ELFOControl HOME
GAIA Edition

USER MANUAL

This manual is addressed to the user.

Before starting up the system, check that the user has performed the following operations :

1. connection of the hydraulic system to the different units;
2. electrical connections to the different units;
3. wiring and RS 485 net check;
4. unit and module addressing;
5. system configuration.

For the operations above indicated, the user should refer to the manual:

“ELFOSystem– Addressing and configuration”

This manual is updated:
to the firmware version 3.0 of the 24/11/2009.

INDEX

MAIN FUNCTIONS

System main functions.

Heat pump for:

- hot and cool water for radiators, radiant panels and fancoils;
- domestic hor water (DHW).

ELFOFresh for:

- recirculate the air, heating and cooling it;
- ambient humiditiy management;
- air-condition during spring and autumn when the heat pump, the terminals and the radiant panels or radiators are not necessary;
- change and filter the air without heating or cooling it (ventilation only).

Domestic hot water production, for which it is possible to set:

- the max. water temperature in the storage;
- a time band where the water is set again to the max. storage temperature.

Zoning:

- The house can be divided into homogeneous zones according to the type of use (day zone, night zone, till a maximum of 10 zones);
- Each zone can be associated to a different hourly program, different both from the other zones and from each day of the week;
- In a zone is possible to set three operating modes, comfort, economic or off; it is possible to set the temperature and the relative humidity set point and the type of ventilation;
- It is possible to force a zone in the required operating mode for a desired time , "suspending" temporarily the current program.

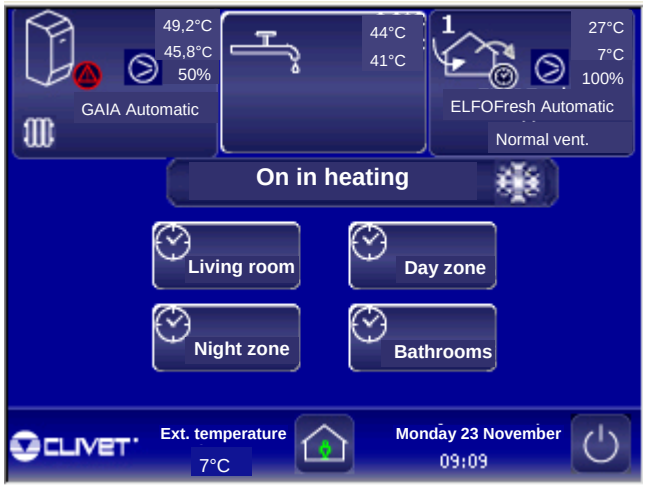
Set point:

- Each zone has both the comfort set point (optimal comfort, higher consumption) and the economic set point (medium comfort, lower consumption);
- It is possible to modify manually the set point at any time.

Programs:

- It is possible to choose a program between the 14 existing and modify it according to its requirements;
- The hourly program provides the operating modes (comfort, economic, off) for each hour of the day and for each day of the week.

STARTING SCREEN AND SYMBOLS



Displayed informations:

- current fresh air temperature
- current hour
- current date
- system status (on, off, off until...)
- system operating in cooling, automatic, heating.

Heat pump
- return water temperature
- % of compressor use
- status
- elements in the system: Radiators, Fancoils, Radiant panels,

ELFOFresh: (two units installed at max.)
- medium return air temperature
- status
- ventilation

Domestic hot water:
- storage water temperature

Zone setting

System start-up and stop

“Away from home” function

System composition

ELFOControl

Help

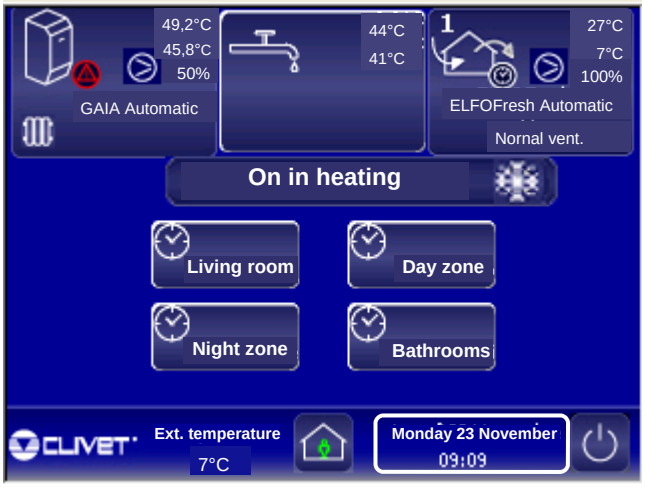
Alarms

Back to the main screen
(displayed in the next menu)

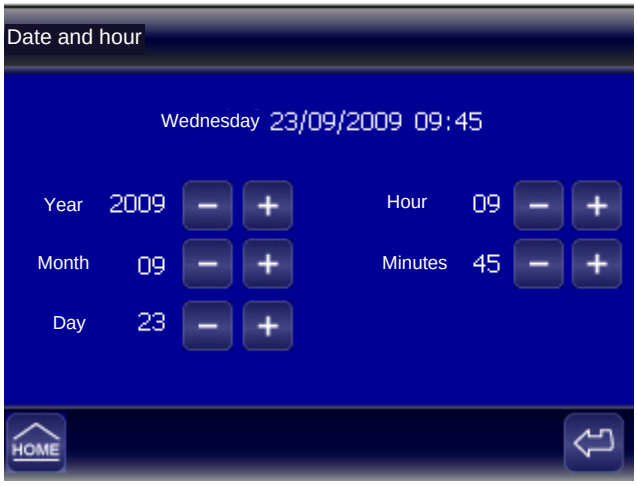
Back to the previous menu
(displayed in the next menu)

MAIN SCREEN

DATE AND HOUR CONTROL



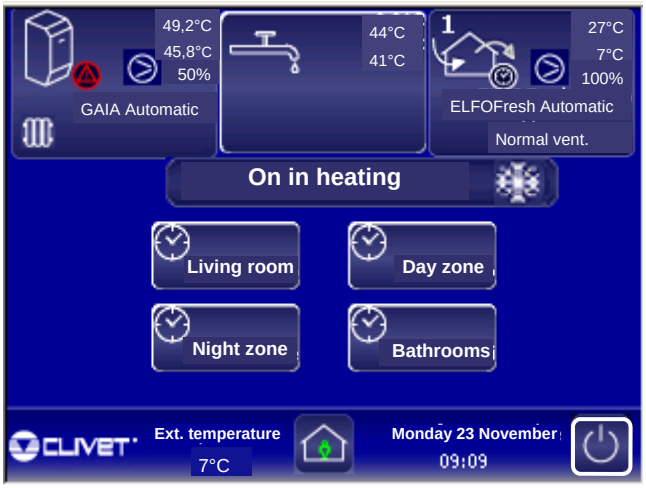
Set the year, month, day and hour to synchronize the system operating.



Set:

- year
- month
- day
- hour
- minutes

SYSTEM ON/OFF



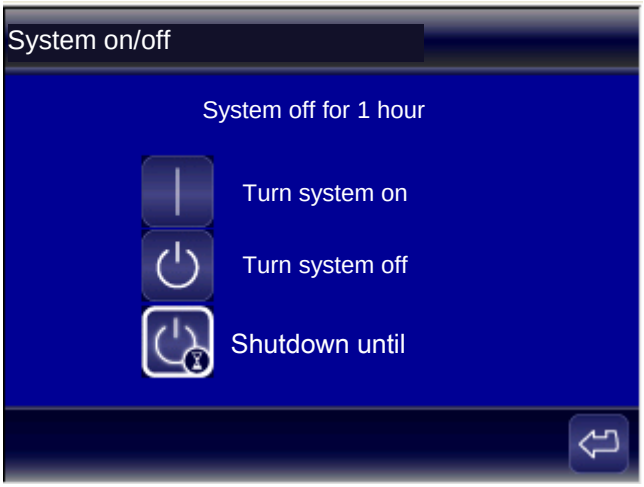
The system can be:

- turned on,
- turned off or
- shutdown until...

Turn on: turn on the system

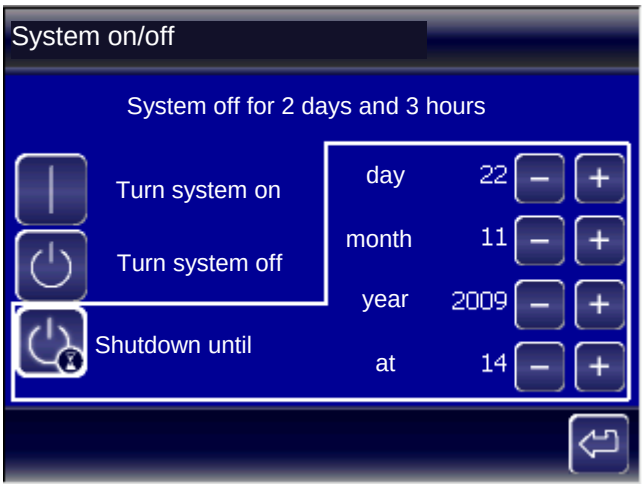
Turn off: turn off the system

SYSTEM ON/OFF



Shutdown until:

at the time expiring the system is restarted-up in the status previously set.

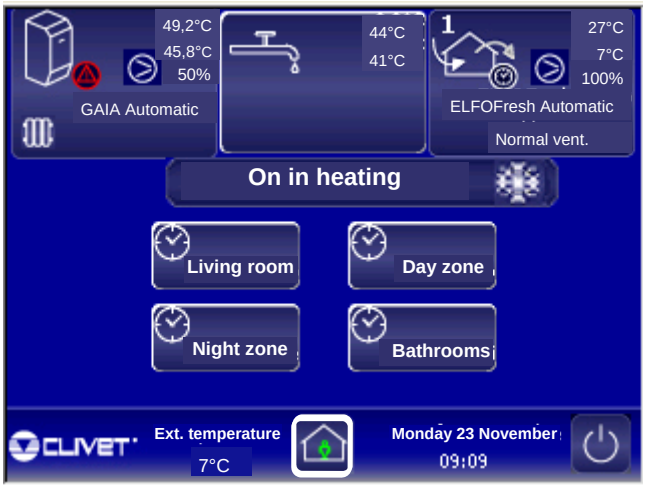


Set:

- day
- month
- year
- at

MAIN SCREEN

“AWAY FROM HOME” MANAGEMENT

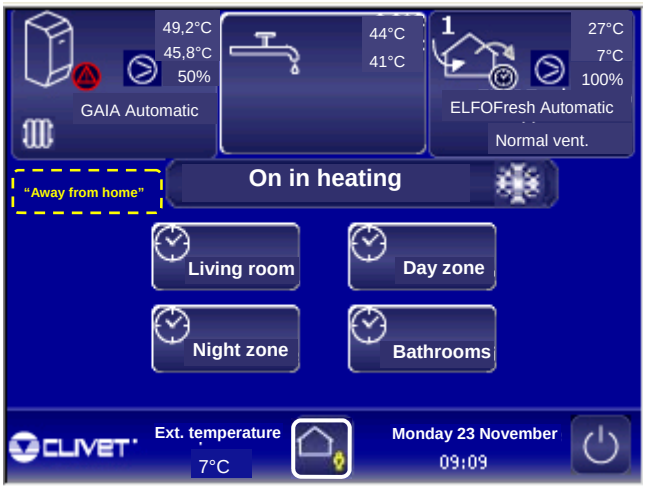


The “Away from home” management allows to set the operating of:

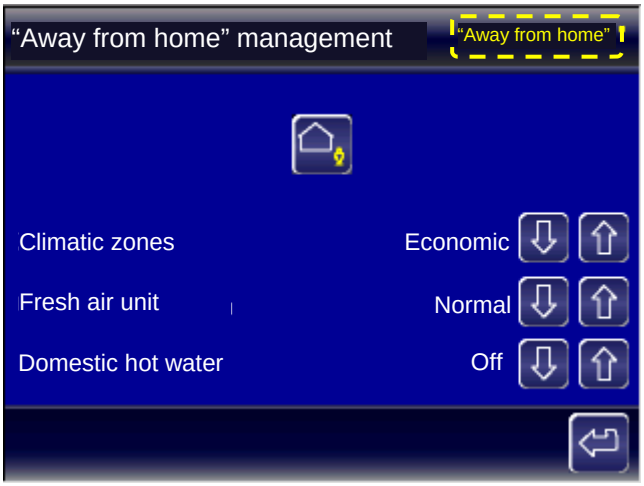
- climatic zones
- fresh air unit
- domestic hot water

of the system to save, keeping however the rooms immediately liveable.

The “Away from home” management of the whole system is activated when the room is not engaged.



If the management is active, in the main screen, on the left, the yellow message “Away from home” is flashing.



Set:

Climatic zones
all zones in the following mode:

- Normal
- Economic
- Off

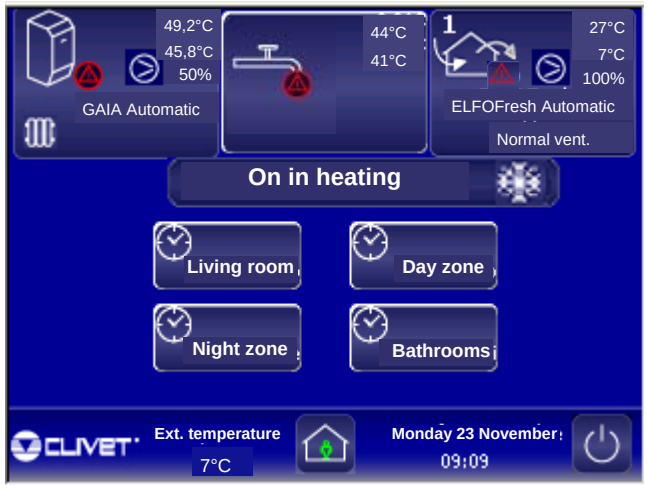
Fresh air unit
the unit or fresh air unit operating in the following mode:

- Normal: automatic ventilation
- Economic: reduced ventilation
- Off: ventilation off

Domestic hot water
the management of the domestic hot water in one of the following mode:

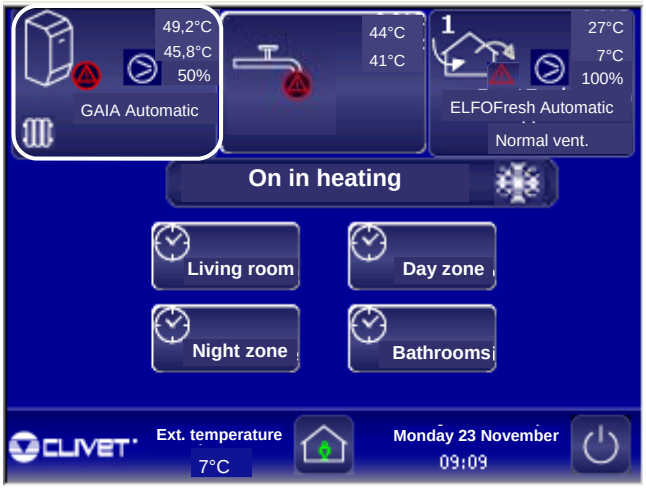
- Normal: automatic
- Reduced: the domestic hot water temperature is maintained to a reduced value.
- Off: domestic hot water off.

ALARMS



The alarms, if detected by the system, are displayed in the first screen.

Alarm signalling

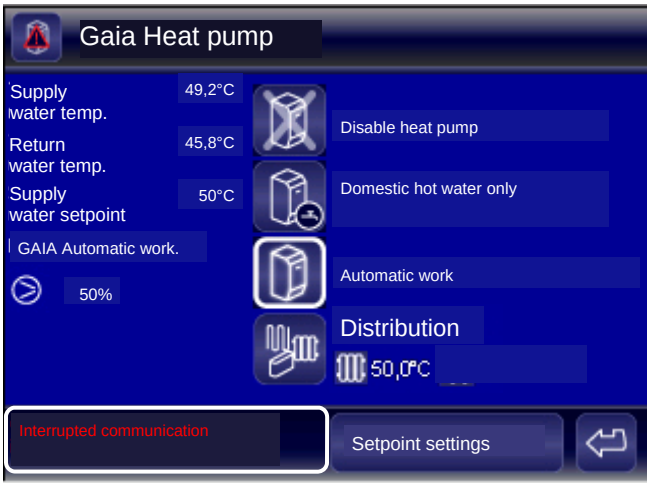


Selecting, as an example, any of the devices in alarm:

Gaia Heat pump

Domestic hot water

ELFOFresh

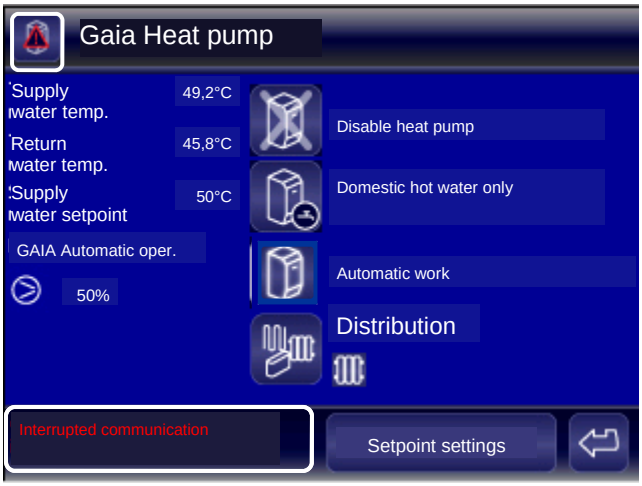


In the main screen of the unit in alarm is displayed:

- the type of the detected alarm

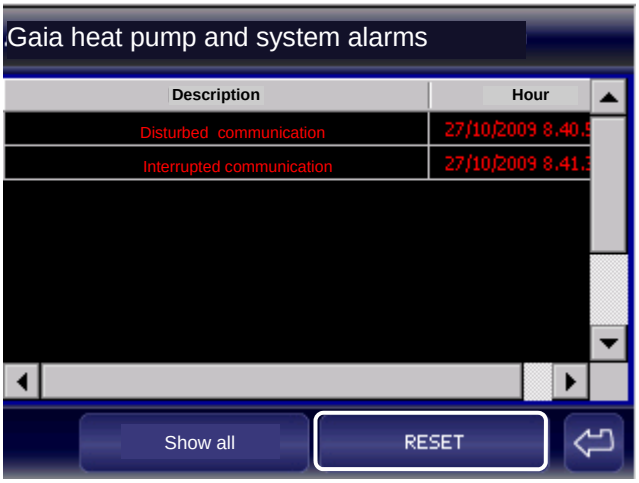
Example:
Interrupted communication with devices

ALARMS



The system detects, saves and allows to display the alarms :

- of the single unit
- of all the system elements.



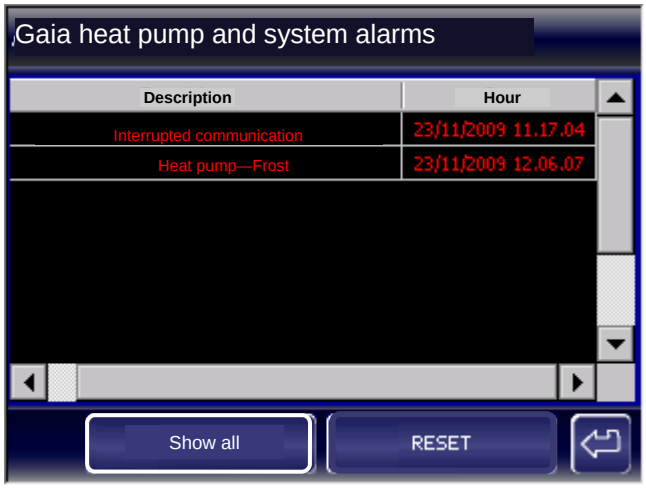
Alarm of the single unit.

Before resetting an alarm:

- identify and
- remove the cause that generated it.

Attention:
Repeated reset can cause irreversible damages.

Attention:
In case of dubts, contact the Service Center.



Alarm of all the system elements.

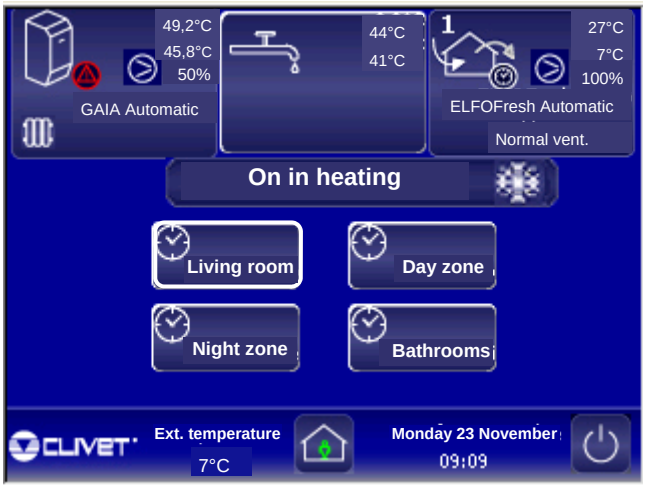
Before resetting an alarm:

- identify and
- remove the cause that generated.

Attention:
Repeated reset can cause irreversible damages.

Attention:
In case of dubts, contact the Service Center.

ZONE SCHEDULING



It sets the “scheduled” or “manual” operating of each zone, set by the technician during the system installation phase.

The zones can be scheduled according to **10 predefined hourly programs and 3 modes :**

Comfort:

Ideal temperature **,** to use when we are at home.

Economic:

Holding temperature, to use when the zone is not used.

Off:

Zone off.

Scheduled zone:
it uses one of the 10 predifined programs

Zone managed in manual mode:
the zone can be set for a while in the comfort, normal, off mode forcing and ignoring the programming.

Zone managed in manual mode:

The temperature of the system elements in the zone :

- fancoils
- radiant panels
- radiators

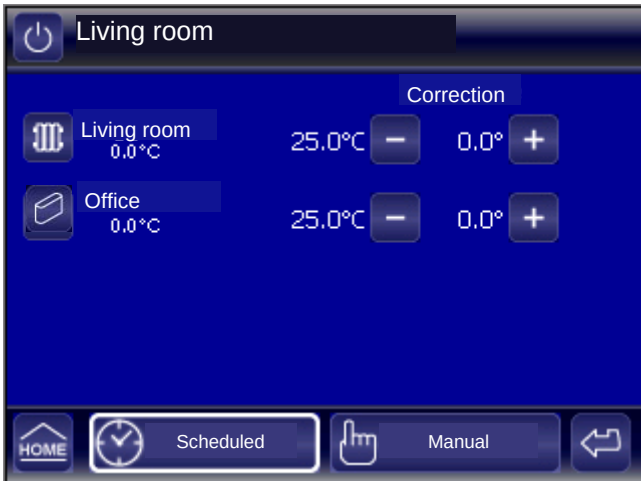
can be fixed and set in this mask.

The temperature set for each element can be “Correct”, i.e. to have some max / min. variations.

The min. correction interval is of 0.5°C.

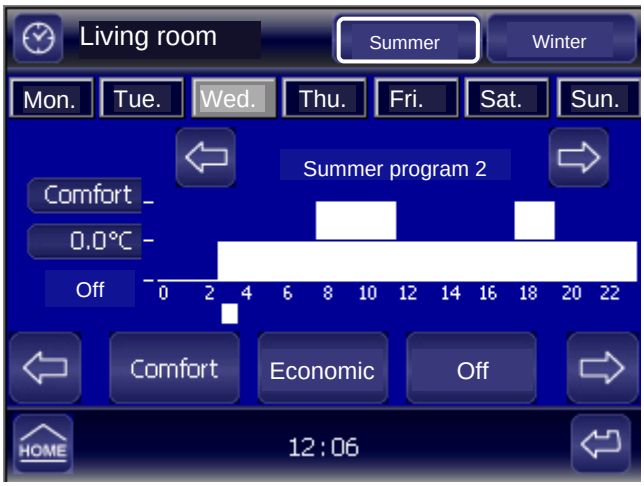
At the time expiring of the manual mode, the Zone is back to the status previously scheduled.

CHOICE OF A PROGRAM



It sets the temperature of the “Zone” displayed on the top bar, choosing one of the predefined hourly programs:

- 7 Summer programs
- 7 Winter programs.



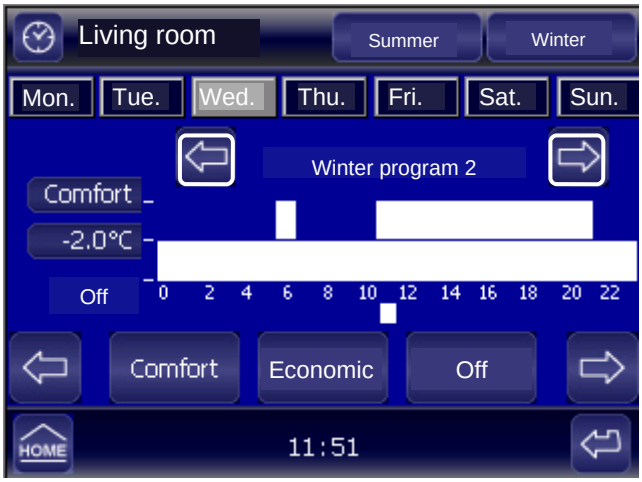
Select:

Season:

- Summer or Winter

Day of the week to program:

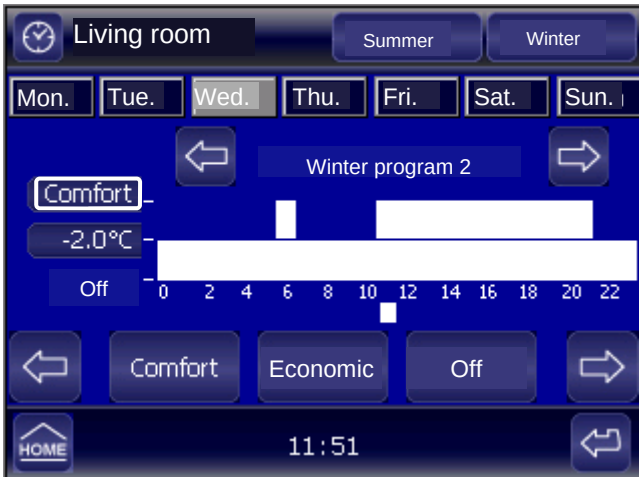
- the selected day is displayed in grey.



Program:

- one of the 7 winter programs

CHOICE OF A PROGRAM



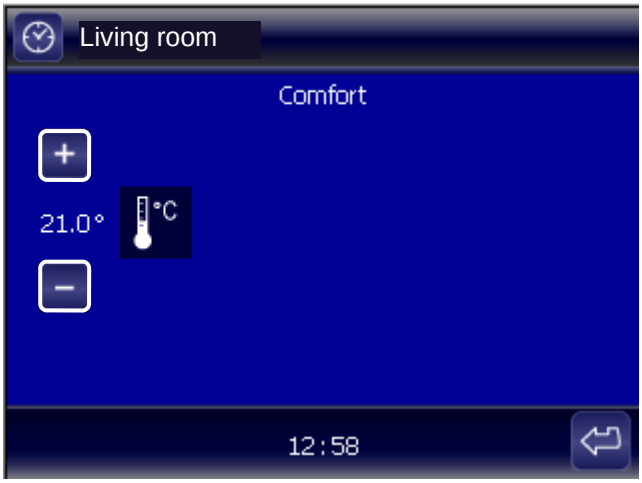
The temperature of the “Comfort” profile is predefined for all the house zones:

- 24°C for Summer
- 21°C for Winter

This temperature can be modified according to the user requirements.

Choose:

The “Comfort” profile of the Living room Zone



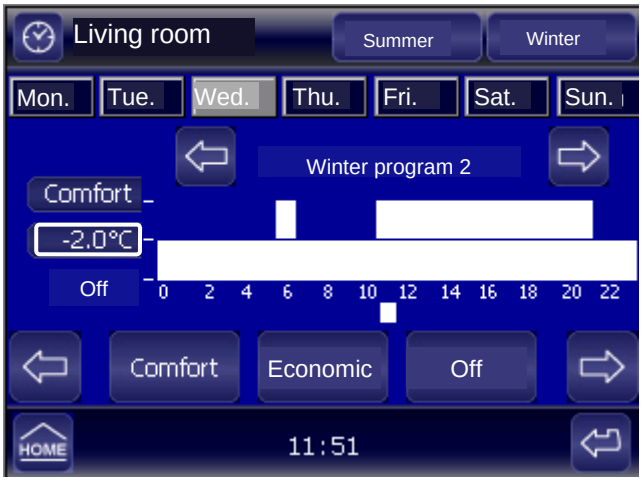
Modify:

With intervals of 0.1°C the predefined temperature increases or decreases.

If is requested a different temperature in each zone of the house , this procedure must be repeated entering in each “Zone”:

- Living room
- Day
- Night
- Bathrooms

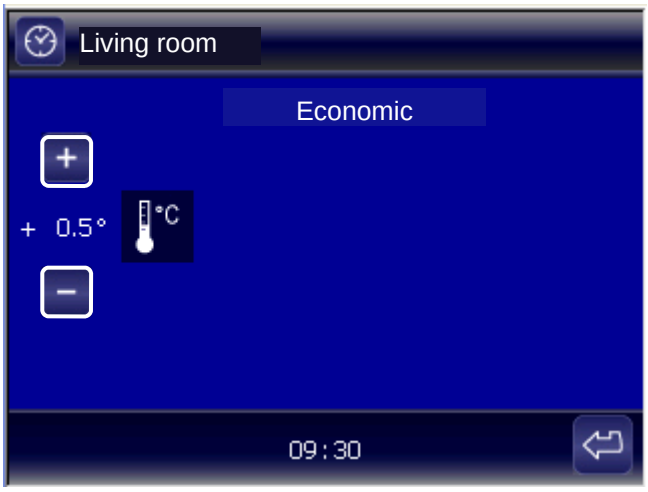
CHOICE OF A PROGRAM



The temperature of the “Economic” profile is based on the temperature variation of the “Comfort” profile (see page 14).

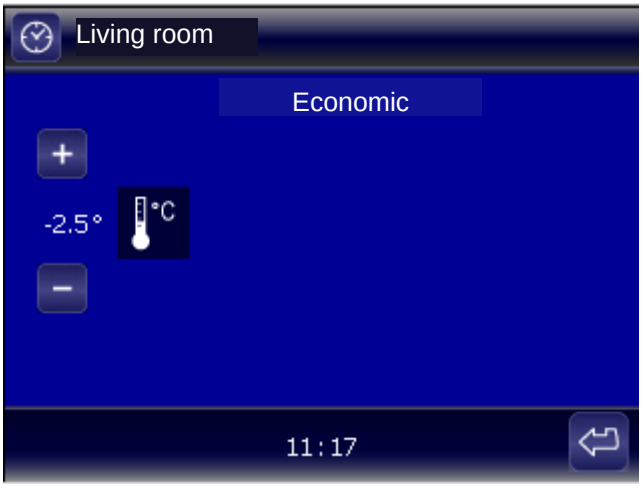
The temperature choice must be set for both the seasons:

- Summer
- Winter



The temperature of the “Comfort” profile is set at 21°C (see page 14):

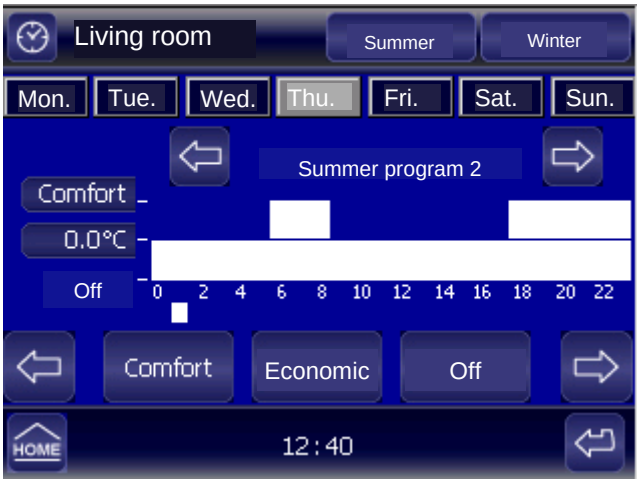
Set the temperature for the Economic profile increasing or decreasing with intervals of 0.5°C the temperature of the “Comfort” profile (21°C).



Example:

- Comfort 21°C (page 14)
- Economic 21°-2,5°C = 18.5°C

CHOICE OF A PROGRAM



Example of program:

Season: Summer

Day of the week: Thursday

Program: Summer program 1

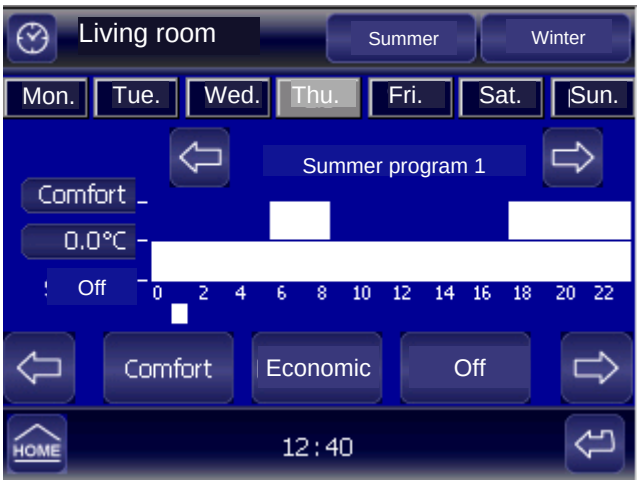
Operating profile:

from 00 to 5.00 Economic

from 5.00 to 8.00 Comfort

from 8.00 to 17.00 Economic

from 17.00 to 24.00 Comfort

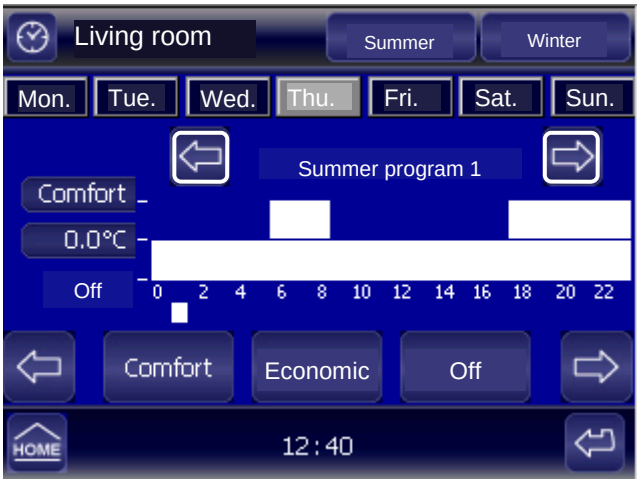


Ideal temperature, to use when we are at home (see page 14)

Holding temperature , to use when the zone is not used (see page 15)

Zone off.

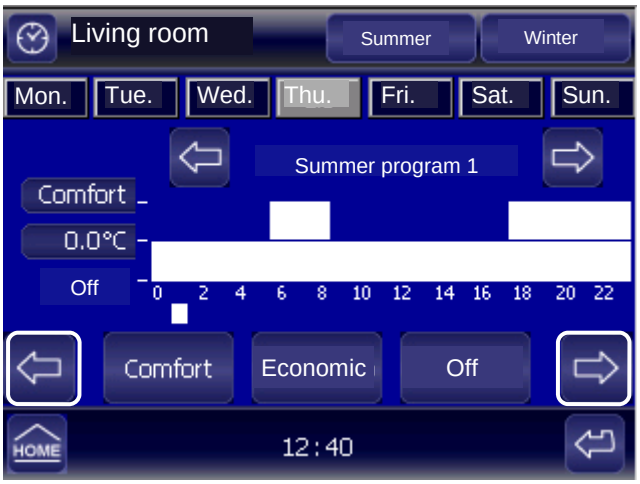
PROGRAM MODIFICATION



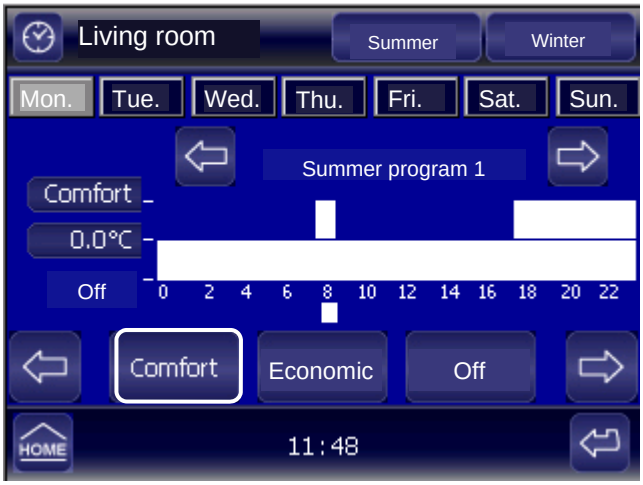
All the hourly programs can be modified.

Select:

- the program to modify.



Move the cursor positioned under the hour, to start the modifications.



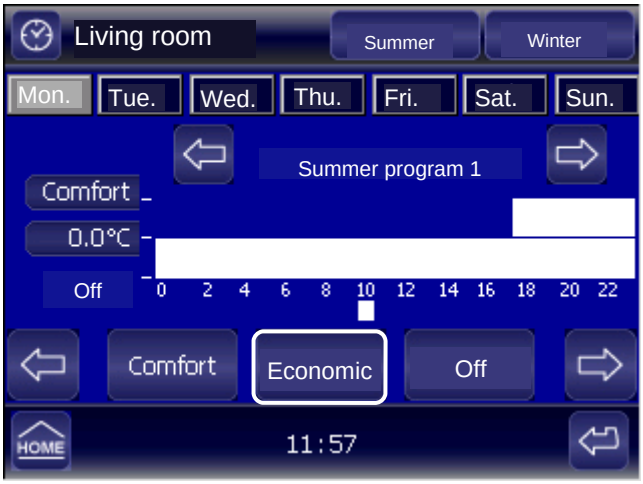
With the Comfort, Economic or Off buttons the hourly program is modified.

Example:

- Comfort.

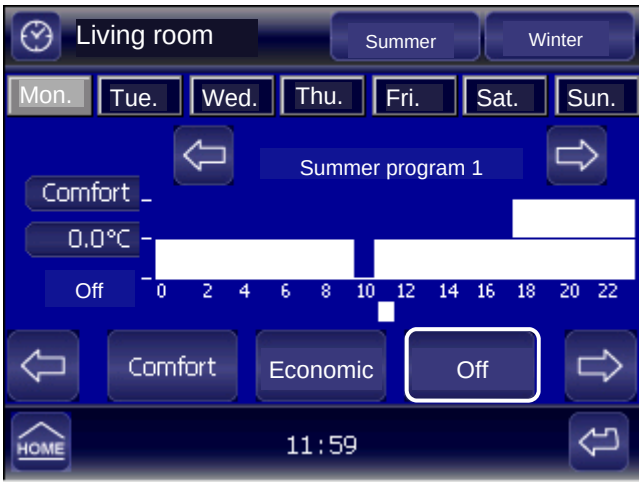
At each selection, the cursor is automatically positioned on the next hour.

PROGRAM MODIFICATION



Example:

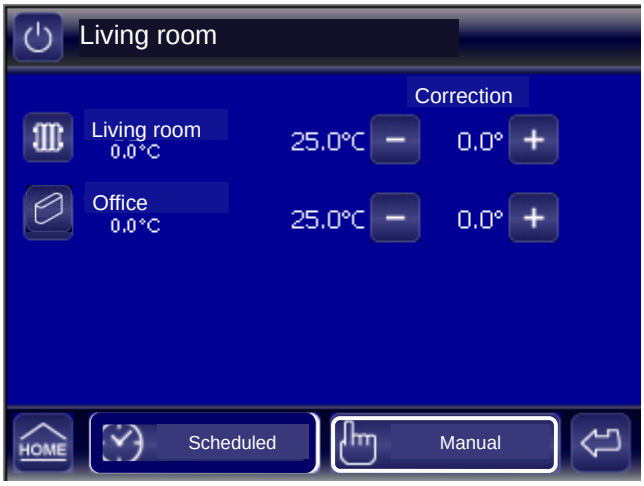
- Economic.



Example:

- Off.

MANUAL MODE



It manually sets the Zone in the operating mode, Comfort, Economic or Off.

(See the profile setting at page 14-15)

At the expiring of the manual setting, the Zone returns in the hourly scheduling previously set.

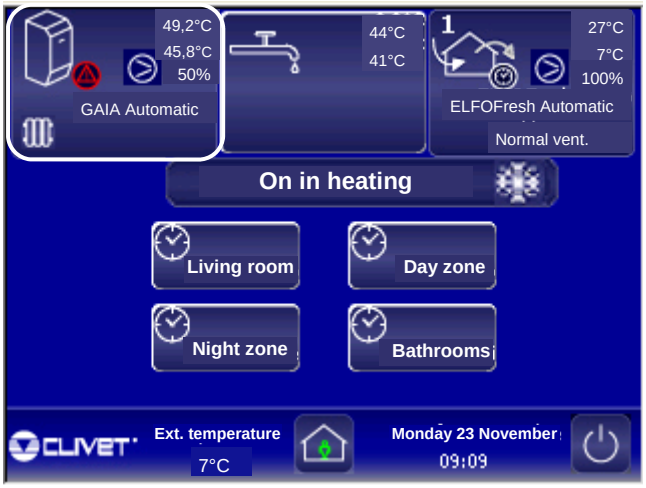
Comfort:
- always
- for 1,2….3 hours...

Economic:
- always
- for 1,2….3 hours...

Off:
- always
- for 1,2….3 hours….

The min. setting interval of the predefined hourly program forcing is of 1 hour.

HEAT PUMP



It sets the heat pump operating.

It displays:

Heat pump GAIA, installed in the system (off or on)

Heat pump GAIA in alarm

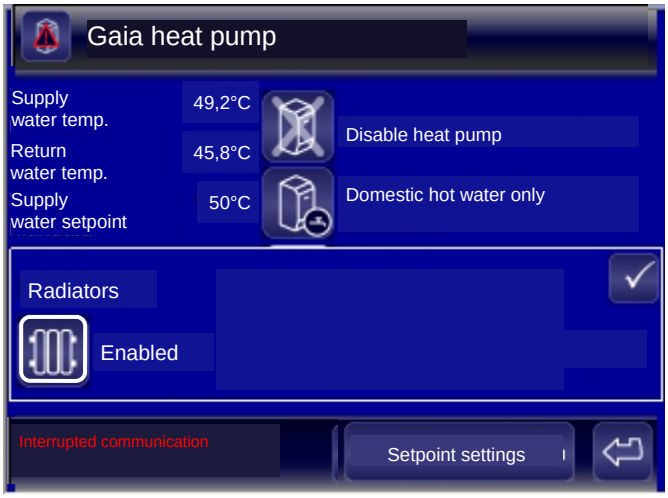
- supply water temperature
- return water temperature
- % compressor capacity
- GAIA operating status
- elements in the radiators, fancoils and radiant panels system.

Deactivates the heat pump:
The heat pump is switched off

Only for domestic hot water:
The heat pump is used only for the domestic hot water production.

Automatic operating:
The heat pump is used both for the air-conditioning system water production and for the domestic hot water production.

Distribution:
It displays the system elements and the water temperature.



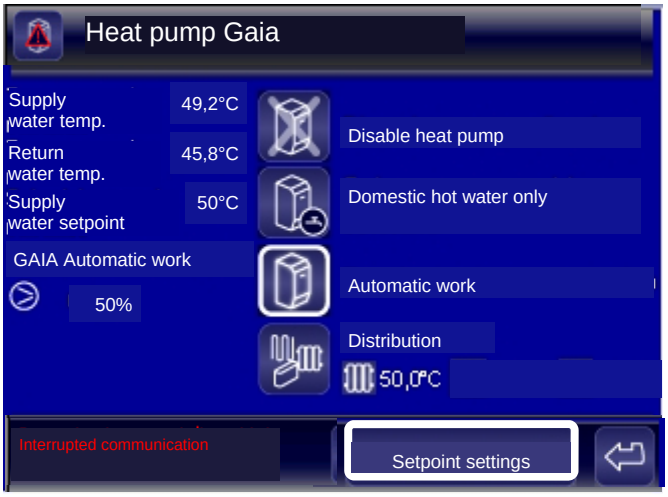
It is possible to choose to enable or to exclude the operating of the system elements:

Radiators enabled

Radiators excluded

Before closing the mask, confirm the choice.

SETPOINT SETTINGS



It sets the operating set point of the heat pump:

- winter or summer,
- fixed or compensated (page 21-22)

Elements of the system:

Set point season:

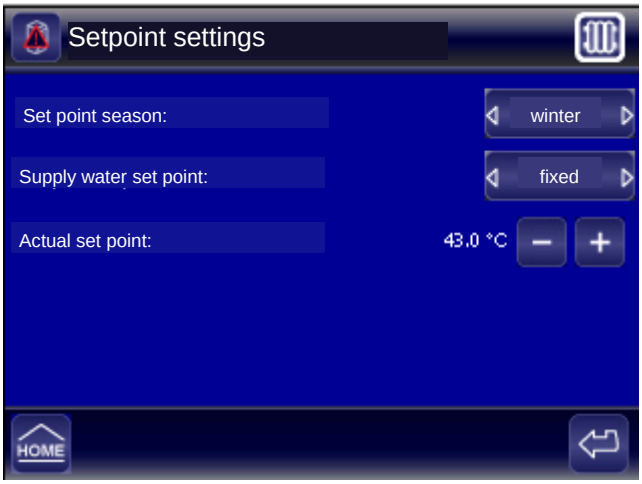
- Winter
- Summer

Fixed supply water set point:

- It sets the desired fixed value. No compensation is set on the outdoor temperature.

Actual set point:

- Fixed temperature to set.



Example:

Active elements : radiator

Set point season: winter

Supply water set point : fixed

Actual set point: 43° fixed value set

SETPOINT SETTINGS

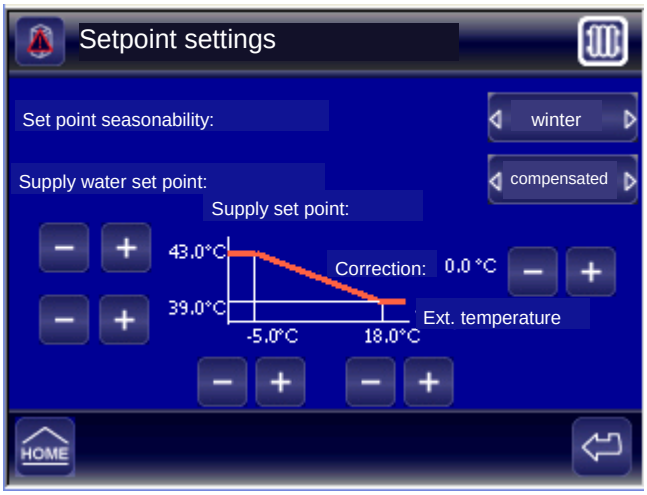
It selects the compensated set point of the supply water.

Set point season:

- Winter
- Summer

Compensated set point of the supply water:

it sets the compensation curve that corrects the value of the water set point according to the fresh air temperature value.



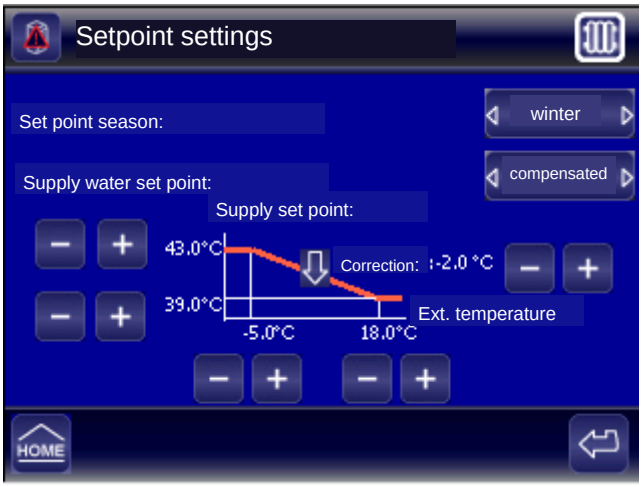
It sets:

Set point season: winter

Supply water set point: compensated

Temperature set point:

- Supply set point changeable between 43 and 39°C
- Outdoor temperatures that limit the compensation field from –5°C to 18 C°.
- Correction: it allows to increase or decrease the water temperature, using the system more efficiently, according to the outdoor temperature changing.



Example

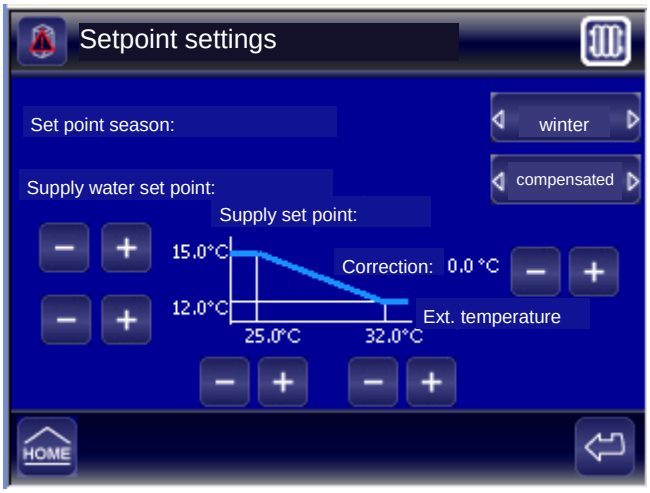
Set point seasonability: winter

Supply water set point: compensated

Temperature set point:

- Supply set point changeable between 43 and 39°C
- Outdoor temperatures that limit the compensation field from –5°C to 18 C°.
- Correction: -2°C it allows to decrease the water temperature of 2°C, using the system more efficiently, in according to the outdoor temperature changing: the supply set point will be therefore changeable between 41°C and 37°.

SETPOINT SETTINGS



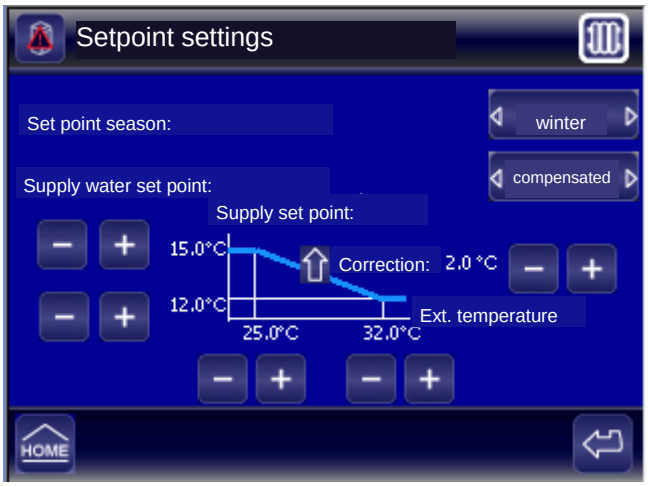
It sets:

Set point season: summer

Supply water set point: compensated

Temperature set point:

- Supply set point changeable between 15° and 12°C
- Outdoor temperatures that limit the compensation field from 25°C to 32 C°.
- Correction: it allows to increase or decrease the water temperature, using the system more efficiently, according to the outdoor temperature changing.



Example

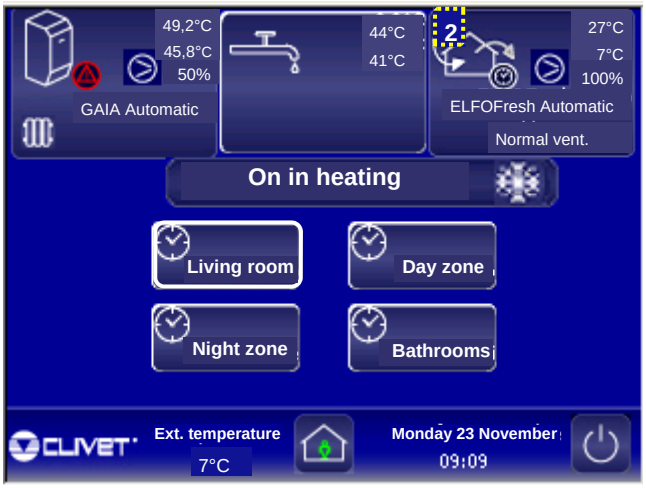
Set point season: summer

Supply water set point: compensated

Temperature set point:

- Supply set point changeable between 15° and 12°C
- Outdoor temperatures that limit the compensation field from 25°C to 32 C°.
- Correction: +2°C allows to increase the water temperature of 2°C, using the system more efficiently, in according to the outdoor temperature changing: the supply set point will be therefore changeable between 17°C and 14°.

ELFOFresh



It alternates the data display of unit 1 or 2, if present, to provide the chance to set the fresh air operating of all the installed units.

The control includes the temperature, the relative humidity and the ventilation set point.

The number that flashes every 0.5 sec. displays the data of the corresponding unit:

- supply air temperature
- return air temperature
- % compressor capacity
- compressor status: on/off
- ventilation.

Choose the unit to set the operating.

On the left of the mask is displayed:

- Fresh air temperature
- Supply air temperature
- Ambient air temperature
- Ambient Setpoint
- Unit status
- % ambient humidity
- Power consump. Of elect. heaters in KWh: only if the unit is working.
- Possible alarms detected by the system

Disable ELFOFresh:
It excludes the fresh air unit

Ventilation only:
It forces the freecooling / freeheating mode

Continuous automatic work:
The fresh air unit operates without interruptions**.**

Scheduled automatic work:

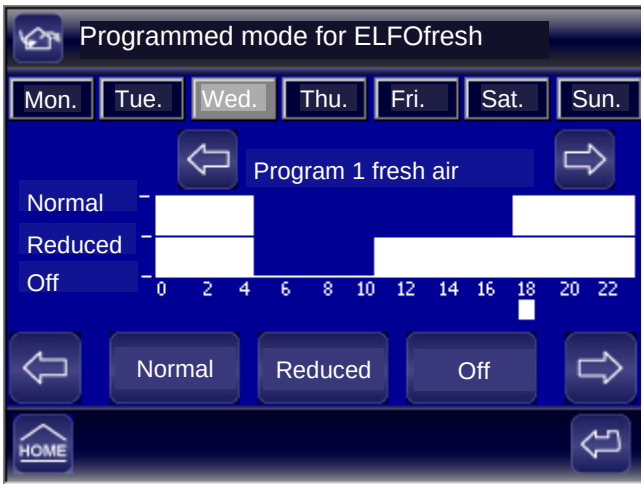
SCHEDULING

It sets the fresh air according to a daily hourly program, with a min. interval of 1 hour, in three operating modes:

Normal: optimal air change. To use if the rooms are engaged.

Reduced: ventilation at reduced flow. The air flow is reduced in favour of a greater savings and silence. To use if is not necessary to assure a continuous air change.

Off: unit turned off.



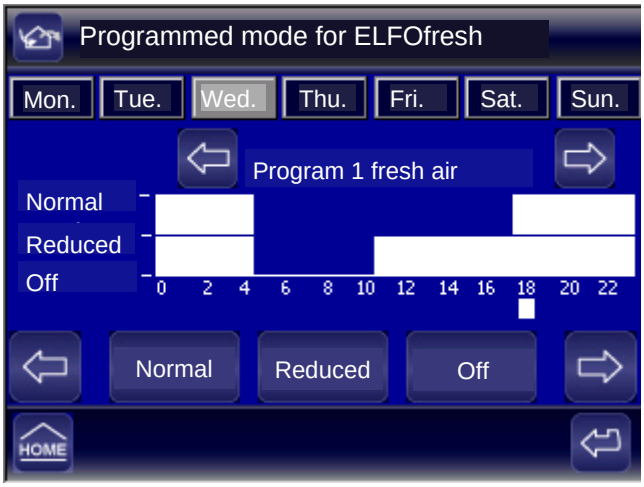
Select:

- day of the week to schedule,

the selected day is displayed in “grey”.

Select:

- the program between the 5 preset



Example of scheduling:

Day : Wednesday

Operating profile:

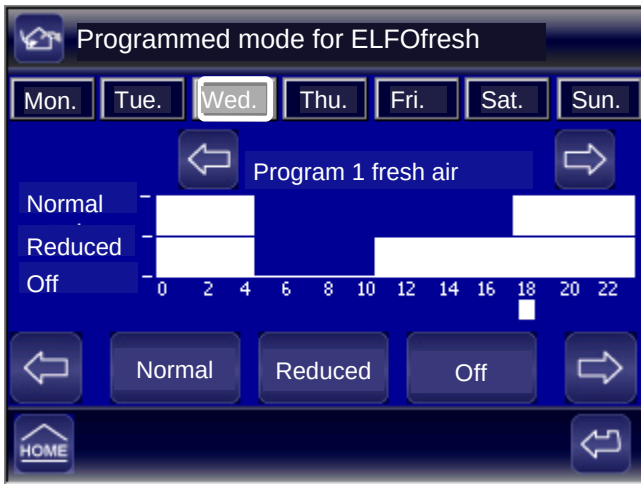
from 00 to 5.00 Normal

from 5.00 to 11.00 Off

from 11.00 to 18.00 Reduced

from 18.00 to 24.00 Normal

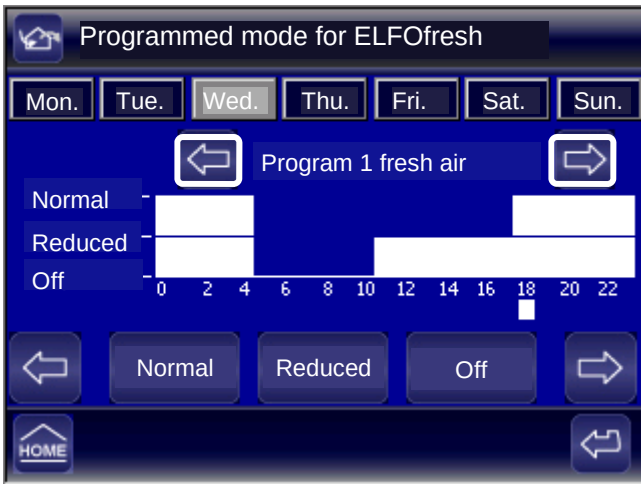
PROGRAM MODIFICATION



Select:

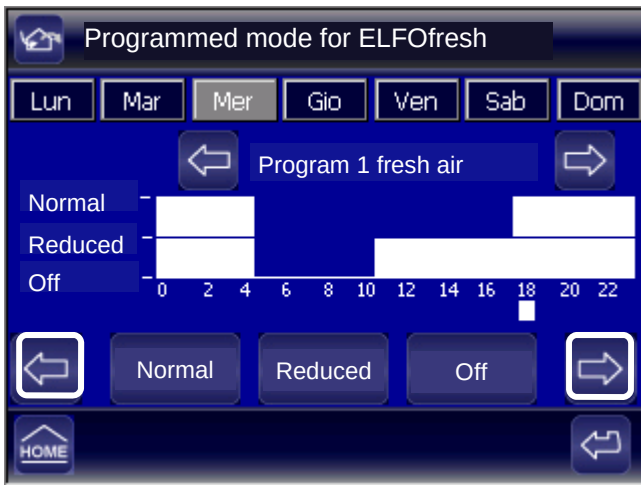
- Day of the week to schedule,

the selected day is displayed in “grey”.



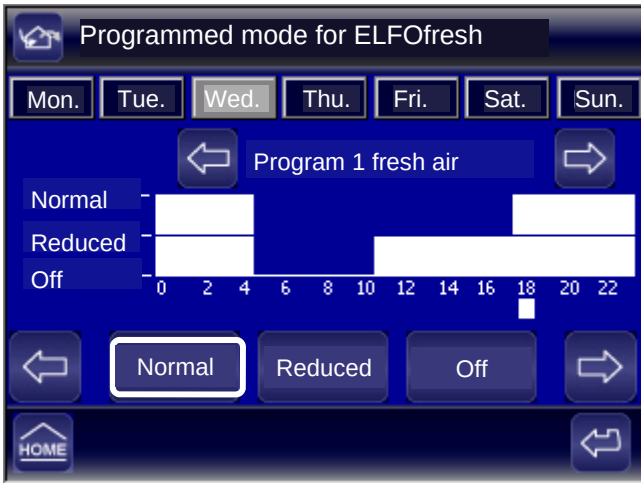
Select:

- the program to modify

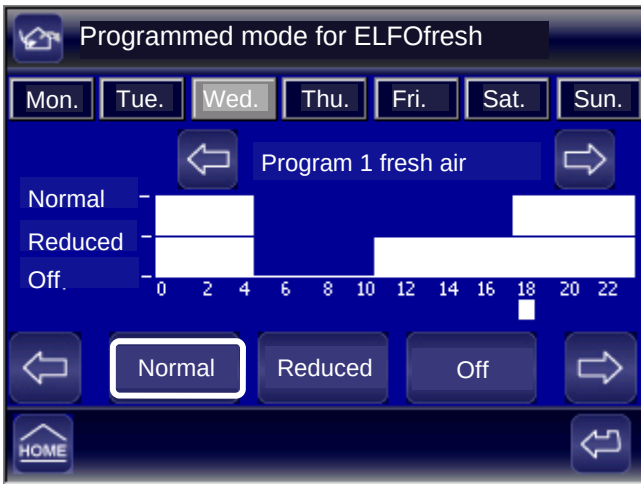


Move with the arrows the cursor positioned under the hour to start the modification.

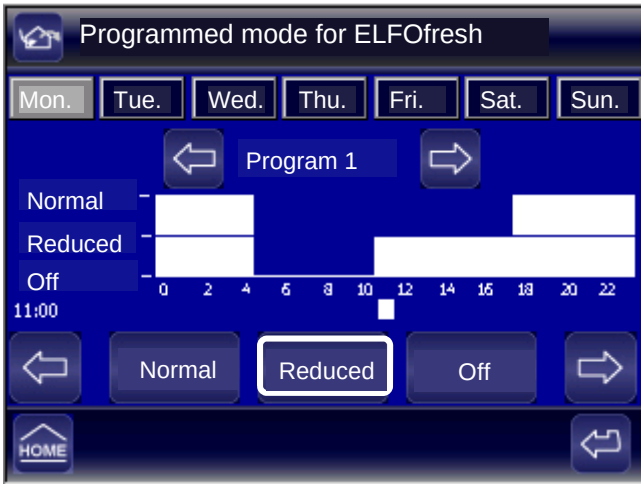
PROGRAM MODIFICATION



The cursor sets at 4.00 the **“Normal”** operating.



The cursor sets at 5.00 the **“Off”** operating.

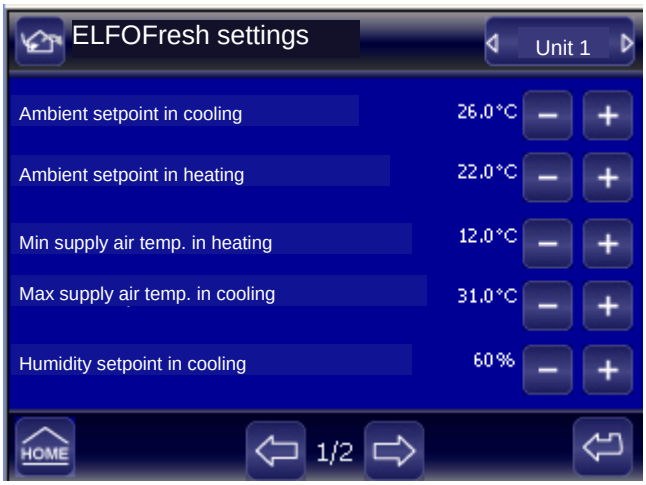


The cursor sets at 10 the **“Reduced”** operating.

SETTINGS

It sets the unit operating set point for the fresh air, ELFOFresh:
temperature, relative humidity and ventilation.

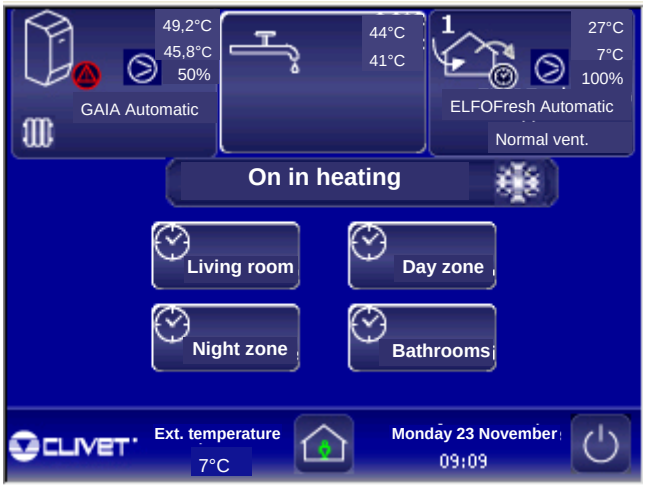
If in the system 2 units are present, set both selecting the button on the top right.



It sets:

- Ambient air set point in cooling:
- Ambient air set point in heating:
- Min supply air temp. in heating:
- Max supply air temp. in cooling:
- Humidity setpoint in cooling
- Humidity setpoint in heating

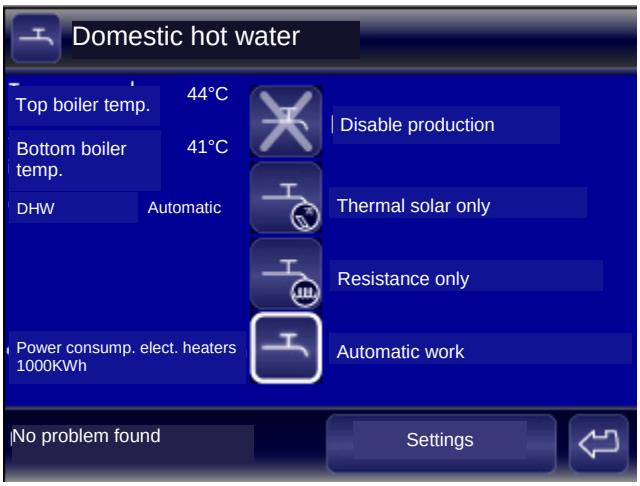
DOMESTIC HOT WATER



It sets the domestic hot water operating.

It displays:

- higher temperature
- lower temperature



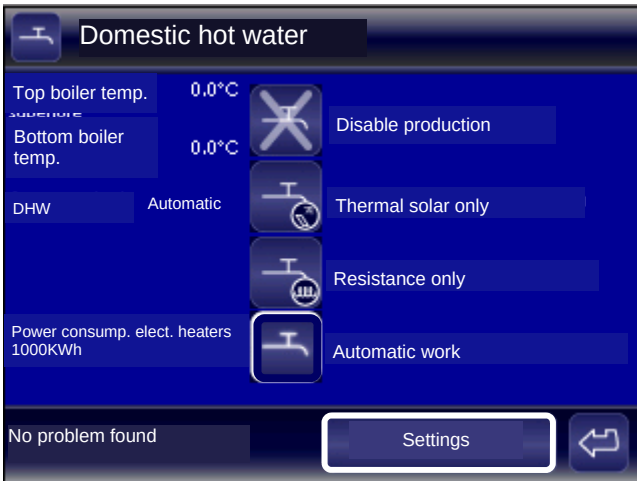
Production disabling:
It excludes the domestic hot water production**.**
In this mode no control on the storage temperature is present.

Thermal solar only:
The storage temperature is assured also with an higher set point by the use of the thermal solar (solar panels).

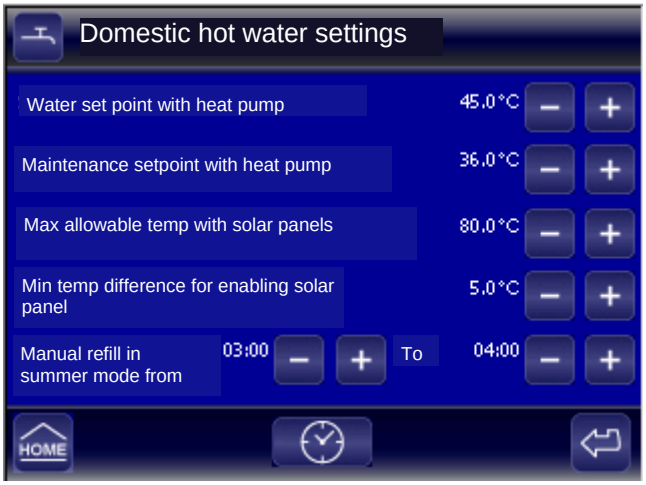
Resistance only:
The storage temperature is maintained only by the use of the electric resistances.

Automatic work:
The domestic hot water production is automatic, according to the request, using all the available resources.

SETTINGS



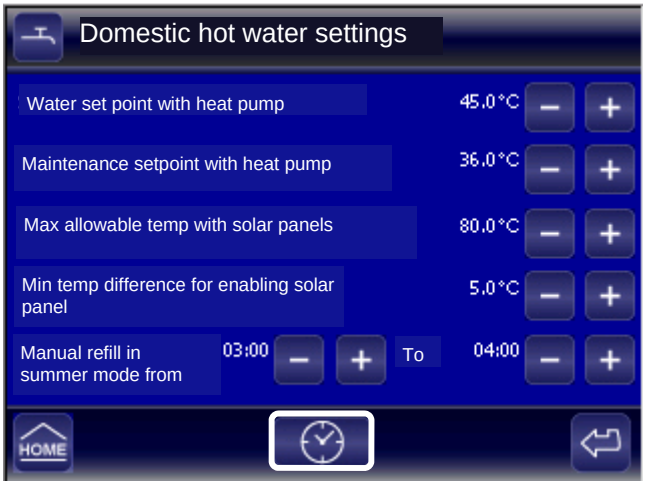
It sets the set point for the domestic hot water use.



It sets:

- Water set point with heat pump:
- Maintenance setpoint with heat pump:
- Max allowable temp with solar panels:
- Min temp difference for enabling solar panel:
- Manual refill in summer mode: from - to

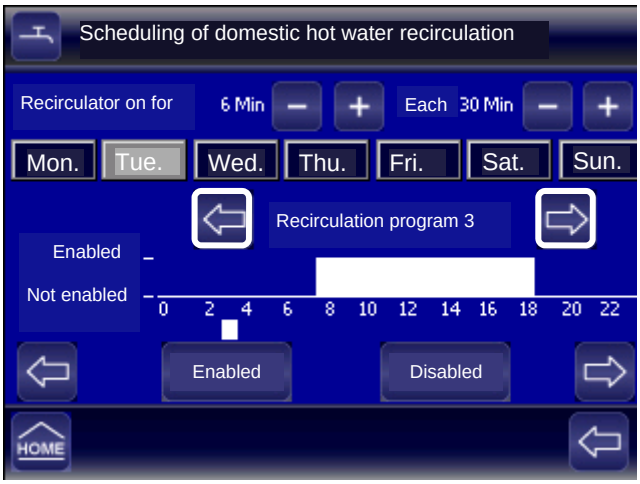
RECIRCULATION



It sets the domestic hot water recirculation to always assure the immediate availability.

3 hourly programs preset are present.

All the hourly programs can be modified.

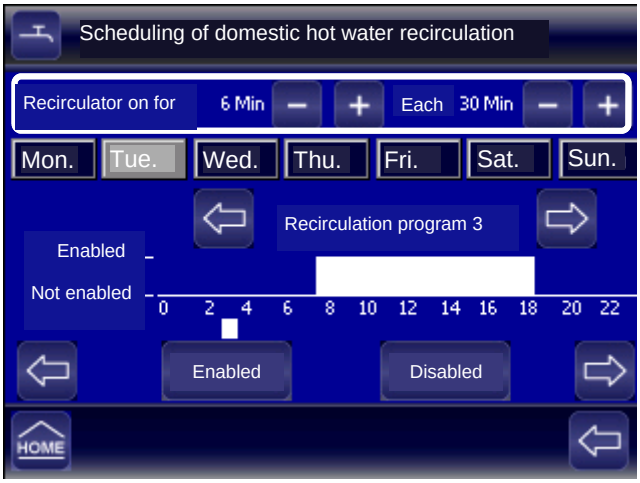


Select:

- the day of the week to program:
  the selected day is displayed in “grey”.

Select:

- the program between the 3 preset.



It sets:

- recirculation operating time, min. interval of 1min.
- recirculation frequency, min. interval of 30min.

Example of scheduling:

Day : Tuesday

Program: Recirculation program 3

Operating profile:

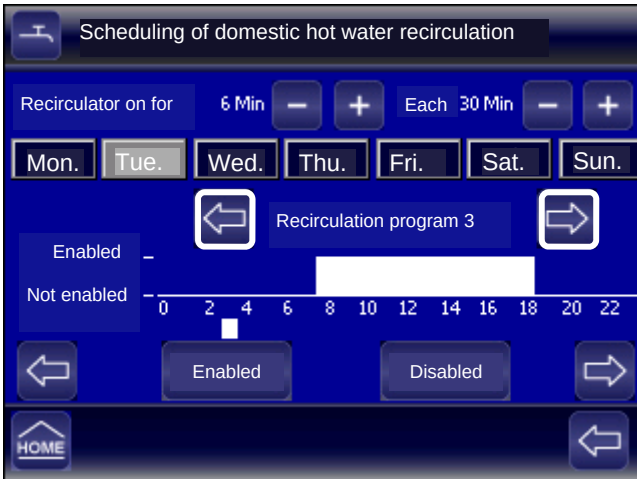
From 00 to 7.00 Not enabled

From 7.00 to 18.00 Enabled**

From 18.00 to 24.00 Not enabled

** the recirculation every 30 minutes operates for 5 minutes.

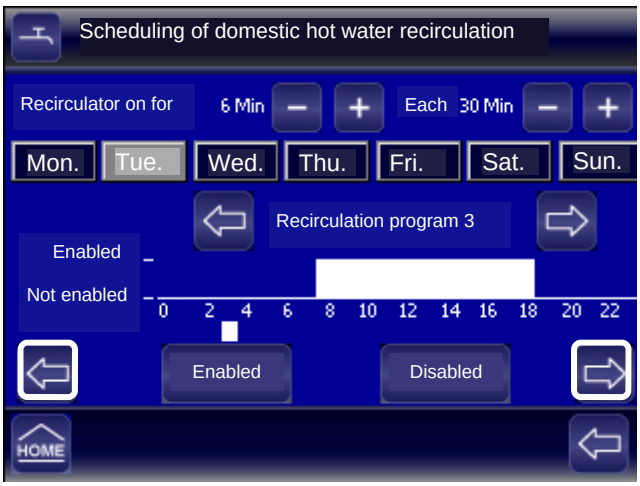
RECIRCULATION



All the hourly programs can be modified.

It selects:

- the program to modify.

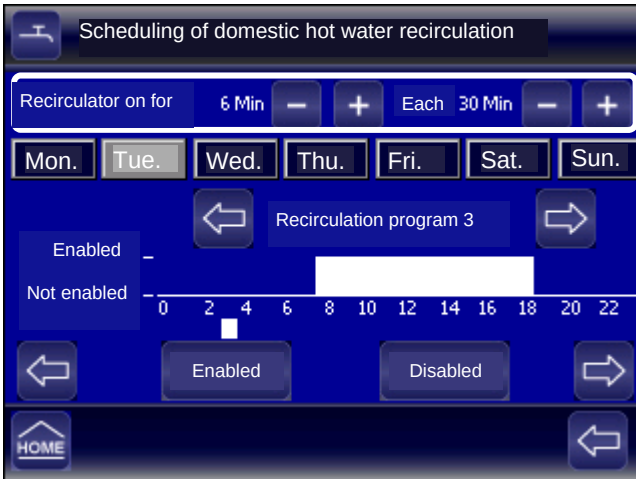


Move the cursor, positioned under the hour, to start the modifications.

With the buttons modify the hourly program:

Recirculation on

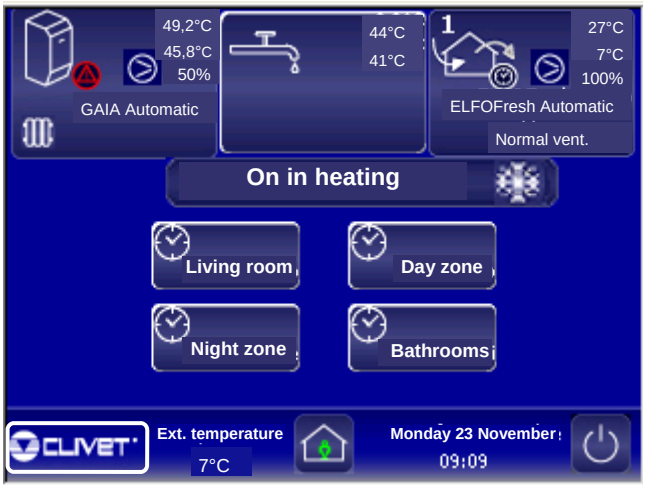
Recirculation off



It sets:

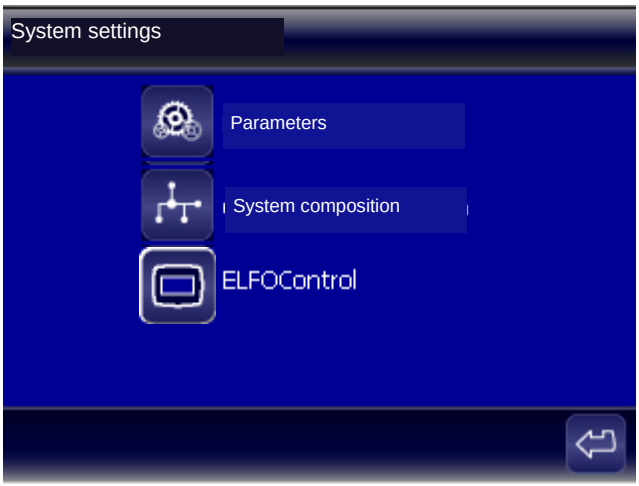
- recirculation operating time, min. interval of 1min.
- recirculation frequency, min. interval of 30min.

SYSTEM SETTINGS



The system setting mask, pressing the “CLIVET” button, allows to set:

- the system parameters
- the system composition
- the Elfocontrol



The access to the **“System settings”** mask is reserved exclusively to the Service Center.

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