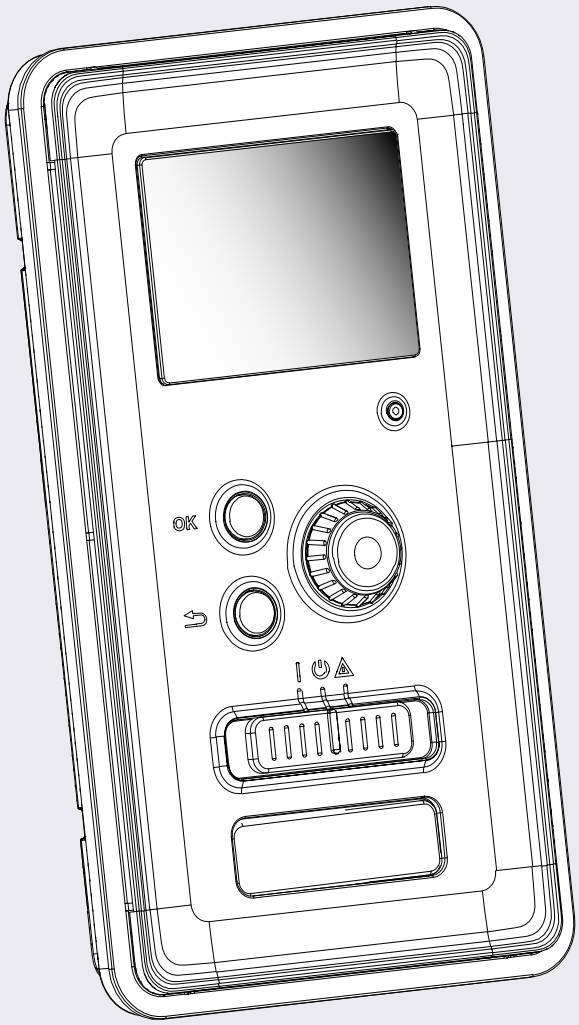
an ideal tomorrow



Operating Manual

Heating and Heat Pump Controller HPC

Accessory for heat pumps

UK

www.aitgroup.com

83070200cUK

Contents

1 About this operating manual

This operating manual is part of the unit.

► Before working on or with the unit, always read the operating manual carefully and follow it for all activities at all times, especially the warnings and safety instructions.

► Keep the operating manual to hand by the unit, and give it to the new owner if the unit changes hands.

► If you have any questions or anything is unclear, ask the local partner of the manufacturer or the factory's customer service.

► Observe all reference documents.

1.1 Validity

This operating manual refers solely to the unit identified by the nameplate.

1.2 Reference documents

The following documents contain supplementary information for this operating manual:

- Planning & design manual, hydraulic integration
- Hydraulic indoor unit operating manual
- Heat pump operating manual
- Log book
- If necessary: operating manuals for accessories

Symbols and markings

Identification of warnings

Symbol	Meaning
	Safety information. Risk of physical injury.
DANGER	Indicates imminent danger resulting in severe injuries or death.
WARNING	Indicates a potentially dangerous situation which may result in severe injuries or death.
CAUTION	Indicates a potentially dangerous situation which may result in moderate or minor injuries.
IMPORTANT	Indicates a potentially dangerous situation which may result in damage to property.

Symbols in the document

Symbol	Meaning
	Information for qualified personnel
	Information for the owner/operator
✓	Required action
▶	Procedural instruction: Individual step to take
1., 2., 3., etc.	Procedural instruction: Numbered series of steps, which should be taken in the listed order
	Additional information, e.g. advice for making work easier, information about standards
→	Reference to further information elsewhere in the operating manual or in another document
●	Bullet point

1.3 Contact

Up-to-date addresses for purchasing accessories, for customer service or for answers to questions about the unit and this operating manual can be found online at:

- www.aitgroup.com

2 Safety

Do not use the unit if it has any technical defects. Only use it as intended, safely and aware of the hazards, and follow this operating manual.

2.1 Intended use

The unit is designed for household use and is solely intended for the following purposes:

- for controlling the heat pump and the associated system components.

IMPORTANT
The unit may only be operated in conjunction with heat pumps approved by the manufacturer and accessories approved by the manufacturer.

► Intended use includes complying with the operating conditions and the operating manual, as well as observing the reference documents.

► When using the unit, observe the local regulations, laws, standards, guidelines and directives.

Any other use of the unit is considered unintended use.

2.2 Personnel qualifications

The operating manual included in the scope of supply is intended for all users of the product.

The product is intended for use by end customers / operators, and it can be operated (via the control panel) and worked on by persons of any age who understand the tasks and potential consequences, and who are able to carry out these necessary tasks.

Children and adults who are inexperienced with the product and who do not understand the tasks and potential consequences must be briefed and, if necessary, supervised by persons who know how to handle the product and who are responsible for safety.

Children must not play with the product.

The product may only be opened by qualified specialist personnel.

All procedural instructions in this operating manual are solely directed at qualified specialist personnel.

Only qualified specialist personnel are able to carry out work on the unit safely and correctly. Interference by unqualified personnel can cause life-threatening injuries and damage to property.

► Ensure that the personnel are familiar with the local regulations, especially those on safe and hazard-aware working.

► Ensure that the personnel are qualified to handle flammable (primary) refrigerant.

► Work on the refrigerating circuit may only be carried out by qualified personnel with appropriate qualifications for refrigeration system installation.

► Qualified personnel with electrical training are the only people permitted to work on the electrics and electronics.

► Other work on the system should only be carried out by qualified specialists, such as:
  - Heating engineers
  - Plumbers

During the warranty and guarantee period, servicing and repairs may only be carried out by personnel authorised by the manufacturer.

2.3 Residual risks

Injuries caused by electric shock

Components in the unit are energised with life-threatening voltage. Before working on the unit:

► Disconnect unit from power supply.

► Protect unit against being switched back on again.

3 Product care

Wipe down the outside of the unit only using a damp cloth or a cloth with a mild detergent (washing-up liquid, neutral cleaning product). Do not use any harsh, abrasive, acidic or chlorine-based cleaning products.

4 Energy-saving tips

The system is intended to generate heating or domestic hot water heat. These operations take place based on the system settings you have made.

The factors that influence energy requirements include indoor temperature, domestic hot water consumption, building insulation and the total size of the window area. The location of the house, e.g. the influence of wind, also has an effect.

Note the following:

► Open any available thermostatic valves fully (except for rooms in which a cooler climate is desired).
The thermostats restrict the volume flow in the heating system, which the controller tries to balance out with a higher temperature. The system has to work more as a result, so it also consumes more energy.

► Lower the temperature when you are away from home (holiday).

→ “9.4.5 Menu 4.7 – Holiday setting”, page 33.

NOTE
If “Economy hot water” is activated, less energy is consumed.

5 Maintenance

The control panel does not require regular maintenance.

6 Disposal

When decommissioning the unit, always comply with local applicable laws, directives and standards concerning the recovery, recycling and disposal of materials and components of cooling units.

7 Installing the control panel

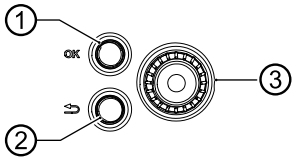
→ Hydraulic unit operating manual

8 Control – Introduction

NOTE
The screenshots in this operating manual are examples. Individual representations and symbols may differ from those in the display of your control panel. However, the described functions remain the same.

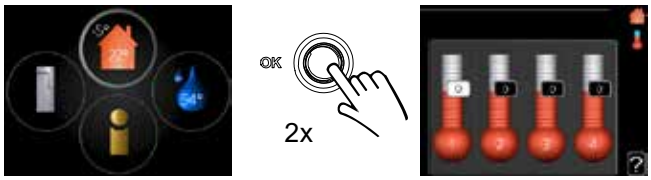
Quick guide

Navigation



① OK button (confirmation / selection)
② Back button (Back / Cancel / Exit)
③ Control knob

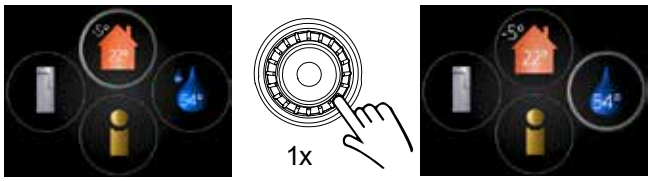
Setting the indoor climate



To access the setting mode for the indoor temperature, press the OK button twice when you are in the initial position in the main menu.

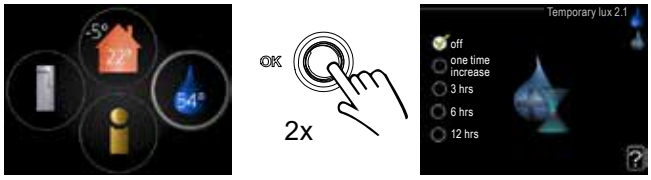
Increasing the amount of domestic hot water

1. To temporarily increase the amount of domestic hot water, turn the control knob once to select menu 2 (water drop).



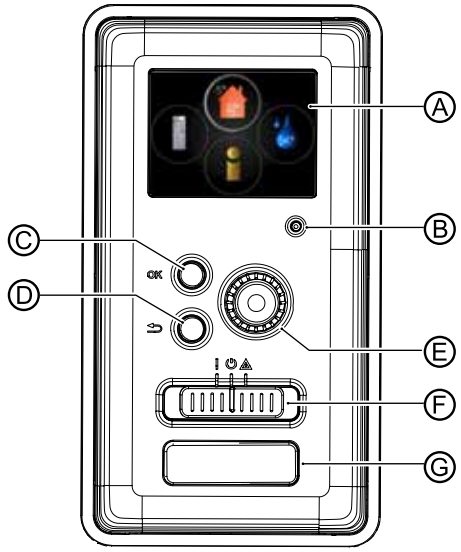
The circle around the water drop is highlighted (shown thicker).

2. Then press the OK button twice.



3. Choose the desired setting.

Control panel



Ⓐ Display

Symbols, instructions, settings and operating information appear on the display.

► Navigate between menus and options to choose the desired settings or access the required information.

Ⓑ Status lamp

The status lamp shows the status of the heating and heat pump controller:

- green in normal operation
- yellow in emergency operation
- red when the alarm is triggered

Ⓒ OK button

The OK button confirms the selection of submenu / option / set value in the start guide.

Ⓓ Back button

The Back button is used to:

- return to the previous menu
- undo a setting that has not yet been confirmed.

Ⓔ Control knob

The control knob can be turned to the right or left. This allows you to:

- scroll through the menus and switch between options
- increase or decrease a previously selected value
- switch between pages (e.g. help text and service information) in multi-page instructions.

Ⓕ Operating switch (SF1)

The operating switch has three settings:

- On (▯)
- Standby (⏻)
- Emergency operation (⚠)

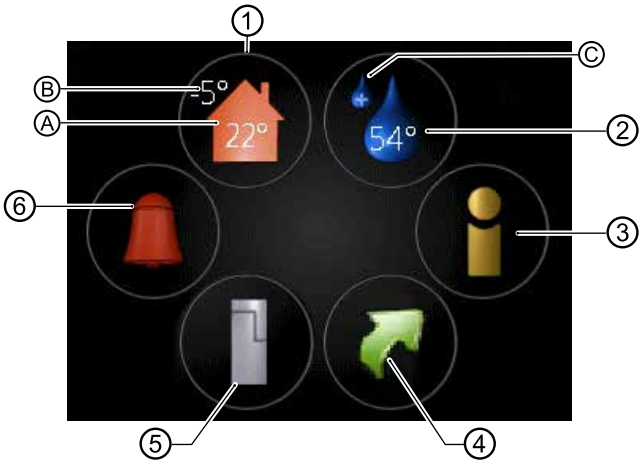
Emergency operation may only be used if an error has occurred in the controller. In this mode, the compressor in the heat pump is switched off and the electric heating element is activated. The controller display is switched off and the status lamp lights up yellow.

Ⓖ USB service port

The USB port is located under the plastic cover.

→ “12.3 USB service port”, page 50

Main menu



① Menu 1 – Indoor climate

Setting and scheduling the room temperature.
Symbols:
Ⓐ = Indoor temperature (value is only displayed if a room temperature sensor is installed)
Ⓑ = Outdoor temp.

② Menu 2 – Domestic hot water

Setting and scheduling the domestic hot water preparation.

Depending on the setting, additional symbols may appear in this circle:

- Comfort mode activated temporarily
- Estimated amount of domestic hot water
- Current domestic hot water temperature

③ Menu 3 – Info

Display of temperature and other operating information, as well as access to the alarm log.

④ Software update via myUplink.com

Appears as soon as there is an Internet connection with myUplink.com and a new software version is available on myUplink.com.

1. Choose the submenu by selecting it and pressing the OK button.
2. Follow the instructions on the display.

⑤ Menu 4 – Min. system

Setting time, date, language, display, operating mode, etc.

⑥ Alarm

Appears as soon as an alarm is triggered. A message can be shown on the display.

→ “13 Comfort malfunction”, page 53

Symbols on the display

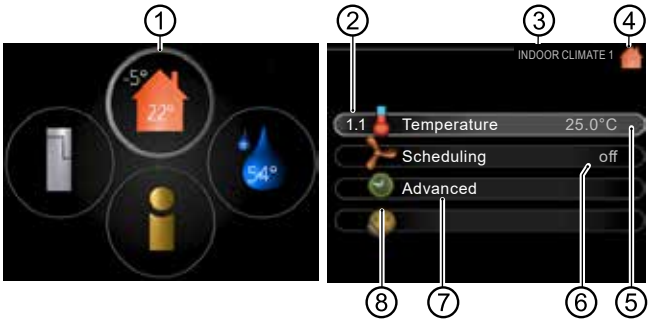
The following symbols may appear on the display during operation:

Symbol	Description
	This symbol appears on the information sign if menu 3.1 contains relevant information.
	These two symbols provide information as to whether the compressor in the heat pump or the additional heat in the system is blocked by the controller. Heat pump or additional heat may be blocked, for example, due to the operating mode selected in menu 4.2, in the event of time-controlled blocking in menu 5.11.5, or by an alarm.  Compressor blocked  Electric heating element blocked
	This symbol indicates whether a periodic increase or lux mode for domestic hot water is activated.
	This symbol indicates whether "Holiday plan" is active in menu 4.7.
	This symbol indicates whether the controller is communicating with the internet.
	This symbol indicates whether the photovoltaics accessories are active.
	This symbol indicates whether the swimming pool heating accessories are active.
	This symbol indicates whether the cooling is active.

Navigation

► Turn the control knob to the left or right to select a menu.

The selected menu is highlighted by a thicker circle (①) and/or marked as an accessed tab (⑤).



① Circle highlighting selected main menu
② Menu number
③ Menu name and menu number
④ Menu symbol
⑤ Accessed tab (highlighted in bright colour)
⑥ Status information
⑦ Submenu name
⑧ Submenu symbol

Choosing a menu

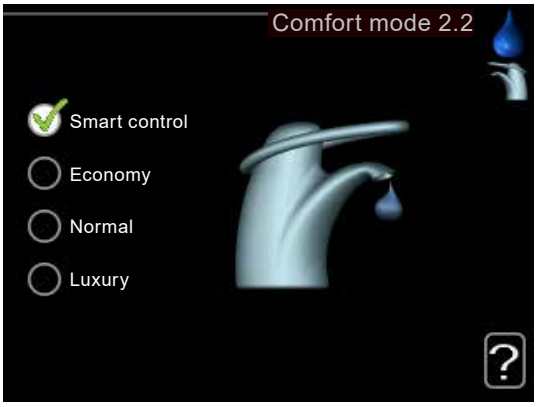
► Choose a main menu by selecting it and pressing the OK button.

This will open a new window with submenus.

► Choose a submenu by selecting it and pressing the OK button.

Selecting alternatives

In a menu with several options, a green tick is shown next to the option that is currently set.



To select a different option:

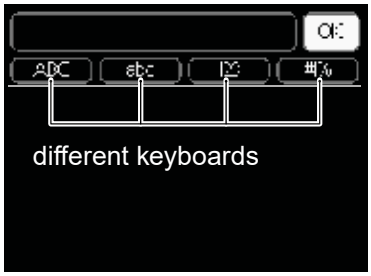
1. Select the desired option.
   The option is preselected (white)
2. Press the OK button to activate the selected option.
   A green tick is then shown next to the option.

Setting a value

1. Use the control knob to choose the field of the value to be set and select the value.
2. Press the OK button.
   The value background turns green. This means that the settings mode is activated.
3. Turn the control knob clockwise to increase the value or turn it anti-clockwise to decrease the value.
4. Press the OK button to confirm the set value.
5. Press the Back button to discard the change and return to the initial value.

Using the virtual keyboard

A virtual keyboard is available in some menus that support text input.



Depending on the menu, you can choose from several character sets and switch between them using the control knob.

► To switch between character sets, press the Back button.

If only one character set is available for a menu, the keyboard appears immediately.

► After entering, select “OK” and press the OK button.

Scrolling between pages

A menu can span multiple pages. Turn the control knob to scroll between pages.

Help menu

Many menus contain an symbol which indicates that additional help is available.

The help text usually includes several pages that you can scroll through using the control knob.

1. Turn the control knob until the Help symbol is selected.
2. Press the OK button.

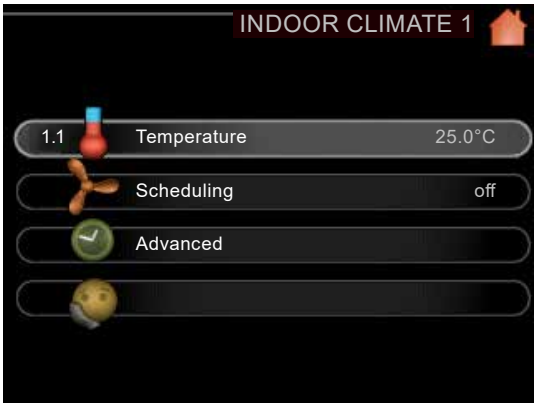
9 Menus

→ “14 Overview of menu structure”, page 59

NOTE
Some menus are only displayed on the control panel display if system components (heat pump type and hydraulic unit type) and accessories that provide the respective function are installed. Depending on the conditions of the heat pump system, the menu structure on site may differ from the menu structure described below, for example, by “jumping” from menu 1.1 to menu 1.3.

9.1 Menu 1 – Indoor climate

Menu 1 – Indoor climate contains several submenus.



Status information for each menu is shown on the display to the right of the menus.

“Temperature” menu line
Temperature setting for the climate system. Set values are displayed for the climate system via status information.

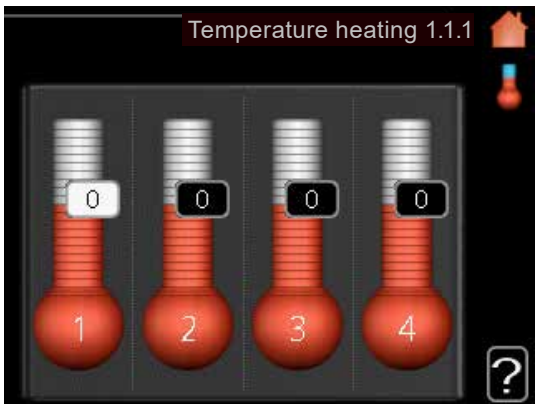
“Scheduling” menu line
Scheduling of heating and cooling.
The status information “set” appears if a scheduling has been set but is not yet active.
“Holiday setting” appears when a holiday scheduling and another scheduling are active at the same time (whereby the holiday function has priority).
“active” is displayed when a scheduling option is active, otherwise “off” appears.

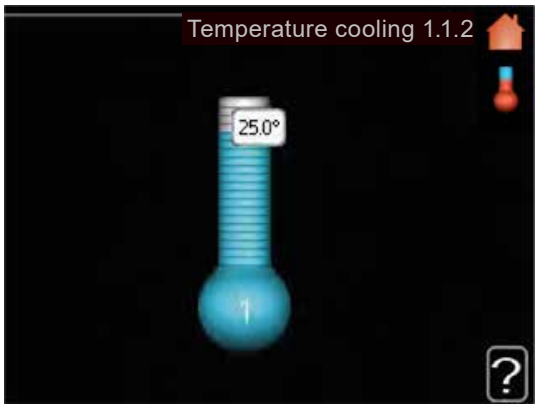
9.1.1 Menu 1.1 – Temperature

Temperature setting for the climate system. Set values are displayed for the climate system via status information.

If there are several climate systems in the home, this is indicated on the display with one thermometer per system.

In menu 1.1, first select between heating or cooling. In menus 1.1.1 and 1.1.2, set the desired temperature for heating and cooling.





Temperature setting when room sensor is installed and activated

Heating Adjustment range: 5°C to 30°C Factory setting: 20°C
Cooling (accessories required) Adjustment range: 5°C to 30°C Factory setting: 25°C

The value on the display is shown as a temperature in °C if the climate system is controlled by a room sensor.

NOTE
A sluggish heating system, such as underfloor heating, may be unsuitable for controlling with the room sensor of the controller.

1. Use the control knob to set the desired temperature on the respective thermometer.
2. Confirm the set temperature by pressing the OK button.

Temperature setting when room sensor is not activated

Adjustment range: -10°C to +10°C Factory setting: 20°C

The display shows the set value for the heating (offset of the heating curve). To raise or lower the indoor temperature, increase or decrease the value on the display.

1. Use the control knob to set the desired value.
2. Confirm the set value by pressing the OK button.

The new value now appears to the right of the symbol on the display.

The number of increments by which the value must be changed in order to change the indoor temperature by one degree depends on the heating system of the building. One increment is usually sufficient. In certain cases, however, several increments may be required.

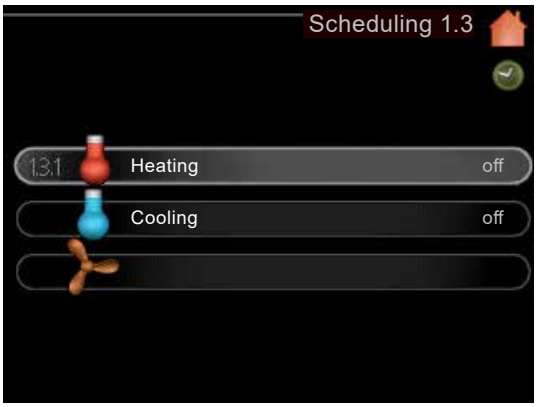
NOTE
An increase in the room temperature can be slowed by the thermostats for the radiators or underfloor heating. So open the thermostat valves fully, except in those rooms where a cooler temperature is required (e.g. in bedrooms).

Wait 24 hours before choosing a new setting so that the room temperature has time to stabilise.

- ► If it is cold outdoors and the room temperature is too low, increase the heating curve slope in menu 1.9.1.1 by one increment.
- ► If it is cold outdoors and the room temperature is too high, reduce the heating curve slope in menu 1.9.1.1 by one increment.
- ► If it is warm outdoors and the room temperature is too low, increase the value in menu 1.1.1 by one increment.
- ► If it is warm outdoors and the room temperature is too high, reduce the value in menu 1.1.1 by one increment.

9.1.2 Menu 1.3 – Scheduling

In this menu, you can set the heating and cooling scheduling for each day of the week.

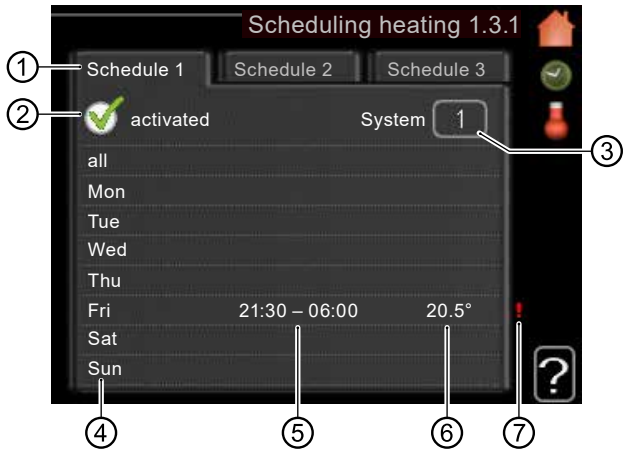


NOTE
You can also set scheduling for a longer period of time during a period of your choice (holiday) in menu 4.7.

Menu 1.3.1 – Scheduling heating

In this menu, the scheduling can be used to set to what extent the temperature in the home should be raised or lowered.
A maximum of three different time periods per day can be set.
To change the room temperature by one degree, one increment is usually sufficient. In certain cases, however, several increments may be required.

When a room sensor is installed and activated, the desired room temperature (°C) is set for the time periods.



① Schedule
This means scheduling to be set.

► Control and select the desired scheduling (schedule).

② activated
Here, you activate the scheduling for the selected period. Set times are not changed upon deactivation.

③ System
Here, you define which climate system the current scheduling applies for. This option only appears if there is more than one climate system.

④ Day
Here, you select the days of the week when you wish the scheduling to apply.
To remove scheduling for a specific day, deactivate the time for that day by specifying an identical start and stop time.
When using the “all” row, all days in the period are set according to this row.

⑤ Time period
Here, you set the start and stop times for the selected day of scheduling.

⑥ Adjustment
Here, you define how much the heating curve should be changed compared to menu 1.1. for the selected scheduling. When a room sensor is installed, the desired room temperature is set in °C.

⑦ Conflict
If two settings conflict with each other, a red exclamation mark is displayed.

NOTE
To set similar scheduling for every day of the week, first select “all”, enter the time and then change the time for the desired days.

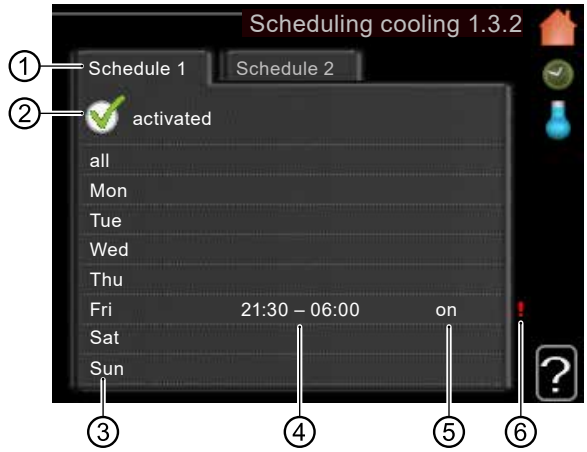
NOTE
In order for the period to extend beyond midnight, set the stop time earlier than the start time. The scheduling then stops at the set stop time on the following day.
Scheduling always starts on the day for which the start time is set.

NOTE
Changes of temperature in the home take time. For example, switching underfloor heating on for a short period of time will not lead to a noticeable change in room temperature.

Menu 1.3.2 – Scheduling cooling

(Heat pump with cooling function required)

Here, you can control the time when cooling is permitted in the home. A maximum of two different time periods per day can be set.



① Schedule
This means scheduling to be set.

► Control and select the desired scheduling (schedule).

② activated
Here, you activate the scheduling for the selected period. Set times are not changed upon deactivation.

③ Day
Here, you select the days of the week when you wish the scheduling to apply.
To remove scheduling for a specific day, deactivate the time for that day by specifying an identical start and stop time.
When using the “all” row, all days in the period are set according to this row.

④ Time period
Here, you set the start and stop times for the selected day of scheduling.

⑤ Adjustment
Here, you can use scheduling to set when cooling is not permitted.

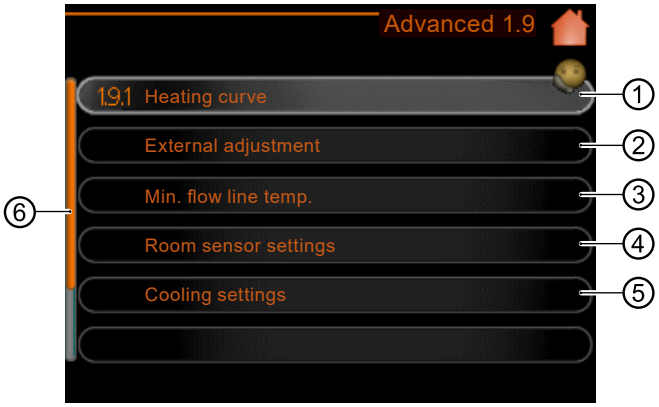
⑥ Conflict
If two settings conflict with each other, a red exclamation mark is displayed.

NOTE
To set similar scheduling for every day of the week, first select “all”, enter the time and then change the time for the desired days.

NOTE
In order for the period to extend beyond midnight, set the stop time earlier than the start time. The scheduling then stops at the set stop time on the following day.
Scheduling always starts on the day for which the start time is set.

9.1.3 Menu 1.9 – Advanced

The “Advanced” menu is intended for advanced users. This is highlighted with orange text.



① Heating curve
Setting the curve slope for heating or cooling.

② External adjustment
Setting the offset for the heating curve when an external switch contact is connected.

③ Min. flow line temp.
Setting the minimum permissible flow temperature.

④ Room sensor settings
Settings for room sensors.

⑤ Cooling settings
Settings for the cooling function.

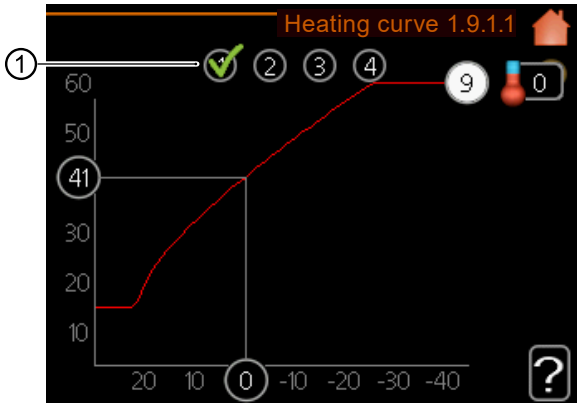
The menu has other menu lines that appear in the display by moving the scroll bar (⑥) downwards:

Own curve
Setting your own curve for heating or cooling.

Point offset
Setting the offset for the heating or cooling curve at a certain outdoor temperature.

Menu 1.9.1 – Heating curve

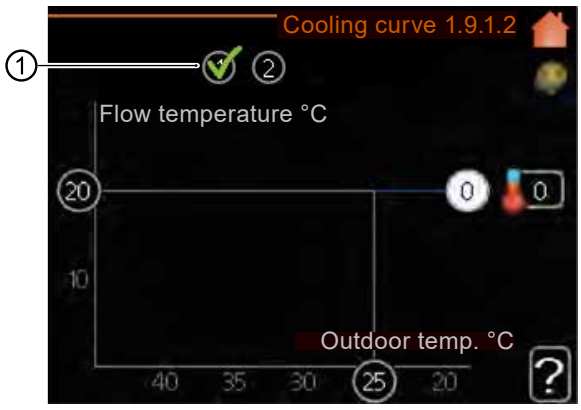
The heating curve for the building can be viewed in the Heating curve menu. The heating curve ensures a constant indoor temperature and therefore energy-efficient operation, regardless of the outdoor temperature. Based on this heating curve, the controller controls the water temperature for the heating system, the flow temperature, and therefore the indoor temperature.
In menu 1.9.1.1, you can select the heating curve and also read how the flow temperature changes at different outdoor temperatures.



① Selection of the climate system
► For systems with several climate systems, select the climate system you wish the heating curve to apply to.

Heating curve Adjustment range: 0 to 15 Factory setting: 9

If cooling is available, similar cooling settings can be chosen for the cooling curve in menu 1.9.1.2.

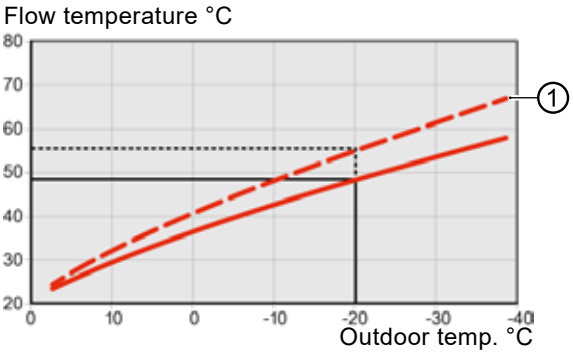


① Selection of the climate system
► For systems with several climate systems, select the climate system you wish the heating curve to apply to.

Cooling curve (accessories required) Adjustment range: 0 to 9 Factory setting: 0

Curve slope

The slope of the heating or cooling curve determines by how many degrees the flow temperature is to be increased or reduced when the outdoor temperature drops or rises.



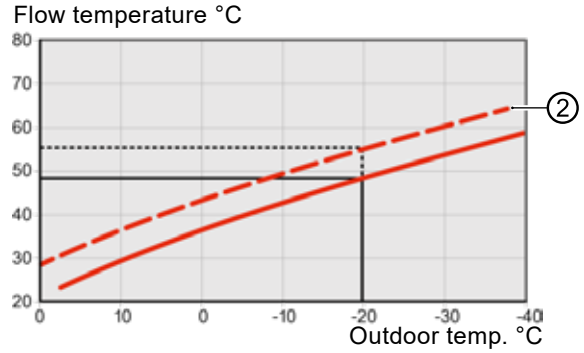
A steeper curve (①) causes a higher flow temperature for heating or a lower flow temperature for cooling at a certain outdoor temperature.

The optimum slope depends on the climate conditions in your location, whether the house has radiators or underfloor heating, and the efficiency of the building insulation.

The curve is set during system installation. However, readjustment may be required. After that, the curve should not need further adjustment.

NOTE
When fine-tuning the indoor temperature, the curve must be moved up or down instead. Use menu 1.1 Temperature to do this.

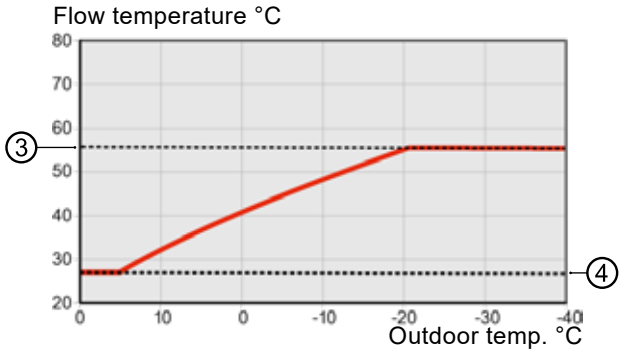
Offset of the heating curve



With an offset of the curve (②), the flow temperature changes to the same extent at all outdoor temperatures.

If, for example, the curve is offset by +2 increments, the flow temperature increases by 5°C at all outdoor temperatures. A corresponding change in the cooling curve causes a reduction in the flow temperature.

Flow temperature – Maximum and minimum values



As the flow temperature cannot exceed the set maximum value (③) and cannot fall below the set minimum value (④), the curves flatten out at these temperatures.

NOTE
For underfloor heating, the “Max. flow line temperature” must normally be in the 35-45°C range.
For underfloor cooling, the “Min. flow line temp.” is limited to avoid condensation.

► Contact your installer / floor supplier for information on the maximum permissible temperature of the floor.

The figure at the end of the curve indicates the slope of the heating curve.
The figure next to the thermometer indicates the offset of the heating curve.

1. Set a new value using the control knob.
2. Confirm the new setting by pressing the OK button.

Curve 0 is your own curve that is created in menu 1.9.7.

Selecting another curve (curve slope)

NOTE
If only one climate system is available, the curve number is already selected when the menu page is opened.

1. If there are multiple climate systems, select the system for which you wish to change the curve.
2. After confirming the climate system selection, the number of the curve is selected.
3. Press the OK button to access the settings mode.
4. Select a new curve.
   The curves are numbered from 0 to 15.
   The higher the number, the steeper the slope and the higher the flow temperature.
   Curve 0 means that your own curve (menu 1.9.7) is used.
5. Press the OK button to complete the setting.

Reading the curve

1. Turn the control knob until the ring on the shaft is shown with the outdoor temperature.
2. Press the OK button.
3. Follow the grey line up to the curve and continue to the left to read the value for the flow temperature at the selected outdoor temperature.
4. To display the different temperatures, turn the control knob to the right or left and read the corresponding flow temperature.

5. Press the OK or Back button to exit readout mode.

NOTE
Wait at least 24 hours before choosing a new setting so that the room temperature has time to stabilise.

► If it is cold outdoors and the room temperature is too low, increase the curve slope by one increment.

► If it is cold outdoors and the room temperature is too high, reduce the curve slope by one increment.

► If it is warm outdoors and the room temperature is too low, increase the curve offset by one increment.

► If it is warm outdoors and the room temperature is too high, reduce the curve offset by one increment.

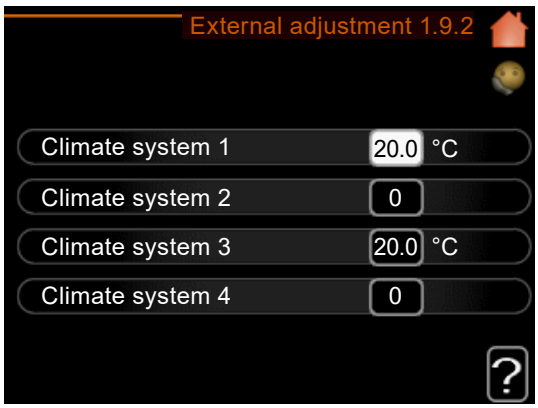
Cooling in two-pipe systems

The controller offers an integrated function for cooling in a two-pipe system up to 7°C (factory setting: 18°C). To do so, the heat pump must support cooling.

→ Air/water heat pump operating manual

If the heat pump is allowed to perform cooling, the cooling menus are activated on the control panel display.
To allow the “cooling” op. mode, the average temperature should be higher than the “start cooling” setting value in menu 4.9.2.
The cooling settings for the climate system are chosen in menu 1 for the indoor climate.

Menu 1.9.2 – External adjustment



climate system
Adjustment range: -10°C to +10°C
Or the desired room temperature if a room sensor is installed.
Factory setting: 0

Connecting an external contact, e.g. a room thermostat or a timer, allows you to temporarily or periodically increase or reduce the room temperature during heating.
When the connection is switched on, the offset of the heating curve is changed by the number of increments selected in the menu.
When a room sensor is installed and activated, the desired room temperature (°C) is set.
If there is more than one climate system, the setting can be made separately for each system.

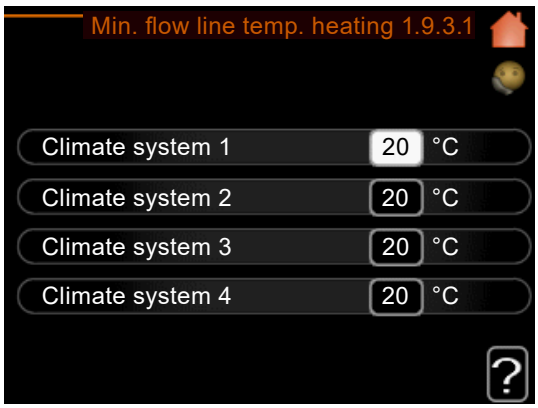
Menu 1.9.3 – Min. flow line temp.

1. In menu 1.9.3, first select heating or cooling.
2. In the respective submenu (1.9.3.1 Min. flow temp. heating / 1.9.3.2 Min. flow temp. cooling), set the minimum flow temperature for the climate system.

Accordingly, the controller never calculates a temperature that is below the value set here.
If there is more than one climate system, the setting can be chosen for each system.

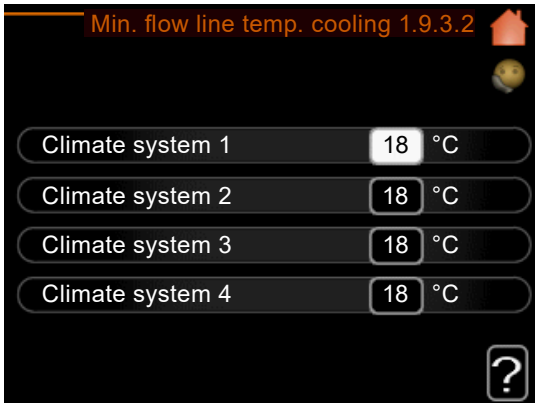
NOTE
If, for example, you always wish basement rooms to be heated slightly (even in summer), you can increase the value.
An increase in the value in “stop heating” in menu 4.9.2 may also be required in “auto mode setting”.

Minimum flow temperature for heating



Heating
Adjustment range: 5°C to 70°C
Factory setting: 20°C

Minimum flow temperature for cooling

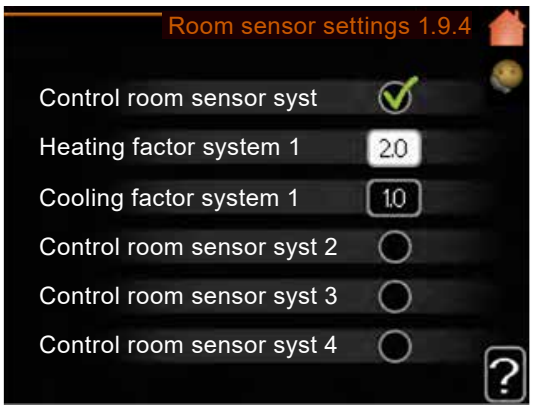


Cooling
Depending on the cooling function used (in two-pipe or four-pipe systems), the lower limit of the adjustment range can vary between 7°C and 18°C.
Adjustment range: 7°C to 30°C
Factory setting: 18°C

Menu 1.9.4 – Room sensor settings

Here, you activate the room sensor to control the room temperature.

NOTE
A sluggish heating system, such as underfloor heating, may be unsuitable for controlling with the room sensor of the system.



Factor system
Heating
Adjustment range: 0.0 to 6.0
Factory setting: 1.0

Factor system
Cooling (accessories required)
Adjustment range: 0.0 to 6.0
Factory setting: 1.0

You can also set a factor (a mathematical value) to define the extent to which the temperature above or below the room set point value (difference between desired and current room temperature) should affect the flow temperature of the rooms belonging to the respective climate system.
A higher value causes a greater offset in the heating curve.

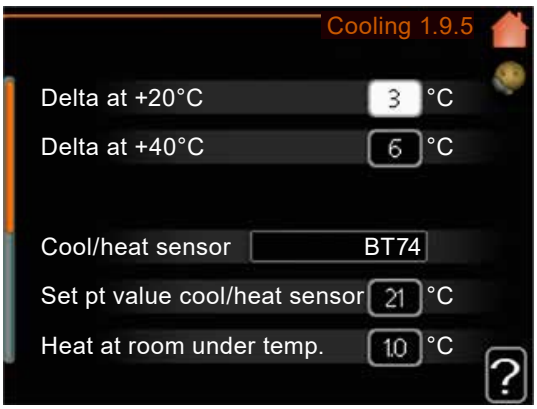
NOTE
A value set too high in the “factor system” can cause an unstable room temperature (depending on the climate system used).

If multiple climate systems are installed, the settings described above can be chosen for each individual system.

Menu 1.9.5 – Cooling settings

(Heat pump with cooling function required)

Here, you control cooling for the home during hot periods of the year.



Delta at +20°C Adjustment range: 3°C to 10°C Factory setting: 3°C
Delta at +40°C Adjustment range: 3°C-20°C Factory setting: 6
Cool/heat sensor Adjustment range: BT74, BT50 Factory setting: BT74
Set pt value cool/heat sensor Adjustment range: 5°C to 40°C Factory setting: 21°C
Heat at room under temp. Adjustment range: 0.5°C to 10.0°C Factory setting: 1.0°C

The menu has other menu lines that appear in the display by moving the scroll bar downwards:

Cool at room over temp. Adjustment range: 0.5°C to 10.0°C Factory setting: 3.0°C
Alarm if sensor is defective Activates alarm if sensor is defective
Start active cooling Adjustment range: 10 to 300 DM Factory setting: 30 DM
Step difference compressors Adjustment range: 10 to 150 Factory setting: 30
Degree minutes cooling Adjustment range: -3000°C to +3000°C cooling degree minutes Factory setting: -1°C
Time betw. switch heat/cool (appears when cooling is activated in the two-pipe system) Adjustment range: 0 to 48 hrs Factory setting: 2 hrs

NOTE

Certain menu lines only appear if their function is installed and activated in the controller.

Delta at +20°C

Here, you set the desired temperature difference between flow and return for the climate system in cooling mode when the outdoor temperature is +20°C. The controller then attempts to get as close to the set temperature as possible.

Delta at +40°C

Here, you set the desired temperature difference between flow and return for the climate system in cooling mode when the outdoor temperature is +40°C. The controller then attempts to get as close to the set temperature as possible.

Cool/heat sensor

If you wish a single room to determine the operation of the entire system, a cool/heat sensor (BT74) must be connected to the controller. This sensor determines when to switch between cooling and heating mode for the entire system.

NOTE

If the sensor for heating/cooling (BT74) has been connected and activated in menu 5.4, no other sensor can be selected in menu 1.9.5.

Set pt value cool/heat sensor

Here, you set the indoor temperature at which the controller should switch between heating or cooling mode.

Heat at room under temp.

Here, you set how far the room temperature can drop below the desired temperature before the controller switches to heating mode.

Cool at room over temp.

Here, you set how far the room temperature can increase above the desired temperature before the controller switches to cooling mode.

Alarm if sensor is defective
Here, you set whether the controller should emit an alarm if the room sensor is deactivated or breaks during cooling mode.

Start active cooling
Here, you set when you wish the active cooling to start.
Degree minutes are a measure of the current heating requirement in the home. They determine when the compressor, the cooling mode or the additional heat should start or stop.

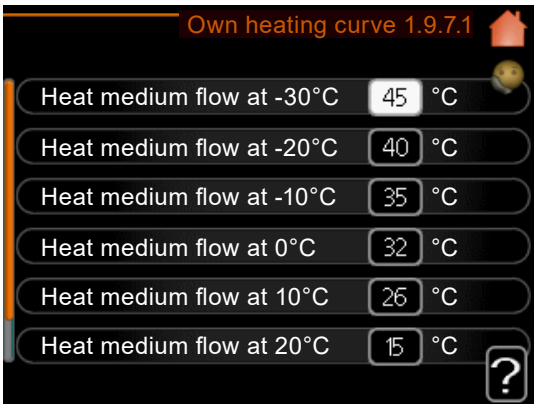
Step difference compressors
This option is only available if cooling is activated in menu 5.2.4.
Here, you set the degree minute difference for controlling when you wish the next compressor to start.

Degree minutes cooling
This option is only available if the connected accessory itself counts the cooling degree minutes.
After setting a minimum or maximum value, the system automatically sets the actual value in relation to the number of compressors that are producing cooling.

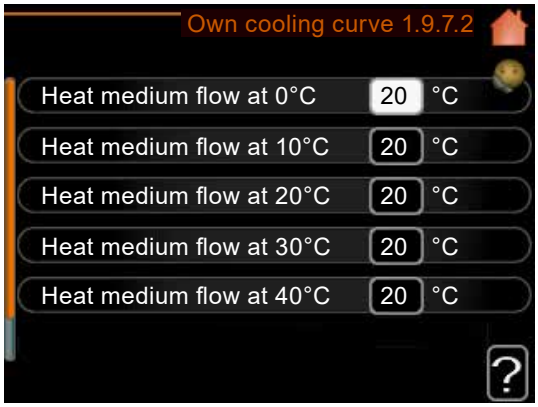
Time betw. switch heat/cool
This option is only available for two-pipe systems.
Here, you set how long you wish the controller to wait before it returns to heating mode after the end of cooling mode (or vice versa).

Menu 1.9.7 – Own curve

In the event of special requirements, you can create your own heating or cooling curve here by specifying the desired flow temperatures at different outdoor temperatures.



Flow line temperature for heating Adjustment range: 5°C to 80°C

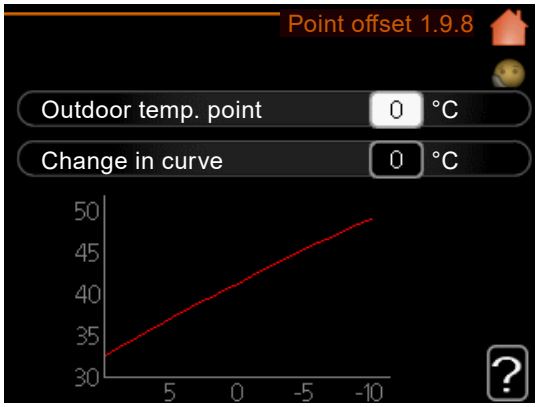


Flow line temperature for cooling (accessories required) Adjustment range: 7°C to 40°C The adjustment range may vary depending on the accessories used.

NOTE
Curve 0 in menu 1.9.1 must be selected for your own curve to apply.

Menu 1.9.8 – Point offset

Here, you can set a heating curve change at a certain outdoor temperature.
To change the room temperature by one degree, one increment is usually sufficient. In certain cases, however, several increments may be required.



Outdoor temp. point Adjustment range: -40°C to 30°C Factory setting: 0°C
Change in curve Adjustment range: -10°C to 10°C Factory setting: 0°C

The heating curve is operated at ±5°C from the outdoor temperature point setting.

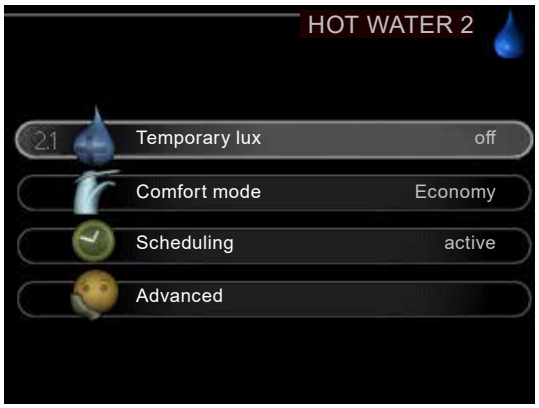
► Ensure that the correct heating curve is selected so that the room temperature feels constant.

NOTE
If the indoor climate feels too cold, e.g. at -2°C, set the “outdoor temp. point” to “-2” and increase the “change in curve” until the desired room temperature is reached.

NOTE
Wait at least 24 hours before choosing a new setting so that the temperatures have time to stabilise.

9.2 Menu 2 – Domestic hot water

Menu 2 – “Hot water” contains several submenus.



Status information for each menu is shown on the display to the right of the menus.

“Temporary lux” menu line
Activation of a temporary increase in the domestic hot water temperature. The status information displays “off” or the remaining time until the temporary increase in temperature.

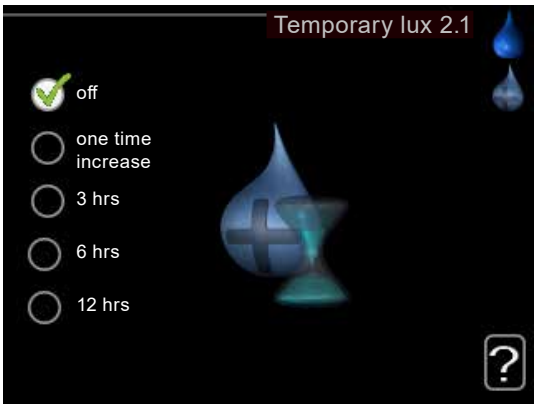
“Comfort mode” menu line
Adjustment of the domestic hot water comfort. The status information displays the selected mode:
“economy”, “normal” or “luxury”.

“Scheduling” menu line
Scheduling for the domestic hot water comfort mode.
The status information “set” appears if a scheduling has been set but is currently not active.
“holiday setting” is displayed when the holiday setting and scheduling are active at the same time (whereby the holiday setting has priority).
“active” is displayed when a scheduling option is active, otherwise “off” appears.

“Advanced” menu line
Setting a periodic increase in the domestic hot water temperature.

9.2.1 Menu 2.1 – Temporary lux

If the hot water requirement has temporarily increased, this menu can be used to increase the domestic hot water temperature to lux mode for a specified period of time.



Adjustment range: 3 hrs, 6 hrs, 12 hrs as well as the “off” and “one time increase” modes Factory setting: off

NOTE
If the “luxury” comfort mode is selected in menu 2.2, no further temperature increases can be initiated.

The function is activated immediately when a time period is selected. Press the OK button to confirm. The remaining time for the selected setting appears on the right.
After the time has elapsed, the controller returns to the mode set in menu 2.2.

► Set “off” to switch off temporary lux.

9.2.2 Menu 2.2 – Comfort mode

Adjustment range: smart control, economy, normal, luxury Factory setting: normal

Smart control
Here, you activate smart control.
This function remembers the domestic hot water consumption of the previous week and adjusts the temperature in the domestic hot water tank the following week to ensure minimum energy consumption.
If more domestic hot water is required, a certain additional amount of domestic hot water is available.
When the smart control function is activated, the tank generates the rated power according to the energy sticker.

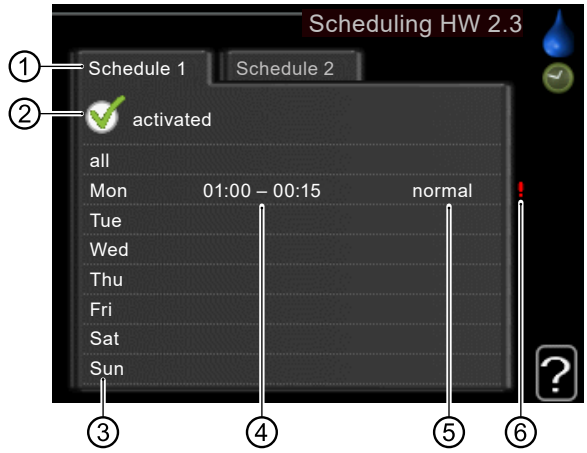
Economy
In this mode, less domestic hot water than usual is available. At the same time, operating costs are reduced. This mode can be used in smaller households with low domestic hot water requirements.

Normal
Normal mode provides a larger amount of domestic hot water, which is suitable for most households.

Luxury
In luxury mode, the maximum amount of domestic hot water is available. In this mode, the immersion heater is also used for domestic hot water preparation in addition to the compressor, which increases operating costs.

9.2.3 Menu 2.3 – Scheduling

Here, you use scheduling to set which domestic hot water mode the system should work in. A maximum of two different time periods per day can be set.



① Schedule
This means scheduling to be set.

► Control and select the desired scheduling (schedule).

② activated
Here, you activate the scheduling for the selected period. Set times are not changed upon deactivation.

③ Day
Here, you select the days of the week when you wish the scheduling to apply.
To remove scheduling for a specific day, deactivate the time for that day by specifying an identical start and stop time.
When using the “all” row, all days in the period are set according to this row.

④ Time period
Here, you set the start and stop times for the selected day of scheduling.

⑤ Adjustment
Here, you use scheduling to set which domestic hot water comfort you wish to apply during the activated scheduling.

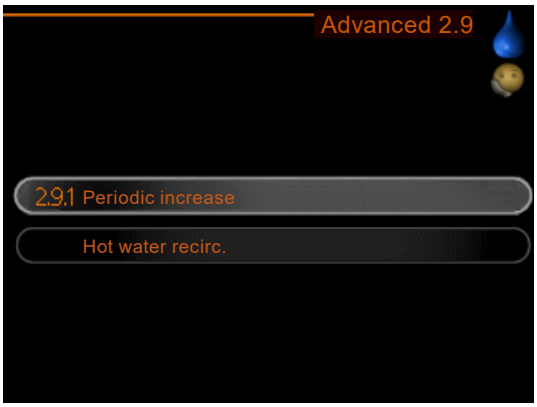
⑥ Conflict
If two settings conflict with each other, a red exclamation mark is displayed.

NOTE
To set similar scheduling for every day of the week, first select “all”, enter the time and then change the time for the desired days.

NOTE
In order for the period to extend beyond midnight, set the stop time earlier than the start time. The scheduling then stops at the set stop time on the following day.
Scheduling always starts on the day for which the start time is set.

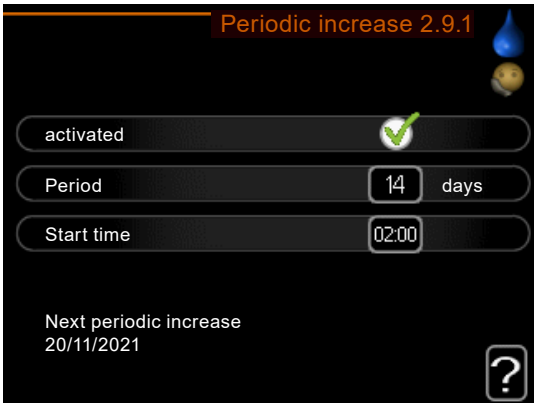
9.2.4 Menu 2.9 – Advanced

The “Advanced” menu is intended for advanced users. This is highlighted with orange text.



Menu 2.9.1 – Periodic increase

In order to prevent the build-up of bacteria in the domestic hot water tank, the heat pump and any additional heat can work together to briefly increase the domestic hot water temperature at regular intervals.



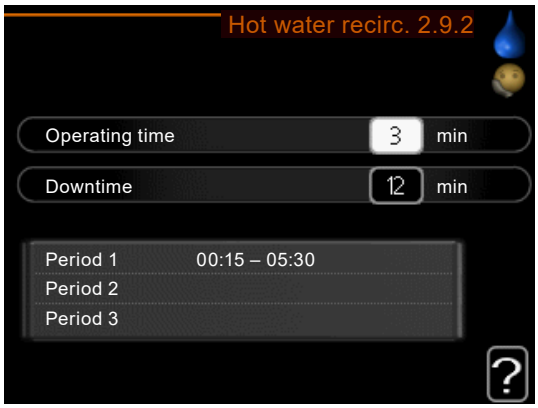
Period Adjustment range: 1 to 90 days Factory setting: 14 days
Start time Adjustment range: 00:00 to 23:00 Factory setting: 00:00

The time interval between the increases in the domestic hot water temperature can be adjusted.

► Activate or deactivate “activated” to switch the function on or off.

Menu 2.9.2 – Hot water recirc.

Here, the domestic hot water circulation can be divided into a maximum of three periods per day. In the defined periods, the domestic hot water circulation pump operates according to the settings.



Operating time Adjustment range: 1 to 60 minutes Factory setting: 60 minutes
Downtime Adjustment range: 0 to 60 minutes Factory setting: 0 min

Operating time
This sets how long the domestic hot water circulation pump must run per operating instance.

Downtime
This sets how long the domestic hot water circulation pump must be stationary between operating instances.

NOTE
The domestic hot water circulation is activated in menu 5.4 for software inputs/outputs AA3-X7.
Alternatively, the domestic hot water circulation can be connected via the EP (Split) accessories.

→ EP (Split) operating manual

9.3 Menu 3 – Info

Menu 3 – “Info” contains several submenus. No settings can be changed in these menus and submenus. They are only used to display information.

Status information for each menu is shown on the display to the right of the menus.

Service info
This submenu displays the temperature values and settings of the system.

Compressor info
This submenu displays the operating times, number of starts, etc., for the compressor of the heat pump.

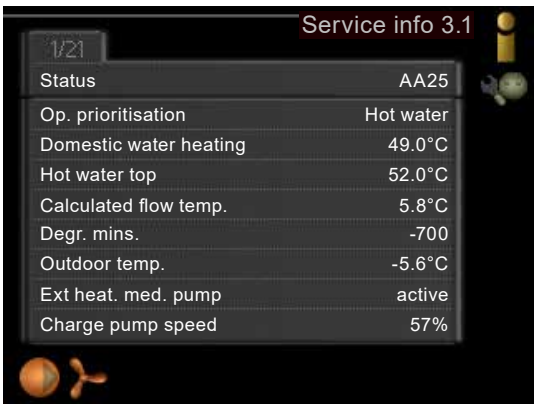
Additional heat info
This submenu displays information about the operating times of the additional heat, etc.

Alarm log
This submenu displays the alarms and malfunctions.

Indoor temp. log
This submenu displays the average indoor temperature for the last year (weekly).

9.3.1 Menu 3.1 – Service info

Information on the current operating status of the system (e.g. current temperatures, etc.) is displayed here.



The information is displayed on multiple pages.

► Turn the control knob to scroll between pages.

This menu may display the following symbols:


Compressor


Additional heat


Cooling


Heating circuit pump (orange)


Solar accessories


Additional heat in tank


Heat


Domestic hot water


Pool

9.3.2 Menu 3.2 – Compressor info

Information on the operating status and statistics of the compressor is displayed here.
The information may be spread over several pages.

► Turn the control knob to scroll between pages.

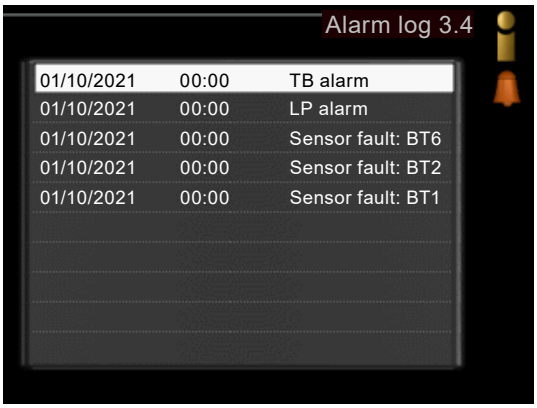
9.3.3 Menu 3.3 – Add. heat info

Information on settings, operating status and statistics of the additional heat is displayed here.
The information may be spread over several pages.

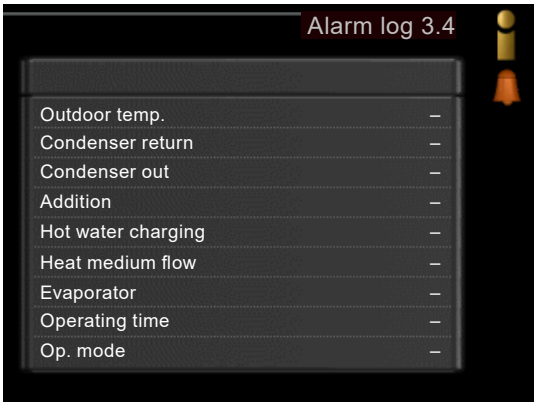
► Turn the control knob to scroll between pages.

9.3.4 Menu 3.4 – Alarm log

To facilitate troubleshooting, the operating status of the system is stored here when the alarm is triggered. You can view information about the 10 most recent alarms.

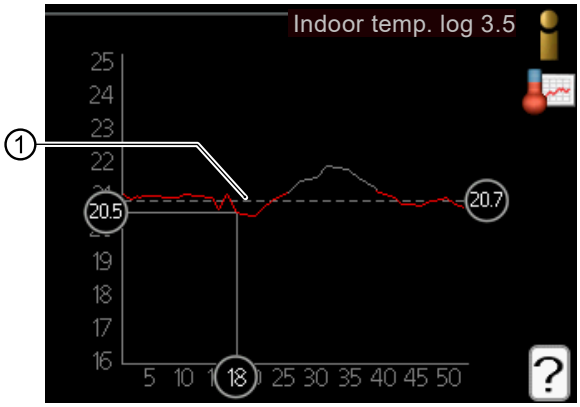


► To view the operating status when an alarm occurred, select the relevant alarm and press the OK button.



9.3.5 Menu 3.5 – Indoor temp. log

This submenu displays the average indoor temperature for the last year (weekly). The dashed line (①) indicates the annual mean temperature.

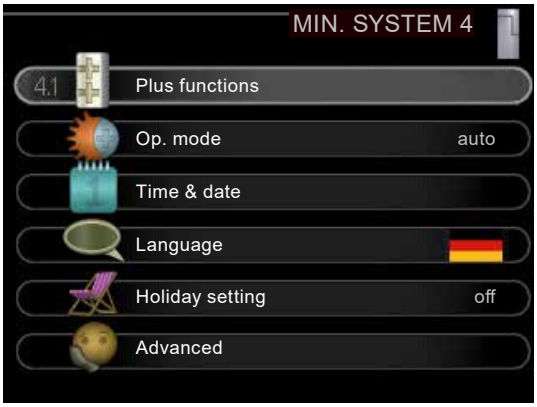


NOTE
The average indoor temperature is only displayed if a room sensor or a remote control panel is installed.

1. Turn the control knob until the ring on the shaft is shown with the week number.
2. Press the OK button.
3. Follow the grey line up to the diagram and continue to the left to read the average indoor temperature for the selected week.
4. To display the different weeks, turn the control knob to the right or left and read the average temperature.
5. Press the OK or Back button to exit readout mode.

9.4 Menu 4 – Min. system

Menu 4 – “Min. system” (“heat pump”) contains several submenus.



Status information for each menu is shown on the display to the right of the menus.

Plus functions
Settings for any additional functions installed in the heating system.

Op. mode
Activation of manual or automatic operation. The status information displays the selected operating mode.

Time & date
The current time and date setting.

Language
Here, you set the language for the display information. The status information displays the selected language.

Holiday setting
Here, you set the display language for the holiday setting of heating and domestic hot water. The status information “set” is displayed if the holiday setting is set but is currently not active.
“active” indicates whether part of the holiday setting is active, otherwise “off” is displayed.

advanced
Operating mode settings for the heating and heat pump controller.

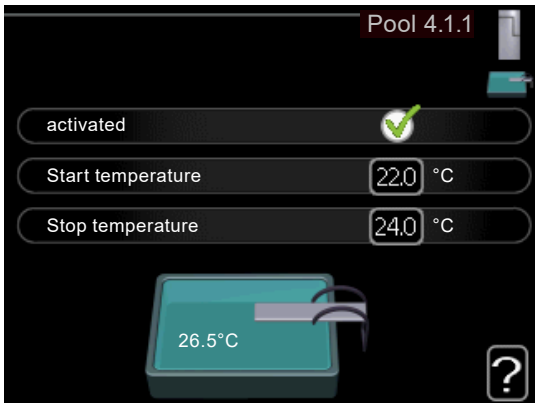
9.4.1 Menu 4.1 – Plus functions

In the submenus, settings for the controller are chosen for any additional functions that may be installed.

Menu 4.1.1 – Pool

(accessories required)

Here, you set whether the pool control should be activated and within which temperature limits (start and stop temperature) the pool should be heated, as well as how many compressors are permitted to operate simultaneously for this pool.



Start temperature Adjustment range: 5.0°C to 80.0°C Factory setting: 22.0°C
Stop temperature Adjustment range: 5.0°C to 80.0°C Factory setting: 24.0°C
Maximum number of compressors Adjustment range: 1 to 8 Factory setting: 8

The maximum number can be used to limit the number of compressors used for pool heating. For example, you can adjust the setting if you wish to give priority to other requirements than the pool.

If the pool temperature has fallen below the set start temperature and there is no requirement for domestic hot water or heating, the controller starts the pool heating.

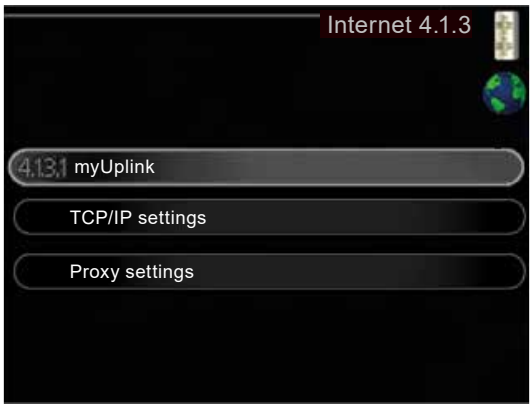
► Deactivate “activated” to switch off the pool heating.

NOTE
The start temperature can be set to a value greater than the stop temperature.

Menu 4.1.3 – Internet

(accessories required)

Here, you choose the settings to connect the controller to the internet via myUplink (internet connection required).



NOTE
In order to use these functions, a network cable must be connected to the control panel.

Menu 4.1.3.1 – myUplink

Here, you can manage the system connection with myUplink. This menu also displays the system users connected to the internet.
A connected user has a user account in myUplink (www.myUplink.com), which has been given permission to control and/or monitor your system.

Number of users
Shows the number of users currently connected to the system via the internet.

Request new connection string
To connect a myUplink user account to the system, a unique connection string must be requested.

► Select the “Request new connection string” menu line and press the OK button.

The system now communicates with myUplink to create a connection string.

After creating a connection string, it appears in the “Connection string” menu line and is valid for 60 minutes.

Switch off all users

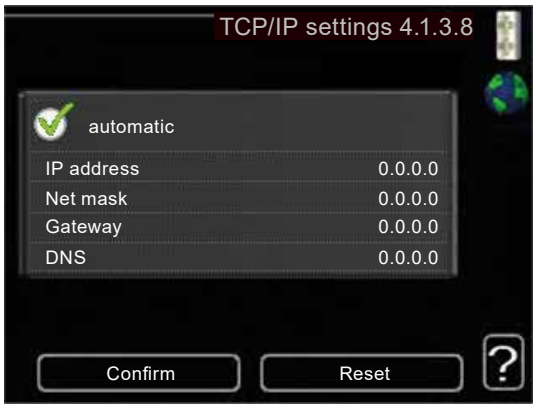
► Select the “Switch off all users” menu line and press the OK button.

The system now communicates with myUplink to separate the system from all users connected via the internet. The “0” then appears in the “Number of users” menu line.

NOTE
After all connected users have been disconnected, none of them can monitor or control your system via myUplink without first requesting a new connection string.

Menu 4.1.3.8 – TCP/IP settings

Here, you choose the TCP/IP settings for your system.



Automatic setting (DHCP)

1. Activate “automatic”. TCP/IP settings are now assigned to the system via DHCP.
2. Select “Confirm” and press the OK button.

Manual setting

1. Deactivate “automatic” in order to access more options.
2. Select “IP address” and press the OK button.
3. Using the virtual keyboard, enter an IP address for the system that is valid for the network and has not yet been assigned.
4. Select “OK” and press the OK button.
5. Repeat steps 2 to 4 for “Net mask”, “Gateway” and “DNS”.
6. Select “Confirm” and press the OK button.

NOTE

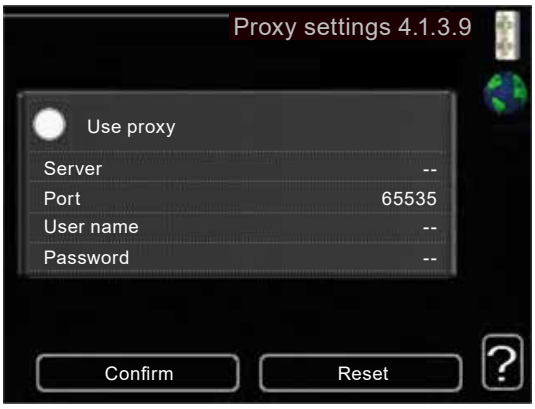
The system cannot connect to the internet without correct TCP/IP settings. If you are unsure about the settings, use automatic mode or contact your network administrator to obtain more information.

NOTE

You can reset all settings changed since you accessed the menu. To do so, select “Reset” before exiting the menu and press the OK button.

Menu 4.1.3.9 – Proxy settings

Here, you choose the proxy settings for the system.



Proxy settings are used to transmit connection information to an intermediary server (proxy server) located between the system and the internet. These settings are primarily used when the system connects to the internet via a business network. The system supports the HTTP Basic and HTTP Digest proxy authentication types.

NOTE

If you are unsure about the settings, contact your network administrator to obtain more information.

Setting

1. Activate “Use proxy” if you wish to use a proxy server.
2. Select “Server” and press the OK button.
3. Enter the correct information using the virtual keyboard.
4. Select “OK” and press the OK button.
5. Repeat steps 2 to 4 for “Port”, “User name” and “Password”.
6. Select “Confirm” and press the OK button.

NOTE

You can reset all settings changed since you accessed the menu. To do so, select “Reset” before exiting the menu and press the OK button.

Menu 4.1.5 – SG Ready

Here, you can choose the settings for the “SG Ready” function.

Affect room temperature
Here, you set whether the room temperature may be affected by activating “SG Ready”.
In the “SG Ready” low-price mode, the offset of the indoor temperature is increased by “+1”. If a room sensor is installed and activated, the desired room temperature is increased by 1°C instead.
In the “SG Ready” overcapacity mode, the offset of the indoor temperature is increased by “+2”. If a room sensor is installed and activated, the desired room temperature is increased by 2°C instead.

Affect hot water
Here, you set whether the domestic hot water may be affected by activating “SG Ready”.
If the “SG Ready” option is set to “Low price”, the stop temperature for the domestic hot water is set as high as possible with only compressor operation (immersion heater not permitted).
In the “Overcapacity” position of “SG Ready”, the domestic hot water is set to “luxury” (immersion heater permitted).

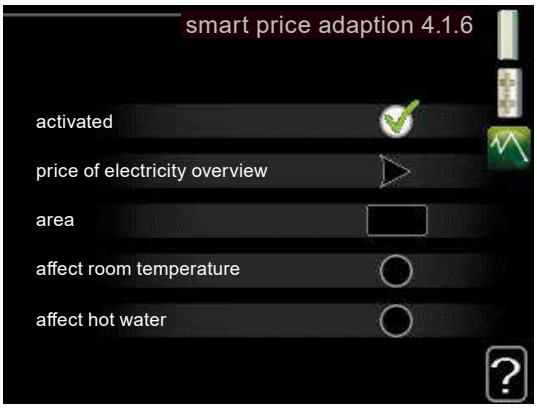
Affect cooling
(accessories required)
Here, you set whether the room temperature may be affected by activating “SG Ready” during cooling mode.
The indoor temperature is not affected in the “Low price” position of “SG Ready” and during cooling mode.
In the “SG Ready” overcapacity mode and in cooling mode, the offset for the indoor temperature is reduced by “-1”. If a room sensor is installed and activated, the desired room temperature is reduced by 1°C instead.

Affect pool temperature
(accessories required)
Here, you set whether the pool temperature may be affected by activating “SG Ready”.
In the “SG Ready” low-price mode, the desired pool temperature (start and stop temperature) is increased by 1°C.
In the “SG Ready” overcapacity mode, the desired pool temperature (start and stop temperature) is increased by 2°C.

NOTE
This function must be connected and activated in your controller.

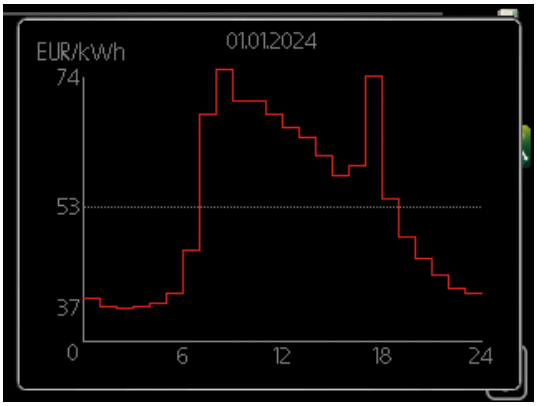
Menu 4.1.6 – Smart price adaption™

This function can only be used if your electricity supplier supports Smart price adaption™, if you have an hourly tariff agreement and an active myUplink account. This function also requires a digital electricity meter.
Smart price adaption™ adjusts some of the installation's consumption during the day to those periods with the cheapest electricity tariff, which can provide savings if you are on an hourly rate based electricity contract. The function is based on downloading hourly rates for the next day via myUplink, and for this reason an Internet connection and an account for myUplink are required.



Activated
Deselect "activated" to switch off Smart price adaption™.

Price of electricity overview
Here you can obtain information on how the electricity price varies over up to three days.



Area (zone)
Contact your electricity supplier for information about which area (zone) the installation belongs to.
Then select the corresponding zone in the menu.

NOTE
If the zone specified by your electricity supplier is not displayed in the selection list, deactivate the Smart price adaption™ function.

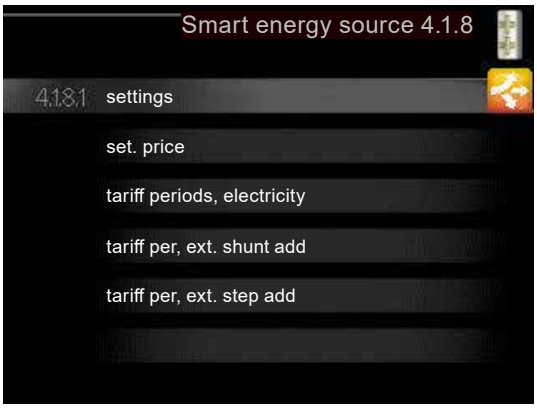
Affect …
You can choose which parts of the installation will be affected by the electricity price and to what extent.

Affect room temperature Adjustment range: on/off Degree of effect Adjustment range: 1 – 10 Factory setting: 5
Affect hot water Adjustment range: on/off Degree of effect Adjustment range: 1 – 4 Factory setting: 2
Affect pool temperature Adjustment range: on/off Degree of effect Adjustment range: 1 – 10 Factory setting: 2
Affect cooling Adjustment range: on/off Degree of effect Adjustment range: 1 – 10 Factory setting: 3

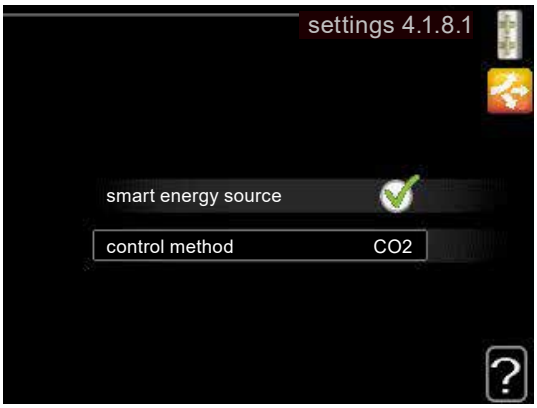
NOTE
The higher the degree of effect is set, the more electricity costs can be saved. However, a high degree of effect can also limit comfort.

Menu 4.1.8 – Smart energy source™

The function prioritises how / to what extent each docked energy source will be used. Here you can choose if the system is to use the energy source that is cheapest at the time or the energy source that is most carbon neutral at the time. To do this, select the desired control method under “Settings”.



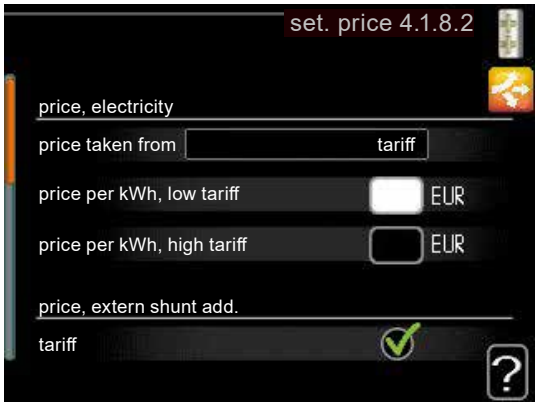
Menu 4.1.8.1 – Settings



smart energy source™ Adjustment range: on/off Factory setting: off
control method Adjustment range: Price / CO_2 Factory setting: Price

Menu 4.1.8.2 – Set. price

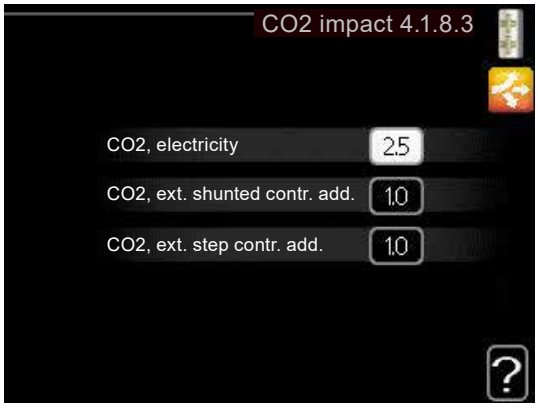
Here you can choose whether the system is to exercise control based on the spot price, tariff control or a set price. The setting is made for each individual energy source. Spot price can only be used if you have an hourly tariff agreement with your electricity supplier.



price, electricity Adjustment range: spot, tariff, fixed price Factory setting: fixed price Adjustment range fixed price: 0 – 100,000*
price, extern shunt add. Adjustment range: tariff, fixed price Factory setting: fixed price Adjustment range fixed price: 0 – 100,000*
price, extern step add. Adjustment range: tariff, fixed price Factory setting: fixed price Adjustment range fixed price: 0 – 100,000*
* The currency varies depending on the country selected

Menu 4.1.8.3 – CO2 impact

Here, you set the size of the carbon footprint for each energy source.
The carbon footprint is different for different energy sources. For example, the energy from solar cells and wind turbines can be considered carbon dioxide neutral and, therefore, has a low CO_2 impact. Energy from fossil fuels can be considered to have a higher carbon footprint and, therefore, has a higher CO_2 impact.



price, electricity Adjustment range: 0 – 5 Factory setting: 2.5
price, extern shunt add. Adjustment range: 0 – 5 Factory setting: 1
price, extern step add. Adjustment range: 0 – 5 Factory setting: 1

Menu 4.1.8.4 – Tariff periods, electricity

Here you can use tariff control for the electric additional heat.
Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).

Menu 4.1.8.6 – Tariff per., ext. shunt add

Here you can use tariff control for the external shunted additional heat.
Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).

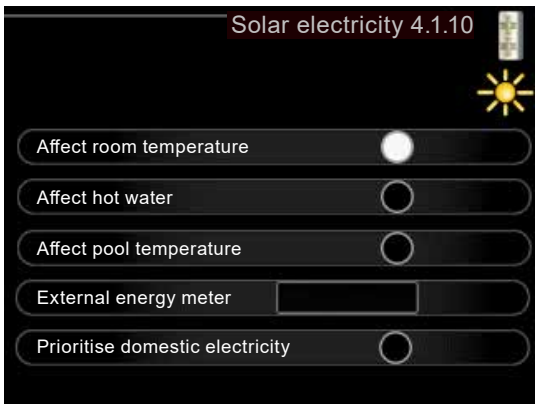
Menu 4.1.8.7 – Tariff per., ext. step add

Here you can use tariff control for the external step controlled additional heat.
Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).

Menu 4.1.10 – Solar electricity

(accessories required)

Here, you set which part of the system (room temperature, domestic hot water temperature) should be involved in the excess solar energy.



Affect room temperature Adjustment range: on/off Factory setting: off
Affect hot water Adjustment range: on/off Factory setting: off
Affect pool temperature Adjustment range: on/off Factory setting: off
External energy meter Adjustment range: on/off Factory setting: off
Prioritise domestic electricity (PV Split) Adjustment range: on/off Factory setting: off

PV Split
In this menu, you can also choose specific settings for the PV Split accessories.
For PV Split, you can set whether household electricity should be given priority over room temperature and domestic hot water, provided that PV Split is equipped with an external heat meter.

9.4.2 Menu 4.2 – Op. mode

Here, you set the operating mode of the system.

Op. mode Adjustment range: auto, manual, add. heat only Factory setting: auto
Functions Adjustment range: Compressor, addition, heating, cooling

The operating mode of the controller is usually set to “auto”.
The controller can be set to “add. heat only” if only an additional heat is used.

► To change the operating mode, select the desired option and press the OK button.

After selecting an operating mode, the permitted functions of the controller (crossed out = not permitted) and the available options appear on the right.

► To set which available options should or should not be permitted, select each option with the control knob and press OK.

Operating modes

auto
In this operating mode, the controller automatically sets which functions are to be permitted.

manual
In this operating mode, you can manually set which functions are to be permitted. “Compressor” cannot be deactivated in manual mode.

add. heat only
In this operating mode, the compressor is not active and only the additional heat is used.

NOTE
When you select the “add. heat only” mode, the compressor is deactivated and the operating costs increase.

IMPORTANT
If a heat pump is not (yet) connected, it is not permitted to switch from “add. heat only” to another operating mode.

Functions

Compressor
prepares domestic hot water and produces heat for the home. If “Compressor” is deactivated in auto mode, this is indicated by a symbol in the main menu. “Compressor” cannot be deactivated in manual mode.

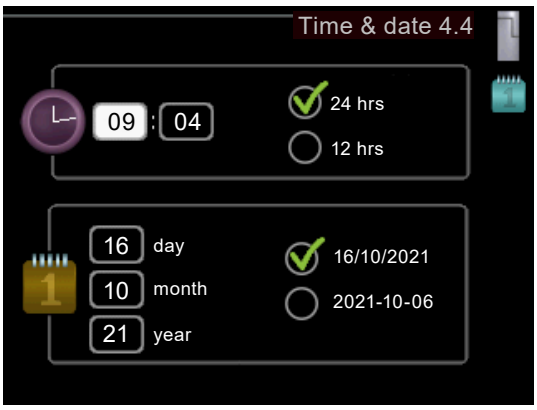
Addition
helps the compressor heat the home and/or prepare domestic hot water if the compressor cannot meet the requirements alone.

Heating
provides heating for the home.
This function can be deactivated if you do not wish any heating to take place.

Cooling
ensures a cool indoor climate in warm weather conditions.
This option requires cooling accessories to be available, or the air/water heat pump must have an integrated cooling function, which must also be activated in the menu.
This function can be deactivated if you do not wish any cooling to take place.

9.4.3 Menu 4.4 – Time & date

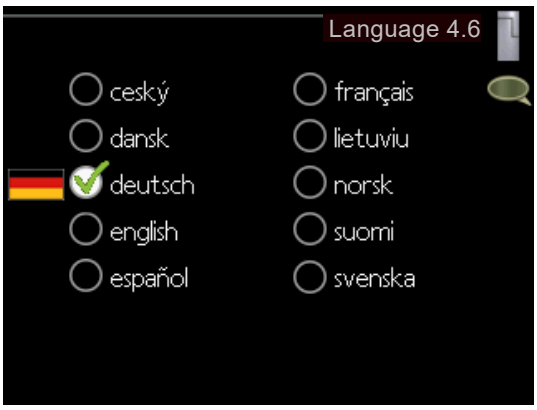
Here, you set the time, date, display mode and time zone.



NOTE
The time and date are set automatically when the controller is connected to myUplink. The time zone must be set to ensure that the time is correct.

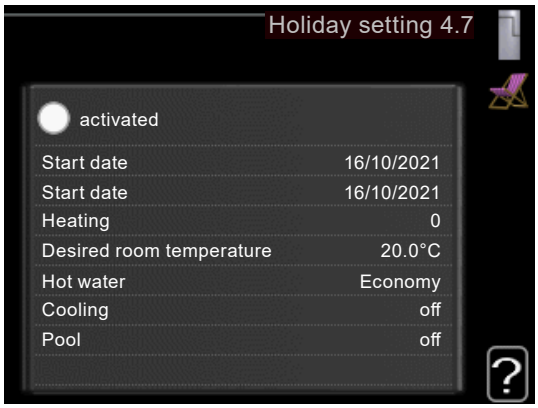
9.4.4 Menu 4.6 – Language

Here, you set the language of the display information.



9.4.5 Menu 4.7 – Holiday setting

In order to reduce energy consumption during a holiday, a lowering of the heating and domestic hot water temperature can be scheduled. Cooling and a pool can also be controlled via scheduling, as long as the functions are connected.



When a room sensor is installed and activated, the desired room temperature (°C) is set for the time periods. This setting applies to all climate systems with room sensors.

If the room sensor is not activated, the desired offset of the heating curve is set. To change the room temperature by one degree, one increment is usually sufficient. In certain cases, however, several increments may be required. This setting applies to all climate systems without room sensors.

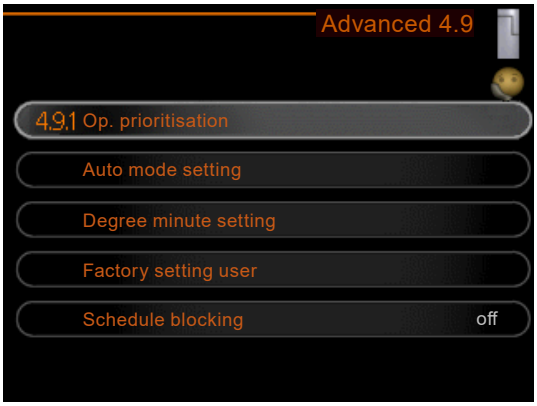
The holiday setting starts at 00:00 on the start date and stops at 23:59 on the stop date.

NOTE
Stop the holiday setting about one day before returning from the holiday so that the room and domestic hot water temperature can rise to the desired values.

NOTE
Define the holiday setting in advance and activate just before departure in order to maintain the level of comfort.

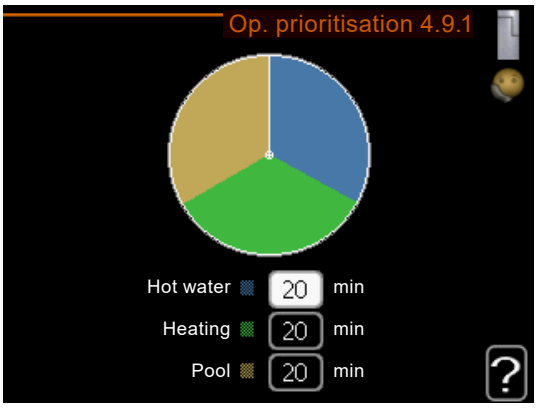
9.4.6 Menu 4.9 – Advanced

The “Advanced” menu is intended for advanced users. This is highlighted with orange text.
This menu has several submenus.



Menu 4.9.1 – Op. prioritisation

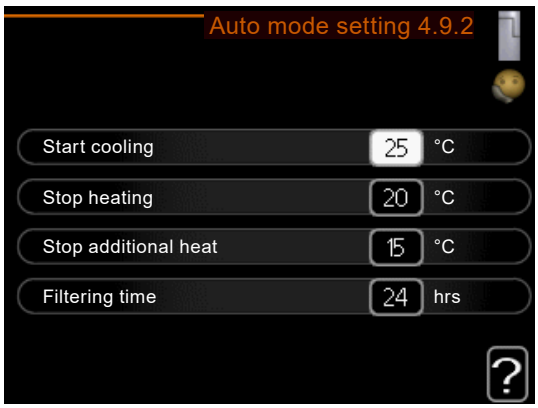
Here, you set how long the system should operate for each requirement if there are two or more requirements at the same time. If there is only one requirement, the system only operates to meet that requirement.



Op. prioritisation Adjustment range: 0 to 180 minutes Factory setting: 30 minutes

The indicator marks where in the cycle the heat pump is.
If 0 minutes is selected, this means the requirement is not prioritised, and will only be activated when there are no other requirements.

Menu 4.9.2 – Auto mode setting



Start cooling Adjustment range: -20°C to +40°C Factory setting: 25°C
Stop heating Adjustment range: -20°C to +40°C Factory setting: 17°C
Stop additional heat Adjustment range: -20°C to +40°C Factory setting: 5°C
Filtering time Adjustment range: 0 to 48 hrs Factory setting: 25 hrs

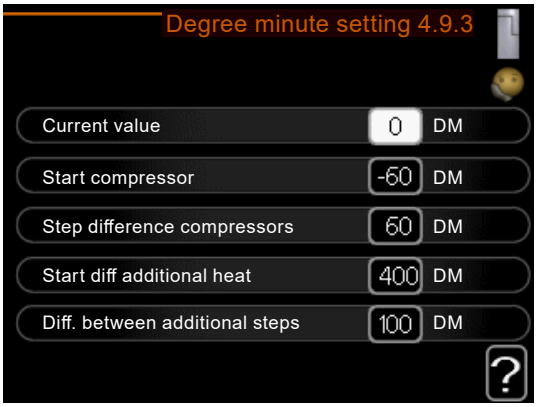
If the operating mode is set to “auto”, the controller itself determines when the additional heat and domestic hot water preparation are permitted to start and stop, based on the average outdoor temperature. If the heat pump has an integrated cooling function and this is activated in the menu, you can also set the start temperature for cooling.
Select the average outdoor temperatures in this menu.

NOTE
The maximum setting for “Stop additional heat” is “Stop heating”.

Filtering time
You can also set the time period (filter time) for the calculation of the average temperature. If you select 0, the current outdoor temperature is used.

Menu 4.9.3 – Degree minute setting

Degree minutes are a measure of the current heating requirement in the home. They determine when the compressor or the additional heat should start or stop.



Current value Adjustment range: -3000°C to +3000°C
Start compressor Adjustment range: -1000°C to -30°C Factory setting: -60°C
Step difference Compressor Adjustment range: 10 to 2000 Factory setting: 60
Start diff additional heat Adjustment range: 100 to 2000 Factory setting: 400
Diff. between additional steps Adjustment range: 10 to 1000 Factory setting: 30

NOTE

A higher value for “Start compressor” results in more frequent compressor starts, which leads to higher compressor wear. Too low a value can result in uneven indoor temperatures.

Menu 4.9.4 – Factory setting user

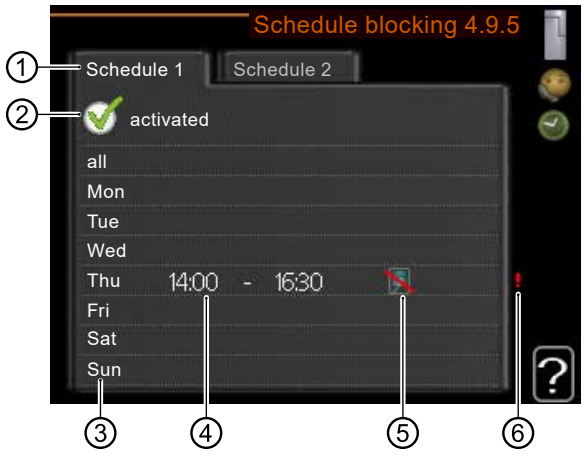
Here, all settings that can be accessed by the user (including the advanced menus) can be reset to the factory settings.

NOTE

After resetting to the factory settings, personal settings, such as the heating curve, etc., must be chosen again.

Menu 4.9.5 – Schedule blocking

Here, you can use scheduling to control whether the additional heat should be blocked. A maximum of two different time periods can be set.



When scheduling is active, the current blocking symbol appears in the main menu of the control panel.

① Schedule
This means scheduling to be set.

► Control and select the desired scheduling (schedule).

② activated
Here, you activate the scheduling for the selected period. Set times are not changed upon deactivation.

③ Day
Here, you select the days of the week when you wish the scheduling to apply.
To remove scheduling for a specific day, deactivate the time for that day by specifying an identical start and stop time.
When using the “all” row, all days in the period are set according to this row.

④ Time period
Here, you set the start and stop times for the selected day of scheduling.

⑤ Blocking
Here, you select the desired blocking.

⑥ Conflict
If two settings conflict with each other, a red exclamation mark is displayed.

This menu may display the following symbols:

	Compressor in the heat pump blocked
	Electric additional heat blocked

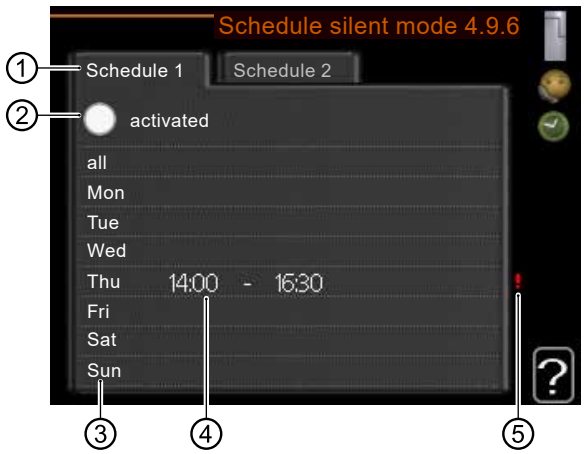
NOTE
To set similar scheduling for every day of the week, first select “all”, enter the time and then change the time for the desired days.

NOTE
In order for the period to extend beyond midnight, set the stop time earlier than the start time. The scheduling then stops at the set stop time on the following day.
Scheduling always starts on the day for which the start time is set.

NOTE
Long-term blocking can cause reduced comfort and operating efficiency.

Menu 4.9.6 – Schedule silent mode

Here, the heat pump can be scheduled to be set to “silent mode” (must be supported by the heat pump).
Up to two different time periods and two different maximum frequencies can be set. This enables the sound to be lowered during the day and further reduced at night.



When scheduling is active, the symbol for “silent mode” appears in the main menu next to the symbol for the control panel.

① Schedule
This means scheduling to be set.

► Control and select the desired scheduling (schedule).

② activated
Here, you activate the scheduling for the selected period. Set times are not changed upon deactivation.

③ Day
Here, you select the days of the week when you wish the scheduling to apply.
To remove scheduling for a specific day, deactivate the time for that day by specifying an identical start and stop time.
When using the “all” row, all days in the period are set according to this row.

④ Time period
Here, you set the start and stop times for the selected day of scheduling.

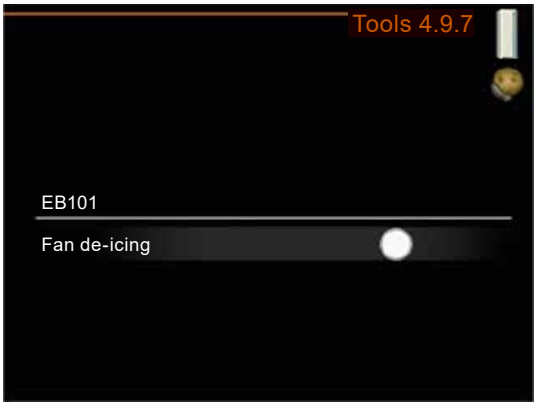
⑤ Conflict
If two settings conflict with each other, a red exclamation mark is displayed.

NOTE
To set similar scheduling for every day of the week, first select “all”, enter the time and then change the time for the desired days.

NOTE
In order for the period to extend beyond midnight, set the stop time earlier than the start time. The scheduling then stops at the set stop time on the following day.
Scheduling always starts on the day for which the start time is set.

Menu 4.9.7 – Tools

This function ensures that ice on the fan or fan grille is removed.



If the heat pump is very icy, “fan de-icing” may be required in addition to automatic defrosting.

► Switch on the function by activating the “Fan de-icing” menu option.

This will be followed by a one-time de-icing.

9.5 Menu 5 – Service

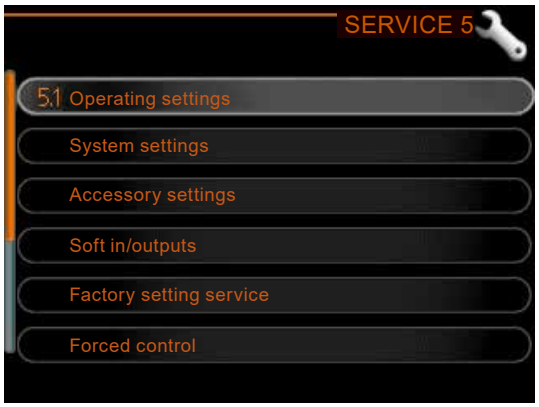
The service menu is hidden from the main menu in standard mode.

NOTE
Settings in the service menu should not be changed by the end user. Faulty or incorrect settings can lead to malfunctions or even damage to the system.

Showing the service menu

1. In the main menu, hold down the Back button for 7 seconds.
2. Once the service menu (①) has become visible, select and activate it.

The menus in the “Service” section appear with orange text to indicate that settings should only be changed by qualified professionals or advanced users.



This menu has several submenus. Status information for each menu is shown on the display to the right of the menus.

Operating settings
Operating settings for the controller.

System settings
System settings for the controller, activation of accessories, etc.

Accessory settings
Operating settings for various accessories.

Soft in/outputs
Setting the software-controlled inputs and outputs on the input board (AA3) or connection terminal (X2).

Factory setting service
Returning all settings to factory settings (including the settings accessed by the user).

Forced control
Forced control for the various components of the indoor module.

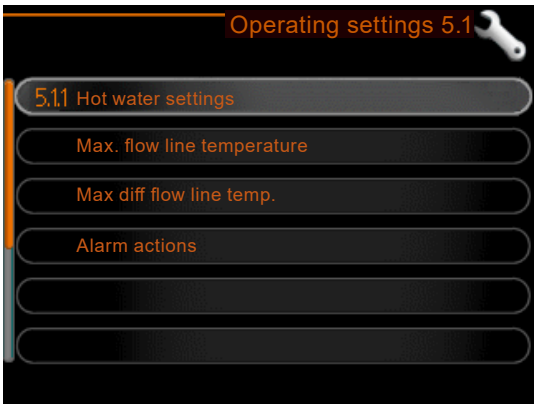
Start guide
Manual running of the start guide, which is launched when the controller is first commissioned.

Quick start
Quick starting the compressor

IMPORTANT
Incorrect settings in the service menus can damage the system.

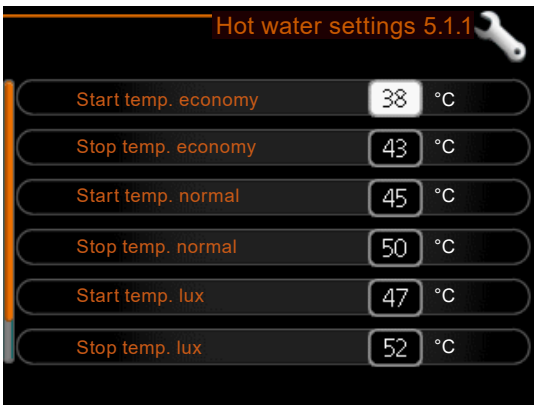
9.5.1 Menu 5.1 – Operating settings

In the corresponding submenus, you can choose operating settings for the controller.



Menu 5.1.1 – Hot water settings

NOTE
In order to be able to choose domestic hot water settings, the domestic hot water preparation must be activated in menu 5.2.4 Accessories.



Economy mode Adjustment range of start temp. economy: 5°C to 55°C Factory setting of start temp. economy: 42°C Adjustment range of stop temp. economy: 5°C to 60°C Factory setting of stop temp. economy: 48°C
Normal mode Adjustment range of start temp. normal: 5°C to 60°C Factory setting of start temp. normal: 46°C Adjustment range of stop temp. normal: 5°C to 65°C Factory setting of stop temp. normal: 50°C
Lux mode Adjustment range of start temp. lux: 5°C to 70°C Factory setting of start temp. lux: 49°C Adjustment range of stop temp. lux: 5°C to 70°C Factory setting of stop temp. lux: 53°C
Stop temp. per. increase Adjustment range: 55°C to 70°C Factory setting: 55°C
Step difference compressors Adjustment range: 0.5°C to 4.0°C Factory setting: 1.0°C
Charge method Adjustment range: target temp, delta temp Factory setting: delta temp

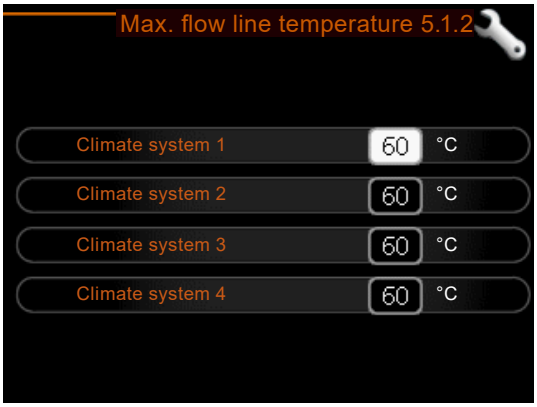
Here, the domestic hot water start and stop temperatures for the individual comfort options are set in menu 2.2 and the stop temperature for a periodic temperature increase is set in menu 2.9.1.

Here, you also select the charge method for domestic hot water mode.

“delta temp” is recommended for tanks with tubular heat exchangers.
“target temp” is recommended for tanks with a double jacket and tanks with a domestic hot water heat exchanger.

Menu 5.1.2 – Max. flow line temperature

Here, you set the maximum flow line temperature for the climate system.



Climate system Adjustment range: 5°C to 80°C Factory setting: 60°C

If the system has several climate systems, individual maximum flow line temperatures can be defined for each climate system. Climate systems 2-8 cannot be set to a higher maximum flow line temperature than climate system 1.

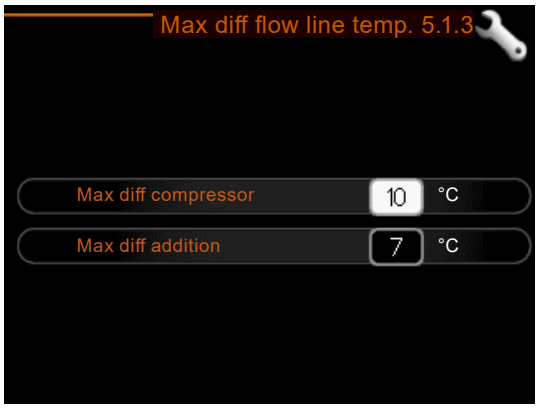
NOTE

For underfloor heating, the max. flow line temperature is usually set between 35°C and 45°C.

► Contact your floor supplier for information on the maximum permissible temperature of the floor.

Menu 5.1.3 – Max diff flow line temp.

Here, you set the maximum permissible difference between the calculated and current flow line temperature for compressor or additional heat operation.
Max diff addition must never exceed max diff compressor.



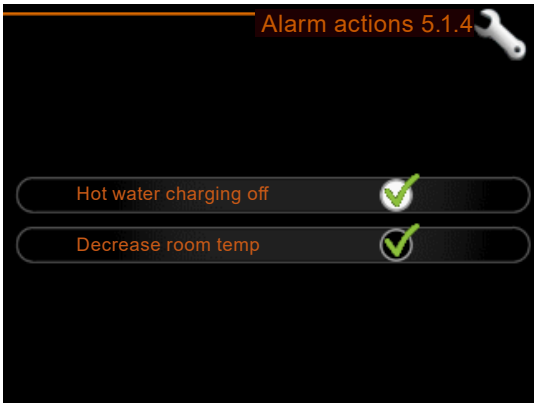
Max diff compressor Adjustment range: 1°C to 25°C Factory setting: 10°C
Max diff addition Adjustment range: 1°C to 24°C Factory setting: 7°C

Max diff compressor
If the current flow temperature exceeds the calculated flow temperature by the set value, the degree minute value is set to +2. If there is only a heating requirement, the compressor of the heat pump stops.

Max diff addition
If “Max diff addition” is selected and activated in menu 4.2 and the current flow temperature exceeds the calculated value by the set value, the additional heat is forced to stop.

Menu 5.1.4 – Alarm actions

Here, you set how the controller should signal that an alarm is displayed on the display.



The following alternatives exist: the heat pump stops preparing domestic hot water and/or reduces the room temperature.

NOTE
If no alarm action is selected, it may result in higher energy consumption in the event of an alarm.

Menu 5.1.12 – Addition

Here, you choose the settings for the connected additional heat (step controlled or shunt controlled addition).

1. Select whether a step controlled or shunt controlled addition is connected.
2. Choose settings for the various options.

Add.type step controlled

► Select this option if a step-controlled additional heat is connected and is located in front of or behind the switching valve for the domestic hot water preparation (QN10).

An external electric boiler is an example of step-controlled addition.

If binary stepping is deactivated (off), the settings for linear stepping apply.

Max step Adjustment range (binary stepping deactivated): 0 to 3 Adjustment range (binary stepping activated): 0 to 7 Factory setting: 3
Fuse size Adjustment range: 1 A to 200 A Factory setting: 16 A
Transformation ratio Adjustment range: 300 to 3000 Factory setting: 300

Here, you set the maximum number of permitted addition steps if there is an internal addition in the domestic hot water tank (only available if the additional heat is connected after the switching valve for the domestic hot water preparation (QN10)), and if binary stepping is to be used.
You can also set the fuse size and transformation ratio.

NOTE
To choose a location before or after QN10, you must select the “hot water charging” option in menu 5.2.4 “Accessories” and set up a docking in menu 5.2.3 “Docking”.

Add.type: shunt controlled

► Select this option if a shunt controlled addition is connected.

Prioritised additional heat Adjustment range: on/off Factory setting: off
Minimum running time Adjustment range: 0 to 48 hrs Factory setting: 12 hrs
Min temp. Adjustment range: 5°C to 90°C Factory setting: 55°C
Mixing valve amplifier Adjustment range: 0.1 to 10.0 Factory setting: 1.0
Mixing valve step delay Adjustment range: 10 to 300 seconds Factory setting: 30 seconds
Fuse size Adjustment range: 1 A to 200 A Factory setting: 16 A
Transformation ratio Adjustment range: 300 to 3000 Factory setting: 300

Here, you set the start time of the additional heat as well as the minimum running time and temperature for external addition with shunt.

An external addition with shunt could then be, for example, a wood, oil, gas or pellet boiler.

Shunt amplification and shunt delay can be defined for the shunt.

If “Prioritised additional heat” is selected, the heat is used by the external addition instead of by the heat pump. The shunt controls as long as heat is available. Otherwise, the shunt valve is closed.

Menu 5.1.14 – Flow set. climate system

The type of heating distribution system the heating medium pump works towards is set here.

Presettings Adjustment range: radiator, underfloor heating, rad. + floor heat., DOT°C Factory setting: radiator DOT adjustment range: -40.0°C to 20.0°C The factory setting for the DOT value depends on the country where the product is used.
Own setting dT at DOT adjustment range: 0.0 – 25.0 dT at DOT factory setting: 10.0 DOT adjustment range: -40.0°C to 20.0°C DOT factory setting: -20.0°C

dT at DOT is the difference in degrees between flow and heat medium return temperature at standard outdoor temperature.

Menu 5.1.22 – Heat pump testing

NOTE
This menu is used to test the controller according to various standards.
The use of this menu for other purposes may result in the system not working as intended.

Presettings Adjustment range: radiator, underfloor heating, rad. + floor heat., DOT°C Factory setting: radiator DOT adjustment range: -40.0°C to 20.0°C The factory setting for the DOT value depends on the country where the product is used.
Own setting dT at DOT adjustment range: 0.0 – 25.0 dT at DOT factory setting: 10.0 DOT adjustment range: -40.0°C to 20.0°C DOT factory setting: -20.0°C

This menu contains several submenus, one for each standard.

Menu 5.1.23 – Compressor curve

NOTE
When commissioning a water pump, the “Communication fault” alarm may appear on the display.
The alarm is reset when the heat pump is deactivated in menu 5.2.2 “Installed slaves”.

Here, you set whether the compressor in the heat pump should operate according to a certain curve or according to predefined curves for a specific requirement.

Set a curve for a specific requirement (heat, domestic hot water, etc.):

1. Deactivate “auto”.
2. Turn the control knob until a temperature is selected.
3. Press the OK button.

You can now set the temperatures at which the maximum or minimum frequencies should be available.

This menu can contain multiple pages (one for each available requirement).

► Use the navigation arrows in the upper right corner to switch between pages.

9.5.2 Menu 5.2 – System settings

Here, you can choose various settings for the system, e.g. you can activate connected slaves and settings for the installed accessories.

Menu 5.2.2 – Installed slaves

Here, you activate the connected air/water heat pump for the heating and heat pump controller. The heat pump is displayed as “Slave 1”, and there are two ways to activate it.

► You can either select the accessories in the list or use the automatic “Search installed slaves” functions.

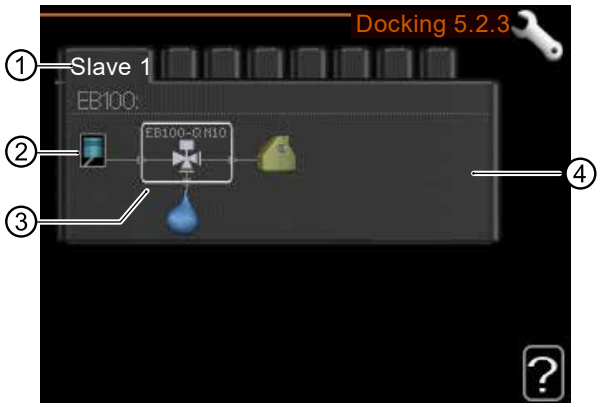
Search installed slaves

1. Select “Search installed slaves”.
2. Press the OK button to automatically find the connected heat pump.

Menu 5.2.3 – Docking

Here, you set how the system is docked by pipe, e.g. to the swimming pool heating, the domestic hot water preparation and the heating of the building.

This menu has a docking memory. This means the controller remembers how a particular switching valve is docked, and the next time the switching valve is used, the correct docking is automatically used.



① Slave
The connected heat pump is displayed as “Slave 1”.

② Compressor
Here, you set whether the compressor in the heat pump is blocked (factory setting) or is in standard mode (connected to e.g. swimming pool heating, domestic hot water preparation and heating of the building).

③ Selection frame
The selection frame can be moved with the control knob.
Use the OK button to select what to change and to confirm the setting in the selection field on the right.

④ Work area for docking
Here, the system dockings are logged.

This menu may display the following symbols:

	Compressor (blocked)
	Compressor (standard)
	Switching valves for domestic hot water, cooling or pool control. The names above the switching valve indicate where it is electrically connected (EB101 = Slave 1, CL11 = Pool 1, etc.).
	Domestic hot water preparation
	Pool
	Heating (heating of the building, including any additional climate systems)
	Cooling

5.2.4 – Accessories

Here, you set which accessories are installed for the system.

The domestic hot water tank integrated in the unit must be activated here.

There are two ways to activate connected accessories.
You can either select the accessories in the list or use the automatic “Search installed acc.” function.

Search installed acc.

1. Select “Search installed acc.”.
2. Press the OK button to automatically find online accessories.

9.5.3 Menu 5.3 – Accessory settings

In the corresponding submenus, you can choose the operating settings for installed and activated accessories.

Menu 5.3.2 – Shunt controlled add. heat

Here, you set the start time of the additional heat as well as the minimum running time and temperature for external addition with shunt.

Prioritised additional heat Adjustment range: on/off Factory setting: off
Start diff additional heat Adjustment range: 0 to 2000 DM Factory setting: 400 DM
Minimum running time Adjustment range: 0 to 48 hrs Factory setting: 12 hrs
Min temp. Adjustment range: 5°C to 90°C Factory setting: 55°C
Mixing valve amplifier Adjustment range: 0.1 to 10.0 Factory setting: 1.0
Mixing valve step delay Adjustment range: 10 to 300 seconds Factory setting: 30 seconds

An external addition with shunt could then be, for example, a wood, oil, gas or pellet boiler.

Shunt amplification and shunt delay can be defined for the shunt.

If “Prioritised additional heat” is selected, the heat is used by the external addition instead of by the heat pump. The shunt controls as long as heat is available. Otherwise, the shunt valve is closed.

→ Function description in the accessory installation instructions.

Menu 5.3.3 – Extra climate system

Here, you define which climate system (2-8) should be set.

In the next menu, you choose the settings for the selected climate system.

Use in heating mode Adjustment range: on/off Factory setting: on
Use in cooling mode Adjustment range: on/off Factory setting: off
Mixing valve amplifier Adjustment range: 0.1 to 10.0 Factory setting: 1.0
Mixing valve step delay Adjustment range: 10 to 300 seconds Factory setting: 30 seconds
Contr. pump GP10 Adjustment range: on/off Factory setting: off

If the heat pump is connected to more than one climate system, condensation may occur in these systems if they are not designed for cooling.

► To avoid condensation, check that “Use in heating mode” is activated for the climate systems that are not intended for cooling.

This closes the shunts for the extra climate systems when cooling mode has been activated.

NOTE
This setting option only appears if the heat pump is activated for cooling mode.

Here, you also set the shunt amplification and shunt delay for the different climate systems that are installed.

Activating/deactivating “Contr. pump GP10” has no effect on “Extra climate system”, as the circulation pump for the accessories is controlled manually.

You can set a speed for the GP10 circulation pump for the accessories.

→ Function description in the accessory installation instructions.

Menu 5.3.6 – Step controlled add. heat

Here, you choose the settings for step controlled addition. Step controlled addition is, for example, when an external electric boiler is installed.

Start diff additional heat Adjustment range: 0 to 2000 DM Factory setting: 400 DM
Diff. between additional steps Adjustment range: 0 to 1000 DM Factory setting: 30 DM

Max step Adjustment range (binary stepping deactivated): 0 to 3 Adjustment range (binary stepping activated): 0 to 7 Factory setting: 3
Binary stepping Adjustment range: on/off Factory setting: off

You can, for example, set when you wish the additional heat to start. The maximum number of permitted steps for the additional heat can be specified and set, as well as whether binary stepping is to be used.

If binary stepping is deactivated (off), the settings for linear stepping apply.

→ Function description in the accessory installation instructions.

Menu 5.3.8 – Hot water comfort

Here, you choose the settings for domestic hot water comfort.

Activating imm heater Adjustment range: on/off Factory setting: off
Activ. imm heat in heat mode Adjustment range: on/off Factory setting: off
Activating the mixing valve Adjustment range: on/off Factory setting: off
Outgoing hot water Adjustment range: 40°C to 65°C Factory setting: 55°C
Mixing valve amplifier Adjustment range: 0.1 to 10.0 Factory setting: 1.0
Mixing valve step delay Adjustment range: 10 to 300 seconds Factory setting: 30 seconds

Activating imm heater
Here, the immersion heater is activated if one is installed in the domestic hot water tank.

Activ. imm heat in heat mode
This is activated so that the immersion heater in the domestic hot water tank (requires the above option to be activated) may prepare domestic hot water if the compressors in the heat pump give priority to heating mode.

Activating the mixing valve
This is activated if a shunt is installed and is to be controlled by the controller. If this option is activated, you can set the domestic hot water outlet temperature, shunt amplification and shunt delay.

Outgoing hot water
Here, you can set the temperature to which the shunt should limit the domestic hot water outlet temperature.

→ Function description in the accessory installation instructions.

Menu 5.3.11 – Modbus

Address Factory setting: Address 1
Word swap Factory setting: not activated

With Modbus (Split) version 10, the address can be adjusted within the range 1-247. Previous versions have a fixed address (1).

If you select “word swap”, this option is activated instead of the default standard “big endian”.

→ Function description in the accessory installation instructions.

Menu 5.3.15 – GMB communication module

Here, you choose the settings for the gas boiler.

Start diff additional heat Adjustment range: 10 to 2000 DM Factory setting: 700 DM
Hysteresis Adjustment range: 10 to 2000 DM Factory setting: 100 DM

For example, you can set the start time for the gas boiler.

→ Function description in the accessory installation instructions.

Menu 5.3.21 – Flow sensor / energy meter

Volumetric flow meter set mode Adjustment range: EMK150 / EMK300/310 / EMK500 Factory setting: EMK150
Energy per pulse Adjustment range: 0 to 10000 Wh Factory setting: 1000 Wh
Pulses per kWh Adjustment range: 1 to 10000 Factory setting: 500
Energy meter set mode Adjustment range: energy per pulse / pulses per kWh Factory setting: energy per pulse
Energy per pulse Adjustment range: 0 to 10000 Wh Factory setting: 1000 Wh
Pulses per kWh Adjustment range: 1 to 10000 Factory setting: 500

Up to two volumetric flow meters (EMK) / heat meters can be connected to the input board AA3 and to the connection terminals X22 and X23.

► Select these in menu 5.2.4 – Accessories.

Volumetric flow meter (EMK heat meter set)

A volumetric flow meter (EMK) is used to measure the heat quantity generated by the heating system and made available for domestic hot water preparation and building heating.

The volumetric flow meter measures flow and temperature difference in the charging circuit. The value is indicated on the display of compatible products.

As of software version 8801R2, you can select the volume flow meter (EMK) that is connected to the system.

Energy per pulse
Here, you set the heat quantity to which each pulse should correspond.

Pulses per kWh
Here, you set how many pulses per kWh are to be sent to the controller.

NOTE
The controller software must be version 8801R2 or higher.

Heat meter (electricity meter)

Heat meters are used to send pulse signals whenever a certain heat quantity has been consumed.

Energy per pulse
Here, you set the heat quantity to which each pulse should correspond.

Pulses per kWh
Here, you set how many pulses per kWh are to be sent to the controller.

9.5.4 Menu 5.4 – Soft in/outputs

Here, you can select with which input/output on the input board (AA3) and which connection terminal (X2) the external switching contact is to be connected.

Available inputs to connection terminal AUX 1-6 (AA3-X6:9-14 and X2:1-4) and output AA3-X7.

9.5.5 Menu 5.5 – Factory setting service

Here, all settings can be reset to the factory settings (including the settings accessed by the user).

NOTE
When next starting up after a reset, the controller for the start guide appears.

9.6 Menu 5.6 – Forced control

Here, a forced control can be initiated for the various components of the controller and any connected accessories.

9.7 Menu 5.7 – Start guide

When first starting up the controller, the start guide is started automatically. You can start it manually here.

9.8 Menu 5.8 – Quick start

A compressor start can be enabled here.

NOTE
For a compressor start, there must be a requirement for heating, cooling or domestic hot water.

NOTE
A quick start of the compressor should not be carried out too often within a short period of time. Otherwise, the compressor and its peripheral equipment may be damaged.

9.8.1 Menu 5.9 – Floor drying function

Here, you set the floor drying program.

Length of period 1 – 7 Adjustment range: 0 – 30 days Factory setting for period 1 – 3, 5 – 7: 2 days Factory setting for period 4: 3 days
Temp. period 1 – 7 Adjustment range: 15°C to 70°C Factory setting: Temp. period 1 20°C Temp. period 2 30°C Temp. period 3 40°C Temp. period 4 45°C Temp. period 5 40°C Temp. period 6 30°C Temp. period 7 20°C

Up to seven time periods with different flow temperatures can be defined. If fewer than seven time periods are to be used, set the number of days for the unused time periods to 0.

► To activate the floor drying function, select the “active” field.

The number of days when the function was already active appears at the bottom.

NOTE
If you wish to use the “Add. heat only” operating mode, set this in menu 4.2.

NOTE
You can save a floor drying function log which shows when the concrete slab has reached the correct temperature.

9.8.2 Menu 5.10 – Change log

Here, you can read changes previously made to the control panel.

For each change, the date, time, ID number (unique name for a setting) and the newly set value are displayed.

NOTE
The change log is saved when restarting and remains unchanged after a factory reset.

9.8.3 Menu 5.11 – Slave settings

You can choose the settings for installed slaves in the corresponding submenus.

Menus 5.11.1 EB101 – 5.11.8 EB108

Here, you can choose specific settings for installed slaves and charge pump settings.

Menu 5.11.1.1 — Heat pump

Here, you can choose settings for the installed slave.

► For information on which settings can be chosen, see the operating manual for the respective installed slave.

→ Operating manual of the connected heat pump, “Commissioning” section

Menu 5.11.1.2 – Charge pump (GP 12)

Here, you set the operating mode for the charge pump here.

Op. mode Heating/cooling Adjustment range: auto/intermittent Factory setting: intermittent

auto
The charge pump works according to the current op. mode.

intermittent
The charge pump starts and stops 20 seconds before or after the compressor in the heat pump.

Here, you set the speed at which the charge pump should work in the current operating mode.

Speed during operation Heating, hot water, pool, cooling Adjustment range: auto/manual Factory setting: auto Manual setting Adjustment range: 1 to 100% Factory setting: 70%
Min. allowed speed Adjustment range: 1 to 100% Factory setting: 1%
Speed in wait mode Adjustment range: 1 to 100% Factory setting: 30%
Max. allowed speed Adjustment range: 80 to 100 % Factory setting: 100%

► Select “auto” if you wish the charge pump speed to be automatically controlled for optimum operation (factory setting).

If “auto” is activated for heating mode, you can also choose the “Min. allowed speed” and “Max. allowed speed” settings.
This limits the charge pump in order to prevent the specified speed value from not being reached or from being exceeded.

► If the charge pump is operated manually, deactivate “auto” for the current operating mode and set a value between 1 and 100% (the previously set value for “Max. allowed speed” and “Min. allowed speed” no longer applies).

Control knob in standby mode
(used only if “Op. mode” is set to “auto”)

The charge pump operates at the set speed when compressor or additional heat operation is not required.

9.8.4 Menu 5.12 – Country

Here, you select where country the product was installed. As a result, country-specific settings are available for the product.

The display language can be chosen independently of this selection.

NOTE
This option is locked after 24 hours, after restarting the control panel or the controller, or after a software update.

10 Commissioning and setting

10.1 Preparations

✓ The entire system must be completely installed.

✓ The outdoor unit and the hydraulic unit must be fully electrically connected.

✓ The system must have been filled with water and vented.

→ Outdoor unit and hydraulic indoor unit operating manuals.

IMPORTANT
The operating switch (SF1) may only be set to ⫿ or ⩓ after the system has been filled with water. Otherwise, the compressor in the heat pump may be damaged.

10.2 Commissioning with air/water heat pump

1. Supply the heat pump with power.
2. Supply the hydraulic indoor unit with power.
3. Set the operating switch (SF1) on the control panel to the ⫿ position.

→ “11 Start guide”, page 48

IMPORTANT
Both when commissioning the heat pump and during continued operation, the minimum return temperature must not fall below 20°C. If the temperature falls below this minimum temperature and the heat pump is operated, the unit may be damaged during operation of the heat pump. If the return temperature is < 20°C, the return temperature must be increased to a value > 20°C via the “Emergency operation” function on the heating and heat pump controller using the electric heating element to ensure safe operation. Only then can the operation be switched to the desired function.

→ Hydraulic indoor unit operating manual, chapter “Emergency operation”

10.3 Commissioning only with additional heat

The hydraulic indoor unit can be operated without a heat pump; in this case, as a pure electric boiler, e.g. for generating heat and domestic hot water before the installation of the air/water heat pump.

1. Supply the hydraulic indoor unit with power.
2. Set the operating switch (SF1) on the control panel to the ⦀ position.

→ “11 Start guide”, page 48

► or:

1. Set additional heat in menu 5.1.12.
2. Menu 4.2 – Starting op. mode
3. Select “Add. heat only” using the control knob and press the OK button.
4. Press the Back button to return to the main menus.

NOTE
When commissioning without an air/water heat pump, the “Communication fault” alarm may appear on the display.
The alarm is reset when the current air/water heat pump is deactivated in menu 5.2.2 (“Installed slaves”).

NOTE
Select auto or manual mode if the hydraulic indoor unit is to be used again with a heat pump.

10.4 Checking the switching valve

1. Activate “AA2-K1” (QN10) in menu 5.6.
2. Check whether the switching valve opens or is open in the direction of domestic hot water preparation.
3. Deactivate “AA2-K1” (QN10) in menu 5.6.

10.5 Checking the AUX output

1. Activate “AA3-X7” in menu 5.6.
2. Check the desired function.
3. Deactivate “AA3-X7” in menu 5.6.

10.6 Cooling mode

If the system includes an air/water heat pump that can generate cooling, cooling mode can be permitted.

► If cooling mode is permitted, select the cooling mode display in menu 5.4 for the AUX output.

10.7 Commissioning and checking

If the system includes an air/water heat pump that can generate cooling, cooling mode can be permitted.

1. If cooling mode is permitted, select the cooling mode display in menu 5.4 for the AUX output.
2. After commissioning, fill out the commissioning protocol.

→ “15 Installation log”, page 62

11 Start guide

A start guide is launched when starting the system for the first time. The start guide contains instructions for initial commissioning. It also helps you choose the basic system settings.

The start guide ensures that the system starts up correctly, so this function cannot be skipped. The start guide can be launched later via menu 5.7.

► Follow the start guide instructions on the display.

NOTE
If the start guide is not launched automatically, start it manually in menu 5.7.

NOTE
While the start guide is running, none of the controller functions will start.
The guide is launched each time you start the controller until it is switched off on the last page.

NOTE
If the system is put into operation at low outdoor temperatures and a low temperature of the heating medium, the heating medium must first be heated to around 20°C-25°C using the additional heat.

NOTE
While running the start guide, the switching valves and shunt are moved back and forth to assist the venting of the heat pump.

Navigation in the start guide

Ⓐ Page

Displays the current page number of the start guide. To scroll between pages:

1. Turn the control knob until the arrow (①) in the upper left corner is selected.

2. Press the OK button to switch between the pages of the start guide.

Ⓑ Name and menu number

Displays the controller menu items on which this page of the start guide is based. The number shown corresponds to the number of the respective controller menu.

Ⓒ Option / Setting

You can choose settings in this area.

12 Service

12.1 Emergency operation

Emergency operation is used in the event of malfunctions and servicing. In this operating mode, no domestic hot water is prepared.

► Activate emergency operation by setting the operating switch (SF1) to ⚠.

The following will happen:

- The status lamp lights up yellow
- The display does not light up in this status and the controller is deactivated
- No domestic hot water is prepared
- The compressors in the heat pump are switched off. The charge pump (EB101-GP12) and charge pump (EB102-GP12) (if available) are in operation
- The accessories are switched off
- The heating medium pump is active
- The reserve operating relay (K2) is active.

The external additional heat is active when connected to the reserve operating relay (K2, connection terminal X1). Make sure that the heating medium circulates through the external additional heat.

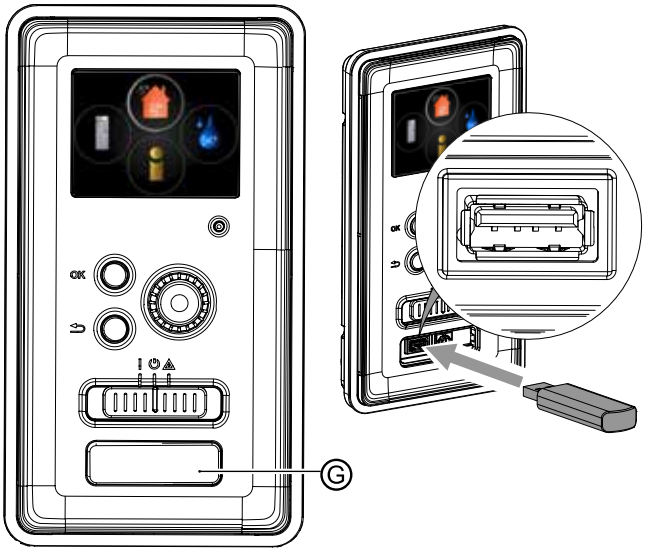
12.2 Sensor data

Temperature (°C)	Resistance (kΩ)	Voltage (V GS)
-40	351.0	3.256
-35	251.6	3.240
-30	182.5	3.218
-25	133.8	3.189
-20	99.22	3.150
-15	74.32	3.105
-10	56.20	3.047
-5	42.89	2.976
0	33.02	2.889
5	25.61	2.789
10	20.02	2.673
15	15.77	2.541
20	12.51	2.399
25	10.00	2.245
30	8.045	2.083
35	6.514	1.916
40	5.306	1.752
45	4.348	1.587
50	3.583	1.426
55	2.968	1.278
60	2.467	1.136
65	2.068	1.007
70	1.739	0.891
75	1.469	0.785
80	1.246	0.691
85	1.061	0.607
90	0.908	0.533
95	0.779	0.469
100	0.672	0.414

12.3 USB service port

The control panel has USB ports that can be used to update the software and store logged information.

► Remover the plastic cover (Ⓖ).

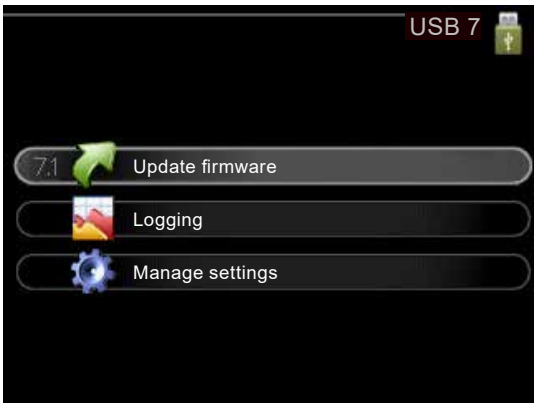


When connecting a USB stick, the symbol for menu 7 – USB appears in the main menu.

1. Select menu 7 – USB.

or

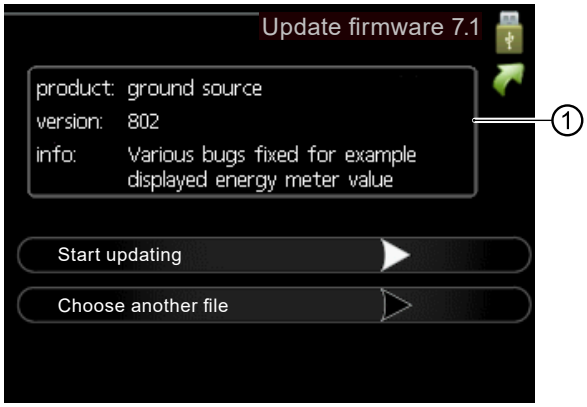
2. Activate menu 7 – USB.



12.4 Menu 7.1 – Update firmware

The software can be updated here.

NOTE
In order to use the following functions, the USB stick must contain special software for the controller.



The info field (①) displays information (always in English) about the update selected by the update software on the USB stick.

This information indicates which product the software is intended for and which software version is available. General information is also shown. If a file other than the selected file is desired, it can be selected via “Choose another file”.

Start updating

1. Activate the arrow in the “Start updating” menu line to start the update.

   First, a prompt appears as to whether you really wish to update the software.

2. Select “Yes” to continue the process.
   Select “No” to cancel the process.

Once you have selected “Yes”, the update starts. The update progress is indicated on the display.

Once the update is complete, the controller restarts.

NOTE
When updating the software, the menu settings are not reset.

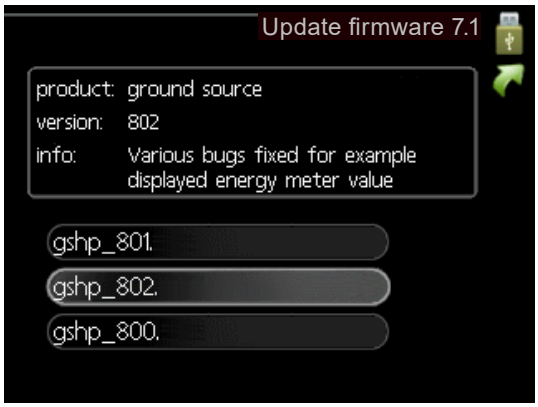
NOTE
If the update is cancelled prematurely (e.g. due to a power failure), the previous software version can be restored.

► To restore the previous software version, hold down the OK button during startup until the green light comes on (after about 10 seconds).

Choose another file

If you do not wish to use the software suggested in the info field:

1. Select the “Choose another file” menu line and activate the arrow in the “Choose another file” menu line.
   A list of file names for different software versions appears.

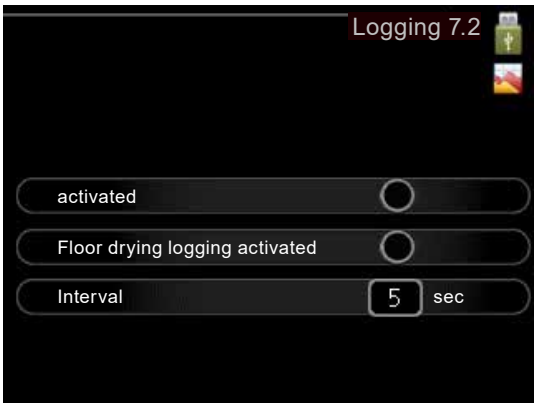


2. When navigating through the list, information about the selected software version is displayed in the info field.
3. If the desired file is selected, press the OK button.

The display then returns to the previous page (menu 7.1), where you can start updating, among other things.

12.5 Menu 7.2 – Logging

Here, you set how you wish current measured values to be saved by the controller in a protocol on the USB stick.



Adjustment range of interval: 1 second to 60 minutes
Factory setting of interval: 5 seconds

1. Set the desired interval between the loggings.
2. Activate “activated”.

As a result, the current measured values are saved by the controller in a file on the USB stick. They are saved at the specified interval until “activated” is deactivated.

IMPORTANT
Deactivate “activated” before disconnecting the USB stick.

Floor drying logging

Here, a floor drying log can be stored on a USB stick, and it can be viewed when the concrete slab has reached the correct temperature.

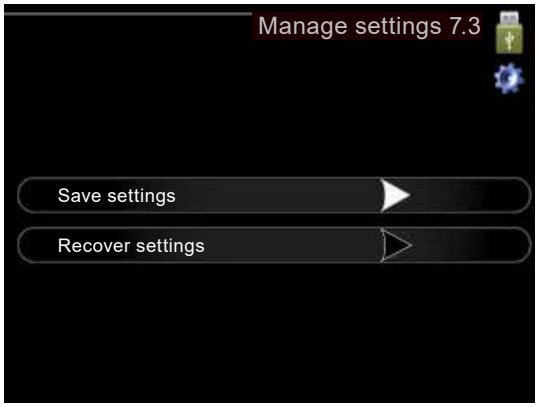
1. Ensure that “Floor drying function” is activated in menu 5.9.
2. Activate the “Floor drying logging activated” option.

This creates a protocol file with temperature and electric heating element performance. The logging continues until the “Floor drying logging activated” option is deactivated or the “Floor drying function” is ended.

IMPORTANT
Deactivate “Floor drying logging activated” before disconnecting the USB stick.

12.6 Menu 7.3 – Manage settings

Here, you can manage all menu settings (user or service menus) for the controller with a USB stick (saving to a USB stick or loading from a USB stick).



The “Save settings” option is used to save the menu settings to the USB stick in order to be able to restore them later or to copy them to another control unit.

IMPORTANT
If the menu settings are saved to the USB stick, any previously saved menu settings on the USB stick will be overwritten.

The “Recover settings” option is used to import all menu settings from the USB stick into the controller.

IMPORTANT
Recovery of menu settings from the USB stick cannot be undone.

13 Comfort malfunction

In the vast majority of cases, the controller detects a malfunction (which can cause a reduction in comfort) and displays it on the control panel display via an alarm and messages with steps to be taken.

13.1 Info menu

Menu 3.1 in the menu system of the controller contains all measured values for this system. Checking the values in this menu can often be useful for determining the cause of the fault.

13.2 Alarm management

A malfunction has occurred if an alarm is triggered. The status lamp no longer lights up green continuously, and instead lights up red continuously. An alarm bell symbol also appears in the information window.

Alarm

In the event of an alarm with a red status lamp, a malfunction has occurred which the heat pump and/or the controller cannot rectify automatically.

Info / action
After activating this menu line, information about the cause of the alarm and tips on how to rectify the problem appear on the display.

Reset alarm
In many cases, selecting “Reset alarm” is sufficient for the controller/system to return to normal operation.
If the status lamp lights up green after selecting “Reset alarm”, the alarm is no longer present. If the status lamp is still red and the “Alarm” menu is visible on the display, the cause of the alarm still exists.

Aid mode
“Aid mode” is a reserve operating mode. It is used by the system to heat and/or produce domestic hot water heat even though a problem exists. It may be that the heat pump compressor is not running. In this case, any available electrical addition takes over the heating and/or domestic hot water preparation.

NOTE
To be able to select Aid mode, an alarm action must have been selected in menu 5.1.4.

NOTE
Selecting “Aid mode” is not the same as rectifying the problem that triggered the alarm. So the status lamp continues to light up red.

→ “13.3 Troubleshooting / Error messages”, page 56

If the malfunction is not shown on the display, the following may be useful:

Basic actions

► If menus for installed accessories are not shown on the display of the control panel, check whether the installed accessories are activated in the heating and heat pump controller HPC and activate installed accessories if necessary.

Check the following:

- Position of the operating switch (SF1) = ‖
- Group and main fuses of the home
- Circuit breaker for the controller (FA1)
- Residual current circuit breaker for the home
- Correctly set Load monitor (if installed)
- Air intake opening and blow out opening of the heat pump are free of obstructions (unimpeded air infeed)

If menus for installed accessories are not shown on the display of the control panel:

► Check whether the installed accessories are activated in the heating and heat pump controller HPC and activate installed accessories if necessary.

To be checked by qualified personnel only

- Communication cable is connected correctly to heat pump and hydraulic unit
- Communication cable works properly

Domestic hot water with low temperature or domestic hot water not available

Check the following:

- Is the domestic hot water filling valve closed or choked?
  ► If yes: Open the valve.
- Is the shunt (if installed) set too low?
  ► If yes: Adjust the shunt.
- Is the controller working in the wrong operating mode?
  1. Go to menu 4.2.
  2. If “auto” mode is selected, set a higher value for “Stop additional heat” in menu 4.9.2.

  ► If “manual” mode is selected, select the “Additional heat” option.
- Is there a high domestic hot water requirement?
  ► Wait until the domestic hot water has been heated. If necessary, activate temporarily increased amount of domestic hot water (Temporary lux) in menu 2.1.
- Is the domestic hot water setting too low?
  ► Go to menu 2.2 and select a higher comfort mode.
- Is the low domestic hot water consumption with “Smart control” function active?
  For low domestic hot water consumption, the system prepares less domestic hot water than is normally the case.
  ► Restart the system.
- Is too low or no op. prioritisation set for domestic hot water?
  ► Go to menu 4.9.1 and extend the period during which priority is given to domestic hot water preparation.

NOTE
Extending the period for domestic hot water preparation shortens the time span for heat production. This can lead to a lower or fluctuating room temperature.

- Is “Holiday mode” activated in menu 4.7?
  ► Go to menu 4.7 and select “off”.

Low room temperature

- Are thermostats closed in several rooms?
  ► Set the thermostats to the maximum position in as many rooms as possible and set the room temperature via menu 1.1 (instead of choking the thermostats).
- Is the controller working in the wrong operating mode?
  1. Go to menu 4.2.
  2. If “auto” mode is selected, set a higher value for “Stop heating” in menu 4.9.2.

  ► If “manual” mode is selected, select the “Heating” option.
  ► If this is not enough, also select “Additional heat”.
- Is the value set too low for the heating controller?
  ► Go to menu 1.1 “Temperature” and adjust the offset of the heating curve.
  If the room temperature is low only when it is cold outdoors, you may need to adjust the heating curve upwards in menu 1.9.1 “Heating curve”.
- Is too low or no op. prioritisation set for heat?
  ► Go to menu 4.9.1 and extend the period during which priority is given to heat production.

NOTE
Extending the period for heat production shortens the time span for domestic hot water preparation. As a result, a lower amount of domestic hot water may be available.

- Is “Holiday mode” activated in menu 4.7?
  ► Go to menu 4.7 and select “off”.
- Is the external switch contact activated to change the room heating?
  ► Check any external switch contacts.
- Is there air in the climate system?
  ► Vent the climate system.
- Are valves to the climate system or to the heat pump closed?
  ► Open the valves.

High room temperature

- Is the value set too high for the heating controller?
  - ► Go to menu 1.1 “Temperature” and adjust the offset of the heating curve.
    If the room temperature is high only when it is cold outdoors, you may need to adjust the heating curve downwards in menu 1.9.1 “Heating curve”.
- Is the external switch contact activated to change the room heating?
  - ► Check any external switch contacts.

Low system pressure

- Is there too little water in the climate system?
  - ► Fill the climate system with water and look for any leaks.
  - ► If repeated refills are required, contact your installer.

Heat pump compressor does not start

- No heating is required
  - ► The controller does not require heating or domestic hot water heat.
- Compressor is blocked due to temperature conditions
  - ► Wait until the temperature is within the operating range of the heat pump.
- The minimum time between compressor starts was not reached
  - ► Wait at least 30 minutes and then check whether the compressor has started.
- Alarm has been triggered
  - ► Follow the instructions on the display.

Add. heat only

If faults cannot be rectified and the home is not heated, the system can be operated in “Add. heat only” mode until technical assistance is provided by an installer. Only the additional heat is used for heat production in the home.

To switch the system to “add. heat only” mode:

1. Go to menu 4.2.
2. Select “Add. heat only” using the control knob and press the OK button.
3. Press the Back button to return to the main menus.

NOTE
When commissioning / operating without a heat pump, the “Communication fault” alarm may appear on the display.
The alarm is reset when the current heat pump is deactivated in menu 5.2.2 (“Installed slaves”).

13.3 Troubleshooting / Error messages

Alarm	Alarm text in the display	Description	Possible cause
3	BT3 sensor fault	Sensor fault, water inlet sensor in heat pump (BT3)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board AA23 in the heat pump
12	BT12 sensor fault	Sensor fault, water outlet sensor in heat pump (BT12)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board AA23 in the heat pump
15	BT15 sensor fault	Sensor fault, liquid line sensor in heat pump (BT15)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board AA23 in the heat pump
162	Condenser out high	Temperature too high at the condenser output, automatic reset	● Low flow rate in heating mode ● Temperatures set too high
163	Condenser in high	Temperature too high at the condenser input, automatic reset	● Temperature is produced by another heat source
183	Defrosting in progress	An operating status rather than an alarm	● Specified when the heat pump performs defrosting
220	HP alarm	High pressure pressostat (63H1) has triggered 5 times within 60 minutes or continuously for 60 minutes.	● Air circulation insufficient or heat exchanger blocked ● Interruption or short-circuit at the input for the high pressure pressostat (63H1) ● Defective high pressure pressostat ● Expansion valve not connected correctly ● Service valve closed ● Defective control board in the heat pump ● Low or no flow rate in heating mode ● Defective circulation pump ● Defective fuse, F(4A)
221	LP alarm	Value too low on the low pressure sensor 3 times within 60 minutes	● Interruption or short-circuit at the input for the low pressure sensor ● Defective low pressure sensor ● Defective control board in the heat pump ● Interruption or short-circuit at the input for the suction gas sensor (Tho-S) ● Defective suction gas sensor (Tho-S)
223	OU communication fault	Communication between the control board and communication board is interrupted. There must be 22 V direct current at the CNW2 docking on the control board (PWB1).	● The circuit breaker for the heat pump may be exposed ● Cables laid incorrectly

Alarm	Alarm text in the display	Description	Possible cause
224	Fan alarm	Deviations from fan speed in the heat pump	● The fan cannot rotate unhindered ● Defective control board in the heat pump ● Defective fan motor ● Control board in the heat pump is dirty ● Fuse (F2) triggered
230	Continuously high hot gas temperature	Temperature deviation on the hot gas sensor (Tho-D) twice within 60 minutes or continuously for 60 minutes.	● Sensor does not work (→ Heat pump operating manual, “Outdoor temperature sensor” section) ● Air circulation insufficient or heat exchanger clogged ● If the fault persists during cooling mode, the (primary) refrigerant quantity may be insufficient ● Defective control board in the heat pump
254	Communication fault	Fault when communicating with accessories board	● Heat pump disconnected ● Fault in the communication cable
261	High temperature in the heat exchanger	Temperature deviation on the heat exchanger sensor (Tho-R1/R2) five times within 60 minutes or continuously for 60 minutes	● Sensor does not work (→ “Comfort malfunction”) ● Air circulation insufficient or heat exchanger blocked ● Defective control board in the heat pump ● Too much (primary) refrigerant
262	Power transistor for warm	If the IPM (intelligent power module) outputs an FO (fault output) signal five times within an hour	● Probably due to an unstable power supply with 15V for inverter PCB
263	Inverter fault	The voltage from the inverter exceeds the limits four times within 30 minutes	● Power supply fault ● Service valve closed ● Too little (primary) refrigerant ● Compressor fault ● Defective inverter board in the heat pump
264	Inverter fault	Communication between the card for the inverter and the control board is interrupted	● Interruption at the connection between ● the boards ● Defective inverter board in the heat pump ● Defective control board in the heat pump
265	Inverter fault	Continuous deviation of the power transistor within 15 minutes	● Defective fan motor ● Defective inverter board in the heat pump
266	Insufficient (primary) refrigerant	Insufficient (primary) refrigerant detected when starting in cooling mode	● Service valve closed ● Loose contact of sensor (BT15, BT3) ● Defective sensor (BT15, BT3) ● Too little (primary) refrigerant

Alarm	Alarm text in the display	Description	Possible cause
267	Inverter fault	Failed compressor start	● Defective inverter board in the heat pump ● Defective control board in the heat pump ● Compressor fault
268	Inverter fault	Overcurrent, inverter A/F module	● Sudden power failure
271	Cold outdoor air	Temperature for BT28 below the set value that allows operation	● Cold weather conditions ● Sensor fault
272	Warm outdoor air	Temperature for BT28 above the set value that allows operation	● Warm weather conditions ● Sensor fault
277	Tho-R sensor fault	Sensor fault, heat exchanger in the heat pump (Tho-R).	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board in the heat pump
278	Tho-A sensor fault	Sensor fault, outdoor air sensor in the heat pump (Tho-A)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board in the heat pump
279	Tho-D sensor fault	Sensor fault, hot gas in the heat pump (Tho-D)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board in the heat pump
280	Tho-S sensor fault	Sensor fault, suction gas in the heat pump (Tho-S)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board in the heat pump
281	LPT sensor fault	Sensor fault, low pressure sensor in the heat pump	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board in the heat pump ● Fault in the refrigerating circuit
294	Incompatible air/water heat pump	Heat pump and hydraulic unit do not work together correctly due to technical parameters	● Heat pump and hydraulic unit are not compatible
404	BP4 sensor fault	Sensor fault, high pressure heating sensor / low pressure cooling in the heat pump (BP4)	● Interruption or short-circuit at the sensor input ● Sensor does not work (→ “Comfort malfunction”) ● Defective control board AA23 in the heat pump

14 Overview of menu structure

14.1 Menu 1 – Indoor climate

- 1 Indoor climate
  - 1.1 Temperature
    - 1.1.1 Heating
    - 1.1.2 Cooling
  - 1.3 Scheduling
    - 1.3.1 Heating
    - 1.3.2 Cooling
  - 1.9 Advanced
    - 1.9.1 Curve
      - 1.9.1.1 Heating curve
      - 1.9.1.2 Cooling curve
    - 1.9.2 External adjustment
    - 1.9.3 Min. flow line temp.
      - 1.9.3.1 Heating
      - 1.9.3.2 Cooling
    - 1.9.4 Room sensor settings
    - 1.9.5 Cooling settings
    - 1.9.7 Own curve
      - 1.9.7.1 Heating
      - 1.9.7.2 Cooling
    - 1.9.8 Point offset

→ “9.1 Menu 1 – Indoor climate”, page 9

14.2 Menu 2 – Domestic hot water

- 2 Hot water
  - 2.1 Temporary lux
  - 2.2 Comfort mode
  - 2.3 Scheduling
  - 2.9 Advanced
    - 2.9.1 Periodic increase
    - 2.9.2 Hot water recirc. *)

*) Accessories required

→ “9.2 Menu 2 – Domestic hot water”, page 19

14.3 Menu 3 – Info

- 3 Info
  - 3.1 Service info
  - 3.2 Compressor info
  - 3.3 Add. heat info
  - 3.4 Alarm log
  - 3.5 Indoor temp. log

→ “9.3 Menu 3 – Info”, page 23

14.4 Menu 4 – Min. system

- 4 Min. system
  - 4.1 Plus functions
    - 4.1.1 Pool *)
    - 4.1.3 Internet
      - 4.1.3.1 myUpLink
      - 4.1.3.8 TCP/IP settings
      - 4.1.3.9 Proxy settings
    - 4.1.5 SG Ready
    - 4.1.6 Smart price adaption™
    - 4.1.8 Smart energy source™
      - 4.1.8.1 Settings
      - 4.1.8.2 Set. Price
      - 4.1.8.3 CO2 Impact
      - 4.1.8.4 Tariff periods, electricity
      - 4.1.8.6 Tariff per., ext. shunt add
      - 4.1.8.7 Tariff per., ext. step add
    - 4.1.10 Solar electricity *)
  - 4.2 Op. mode
  - 4.4 Time & date
  - 4.6 Language
  - 4.7 Holiday setting
  - 4.11 Advanced
    - 4.11.1 Op. prioritisation
    - 4.11.2 Auto mode setting
    - 4.11.3 Degree minute setting
    - 4.11.4 Factory setting user
    - 4.11.5 Schedule blocking
    - 4.11.6 Schedule silent mode
    - 4.11.7 Tools

*) Accessories required

→ “9.4 Menu 4 – Min. system”, page 25

14.5 Menu 5 – Service

This menu is hidden in standard mode.

- 5 Service
  - 5.1 Operating settings
    - 5.1.1 Hot water settings *)
    - 5.1.2 Max. flow line temperature
    - 5.1.3 Max diff flow line temp.
    - 5.1.4 Alarm actions
    - 5.1.12 Addition
    - 5.1.14 Flow set. climate system
    - 5.1.22 Heat pump testing
    - 5.1.23 Compressor curve
  - 5.2 System settings
    - 5.2.2 Installed slaves
    - 5.2.3 Docking
    - 5.2.4 Accessories
  - 5.3 Accessory settings
    - 5.3.2 Shunt controlled add. heat *)
    - 5.3.3 Extra climate system *)
    - 5.3.6 Step controlled add. heat
    - 5.3.8 Hot water comfort *)
    - 5.3.11 Modbus *)
    - 5.3.15 GBM communication module *)
    - 5.3.21 Flow sensor / energy meter
  - 5.4 Soft in/outputs
  - 5.5 Factory setting service
  - 5.6 Forced control
  - 5.7 Start guide
  - 5.8 Quick start
  - 5.9 Floor drying function
  - 5.10 Change log

- 5.11 Slave settings
  - 5.11.1 EB101
    - 5.11.1.1 Heat pump
    - 5.11.1.2 Charge pump (G12)
  - 5.11.2 EB102
  - 5.11.3 EB103
  - 5.11.4 EB104
  - 5.11.5 EB105
  - 5.11.6 EB106
  - 5.11.7 EB107
  - 5.11.8 EB108
- 5.12 Country

*) Accessories required

→ “9.5 Menu 5 – Service”, page 37

14.6 Menu 7 – USB

This menu appears as soon as a USB stick is inserted into the USB service port on the control panel.

- 7 USB
  - 7.1 Update firmware
  - 7.2 Logging
  - 7.3 Manage settings

→ “12.3 USB service port”, page 50

15 Installation log

The heating system must be subjected to an installation check in accordance with local regulations before commissioning. This check may only be carried out by qualified personnel.

✓	Description	Comment	Signature	Date
	Electrical connections			
	Communication, heat pump			
	Connected power supply (400 V / 230 V)			
	Outdoor sensor			
	Room temperature sensor			
	Temperature sensor Domestic hot water preparation			
	Sensor, domestic hot water, top			
	External supply sensor			
	Temperature sensor, external return			
	Charge pump			
	Changeover valve			
	AUX1			
	AUX2			
	AUX3			
	AUX4			
	AUX5			
	AUX6			
	AA3-X7			
	DIP switch			
	Miscellaneous			
	Additional heat check			
	Switching valve function check			
	Charge pump function check			
	Installation check carried out on heat pump and associated equipment			

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