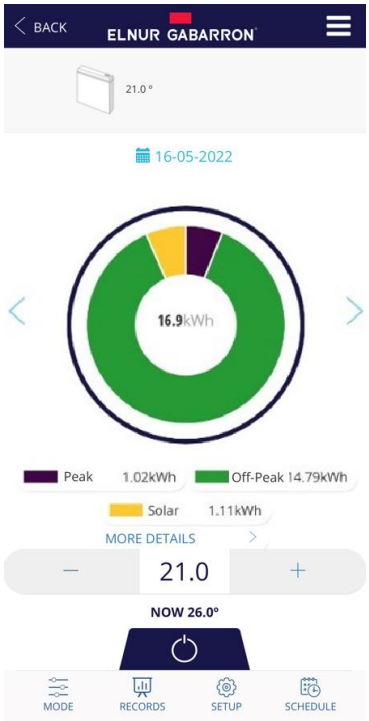
Select the name and colour. You can use the + or the button ▼ to remove or edit different profiles.

2.3.2. Weekly programming of energy profiles.

Once you have tailored your profiles to your energy tariff, you must select days of the week and configure the profile to the corresponding hours.



Once the energy tariff has been configured, the electricity consumption will be displayed correctly on the home screen of each piece of heating equipment, and in the different consumption meters on the app.



2.4. Maximum Power. Configuration.

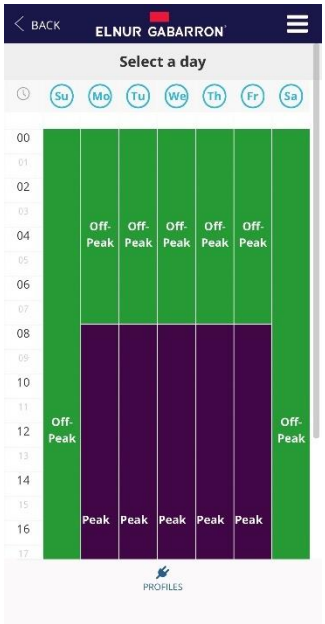
You will be able to configure the maximum power consumption for your home in this menu. Your heating devices will stop consumption once it surpasses a certain usage limit, allowing it to adjust to your available maximum power and to avoid possible power cuts due to an excess of power usage.

Note: You can only set the maximum contracted power of the home if you have installed a G Control PM power meter. The meter is responsible for monitoring the total consumption of the house so as not to exceed the established limits.

To configure it, go to point "*2.2.2 Homes > d. Home Data*" and press the "schedule" button (underneath maximum power).

If you have not already programmed your power cap, the following screen will be displayed, where you can choose the default power cap profile, which you can then customise according to your electricity tariff.

Once you have entered this information, go to the weekly programming menu.

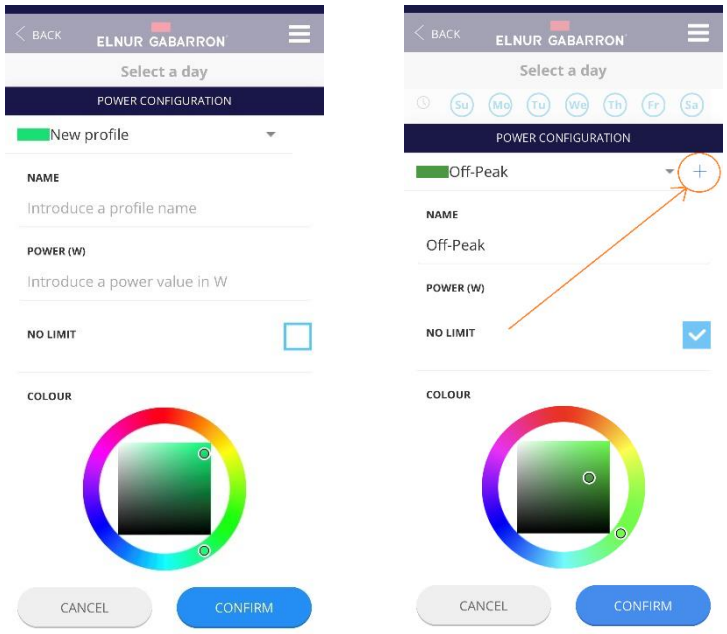


This example shows the regulated power profile in Spain (Mainland, Balearic and Canary Islands), with Off-Peak power from 00:00 to 08:00 on weekdays and weekends, and Peak power from 08:00 to 00:00 on weekdays.

2.4.1. Profiles: Power ratings.

A profile is each different power rating of your electricity tariff (Off-Peak, Peak, Flat). By selecting profiles in the lower menu, you can:

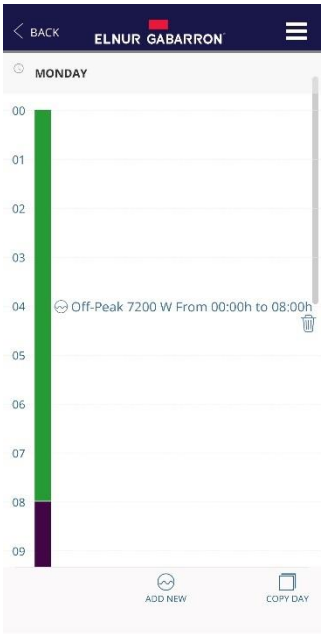
- Edit existing profiles: Change the name of the profile, its colour and the power (W) associated with this profile.
- Create New Profiles: By selecting "New custom profile" the following screen appears, where you can select the name of the profile, the colour of representation and the power value (W).



Select the number, the colour and maximum power for each profile. You can use the + or the button ▼ to remove or edit different profiles.

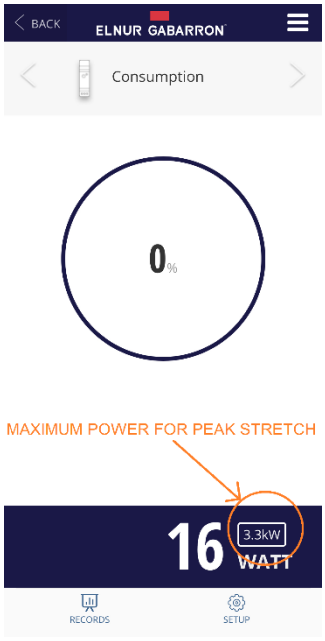
2.4.2. Weekly programming profiles and maximum power rates.

Once the maximum power rates of your tariff have been configured, you must select a day of the week and assign each hour to the corresponding maximum power rate (profiles).



Example: Once the maximum power cap has been established, if in the above example you have established an off-peak power of 7200W and a peak power of 3300W, the system will limit the consumption of the equipment so that it does not exceed this power.

This data will be shown on the energy meter, depending on the maximum power cap at that time.



Note: You can only set the maximum contracted power of the home if you have installed a G Control PM energy meter. The meter is responsible for monitoring the total consumption of the house so as not to exceed the established limits.

3. G CONTROL PM POWER METER.

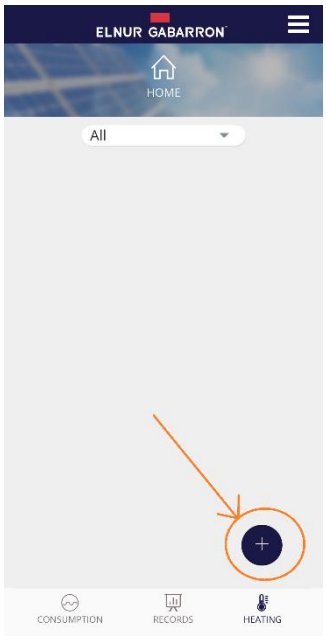
The G Control PM Power Meter is used to monitor and manage the power and energy consumed and to manage and monitor the solar power and energy generated.

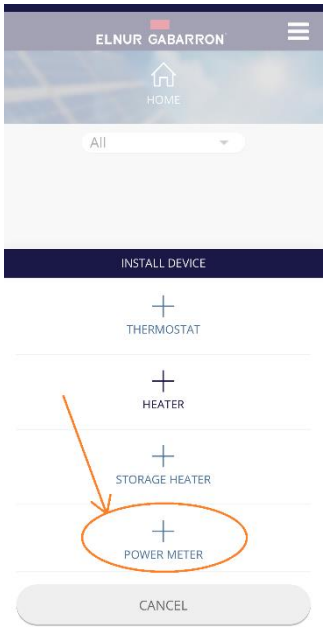
- For control over power consumed and monitoring of energy consumed, it is necessary to install a single G Control PM meter at the entrance to the house.
- If you have solar-powered storage heaters, and you want to manage the surplus energy available from your solar panels, you must install an additional meter that measures solar power generation.

Once the meters have been installed, following the instructions included in them, you must link and configure them in the app.

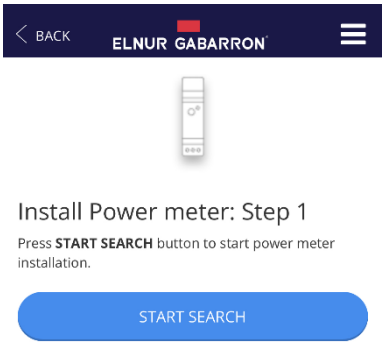
3.1. Linking up your G Control PM Power Meter.

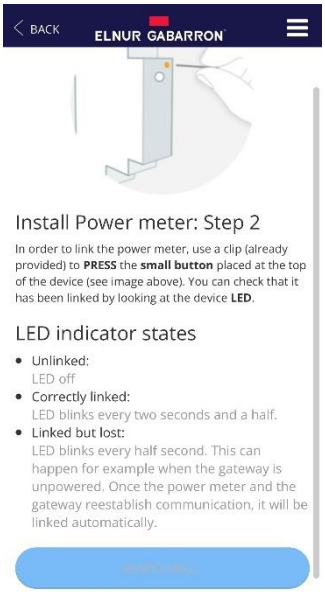
To link up your meter, you must press the + symbol on the home screen and a menu will appear with different options.





Select POWER METER, and follow the installation instructions in the installation wizard. A screen will appear where you must select the START SEARCH button. Next, press the small button on the top of the power meter with a pin or unwound paper clip.





The meter is now linked up. Now, a screen will appear to help you configure your meter. Set the parameters of the meter and press the "save" button.

- Name of the power meter.
- Circuit type:
    - Consumption: Select consumption if the installed meter is used for registering the consumption of your home.
    - Generation: Select generation if the installed meter is used for registering solar power generation.
- Main circuit: It is possible to install several meters in the dwelling.
    - The main consumption and generation meter will be the meter for power and surplus management. Activate the main circuit on the main consumption and generation meter.
    - Additional meters can be installed to record the consumption of particular parts of the home whose consumption you want to have in detail. In this case, as they are not the main ones, the main circuit option must be deactivated.

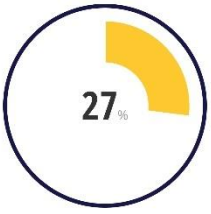
Note: The application only allows to have a main consumption meter and a main generation meter. The consumption of additional meters installed as "Without Main Circuit" will not be taken into account for energy rationalization and surplus management.

Once installed, the meter will appear on the home screen of the app with the following symbol.

3.2. Power Meter Screen.

When any power meter is selected on the home screen of the app, the home screen of that equipment is displayed.

The central pie chart shows the percentage information in real time that the meter is registering:



- In the consumption meter, you can see the current percentage of consumption of the home with respect to the energy cap.
- The generation meter shows the percentage of solar power generated in real time, in relation to the solar power cap.

The bottom bar shaded in dark blue shows you the power data (W) that the meter is measuring in real time, and the energy cap data in kW.

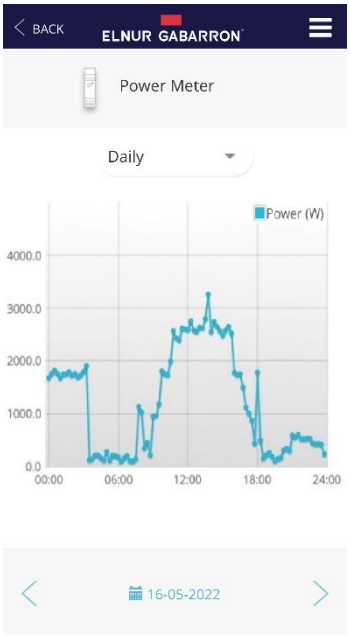
The lower horizontal menu allows you to access:

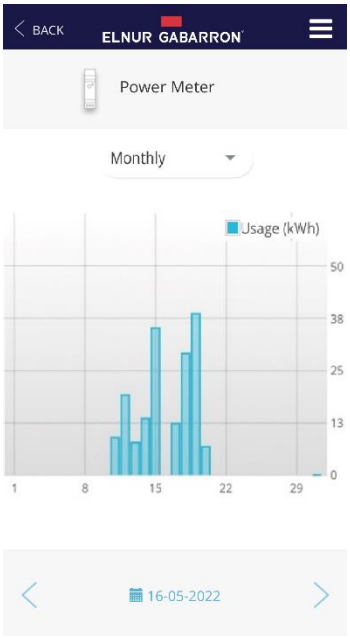
- 3.2.1. Records.
- 3.2.2. Setup.

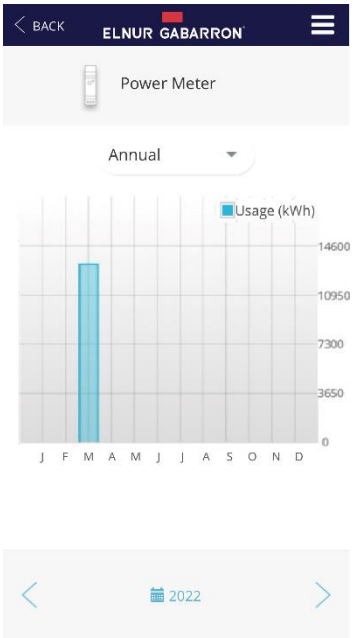
3.2.1 Records.

In this section you can consult your energy consumption broken down by hour, day or month.

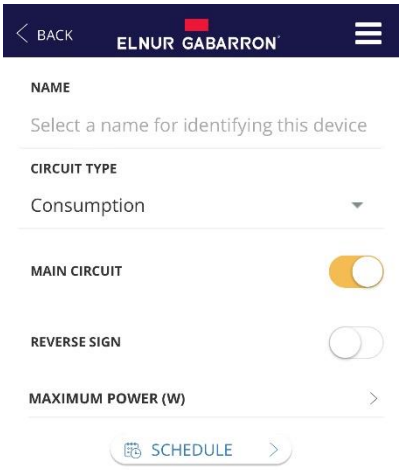
- The daily view shows the current power information throughout the last 24 hours. (W)
- The monthly view shows the aggregated information of energy consumed per day. (kWh)
- The annual view shows the aggregated information of energy consumed per month. (kWh)

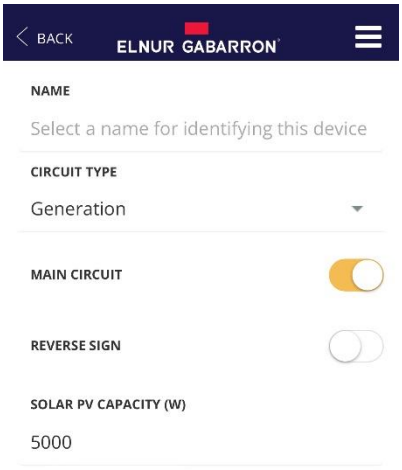






3.2.2 Setup.





- *Name:* Select the name you want for the power meter (Generation, Consumption…)

- *Circuit type*:
  - Consumption: Select consumption if the installed meter is used for registering the consumption of your home.
  - Generation: Select generation if the installed meter is used for registering solar power generation.

- *Main circuit*: It is possible to install several meters in the dwelling.
    - The main consumption and generation meter will be the meter that will be taken into account for power and surplus management. Activate the main circuit on the main consumption and generation meter.
    - Additional meters can be installed to record the consumption of parts of the home whose consumption you want to have in detail. In this case, as they are not the main ones, the main circuit option must be deactivated.

  ***Note**: The application only allows having a main consumption power meter and a main generation power meter. The consumption of additional meters installed as "Without Main Circuit" will not be taken into account for energy rationalization and surplus management.*

- *Reverse sign*: The current clamp meter should be installed in such a way that the current enters from the side where the red dot sticker is located. If it is installed the other way round, the sign shown by the meter will be opposite to the expected value. To solve this problem without manipulating the electrical panel, you can activate the inverted sign option from this menu.

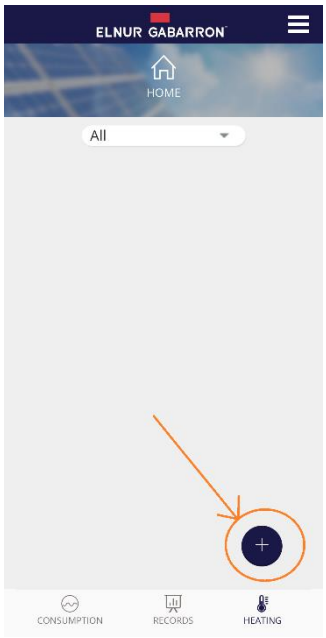
- *Solar PV capacity (W):*
    - If the type of circuit selected is generation, you can configure it through here.
    - You must enter the generation cap of your solar power and, based on this data, the screen will show the current generation percentage.

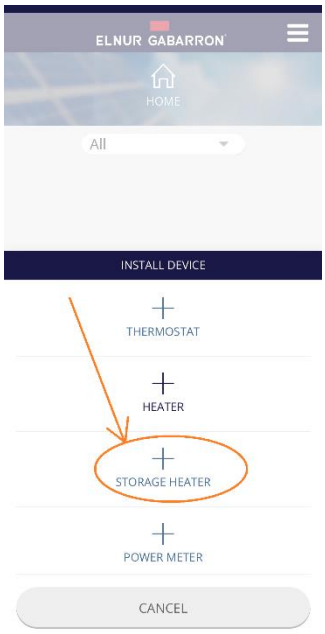
- *Maximum power (W):*
    - If the type of circuit selected is consumption, this configuration option will be shown.
    - The "Program" option will give you access to the power configuration. To configure the energy cap, see "*2.4. Energy caps: Configuration".*

4. STORAGE HEATERS.

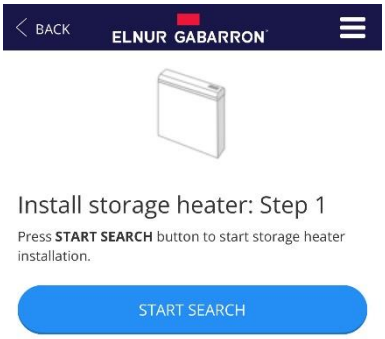
4.1. Linking up your storage heater.

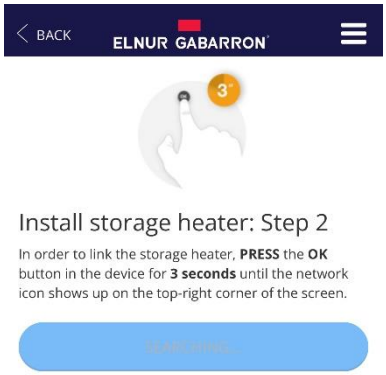
To link up your storage heater, you must press the + button on the home screen and a menu will appear with different installation options.





Select STORAGE HEATER and follow the instructions of the installation wizard. A screen appears and you must click on the START SEARCH button. Next, press the OK button on the heater's display for 3 seconds.





Your storage heater is now linked up and will appear on the home screen of the app.

4.2. Storage heater symbol key.

The flashing yellow arrow at the top left of the heater indicates that the backup resistor is working.

The hand indicates that BASIC MODE has been established (constant temperature all day).

When AUTO appears, it indicates that PROGRAMME mode has been activated (weekly programming of temperatures).

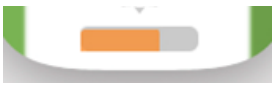
The SUN icon indicates that COMFORT set temperature within PROGRAMME mode has been activated.

The MOON light indicates that ECO set temperature within PROGRAMME mode has been activated.

The thermostat symbol flashes when you manually modify the temperature while in PROGRAMME mode.

<u>Levels of charge:</u>

The charging bar is green when not in the charging period. If it is flashing, the device is charging.

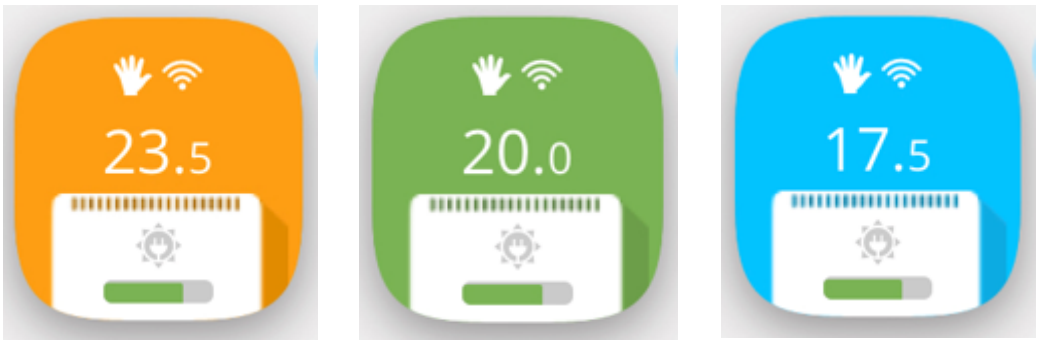


The charging bar is orange within the charging period. If it is flashing, the device is charging.

When this symbol flashes, it indicates that the device is consuming energy by using solar surpluses.

The background of the heater has different colours, depending on the set temperature.

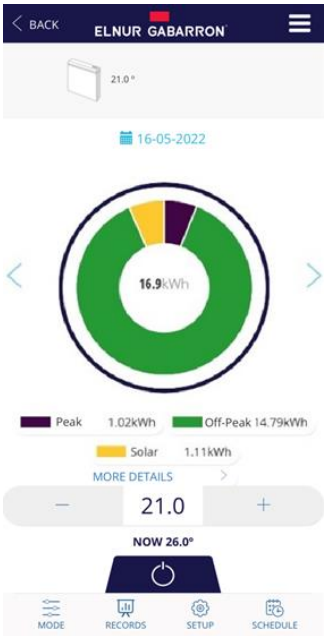
- Orange: if the temperature is above the COMFORT setpoint.
- Green: if the temperature is between the COMFORT and ECO setpoints.
- Blue: if the temperature is below the ECO setpoint.



4.3. Storage heater screen.

When selecting any heater on the home screen of the app, the screen of this equipment is displayed. If you have not yet set the energy tariff for your home, when accessing the view, the message "*There is no tariff defined on this device. Configure it here*" will appear. Setting the energy tariff is necessary for the application to display the consumption data of the equipment. Follow the instructions in point "*2.3. Energy tariff: Configuration*" for configuration.

Once the energy tariff has been configured, the screen appears as follows:



The central circular graph gives you the consumption data of the heater for each day, grouped in the different sections of the configured electricity tariff and the solar surplus if there is any.

The "+" and "-" buttons are used to change the setpoint temperature.

Pressing this symbol switches the storage heater on and off.

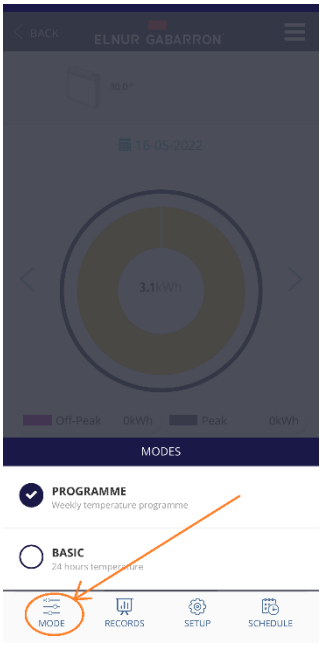
The temperature in the room is displayed. **NOW 26.0°**

From the lower horizontal menu, you can access the different options of the heater.

- 4.3.1. Mode.
- 4.3.2. Records.
- 4.3.3. Setup.
- 4.3.4. Schedule.

4.3.1. Mode.

In this menu, you can select the heater's operating mode. There are two possible modes:



- **PROGRAMME**: operating mode with weekly temperature programming. This programme can be edited following the instructions in section "4.3.4. Programming", by clicking on the programme button at the bottom right.

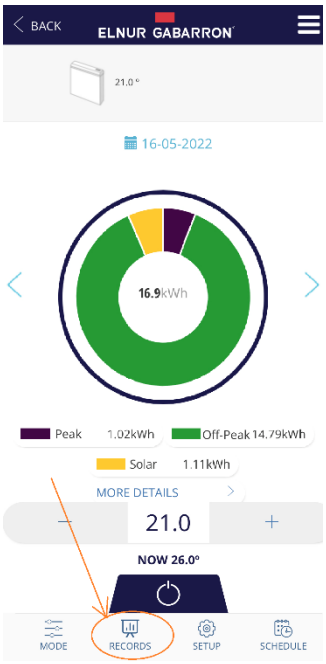
- **BASIC or 24-hour temperature**: operating mode with constant temperature for 24 hours. Recommended for storage heaters.

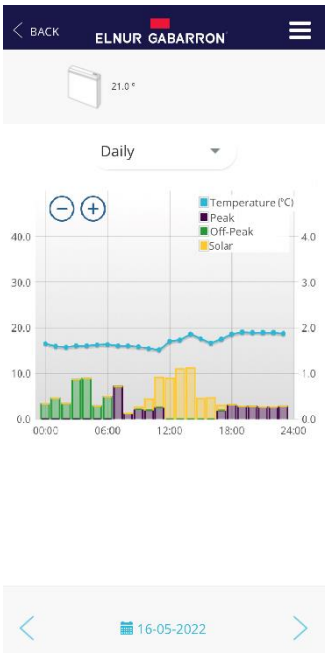
Note: It is not possible to select the program mode in the ECO SOLAR storage heater when the equipment is operating with solar energy in the Exclusive Solar and Solar + Valley charge types.

4.3.2. Records.

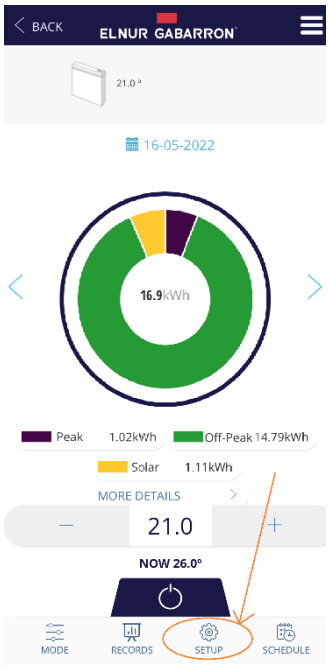
In this menu, you can view consumption, grouped by electricity rates according to the configured energy tariff, and the history of temperatures registered by the heaters in:

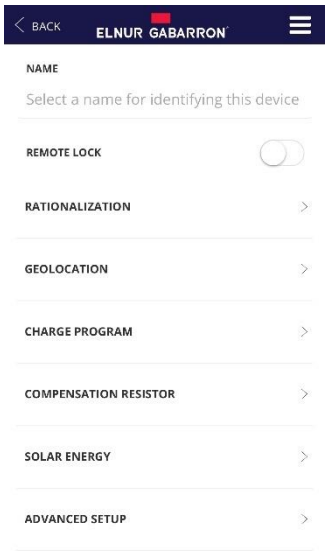
- Daily: Consumption and temperature information is displayed every hour.
- Monthly: It shows the aggregated consumption per day of the month and the average temperature.
- Annual: It shows the aggregated consumption per month of the year and the average temperature.





4.3.3. Setup.





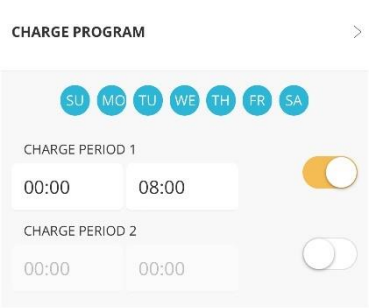
- *Name*: Select the name that you want to give your equipment (living room, bedroom, kitchen…).
- *Remote lock*: Enables remote locking of the storage heater keypad. With the remote lock activated, no modifications can be made from the keypad of the device.
- *Rationalization*: You can mark the mains consumption as priority for the storage heater (Low, medium and high), with respect to the rest of the equipments connected to the app.

  When a maximum power cap has been configured in the home (See section "*2.4. Energy caps: Configuration*") and the cap is going to be exceeded, the app will automatically disconnect the equipment determined by its algorithm, prioritising your priority equipment so as not to exceed the cap configured in the home.

  Under these circumstances, more commonly used equipment will tend to be more heavily loaded.

- *Geolocation:* Sets the minimum temperature for when "away" mode is activated. "Away" mode can be set manually or by activating geolocation. (See section "*c. Geolocation*" of section "*2.2.Home*").

- *Charge program:* In this menu, the time and days for charging the storage heater are chosen.



You can set one or two charging periods, in which you can select the start and end time of charging for each period.

If there are days of the week when heating is not required due to the house not being occupied daily, you can click on that day to deactivate it. The icon will turn white, and the unit will not charge on that day.

In the example above, the heater is configured to charge every day of the week between 00:00 and 08:00.

Note: For optimal storing operation, the number of hours of charge must be equal to the number of hours of nominal charge of the equipment.

- *Balancing heating element:* By setting the daily operating limit (hours), you are selecting how many hours per day, as a maximum, the balancing heating element is allowed to operate in the periods outside the off-peak hours set in the storage heater charging schedule.

  By setting the value to zero, the balancing heating element is not allowed to operate outside the off-peak hours set in the charging schedule.

  Note: The balancing heating element will work only if the thermal needs of the room require it to complement the energy accumulated during the charging period.

- *Solar energy:* Menu for activating and configuring the usage of excess solar power. This menu will be uniquely visible in the ECO ARC and ECO SOLAR models.

  - *Activation state:* You can activate or deactivate the option of charging the solar energy surplus.

  - *Charge settings:*
    - *Solar Alone:* The device will only charge solar surplus, regardless of the balancing heating element and charging schedule parameters.
    - *Solar and Off-Peak:* The unit will use the solar surplus to charge and the off-peak period of the electricity tariff, which is configured in "charging schedule". It will not activate the balance heating element.
    - *Solar and Grid adjustment:* The unit will use the solar surplus for charging the off-peak period of the electricity grid and will activate the balance heating element if necessary and if it is activated.

  - *Solar power activation:* This is the percentage of solar surplus required to activate the next resistor.

    Example:

    An ECO30 Solar has 3 resistors of 650 watts. If we have a surplus of 1300 watts, the system activates 2 resistors.

    The third one will be activated when the percentage chosen in this parameter is available, of the 650 watts that the resistor needs to be connected.

    - If the value is set to 100%, the resistor will not be activated until the extra 650 watts are available. In other words, it will use the 1300 watts from the resistors that were already activated, plus 650 watts, giving a total of 1950 watts.
    - If the value is set to 50, the resistor will activate when we have 325 extra watts of surplus (50% of 650=325). In other words, 1300 watts from the resistors that are already activated, plus 325 watts, gives a total of 1625 watts. The last resistor is activated as it has 1625 watts of surplus.
      As the resistor consumes 650 watts and is activated when it has 325 watts of solar surplus, the other 325 watts may be consumed from the grid, depending on the actual surpluses.

  - *Off-Peak maximum charge:* Maximum percentage which the accumulator will reach when charging from the grid in the off-peak period. With this value, we make sure that the equipment is not charged to 100% (whenever we set a lower value), so that it has the margin to charge with solar surplus.

- *Ambient temperature offset:* Ambient temperature range for the unit to continue to use solar surplus.

  Example:

  If we set it to 3 and the temperature setpoint of the storage heater is at 21°, the unit will continue to use solar surplus until the room reaches 24°.

- *Charging priority:* Priority used by the system to activate or deactivate the heating element of one or another storage heater when the solar surplus is not enough to charge all the equipment at maximum power. Devices with higher priority will tend to charge more than devices with lower priority.

- *Advanced setup (Balancing heating element parameters):*

  - *Temperature unit:* Celsius or Fahrenheit.

  - *Frost protection:*
    - *Activated:* When we switch off the heater using the app, it sets a setpoint of 3° to protect it from freezing. If the room falls below this temperature, the balance heating element is activated.
    - *Deactivated:* Switching the heater off from the app turns it off (total shutdown).

  - *Adaptative start:* The balance heating element will switch on to help reaching the setpoint temperature at the desired time in advance before a programmed temperature increase.

    Example:

    At 17:00 there is a setpoint change from 19 to 21°C and the temperature in the room at 16:30 is 20°C.
    - If the "adaptative start" is activated, the balance heating element can be switched on from 16:30 to reach the required 21°C at 17:00.
    - If the "adaptative start" is deactivated, the balance heating element will only switch on if the room temperature is below 21°C at 17:00. It will not switch on earlier to reach 21°C at the programmed time.

  - *Open window detection:* If the unit detects a sudden drop in temperature in the room (such as the windows being opened) and the balance heating element is working, this is automatically deactivated, and its operation is prevented for the following 30 minutes.

    If this option is disabled, the heater will continue to operate despite detecting the sudden drop in temperature.

- *Control:* Mode in which the balance heating element acts to maintain the room temperature.

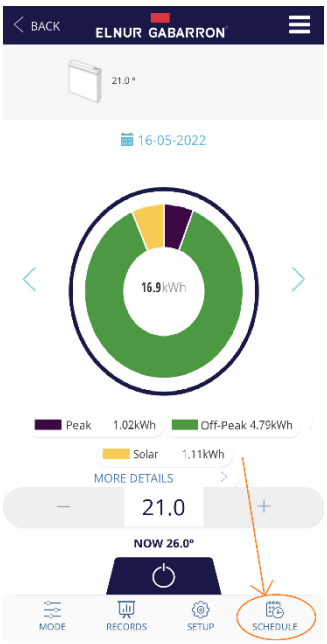
    - PID: Proportional Integral Derivative. The heater activates and deactivates the resistance by means of an intelligent control, in order to keep the room temperature stable.
    - HYSTERESIS: The resistance is deactivated when the room is at the setpoint temperature and activated when the temperature drops below tenths of a degree established in the hysteresis.

      Example:

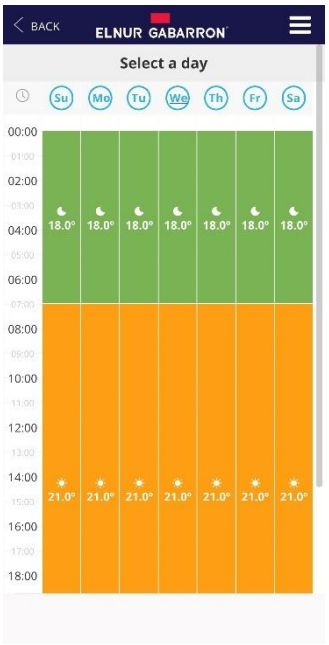
      If the setpoint is at 21° and the control in hysteresis 0.2, when the room reaches 21°, the resistor stops. When it reaches 20.8°, it is activated again.

4.3.4. Schedule.

In this section you can modify the temperature programme that the equipment will use in "PROGRAMME" mode. To do this, select the "SCHEDULE" option in the lower menu.



When you enter the “schedule” menu, the screen on the left appears, with the temperature programming for the 7 days of the week. If you want to change the programming of a day, you can click on that day and the screen on the right appears.

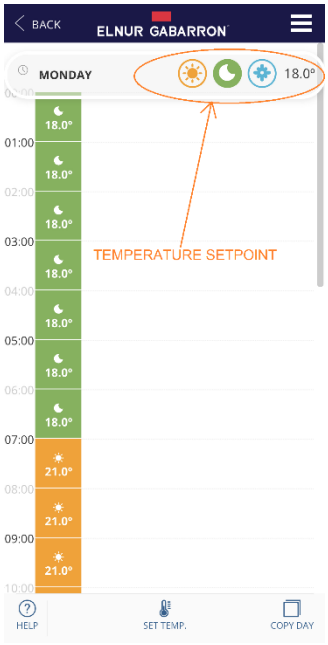


First, you can modify the temperature values of each temperature level (COMFORT, ECO and ANTI-FROST), by clicking on "SET. TEMP." in the lower menu. The following screen is displayed.

In the drop-down menu:

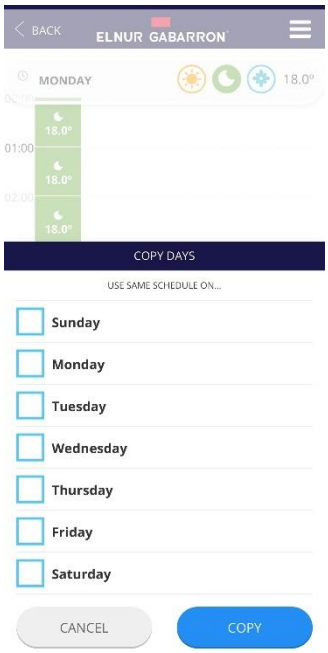
- Select the setpoint that you wish to modify. (In the example in the image, the comfort setpoint is selected).
-
- Choose the desired temperature using the horizontal temperature ruler or the "+" and "-" buttons.
-
- Press "confirm" when you have included the temperatures of the 3 temperature levels to your liking to save the changes you have made.

Subsequently, to assign the temperature levels to each hour of the day, you must first select the temperature setpoint you want to set in the top menu (COMFORT or ECO) and with it selected, click on the hours which you want to apply to this setpoint.



Important: The FROST PROTECION setpoint must not be used. In Frost Protection hours the equipment will not take a load. This temperature set-point should be reserved for full days when heating is not required.

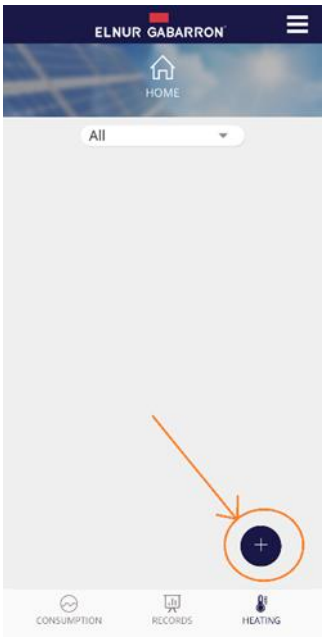
Once you have set the schedule for that day, if you wish to use the same schedule for other days of the week, you can copy it by selecting "COPY DAY" from the menu below. The following menu will be displayed to select the days you wish to copy the programme to.

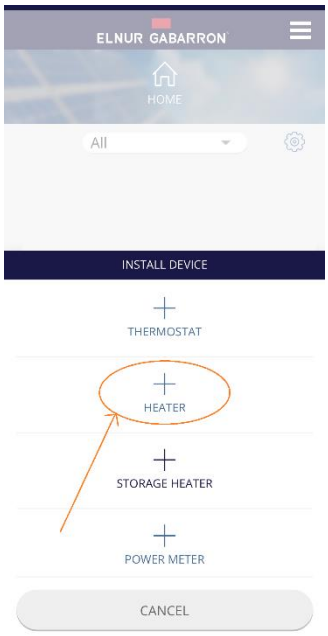


5. RADIATOR.

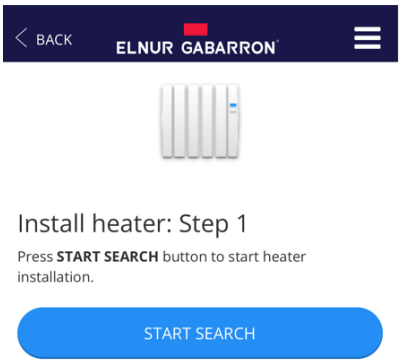
5.1. Linking up your radiator in the app.

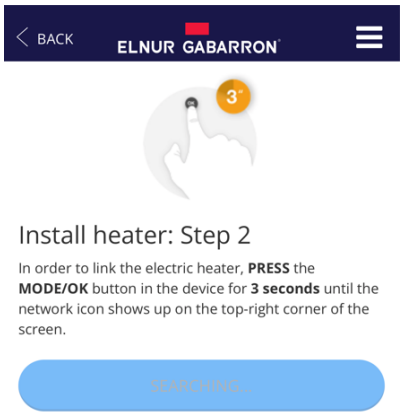
To link up your radiator, you must press the + button on the home screen and a menu appears with different options.





Select HEATER. A screen appears on which you must select the START SEARCH button. Next, press the OK button on the radiator display for 3 seconds.





Your radiator is now linked up and will appear on the app.

5.2. Radiator symbol key.

The flashing yellow arrow at the top left of the radiator indicates that it is heating.

The hand indicates that BASIC MODE has been established (constant temperature all day).

When AUTO appears, it indicates that PROGRAMME mode has been activated (weekly programming of temperatures).

The SUN light indicates that COMFORT setpoint within PROGRAMME mode has been activated.

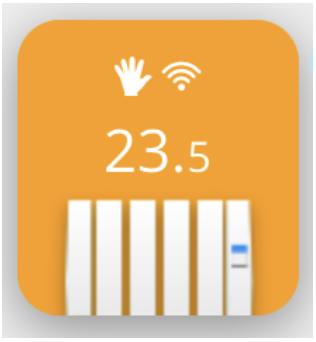
The MOON icon indicates that ECO setpoint within PROGRAMME mode has been activated.

The SNOWFLAKE light indicates that FROST PROTECTION setpoint within PROGRAMME mode has been activated.

The thermostat symbol flashes when you manually modify the temperature while in PROGRAMME mode.

The radiator shows different colours, depending on the temperature set.

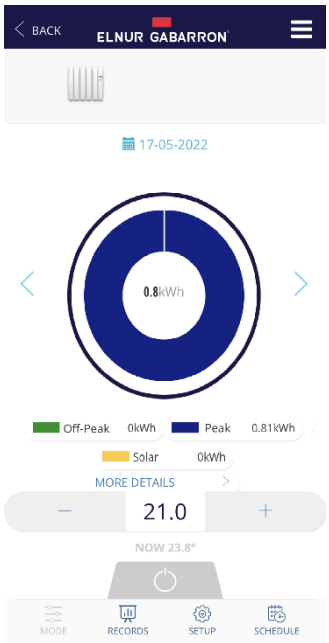
- Orange: if the temperature is above the COMFORT setpoint.
- Green: if the temperature is between the COMFORT and ECO setpoints.
- Blue: if the temperature is below the ECO setpoint.



5.3. Radiator Screen.

When selecting a radiator on the home screen of the application, the screen of this equipment is displayed. If you have not set the energy tariff for the home yet, when accessing the view, the message "*There is no energy tariff defined on this device. Configure it here*". Setting the energy tariff is necessary for the application to display the consumption data of the equipment. Follow the instructions in "*2.3. Energy tariff. Configuration*" for configuration.

Once the energy tariff has been configured, the screen appears as follows.



The central pie chart shows the consumption data of the radiator for each day, grouped into the different sections of the configured electricity tariff and the solar surplus, if any.

The "+" and "-" buttons are used to change the setpoint temperature.

Pressing this button switches the radiator on and off.

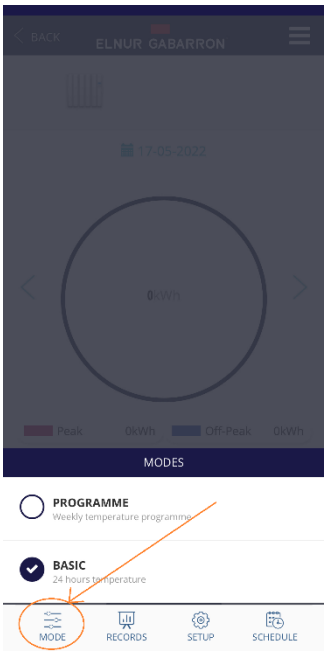
The temperature in the room is displayed. **NOW 23.8º**

From the menu below, you can access the following different options for the radiator.

- 5.3.1. Mode.
- 5.3.2. Records.
- 5.3.3. Setup.
- 5.3.4. Schedule.

5.3.1. Mode.

In this menu, you can select the operating mode:



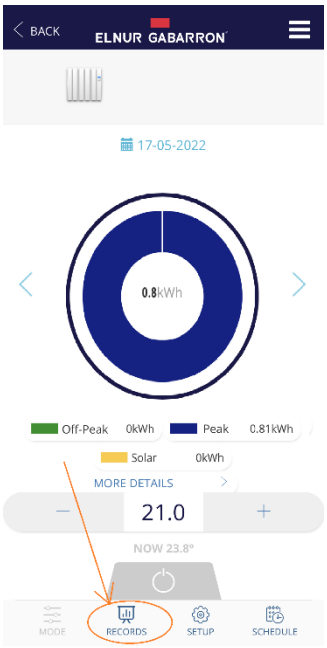
- **PROGRAMME**: Weekly temperature programming. This programme can be edited following the instructions in section "5.3.4. Schedule", by clicking on the Schedule button located at the bottom right.

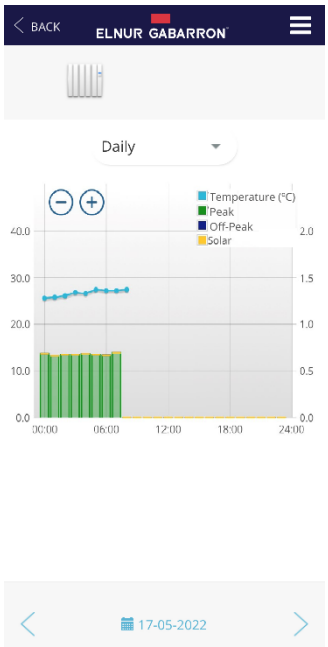
- **BASIC** or **24 hours Temperature:** Constant 24/7 temperature.

5.3.2. Records.

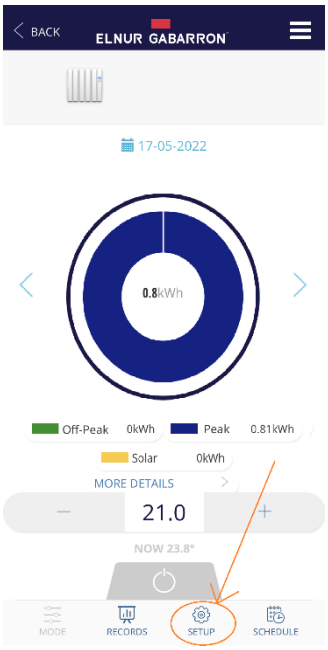
In this menu, you can view consumption, grouped by electricity rates according to the configured energy tariff, and the history of temperatures registered by the heaters in:

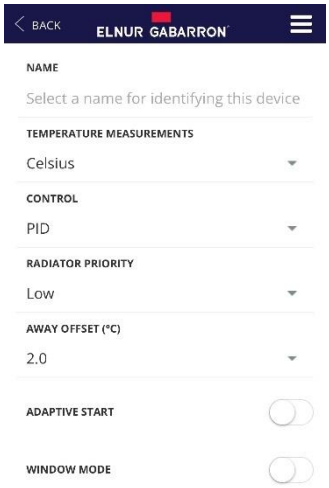
- Daily: Consumption and temperature information is displayed every hour.
- Monthly: It shows the aggregated consumption per day of the month and the average temperature.
- Annual: It shows the aggregated consumption per month of the year and the average temperature.





5.3.3. Setup.





- *Name:* Select the desired name for the device (living room, bedroom, kitchen...).
- *Temperature unit:* Celsius o Fahrenheit.
- *Control:* Mode in which the heating element is controlled to maintain the room temperature.
    - PID: Proportional Integral Derivative. The emitter connects or disconnects the heating resistance by means of an intelligent control, to maintain the room temperature stabilized.
    - HYSTERESIS: The emitter disconnects the heating resistance when the room reaches the setpoint temperature and reconnects again when the temperature drops the tenths of a degree established in the hysteresis.

      Example: If the setpoint is 21° and the control in hysteresis 0.2, when the room reaches 21°, the emitter disconnects the heating element. When it reaches 20.8°, it is activated again.
- *Radiator priority*: You can assign the mains consumption priority of the emitter (low, medium and high), with respect to the rest of the equipment connected to the application.

  When a maximum power cap has been configured in the home (See section "*2.4. Energy. Configuration*") and the cap is going to be exceeded, the application will automatically disconnect the radiator determined by its algorithm, considering the priority so as not to exceed the power value configured in the home.

  Radiators with lower priority will be the first to be disconnected to not exceed the power cap.
- *Away offset (°C):* Sets the number of degrees that the setpoint temperature drops to when "away" mode is activated. "Away" mode can be set manually or by activating the geolocation. (See section "*c. Geolocation*" of section "*2.2. Home"*).

- *Adaptative start:* The radiator should switch on before a programmed temperature increase to reach the desired setpoint temperature at the desired time.

  Example:

  At 17:00 there is a setpoint change from 19 to 21°C and the temperature in the room at 16:30 is 20°C.

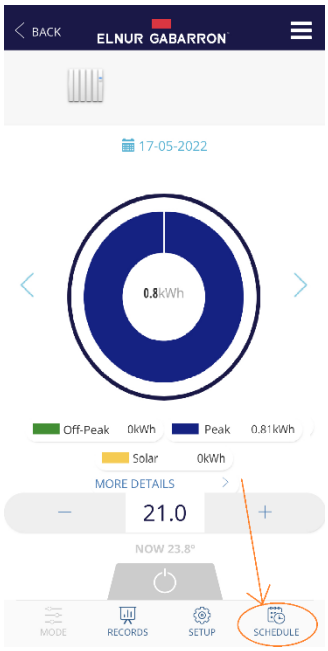
  - If the "adaptative start" is activated, the radiator may be switched on from 16:30 to reach the required 21°C at 17:00.
  - If the "adaptative start" is deactivated, the radiator will only switch on if the room temperature is below 21°C at 17:00. It will not switch on earlier to reach 21°C at the programmed time.

- *Open Window detection:* If the unit detects a sudden drop in temperature in the room (caused by an open window for example) this function will automatically deactivate the heating element and prevent its operation for the following 30 minutes.

  If this option is disabled, the heating element will continue to operate despite detecting the sudden drop in temperature.

5.3.4. Schedule.

In this section you can modify the temperature setpoint for a radiator in PROGRAMME mode. To do this, select the "SCHEDULE" option in the lower menu.



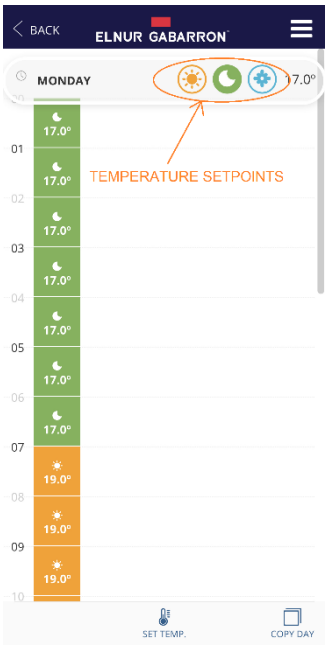
When you enter the schedule menu, the screen on the left appears, showing the temperature programming for the 7 days of the week. If you want to change the programming of a day, you can click on that day and the screen on the right will be displayed.

First of all, you can modify the temperature values of each temperature level (COMFORT, ECO and FROST PROTECTION), by clicking on "SET. TEMP." in the lower menu. The following screen is displayed.

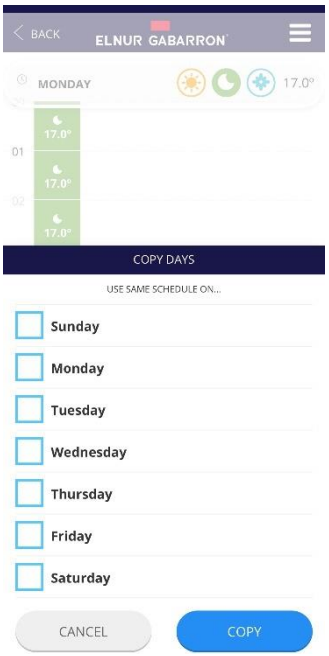
In the drop-down menu:

- Select the setpoint you wish to modify. (In the example in the image, the comfort setpoint is selected).
- Choose the desired temperature using the horizontal temperature ruler or the "+" and "-" buttons.
- Press "CONFIRM" when you have modified the temperatures of the 3 temperature levels to your liking to save the changes you have made.

Subsequently, to assign the temperature levels to each hour of the day, you must first select the setpoint you want to set in the top menu (COMFORT, ECO or FROST PROTECTION) and with it selected, click on the hours in which you want to apply this setpoint.



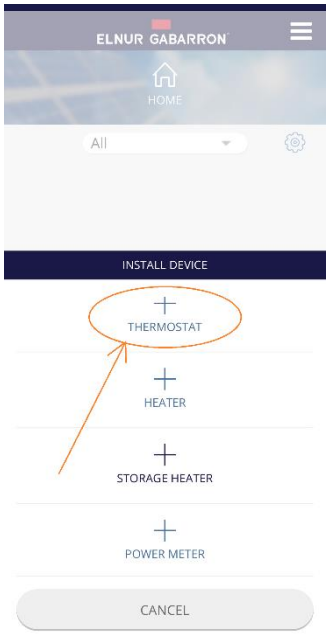
Once you have set the programme for that day, if you wish to replicate the same in other days of the week, you can copy it by selecting "COPY DAY" from the menu below. The following menu will be displayed to select the days you wish to copy the programme to.



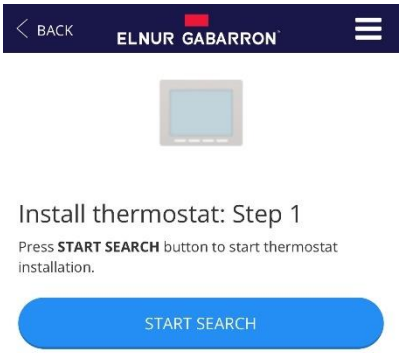
6. THERMOSTAT.

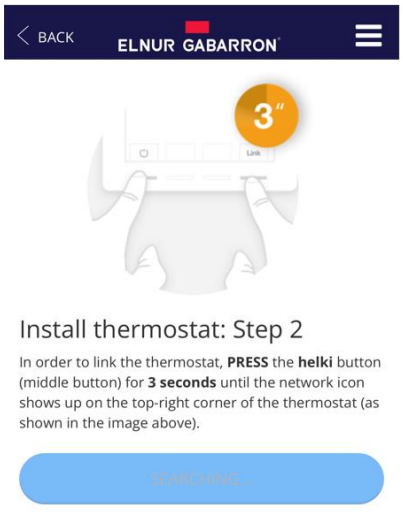
6.1. Linking up your thermostat with the app.

To link up your THERMOSTAT, you must press the + button on the home screen and a menu with different options will be displayed.



Select THERMOSTAT. A screen appears where you must select the START SEARCH button. In the next step, hold down the keys on the ends of the thermostat for 3 seconds until the link symbol appears, following the wizard instructions.





Your THERMOSTAT is now linked up and will appear on the app.

6.2. Thermostat symbol key.

The flashing yellow arrow at the top left of the thermostat indicates that the equipment to which the thermostat is connected (boiler, fan heater...) is currently heating.

The flashing blue arrow at the top left of the thermostat indicates that the equipment to which the thermostat is connected (fan heater...) is currently cooling.

This symbol indicates that the equipment to which the thermostat is connected is operating in cooling mode.

This symbol indicates that the equipment to which the thermostat is connected is operating in heating mode.

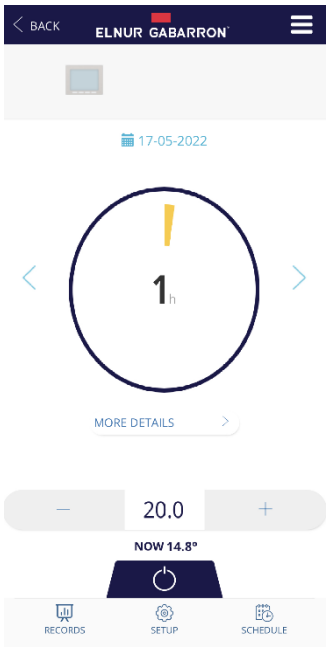
The thermostat in the application always works in program mode. If we modify the temperature of this programme manually, the previous symbol appears.

The thermostat is displayed in different colours, depending on the set temperature.

- Orange: if in heating mode the temperature is above 19.5°C, and if in cooling mode the temperature is below 23°C.
- Green: if in heating mode the temperature is between 15°C and 19.5°C, and if in cooling mode the temperature is between 23°C and 26°C.
- Blue: if in heating mode the temperature is below 15°C, and if in cooling mode the temperature is above 26°C.

6.3. Thermostat Screen.

When the thermostat is selected, the thermostat screen is displayed.



The central pie chart shows the consumption time of the equipment controlled by the thermostat (boiler, fan heater...) in hours per day.

With the "+" and "-", you can modify the setpoint temperature of the thermostat temporarily.

Pressing the symbol switches the thermostat on and off.

NOW 14.8° It shows the current temperature in the room.

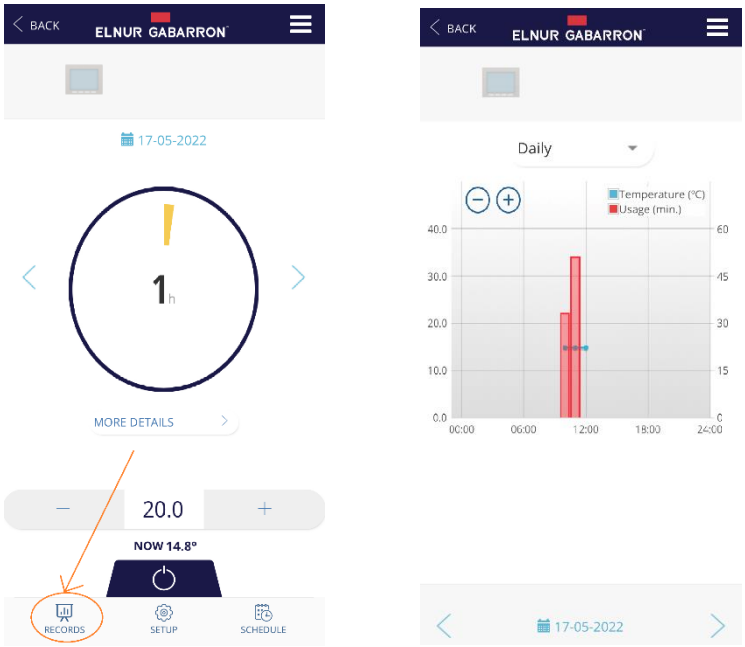
In the menu below, you can access the different options for the thermostat.

- 6.3.1. Records.
- 6.3.2. Setup.
- 6.3.3. Schedule.

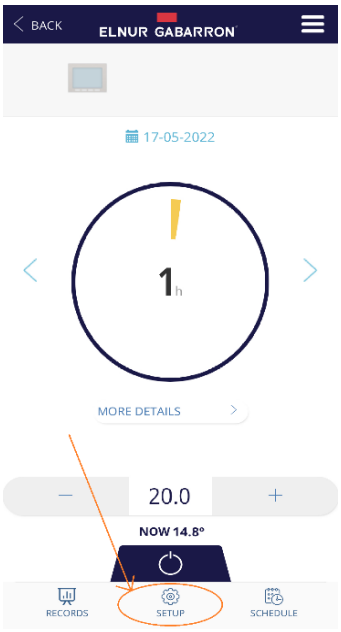
6.3.1. Records.

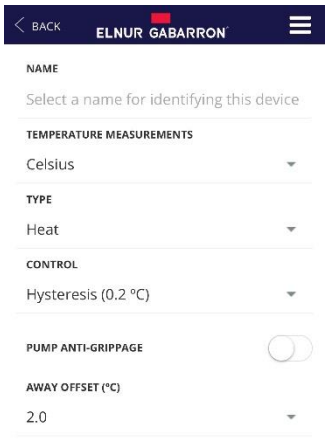
In this menu, you can view consumption, grouped by electricity rates according to the configured energy tariff, and the history of temperatures registered by the thermostat in:

- Daily: Consumption and temperature info is displayed in minutes by hour and temperature for each hour.
- Monthly: It shows the aggregated info of consumption per day of the month and the average temperature.
- Annual: It shows the aggregated info of consumption per month of the year and the average temperature.



6.3.2. Setup.





- *Name*: Select the desired name for the device (living room, bedroom, kitchen...).
- *Temperature unit:* Celsius o Fahrenheit.
- *Type:* Select whether you want the thermostat to function in HOT (winter) or COLD (summer) mode.
- *Control:* Mode in which the thermostat activates the equipment it is connected to:

    - PID: Proportional Integral Derivative. The thermostat connects or disconnects the equipment that it is controlling (boiler, fan heater) through a smart control, to maintain a stable temperature.
    - HYSTERESIS: The thermostat disconnects the equipment when the room reaches the setpoint temperature and reconnects again when the temperature drops the tenths of a degree established in the hysteresis.

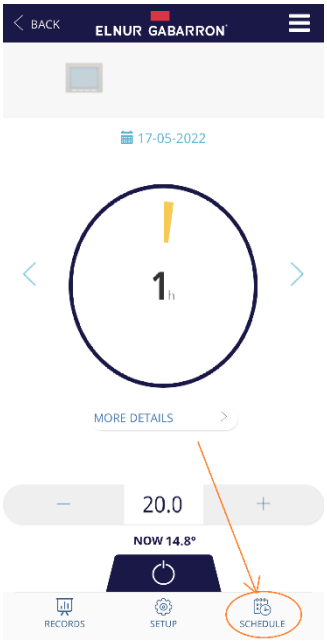
      Example: If the setpoint is 21° and the control in hysteresis 0.2, when the room reaches 21°, the emitter disconnects the heating element. When it reaches 20.8°, it is activated again.

- *Pump anti-grippage:* If this mode is activated, even if the thermostat is switched off, the thermostat switches on for a period of 10 minutes once a week to run the pump of the connected equipment (boiler, fan heater, etc.).

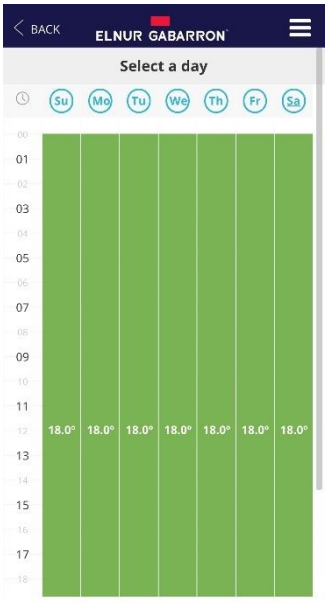
- *Away offset (°C):* Sets the number of degrees that the setpoint temperature drops to when AWAY mode is activated. AWAY mode can be set manually or by activating the geolocation. (See section "*c. Geolocation*" of section "*2.2.Home"*)

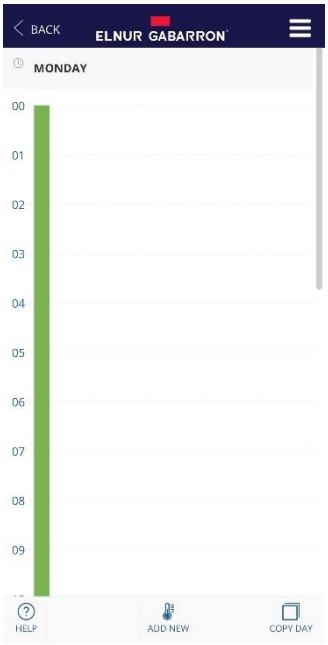
6.3.3. Schedule.

In this section, the temperature programme of the thermostat can be modified. Unlike the storage heaters and radiators, the programme is not created using the Eco, Comfort or Anti-frost protection setpoints, but a different temperature is directly assigned for each hour of the week.



When pressing the "Schedule" option on the home screen of the thermostat, the screen on the left appears, with the weekly temperature programming. Click on the day you want to modify and the screen on the right will be displayed.

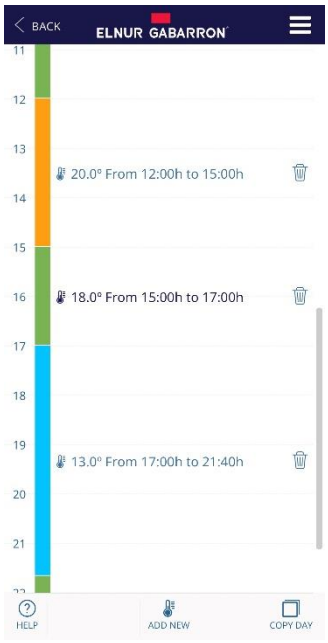




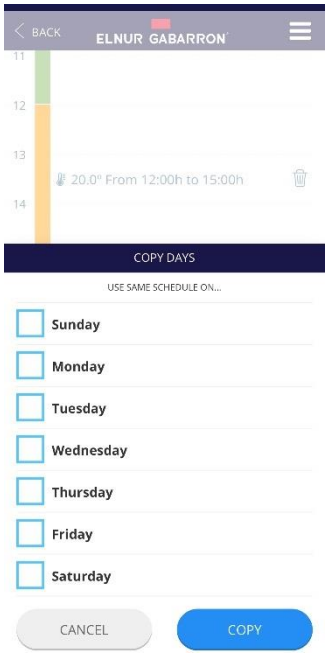
You can modify the set temperatures of a period of day by clicking on ADD NEW

- Select the start and end of the time period.
- Select the desired temperature for the new time slot.
- Click on "CONFIRM".

Repeat the previous step as many times as you need to adjust the programme to your preferred temperature and time requirements. When you are finished, you will see the display with the programme set for that day.



Once you have set the schedule for that day, if you wish to use the same schedule for other days of the week, you can copy it by selecting COPY DAY from the menu below. The following menu will be displayed to select the days you wish to copy the programme to.



Example:

7. G CONTROL HUB.

To connect and control the devices via the app, you need a **G Control Hub**. This control unit is responsible for communicating wirelessly with the devices via an RF network and for connecting it to the internet.

Only one control unit is necessary for each installation, being able to control up to 30 heating systems each.

There are two versions of the control unit available:

- G Control HUB USB. USB-type control unit with Wifi antenna for internet connection by configuring the Wifi network of your home.
- G Control HUB EU. Control unit for wired connection to an Ethernet port of your router.

The *"1.3. Installing your G Control HUB"* section details how to install and make the initial start-up of the two types of G Control HUB control panel available.

In the following section, additional configuration options and technical features of the control panel are described.

7.1. G Control HUB USB.

7.1.1. LED Lights: Connection.

The G Control HUB USB device uses LED lights, and the status of these lights indicates its internet connection status.

LED Status	Device Status
Red flashing light	Wifi not configured
Red-Orange rapid flashing	Not connected to the router
Orange for 2.5s-Red for 0.5s	No connection to the server
Orange for 2.5s-Green for 0.5s	Connected

7.1.2. Changing Wifi Network.

You can change the Wifi network connected to the G Control Hub USB at any time, e.g., after a change in the router of the home or a change of password.

To do this, go to the "Home" section in the top right-hand side menu and then select the name of the home where to reconfigure the Wifi network.

Now go to "Configure Wifi" and click on the next button. A new installation process starts with the same steps detailed in section "*1.3.1. G Control Hub USB*" of this manual.

7.1.3. Resetting your G Control Hub USB.

You can reset the G Control Hub USB using the button on the device:

- Press and hold for 10 seconds to reset the set Wifi configuration.
- Press and hold for 20 seconds to delete all linked heating equipment.

Note: Resetting the G Control Hub USB control unit does not remove the link between the device and the registered account associated with it. If you want to change accounts, you must do so from the "My account" menu available in the drop-down menu at the top right of the app and the web. There you will be able to modify the registration email account.

7.2. G Control HUB EU.

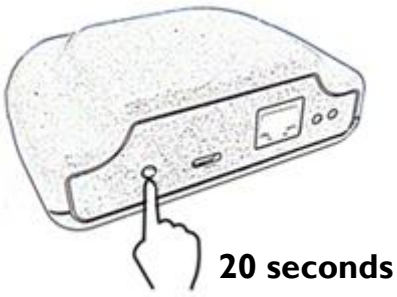
7.2.1. LED Lights: Connection.

The G Control HUB EU device uses LED lights and the status of these lights indicates the internet connection status.

LED Status	Device Status
Green off, intermittent orange every second	The G Control Hub is searching for networks
Orange on, intermittent rapid green	Router not assigning a valid IP address to the Control Hub
Orange on, green flash every 5 seconds	The Control Hub has found an IP address, but has not connected to the server
Orange on, alternating with a green every five seconds	The Control Hub has found an IP and is communicating correctly with the server

7.2.2. Resetting your G Control Hub EU.

Resetting the device will delete the existing RF network, eliminating the link with the different devices associated with the equipment, as well as the data record available from the G Control Hub. To reset the device, press the button on the back of the control unit for 20 seconds.



Note: Resetting the G Control Hub control unit does not remove the link between the device and the registered account associated with it. If you wish to switch accounts, you must do so from the "My Account" menu available in the drop-down menu at the top right of the screen in the app and the web. There you will be able to modify the registration email account.

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