

Belaria® twin A (17-32)

Belaria® twin AR (17-32)

Air/water heat pump



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1. Important notes

Dear Customer,

With the purchase of this system you have made a decision for a modern and economical heating system. Continuous quality control and enhancements, as well as function tests in the factory, guarantee a technically flawless device.

Please carefully read these documents. They contain important information for the safe and thrifty operation of the system.

1.1 Important addresses and telephone numbers

Heating specialist

.....

Plumber:

.....

Electrician:

.....

1.2 System data

To be completed by the heating engineer!

Order no. / Serial no.:

.....

Heat pump type:

.....

Nominal output (kW):

.....

Hot water buffer storage tank size (if present):

.....

Calorifier:

.....

Heating circuit pump:

.....

Heating controller:

.....

Mixing valve:

.....

To be filled in by the heating specialist!

Outdoor sensor:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Room air sensor:	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Number of heating circuits:	<input type="checkbox"/> 1	<input type="checkbox"/> 2
	<input type="checkbox"/> 3	<input type="checkbox"/> ...
Legionella function activated:	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Lowest design outside temperature (°C):

.....

Heat energy demand (kW):

.....

Max. flow temperature (°C):

.....

1.3 Calculation basis

Heating curve value HC:

.....

Heating curve value MC1:

.....

Heating curve value MC2:

.....

2. Safety

2.1 General safety instructions

Installation and maintenance work can – due to the high system pressures, high temperatures and live electrical parts – be associated with hazards and may only be performed by specialists. Heat pumps may only be installed by capable specialists and only put into operation by customer service personnel that have been specially trained by Hoval for this purpose. Power supply to the system should be switched off when work is being performed on the heat pumps and safeguarded against inadvertent re-switching. Moreover, all safety instructions in the respective documents, as well as on adhesive labels on the heat pumps themselves and in other applicable safety regulations, must be observed.

Behaviour in case of danger

Disconnect the electrical power supply.

Disconnecting the electrical power supply

The heat generator can only be de-energised by disconnection from the mains (fuse). Even when the blocking switch is set to "0", the plant is still live. Electric shocks can cause fatal injuries and lead to fires.

Checking the water pressure

Check the water pressure in the system at regular intervals, as described in chapter 8.1 page 76.

Sound emissions

The Hoval Belaria® heat pump runs exceptionally smoothly, thanks to its engineering design. Nevertheless, it is important that the heating room is located as far away from noise-sensitive living quarters and closed off with a tightly sealing door.

Drying out buildings or heating screed

The heat pump is not designed for the increased heat requirement necessary for drying out buildings or heating screed. At heating return temperatures of less than +18 °C the compressor is switched off for safety reasons. Drying of the building must be done with other devices to be provided on-site.

Service and maintenance

Regularly scheduled maintenance and the examination and care of all important system parts ensures safe and thrifty system operation in the long run. We therefore recommend concluding a maintenance contract with Hoval Customer Service for this purpose.

According to EC regulation no. 842/2006, the owner of a unit with a refrigerating circuit must ensure that the unit is periodically inspected for leaks by expert technical personnel. The inspection must be logged and the document stored for at least 5 years. The inspection must be performed by certified personnel in accordance with EC regulation no. 1516/2007.

Cleaning

If necessary, the Belaria® heat pump can be cleaned with a damp cloth. The usage of cleaning agents is not recommended. It must be checked periodically if the condensate discharge is blocked or the evaporator is soiled.

Installation of additional components

The installation of additional components which have not been tested as a part of the system can cause functional impairment. Hoval will assume no warranty or liability coverage for any resultant damages.

Installation room

Adequate ventilation must be provided

- No heavy occurrence of dust
- No sustained high level of air humidity
- Protection against frost

2.2 Intended use

The Hoval Belaria® heat pump is exclusively intended for heating the heating water.

The heat produced must be carried away by the heating water.

Only use the heat pump if in perfect technical condition, as well as according to the intended use, safely and with regard to potential dangers!

The inspection and cleaning intervals stated in the documents must be complied with. Malfunctions that could impair safety must be rectified immediately!

The manufacturer/supplier will not accept any liability for any other use, or use beyond the scope of these definitions, and any resulting damage.

2.3 Explanation of the symbols

2.3.1 Warnings

**DANGER**

... indicates a situation of immediate danger which will lead to serious or fatal injuries if not avoided.

**WARNING**

... indicates a situation of possible danger which can lead to serious or fatal injuries if not avoided.

**CAUTION**

... indicates a situation of possible danger which can lead to minor or slight injuries if not avoided.

**NOTICE**

... indicates a situation of possible danger which can lead to damage to property if not avoided.

2.3.2 Icons



General warning of a danger zone.



"Warning: dangerous electrical voltage" as a warning for accident prevention. Ensures that people do not come into contact with electrical voltage. The danger sign with the black lightning symbol warns against the danger of electrical voltage.



Information:
Provides important information.

ENERGY

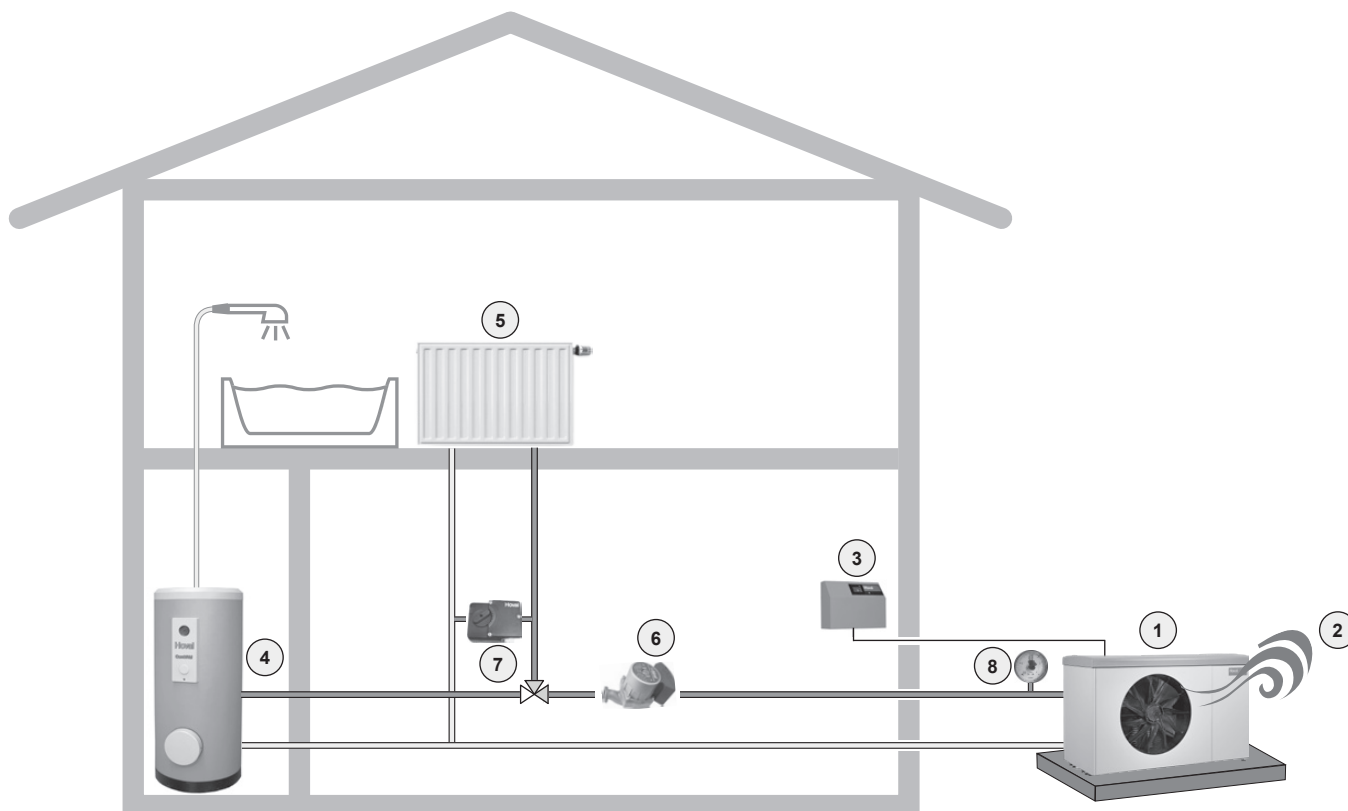


Energy-saving tip:
Provides information about saving energy.

3. Functional principle of the heating system

3.1 Construction of the plant

Depending on the type of heating system selected, some of the components might be different from the presentation below. The heating specialist will explain the system to you.



The heating water heated by the boiler is supplied to the radiators or is used to heat up the hot water (calorifier).













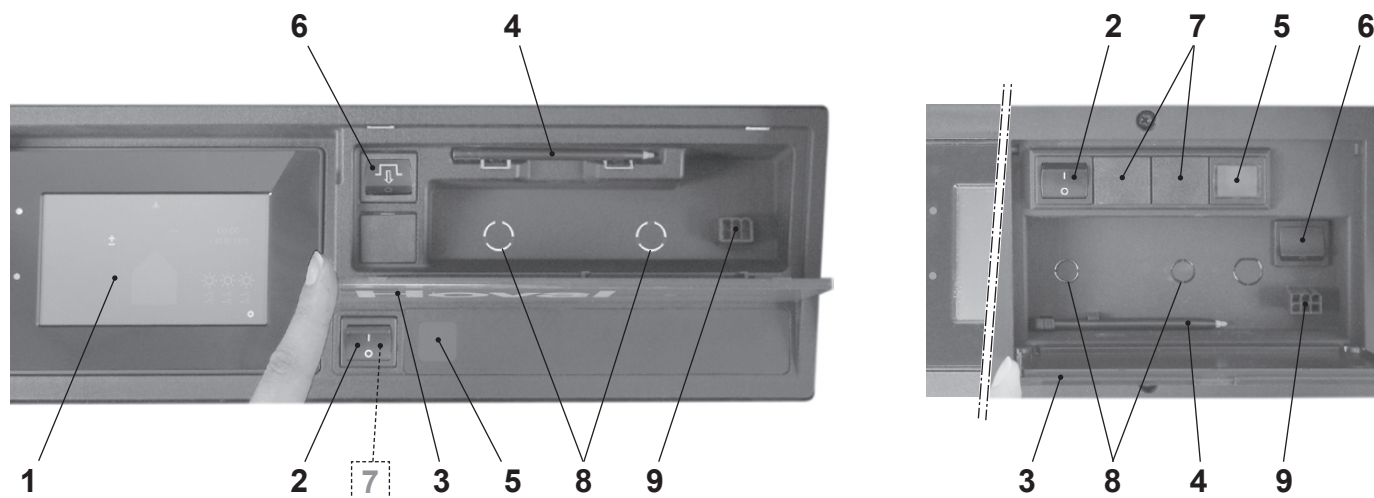

Figure	Components	Function / description
	Air/water heat pump	Extracts thermal energy from the air and transfers it to the heating water.
	Air	Heat is extracted from the ambient air and used for heating.
	Control panel / Control module	Controls and monitors the operation of the boiler. Maintains the desired room temperature optimally and fuel-efficiently, independent of the outside temperature.
	Calorifier	Holds a reserve of hot process water for household consumption (e.g. for showering).
	Radiator, underfloor heating	Releases the heat of the heating water into the room.

	Figure	Components	Function / description
6		Heating pump	Transports the heating water from the boiler to the radiators and back into the boiler, where it is re-heated.
		Heating pipes	Transport the heat which is generated (heating water) from the boiler to the radiators.
7		Mixing valve	Adjusts the heating flow temperature by mixing in colder heating return water (water flowing back from the radiator) to maintain the desired room temperature, independent of the outside temperature.
8		Pressure gauge	Displays the water pressure in the heating system.
		Safety valve	If the water pressure is too high, the valve protects the plant hydraulics.
		Air vent	Ensures that the heating pipes contain only heating water and no air.
		Diaphragm pressure expansion tank	Maintains the pressure in the system at a constant level and absorbs the expansion water.

4. Control panel on heat generator

4.1 Overview of control panel



No.	Designation	Function
1	TopTronic® E control module	Used as operator terminal for the plant that can be operated by touching with the finger or stylus (no. 4). For a detailed description of the elements, see chapter 5.6.1 page 17.
2	Blocking switch	1 = ON Heat generator in operation 0 = OFF Heat generator not in operation (plant live; no frost protection)
3	Flap	To protect the folding compartment with stylus (no. 4), reset button (no. 6) and service plug (no. 9). Safety temperature limiter optional (no. 8)
4	Stylus	Stylus for operating the control module
5	Fault lamp	Lights up if there is a heat generator fault.
6	Reset button	Used for resetting if the failure indication lamp lights up. <div data-bbox="587 1332 710 1456">  <p>The reset button is allowed to be pressed once at most. If the failure indication lamp continues to be lit, please contact Hoval Customer Service.</p> </div>
7	Bivalent switch (optional)	Used for switching priority in plants with several heat generators or for other plant-specific switching functions.
8	Additional safety temperature limiter (optional)	Optional installation of an additional safety temperature limiter. Used for interrupting the heat generator if a set temperature is exceeded.
9	Service plug	Used exclusively by the service technician.

5. Heating system control

5.1 Function of the TopTronic® E control

The TopTronic® E control module is used for controlling your heating system. Using the touch-sensitive screen (referred to below as touchscreen), you can make various settings on your system at the touch of a fingertip or using the stylus.

NOTICE



The surface of the TopTronic® E control module is not allowed to be touched with sharp or pointed objects for operation – risk of scratching.

The control module has the following functions:

- Maintaining the desired room temperature independent of the outside temperature
- Heating the living space only when required
- Producing hot water only when required
- Displaying information about the system

Further functions:

- Making it possible to set the desired temperatures and select a basic program (chapter 5.8 page 28)
- Turning the heat generator ON/OFF
- Monitoring temperatures

All the basic settings will have already been carried out by Hoval, or the heating engineer, during commissioning of the heating system. You can make further settings if you go on a journey or if your home is too cold or too warm. You can find an overview of the most frequently asked questions in chapter 5.3 page 13.



How to save energy!

For your benefit and for the environment

Using energy more efficiently by avoiding unnecessary losses! With little effort, you can optimise the operation of your heating system and save energy at the same time.

It is worth setting your personal day and week programs

You can save valuable energy and money by specifically adjusting the heating times with a personal day or week program to take account of the times when you will be present and absent. The TopTronic® E control makes it very simple to set different switching cycles for individual daily sequences (chapter 5.9 page 31).

5.2 Operating and display elements

The graphical displays on the control module can be operating or display elements.



If the TopTronic® E control module is in sleep mode, it can be “woken up” by touching the touchscreen. Sleep mode and the duration until the mode starts can be adjusted (chapter 5.12.13 page 70, nos. 3 and 4).

Operating elements



Operating elements are understood to be the buttons on the control module that can be selected by touching in order to adjust various settings. The operating elements are shown in white on a black background or in black on a white background. Values that can be changed with plus (+) or minus (−) can be touched directly. As a result, a keypad appears on the control module which helps you to make the entry.

Display elements



Display elements only provide information and cannot be selected. They are shown in colour.

Room temperature – coloured marking

21,0°C

The room temperature on the start screen is shown in three different colours. The colours have the following meaning:

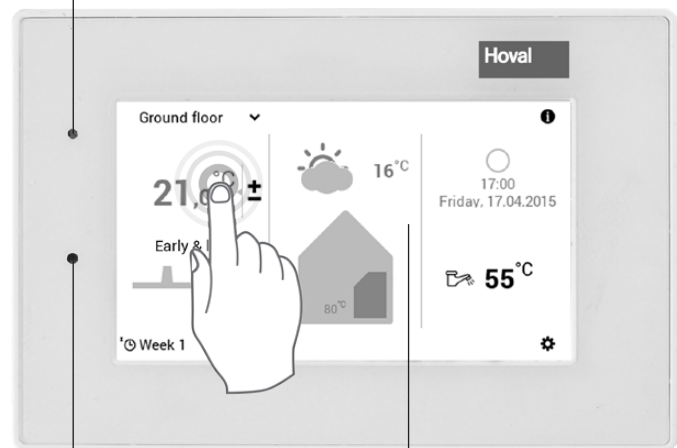
Colour	Meaning
Orange	Heating Heating operation active. The room is heated to the desired room temperature.
Blue	Cooling Cooling operation active. The room is cooled to the desired room temperature.
Grey	Inactive Heating/cooling operation inactive.

LED operating status

An LED indicator is additionally attached on the left of the control module. This displays the operating status and can light up in the following three colours:

Colour	Meaning
Green	Correct operation General information or warnings may be displayed on the control module. You as the customer do not need to do anything, however! Heating operation is continued.
Orange	Blocking The heat generator has been temporarily blocked because of an error. Contact Hoval customer service if the blocking leads to inadvertent cooling down of the heating system.
Red	Locking The heat generator sent a critical error and has been locked for safety reasons. The heat generator cannot continue to operate. Contact Hoval customer service!

LED indicator




Brightness sensor

Touchscreen

5.3 What to do if...

The following information can be used as a first level support in frequently occurring situations.

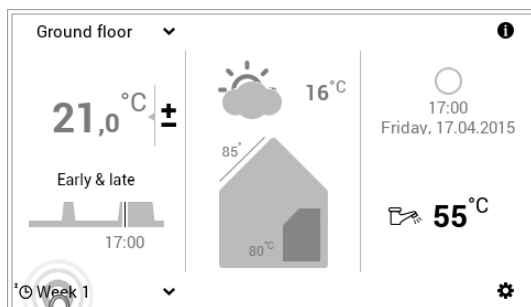
Observation	Remedy	Chapter / page
It is too cold.	Select Room temperature on the start screen and press the plus (+) button to increase the room temperature.	5.7.1 page 21
It is too warm.	Select Room temperature on the start screen and press the minus (-) button to reduce the room temperature.	5.7.1 page 21
From now on, equal day and night temperatures should be maintained continuously.	Select Basic programs on the start screen and choose the Constant basic program. Set the desired room temperature.	5.7.4 page 23
This evening, the heating should remain on for longer.	Select Day programs on the start screen. Under "Select day program", set Party and enter the duration and room temperature.	5.10.3 page 42
A larger amount of hot water is required.	Select DHW temperature (tap icon) on the start screen and press the plus (+) button to increase the water temperature. If necessary, recharge domestic hot water ("Recharging").  You can also access the function for setting the water temperature using Main menu (⚙️) > Hot water .	5.7.2 page 22 / 5.11.7 page 55
From now on, hot water but no heating is required.	Set Heating circ. to Standby basic program and Hot water to the required basic program . Heating operation OFF, hot water ON.	5.7.4 page 23
Suddenly, there is no heating or hot water; it is cold.	Check the control module for alarm messages and consult a heating engineer, if necessary. Check if there is still sufficient fuel/Electricity available, if necessary.	Alarm messages chapter
I will be absent for several hours during the day today.	Select Day programs (e.g. all day) on the start screen. Under "Select day program", set another day program or Absent (enter the duration and room temperature).	5.7.5 page 24 / 5.10.3 page 42
I am travelling for a certain period of time (e.g. two weeks).	Select Basic programs on the start screen and choose the Holiday basic program. Set the date of your return.	5.8.2 page 29
I am going away for an indefinite period of time.	Select Basic programs on the start screen and choose the Standby basic program. Change the basic program when you return.	5.7.4 page 23
In summer, it is too cold or too warm.	The basic program enables you to tell which operating mode is active. Adapt the required basic program as you need to.	5.7.4 page 23

5.4 Efficient control of the system

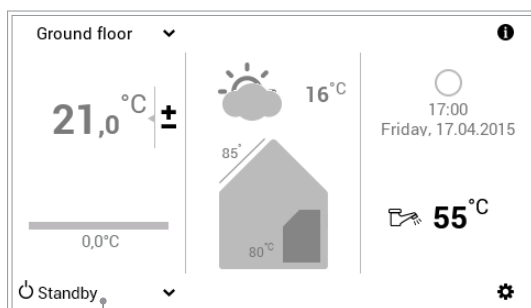
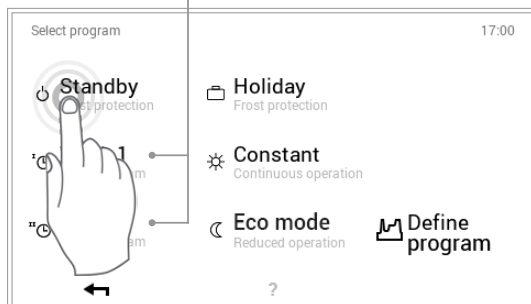
You can save a lot of energy by efficient adjustment of the heating operation. The TopTronic® E control module provides basic programs (5.8 page 28) that help you to control your system easily and specifically when you are present and absent over a fairly long period of time.

For short-term changes to the heating times, you can use various day programs in the Week 1 and Week 2 basic programs (5.10 page 40). Furthermore, the living area temperature can be increased or reduced effortlessly by selecting the current room temperature.

Basic programs

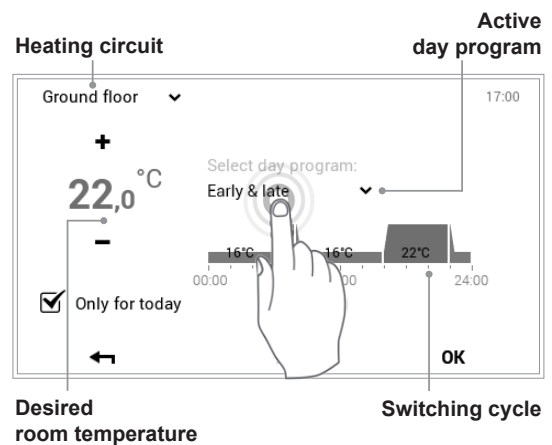
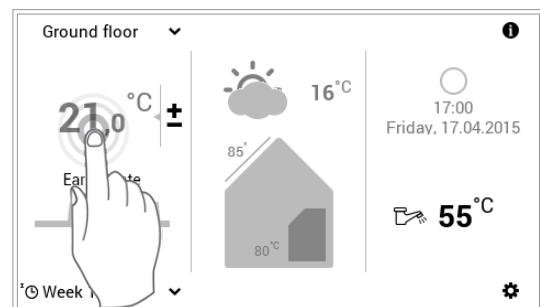


See “Week programs” chapter



New active basic program

Room temperature / day programs



Desired room temperature

Switching cycle



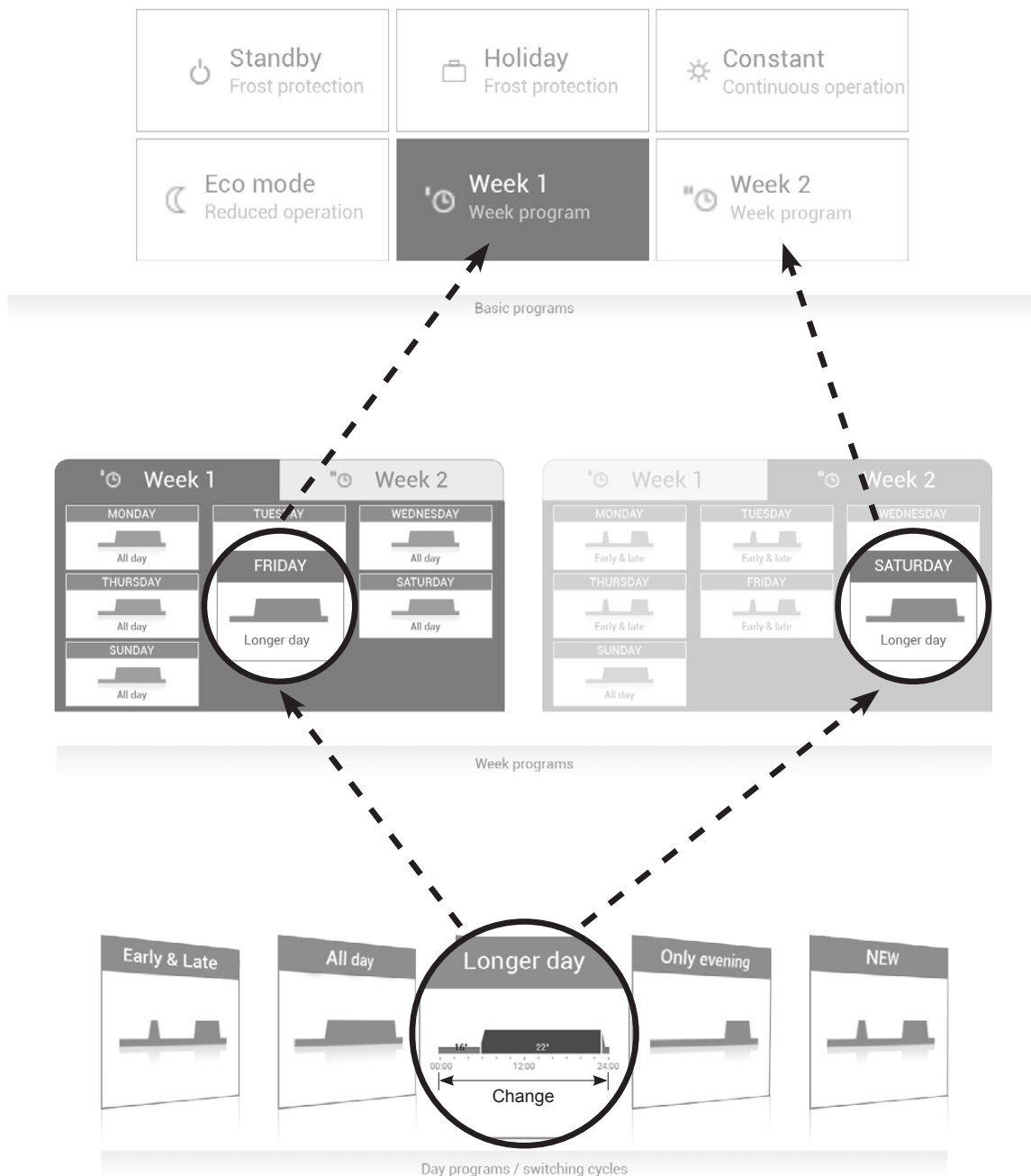
Day program “Party”

Day program “Absent”

5.5 Individual day and week programs

To save you the trouble of selecting the required basic program every day, the control module of the TopTronic® E offers you the opportunity of using week programs. In the two basic programs that can be selected, you can plan your individual week sequences and assign day programs (5.10 page 40) to adapt the heating times to your presence and absence using switching cycles. In

the basic settings, the control module already contains the two standard week programs, Week 1 and Week 2 (5.8 page 28). You can edit the two week programs individually (5.9.4 page 34) and give them any name (5.9.5 page 36).



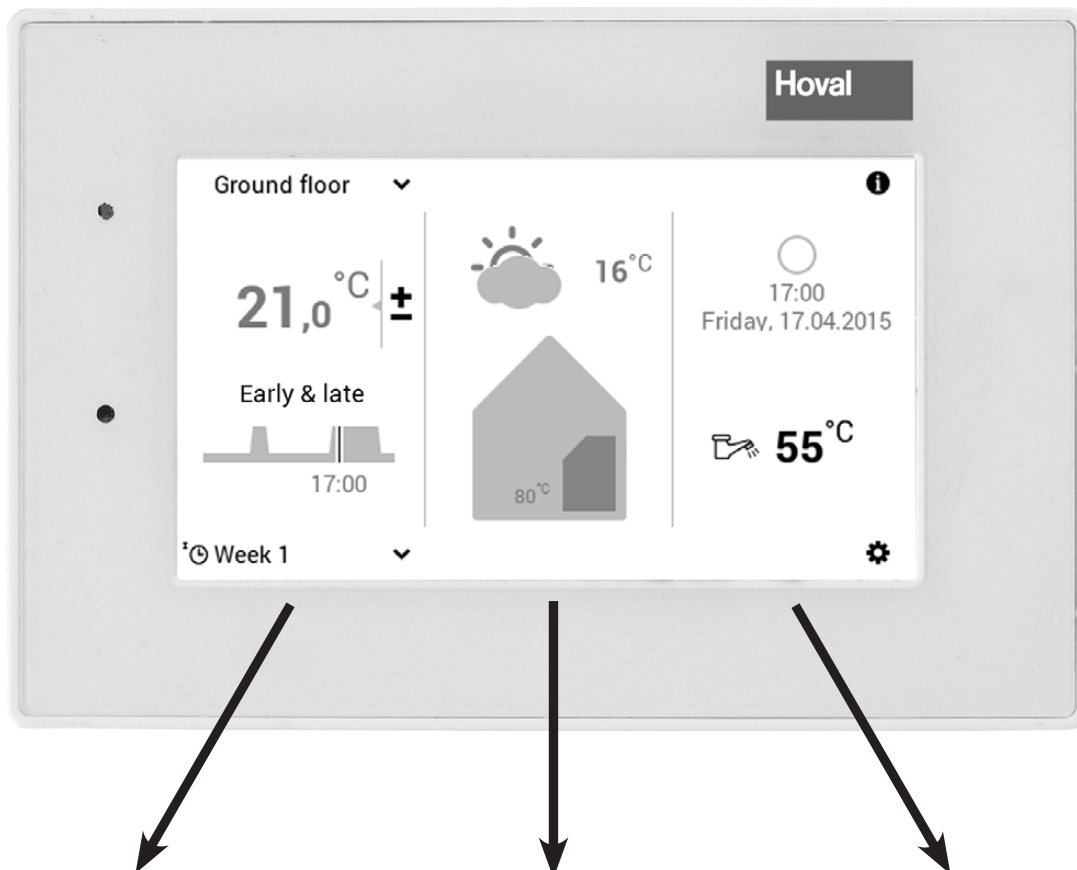
5.6 Start screen

The start screen of the control module is divided into three vertical display elements. For a detailed list of the various start screen functions, refer to 5.6.1 page 17.

NOTICE



The surface of the TopTronic® E control module is not allowed to be touched with sharp or pointed objects for operation – risk of scratching.



Information living area

The left third of the start screen contains information about the living area. Here, you can make settings for the heating circuit, current room temperature, day program and switching cycles as well as basic program (chapter 5.4 page 14).

Information heat generator

The middle third of the start screen contains information about the heat generator. This information area displays the error status, the outside temperature as well as information about the heating circuit. In addition, the user level (referred to below as authorisation level) can be displayed.

Information general

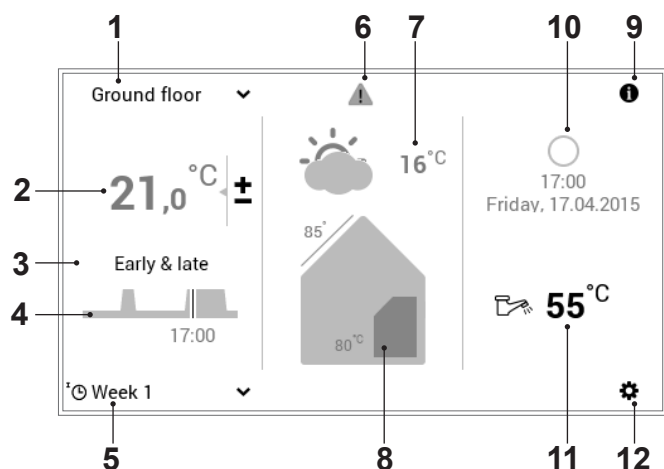
The right third of the start screen contains general information. Information about energy consumption, time/date as well as domestic hot water temperature. In connection with the TopTronic® E online, the weather forecast is displayed on the control module as an option.



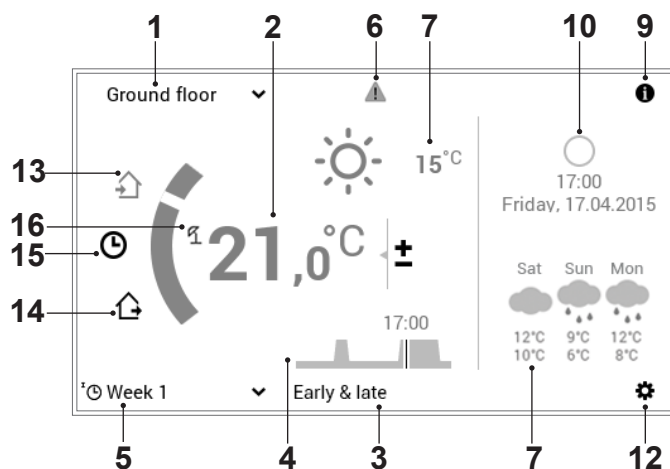
The display of the start screen is a standard view. The operating elements can be adapted by the user. Please check the start screen settings in 5.13.2 page 72 if the display is different.





5.6.1 Elements of the start screen heat generator and living area





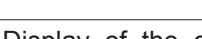

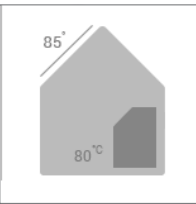

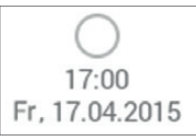











Heat generator



Living area



Position / symbol	Designation	Function	Chapter / page
1	<div>Ground floor ▼</div> <div>  Ground floor ▼ </div>	Heating circuit <p>If a house is divided into individual heating areas, the heating circuit refers to each individually adjustable portion. Each heating circuit can have individual settings assigned to it, such as basic program, day and week program as well as room temperature. If no name is shown, then there is only one heating circuit.</p> <p>Operation heating circuits</p> <div> <div>Ground floor ▼</div> <div>Individual operation of every individual heating circuit</div> </div> <hr/> <div> <div>  Ground floor ▼ </div> <div>Joint operation of all heating circuits (temperature and programs identical)</div> </div>	5.7.3 page 23
2	<div> <div>21,0°C</div> <div>±</div> </div>	Room temperature <p>Displaying the current room temperature – in room control modules and systems with room air sensor – in the selected heating circuit. Adaptation of the temperature by increasing or reducing the preset temperature (5.7.1 page 21). Display of the required room temperature in systems without room air sensor.</p>	5.7.1 page 21
3	<div>Early & late</div>	Active day program <p>Currently active day program. Only displayed if the basic programs Week 1 and Week 2 (5.8 page 28) are selected.</p>	5.7.5 page 24
4	<div>  </div>	Switching cycle <p>The diagram shows the course of the day (room temperature vertical, time horizontal) of the active basic program or the assigned day program. The vertical line represents the current status.</p>	5.10.5 page 45
5	<div>  Week 1 ▼ </div>	Basic program <p>Assignment of the basic program for the particular situation (e.g. week programs, Constant, Holiday). The basic program is used as the operating mode of the heating circuit.</p>	5.7.4 page 23


6	 Information	Operating status	Currently active operating status	7 page 74
			 No display – correct operation	
		Alarm message display	 Warning  Selection and display of alarm messages  Display authorisation level. If no level is displayed, the control is in level 0 - your operating level.	
7		Outside temperature	Display of the current outside temperature (only displayed if there is a outdoor temperature sensor). In addition, the phase of the moon is displayed at night. In connection with the TopTronic® E online, the current weather is displayed.	
8		Information active heat generator	Displays the current temperature in the active heat generator. If a solar plant is installed, the collector temperature is also displayed. If the heat generator/solar plant is currently active, this is indicated by an orange colour.	
9		Information	Detailed information about the system	5.7.7 page 27
10		Phase of the moon, time and date	Display of the current time and date. In connection with the TopTronic® E online, the current phase of the moon is displayed.	
11		Hot water	Shows the current domestic hot water temperature if necessary.	5.11 page 51
12		Main menu	This operating element accesses the main menu.	5.12.1 page 58
13		Day program	Immediate heating starts, the day program is activated.	5.10 page 40
14		Present	Immediate heating starts, the “All day” day program is activated	5.10.3 page 42
15		Week program	Back to the week program	5.7.4 page 23
16	  	Special symbols	 = summer mode  = frost protection when pump on  = screed drying	



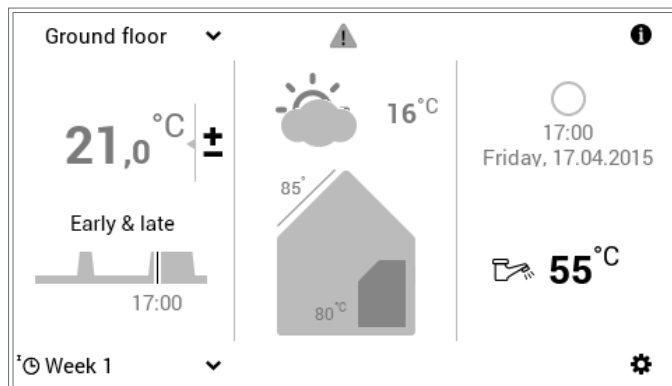
The display of the start screen is a standard view. The operating elements can be adapted by the user. Please check the start screen settings in 5.13.2 page 72 if the display is different.

5.6.2 Optional start screen

The TopTronic® E control module includes five different displays of the start screen. Depending on the individual requirement, the required start screen can be defined during commissioning and set by the heating specialist.

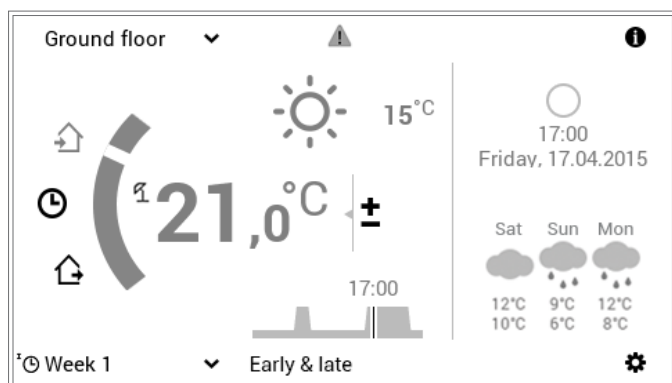
 A subsequent changeover to one of the variants described below can only be made by the heating specialist.

Start screen Heat generator



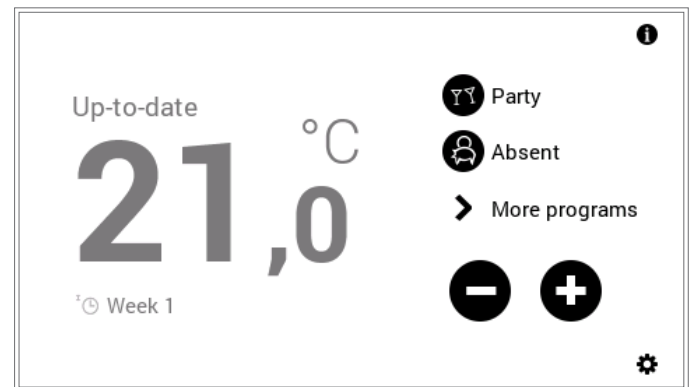
The heat generator screen shows detailed information about the heat generator. In connection with the TopTronic® E online, the weather forecast and the current phase of the moon are displayed.

Start screen Living comfort (option)



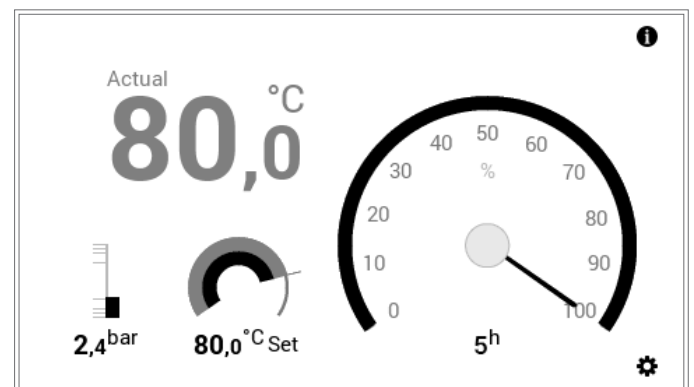
In contrast to the heat generator start screen, the "Living comfort" start screen focuses on quickly switching over between day programs (chapter 5.10 page 40) as well as absence (chapter 5.10.3 page 42). The information about heat generators is shown with a smaller size. In connection with the TopTronic® E online, the weather forecast and the current phase of the moon can also be displayed.

Start screen Living easy (option)



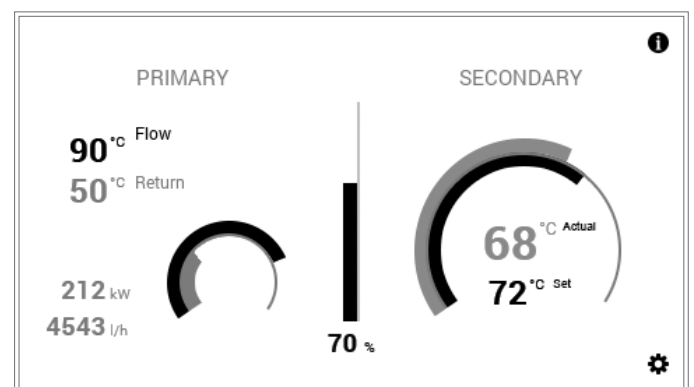
Please refer to the separate operating instructions for the room control module easy.

Start screen Industrial (option)

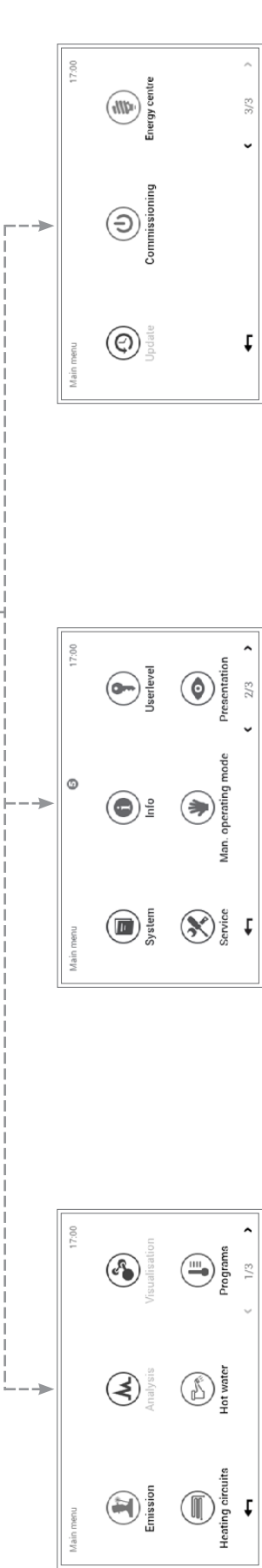
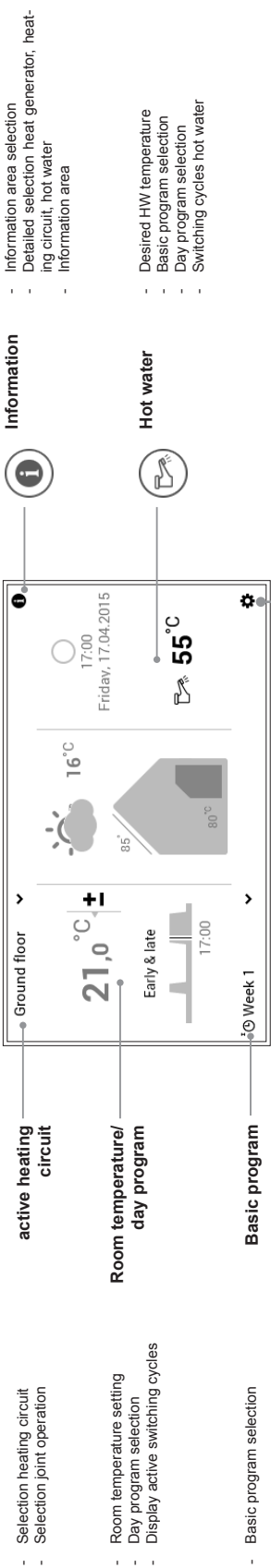


The start screen "Industrial" is usually used in large plants. As a result, only the current heat generator temperature, the water pressure (optional), the desired heat generator temperature and the operating hours are displayed.

Start screen District heating (option)



The current power (%), the temperature deviation between desired and current temperature in the graph and, optionally, the current absolute power are displayed.



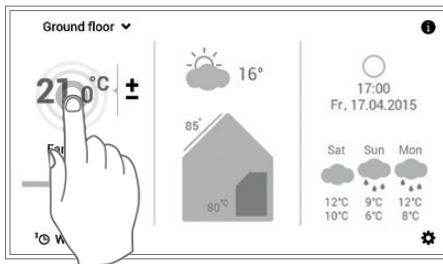
	Emission	<ul style="list-style-type: none">- Selection heat generator- Remaining run time- Output limitation- Information area	System	Display of the next due maintenance/cleaning/service
	Analysis	<ul style="list-style-type: none">- Selection heat generator, heating circuit, hot water- Selection duration- Diagram display	Info	<ul style="list-style-type: none">- Information area selection- Detailed selection heat generator, heating circuit, hot water, solar, etc.- Information area
	Visualisation	<ul style="list-style-type: none">- For solar collector systems	User level	<ul style="list-style-type: none">- User level PIN entry
	Heating circuits	<ul style="list-style-type: none">- Desired room temperature- Basic program selection- Day program selection- Switching cycles room temperature	Service	Menu item only for heating specialist
	Hot water	<ul style="list-style-type: none">- Desired HW temperature- Basic program selection- Day program selection- Switching cycles hot water	Manual mode	<ul style="list-style-type: none">- Selection heat generator/heating circuit- Detailed selection- Cooling operation/OFF/heating operation- Information
	Programs	<ul style="list-style-type: none">- Selection heating circuit/hot water- Detailed selection heating circuit/hot water- Adapting week programs- Adapting day programs	Presentation	<ul style="list-style-type: none">- Language- Colour scheme- Start screen- Backlighting- Duration until standby- Display until standby- Authorisation- Configuration analysis
	Update	Menu item only for heating specialist	Commissioning	Menu item only for heating specialist
	Power station	Influence of weather forecast on the heating. The function is only active with remote connection.	Energy centre	Menu item only for heating specialist

Functions might not be available for selection, depending on the version of your operating element.



5.7 Main settings

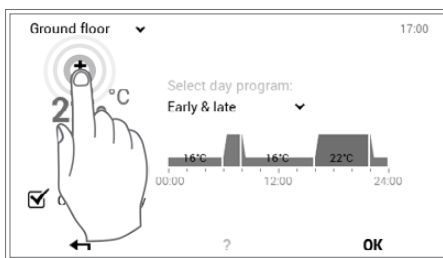
5.7.1 Changing the room temperature



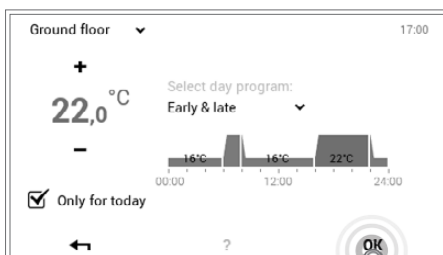
- 1 Touch the displayed room temperature to select it.



If there are several heating circuits, make sure that the correct heating circuit is displayed (example: ground floor). See “Selecting heating circuit” in chapter 5.7.3 page 23.



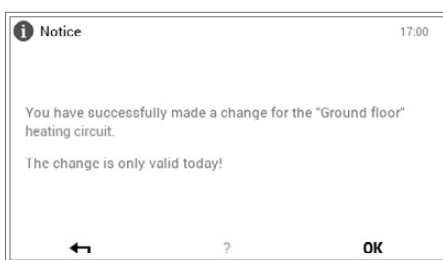
- 2 Touch the **plus (+)** or **minus (-)** button several times to set the required room temperature.



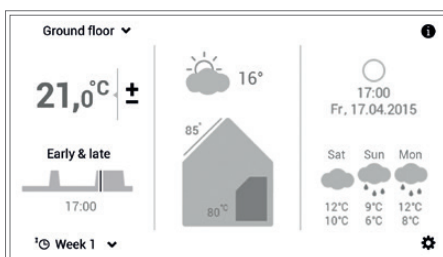
- 3 Accept the settings with **OK**.



The room temperature is only accepted in the active day program up to the end of the current cycle. Deactivate the checkbox for “**Only for today**” to store the change in the active day program.

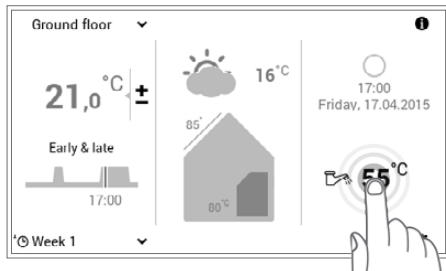


- 4 A change message is displayed. Confirm this with **OK**. Touch the **Back** (←) button if you want to edit the settings again.



- 5 The current room temperature is displayed on the start screen and goes up or down until the desired room temperature is reached.

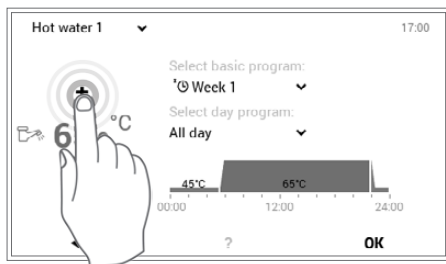
5.7.2 Adapt hot water temperature



- 1 Touch the displayed **water temperature** to select it.



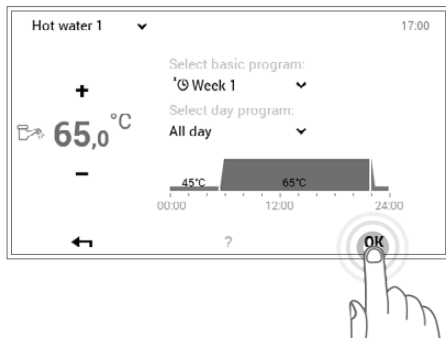
You can also access the function for setting the required water temperature using **Main menu** (⚙) > **Hot water** (5.12.1 page 58, no. 5).



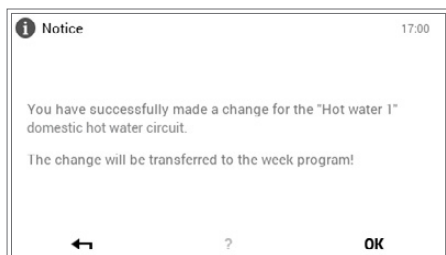
- 2 Touch the **plus (+)** or **minus (-)** button several times to set the required water temperature.



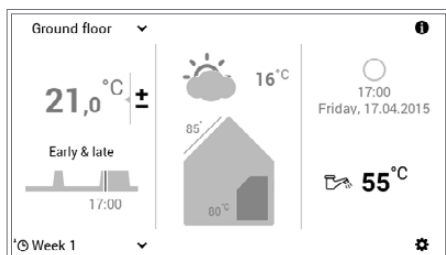
When a day program is active, the hot water temperature is only accepted in the active switching cycle.



- 3 Accept the settings with **OK**.

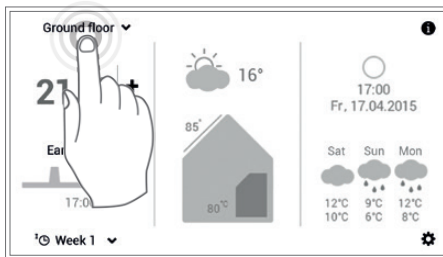


- 4 A change message is displayed. Confirm this with **OK**. Touch the Back (←) button if you want to edit the settings again.

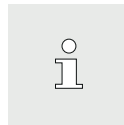


- 5 The current hot water temperature is displayed on the start screen and goes up or down until the desired water temperature is reached.

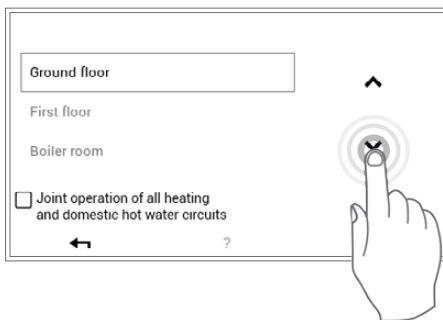
5.7.3 Select heating circuit (if there are several)



- 1 Touch the displayed **heating circuit** to select it (example: ground floor).



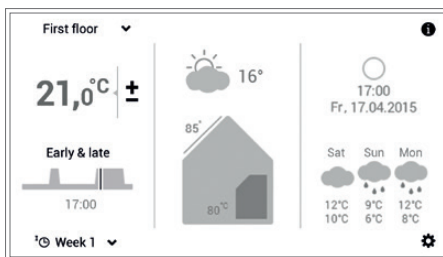
If your system only has one heating circuit, no heating circuit selection is displayed.



- 2 Use the **vertical arrows** (^v) to select the required heating circuit and confirm with **OK**.

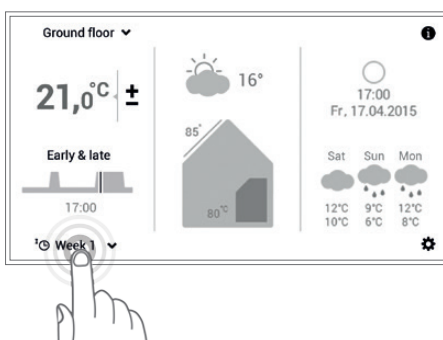


If there are several heating circuits (e.g. apartments), activating the “**Joint operation**” checkbox (5.7.8 page 27) allows all heating circuits to be controlled jointly. The room temperature, the day program and the basic program are thus changed at the same time in all circuits.

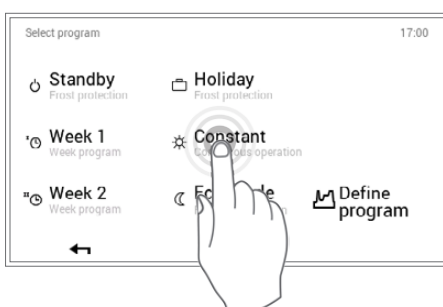


- 3 The selected heating circuit is displayed on the start screen. All settings in the left area of the control module are now accepted for this heating circuit.

5.7.4 Change the basic program (heating circuit)



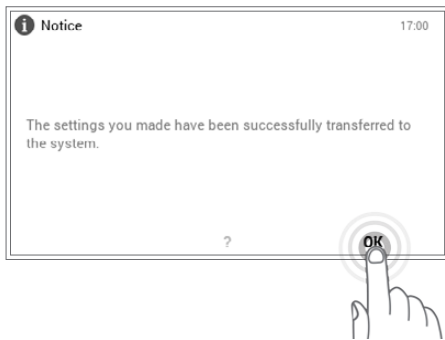
- 1 Touch the displayed **basic program** to select it (example: Week 1).



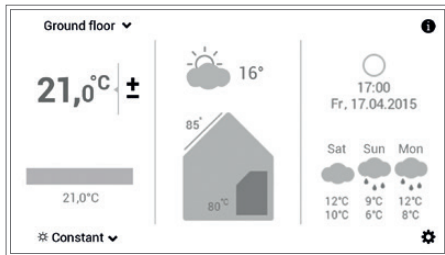
- 2 Select the desired **basic program**.



Individual basic programs additionally require the room temperature or the return date to be entered (5.8.2 page 29).

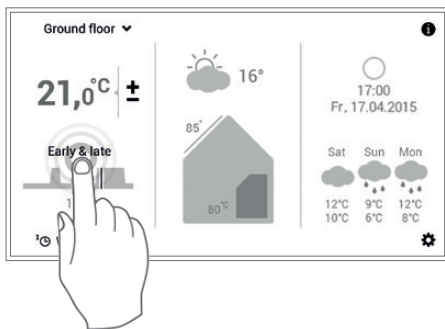


3 A change message is displayed. Confirm this with **OK**.

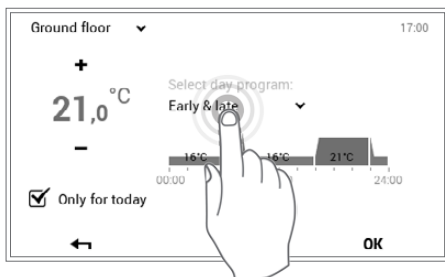


4 The new active basic program is displayed on the start screen.

5.7.5 Change active day program (heating circuit)



1 Touch the displayed **day program** to select it (example: early & late).



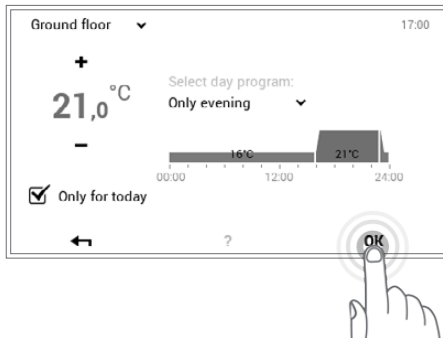
2 Touch the active **day program** to select it.



The adaptation to the day program is only accepted in the active week program for the current day. Deactivate the checkbox for “**Only for today**” to store the change in the week program.



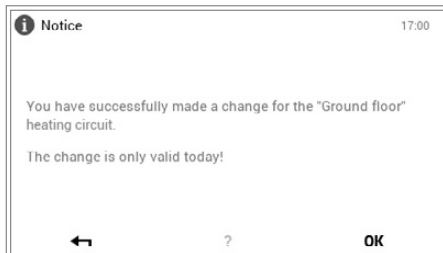
3 Use the **vertical arrows** (^v) to select the required day program and confirm with **OK**.



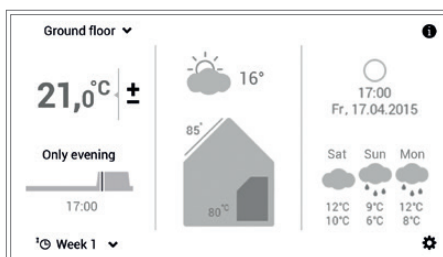
- 4 The selected day program is now displayed with the associated switching cycles as well as the room temperature.



The room temperature can be adapted again after the new desired day program has been selected.

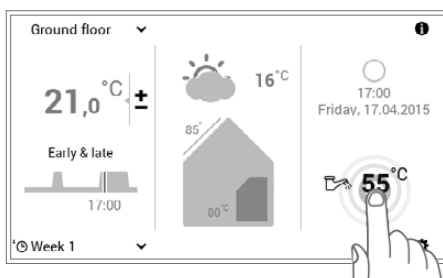


- 5 A change message is displayed. Confirm this with **OK**. Touch the **Back** (←) button if you want to edit the settings again.

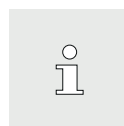


- 6 The new selected day program is displayed on the start screen.

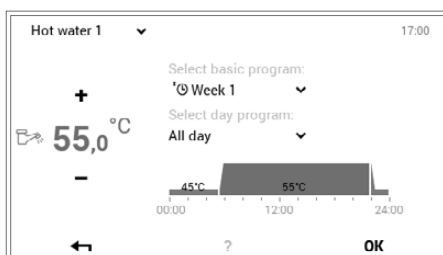
5.7.6 Change basic and day program (hot water)



- 1 Touch the displayed **hot water temperature** to select it.



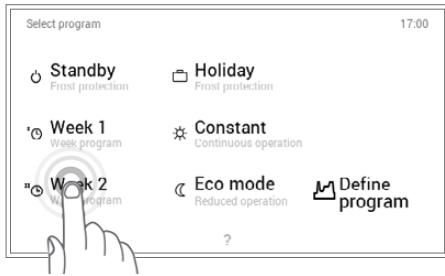
In connection with the TopTronic® E online, the weather forecast is displayed on your start screen as an option. You can also access the function for adapting the required water temperature using **Main menu > Hot water** (5.12.1 page 58).



- 2 Touch the **hot water basic program** or **hot water day program** to select it.



Hot water basic and day programs are independent from the heating circuit basic and day programs. The hot water basic program can be set to **Week 1**, for example, while the heating operation is heating with the **Constant** setting.



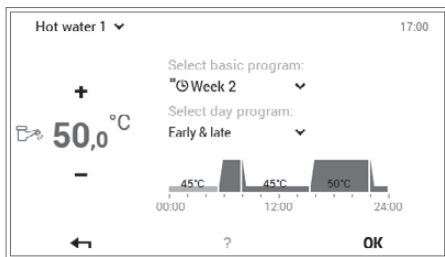
3 Select basic program:

Select the desired hot water basic program.



Select day program:

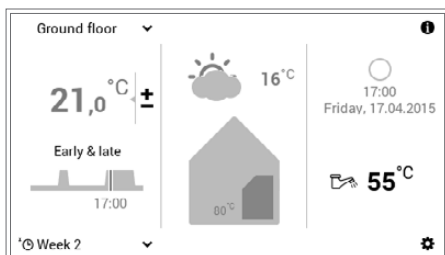
Use the vertical arrows (▲▼) to select the required hot water day program and confirm with OK.



4 The selected basic or day program for water heating is displayed on the menu. Press OK to return to the start screen.

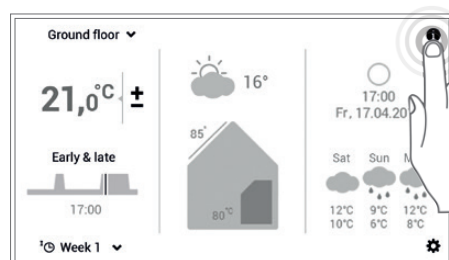


5 A change message is displayed. Confirm this with OK.



6 The current hot water temperature is displayed on the start screen and goes up or down until the water temperature of the selected basic or day program is reached.

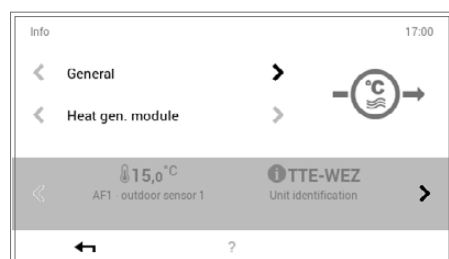
5.7.7 Call up system information



- 1 Touch the **Info** (i) button to select it.



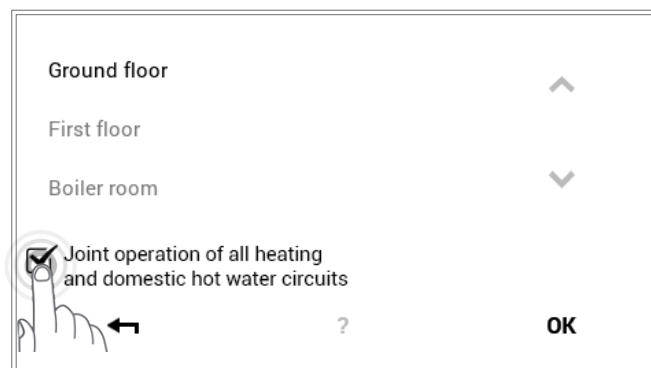
Also use the Main menu (⚙) > Info (page 2) to access the overview of the system information (5.12.2 page 59, no. 2).




- 2 The Info menu item is displayed. Information for each system area can be called up here. To do this, use the horizontal arrows (◀ ▶) to select the corresponding areas. Use the Back (◀) button to exit the menu item. The start screen appears again.

5.7.8 Joint operating mode for heating and hot water circuits

If your system has several heating circuits (e.g. apartments), the TopTronic® E control module offers the “Joint operation of all heating and domestic hot water circuits” function. For the same operating mode to be set for all heating and hot water circuits, it is necessary for the “Joint operation of all heating and domestic hot water circuits” checkbox to be activated (5.7.3 page 23, no. 2). The room temperature, the day program and the basic program are thus changed at the same time in all circuits.



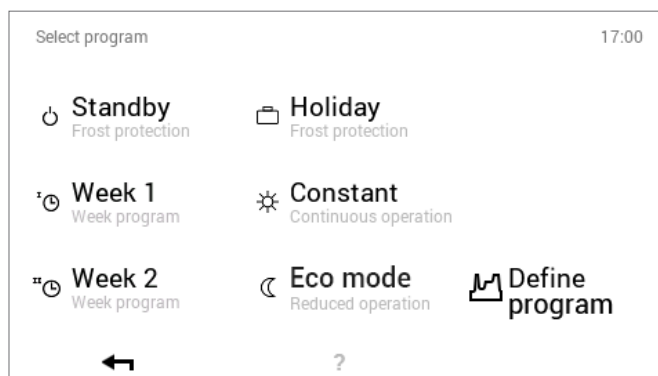
Programs are controlled as follows in joint operation:

Temperature	Synchronisation exclusively in the heating circuits  There is <u>no</u> synchronisation of the hot water temperature during the joint operating mode.
Basic programs	Synchronisation in the heating and hot water circuits
Day programs	Synchronisation exclusively in the heating circuits
“Special day programs” (Party and Absent)	Synchronisation in the heating and hot water circuits

5.8 Basic programs

Basic programs are referred to as the operating modes of the TopTronic® E control and, in contrast to the day programs (5.10 page 40), they are usually selected for a lengthy period of time. You can thus achieve targeted energy savings by deliberately selecting the right basic program.

The basic programs **Week 1** and **Week 2** are available for recurrent weekly rhythms. Here, you can plan your individual week(s) by allocating day programs (5.10 page 40) and regulate the heating operation specifically. In addition, for example, you can activate the **Standby** basic program if you will be absent for a relatively long period of time. The heating system consequently switches OFF and frost protection is activated. An overview of the functions of the basic programs is presented below.



The TopTronic® E automatically switches to summer disconnection as the outside temperatures rise, thus saving energy. This function requires an outdoor sensor, however.



Refer to 5.7.4 page 23 for a detailed description of selecting basic programs.

5.8.1 Functions of the various basic programs

Basic program	Possible occasion and functions
Week 1 Day programs	<p>You go to work during the day from Monday to Friday, and are at home on Saturday and Sunday.</p> <ul style="list-style-type: none"> • Heating operation defined by individual day programs • Hot water operation active in a separate basic program • In the standard program mornings and evenings heating operation at 22 °C, during the day and at night reduced heating operation (16 °C). On Saturdays and Sundays, heating operation during the day at 22 °C and at night reduced heating operation (16 °C). • Mo – Fr = early & late / Sa and Su = all day • For more information about “Week 1”, see chapter 5.9 page 31
Week 2 Day programs	<p>You are at home all day, every day of the week.</p> <ul style="list-style-type: none"> • Heating operation defined by individual day programs • Hot water operation active in a separate basic program • In the standard program during the day continuous heating operation at 22 °C, at night reduced heating operation (16 °C). On Saturdays and Sundays, heating operation during the day at 22 °C and at night reduced heating operation (16 °C). • Mo – Su = heating “all day” • For more information about “Week 2”, see chapter 5.9 page 31
Eco mode Reduced operation 	<p>You feel comfortable with a slightly lower temperature and you would like to save energy.</p> <ul style="list-style-type: none"> • Continuously reduced 24 h operation • Constant room temperature - optional • Hot water operation active in a separate basic program

**Constant**

Continuous operation

You would like to heat the rooms during the night, too.

- Room temperature is not reduced during the night
- Constant room temperature - optional
- Hot water operation active in a separate basic program

**Holiday**

Frost protection

You are going on holiday for e.g. 1 week and you know the date of your return.

- Heating system OFF
- No hot water operation
- Frost protection activated

**Standby**

Frost protection

You are travelling for an indefinite period of time in spring or in autumn. It does not matter if the rooms are cold on your return. You do not need warm water on your return.

- Heating system OFF
- Frost protection active
- No hot water operation

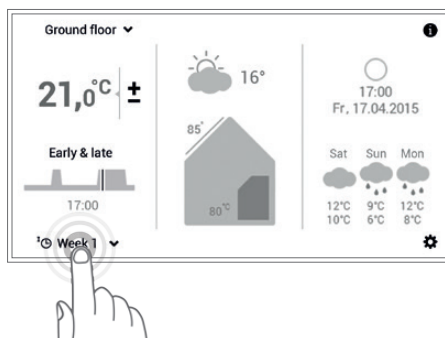


If joint operating mode is not active, the “Standby” basic program only acts on the selected heating circuit!

5.8.2 “Holiday” – enter return date

Switching to the Holiday basic program additionally requires the return date to be entered for automatic resumption of heating operation. On the entered return date

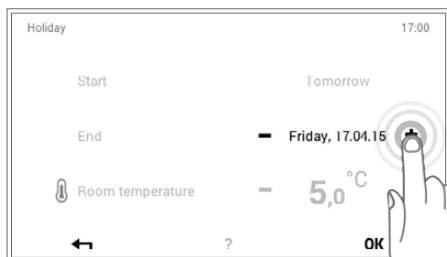
(0:00 hours), the system switches back to the previously active basic program.



1 Touch the displayed **basic program** to select it (example: Week 1).



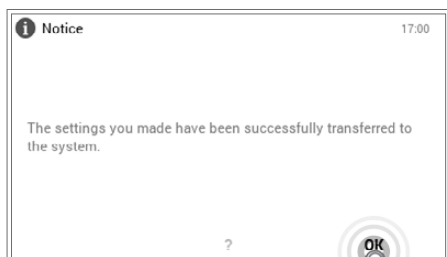
2 Select the **Holiday** basic program.



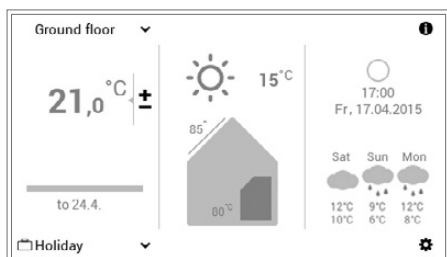
- 3 Touch the **plus (+)** button several times or select the **current date** to select the required return date (end). Accept the settings with **OK**.



Start: the system is switched OFF at 0:00 hours (frost protection activated).



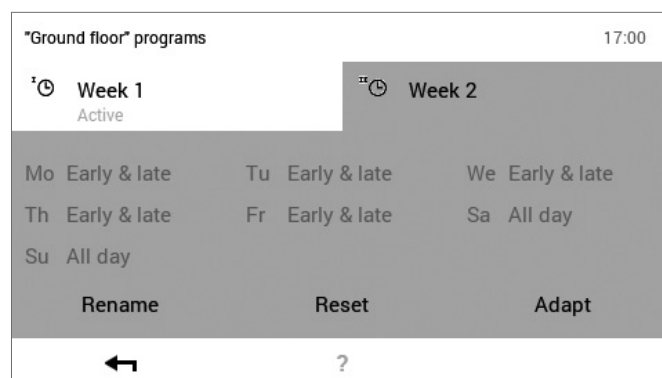
- 7 A change message is displayed. Confirm this with **OK**.



- 8 The newly selected basic program is displayed on the start screen.

5.9 Week programs

The **Week 1** and **Week 2** operating modes integrated in the basic programs are referred to as week programs. These enable you to plan your individual weekly rhythm (example: working week, early shift, late shift, etc.). To make the selection easier for you, it is possible to edit the names of the week program individually. In this case, each day of the week keeps its own day program with integrated switching cycles (5.10 page 40). You can also adapt these to your personal requirements and assign them to the week program.



Refer to 5.9.4 page 34 for a detailed description of editing the week programs.

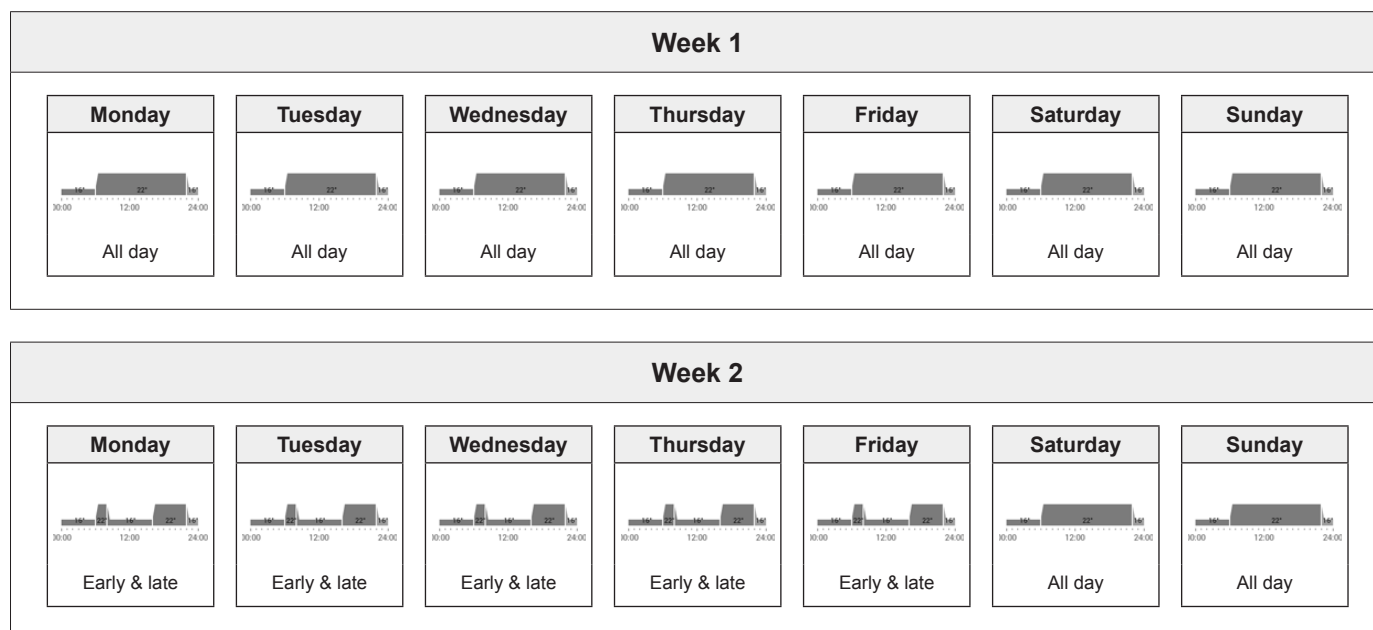
5.9.1 Week program default settings

The predefined week programs (Week 1 and Week 2) are used as default settings and can be activated using the **Week 1** and **Week 2** basic programs as operating mode. They can be edited individually (5.9.4 page 34) and renamed (5.9.5 page 36). Changed week programs can be reset to the default settings (see below) (5.9.6 page 38).



Resetting the week programs does not reset the day programs they include!

Week program default settings:



Attention: Each heating circuit has two week programs. These can be composed of five different day programs (5.10 page 40). These day programs only apply in the particular heating circuit and are independent from the programs in other circuits!

5.9.2 Notes on personal week programs

For a clear display of the week programs that you have created, you will find two empty tables below in which you can record the day programs that you have stored.

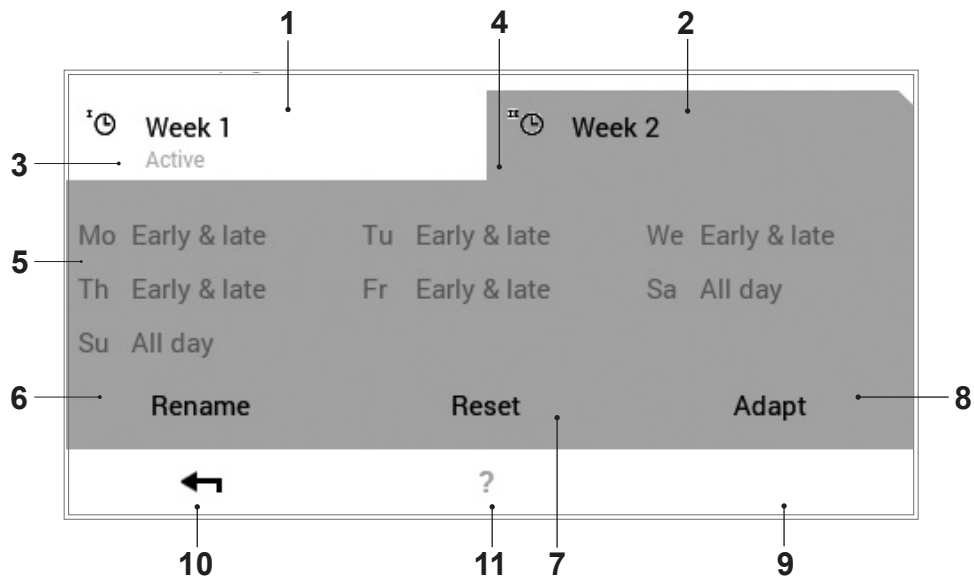


For heating systems with several heating circuits, please make a copy of the empty tables.

Week program 1: _____						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Day program:	Day program:	Day program:	Day program:	Day program:	Day program:	Day program:

Week program 2: _____						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Day program:	Day program:	Day program:	Day program:	Day program:	Day program:	Day program:

5.9.3 Week program operating elements

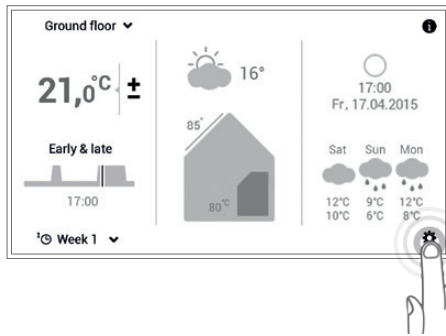


No.	Designation	Function
1	Week program 1	Heating program with individual week cycle 1
2	Week program 2	Heating program with individual week cycle 2
3	Active week program in heating circuit	Displays the active week program in the heating circuit. The message is not displayed if neither of the two week programs is operating.
4	For editing active week program	Marks the week program selected for editing (rename / reset / adapt).
5	Defined week cycle	Day programs assigned to the week days. The seven assigned day programs thus make up the week cycle or the week program.
6	Rename	Individual renaming of the selected week program (5.9.5 page 36)
7	Reset	Reset the selected week program to the default settings (5.9.6 page 38)
8	Adapt	Assignment of the day programs to the individual days of the week (5.9.4 page 34)
9	OK	Save (OK) the changes in the selected week program and return to the previous screen
10	Back	Return (←) to the previous screen. Changes made are not accepted/stored.
11	Help	Summarised information about the screen area shown above

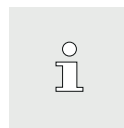


The illustrated screen is the standard view. Various elements can be renamed and adapted by the user in the menu.

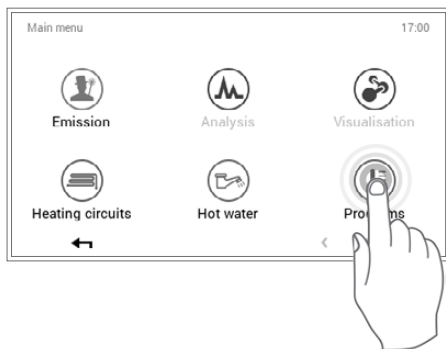
5.9.4 Adapt week program



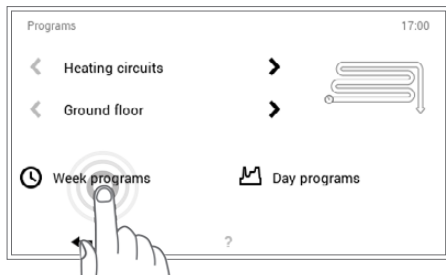
- 1 Touch the **Main menu** (⚙️) button to select it.



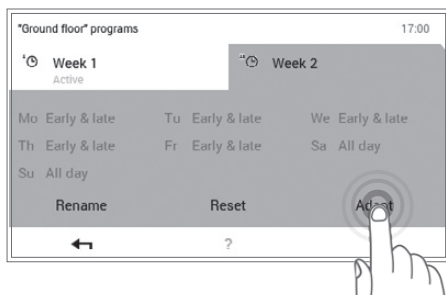
“Adapt week program” is also possible using Basic program
 ⌚ Week 1 > 📊 “Define program”.



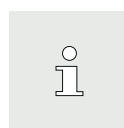
- 2 Touch the **Programs** button to select it.



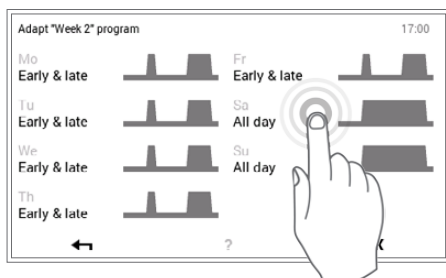
- 3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Week programs**.



- 4 Select the required week program (example: Week 2). Touch the **Adapt** button to make settings in the selected week program.



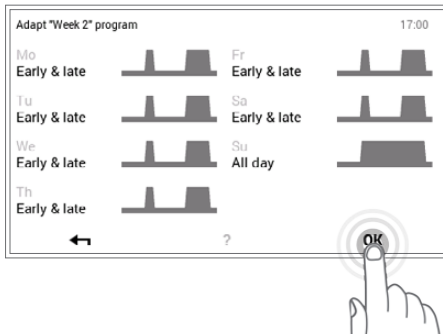
The names of the week programs (Week 1 and Week 2) may be different if they have already been changed.



- 5 Select the required **week day** to assign a new day program to it.



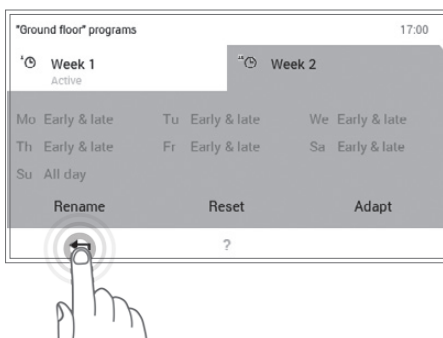
- 6 Use the **vertical arrows** (^v) to select the new day program and confirm with **OK**.



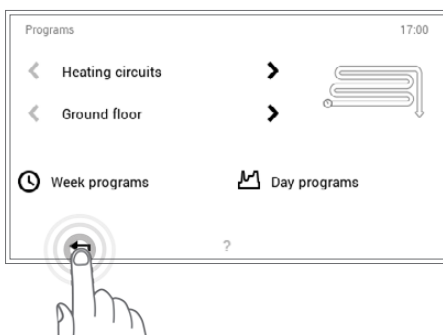
- 7 The overview of the selected week program opens again. Press **OK** to accept the adaptation.



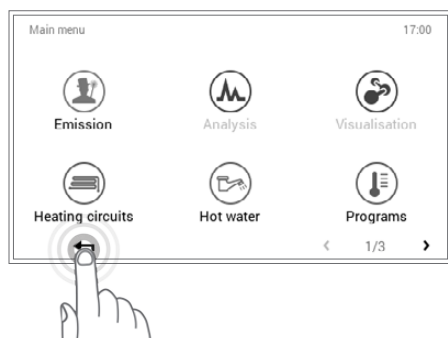
- 8 A change message is displayed. Confirm this with **OK**.



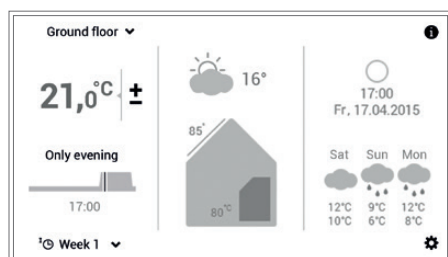
- 9 The adaptations are displayed in the selected week program. Press **Back** (←) to return to the menu item.



- 10 Touch **Back** (←) to close the **Programs** menu item.

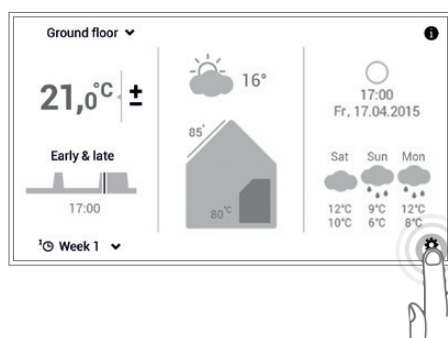


11 Select **Back** (←) again to close the main menu.

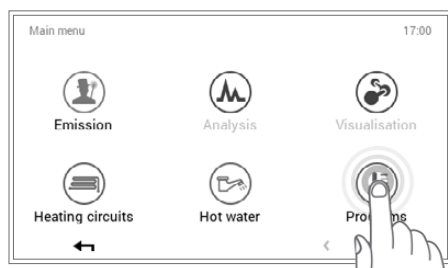


12 If the week program is active, the settings are displayed on the start screen.

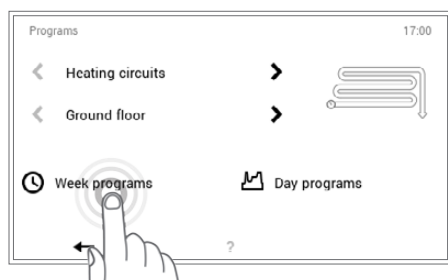
5.9.5 Rename week program



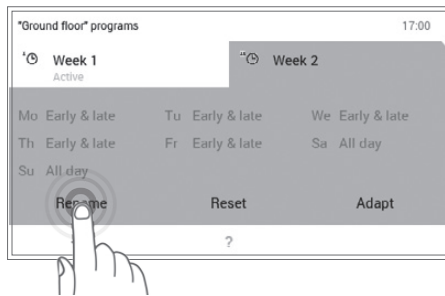
1 Touch the **Main menu** (⚙) button to select it.



2 Touch the **Programs** button to select it.



3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Week programs**.



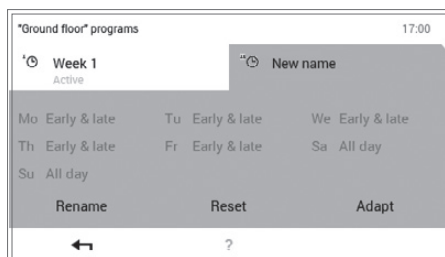
- 4 Select the required week program (example: Week 2). Touch the **Rename** button to select it.




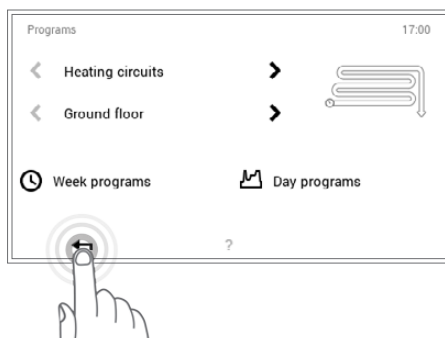
The names of the week programs (Week 1 and Week 2) may be different if they have already been changed.




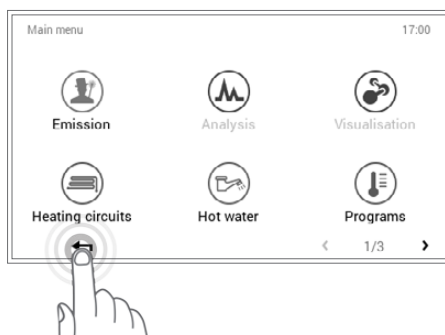
- 5 A **keypad** appears on the screen that you can use for renaming the selected week program. Press **OK** to accept the entry.



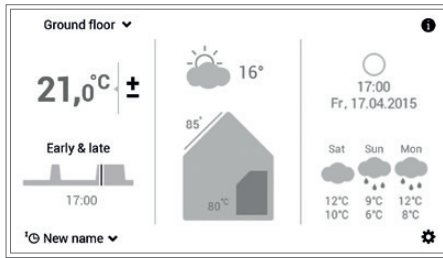
- 6 The new name is displayed in the selected week program. Press **OK** or **Back** () to return to the menu item.



- 7 Touch **Back** () to close the **Programs** menu item.

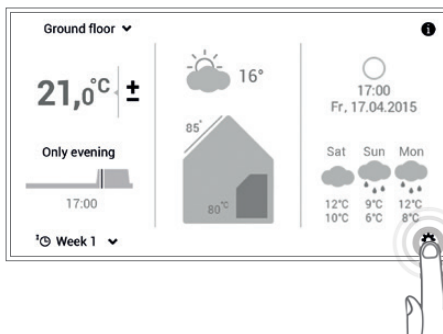


- 8 Select **Back** () again to close the main menu.

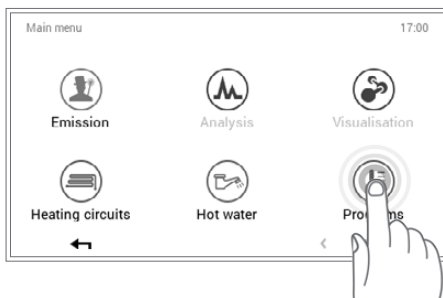


- 9 If the newly named week program is active as the basic program, the new name is displayed on the start screen.

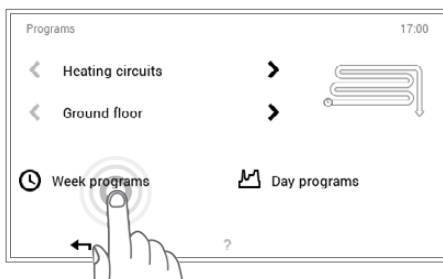
5.9.6 Reset week program



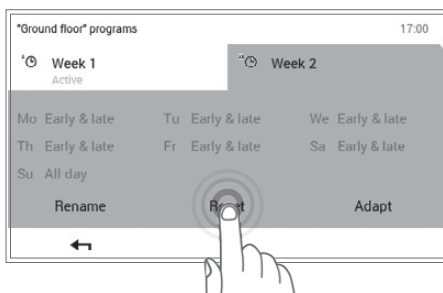
- 1 Touch the **Main menu** (⚙️) button to select it.



- 2 Touch the **Programs** button to select it.



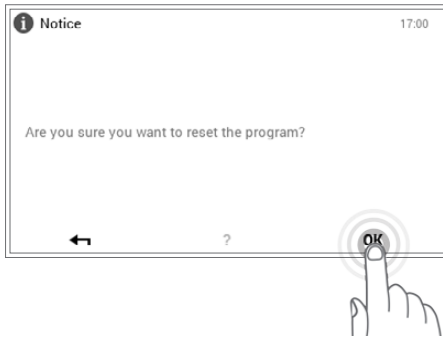
- 3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Week programs**.



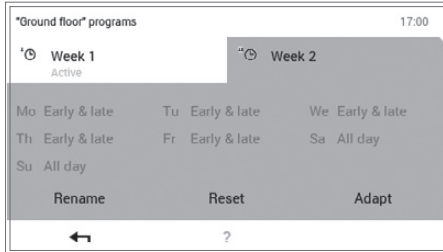
- 4 Select the required week program (example: Week 2). Touch the **Reset** button to reset the settings in the selected week program to their default values.



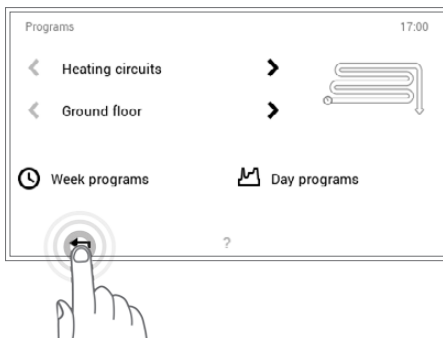
The names of the week programs (Week 1 and Week 2) may be different if they have already been changed.



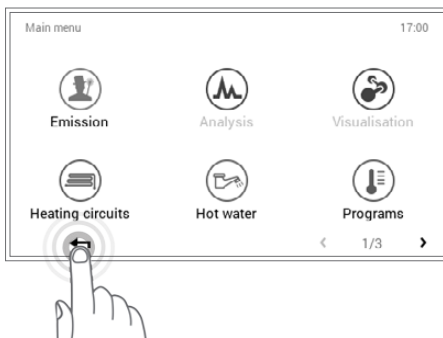
- 5 A confirmation message is displayed. Confirm this with **OK**. Press **Back** () to go back without resetting the program.



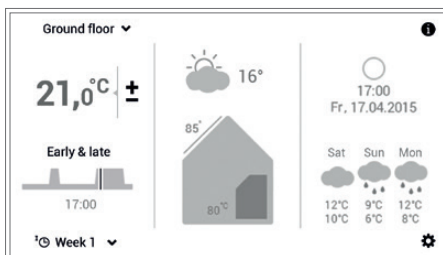
- 6 The pre-programmed standard program is displayed in the selected week program. Press **OK** or **Back** () to return to the menu item.



- 7 Touch **Back** () to close the **Programs** menu item.



- 8 Select **Back** () again to close the main menu.



- 9 If the reset week program is active, the default settings are displayed on the start screen.

5.10 Day programs / switching cycles

Day programs are elements which are subordinate to the week program and contain what are referred to as switching cycles with corresponding room temperature specifications. You can adapt day programs and switching cycles to meet your particular requirements. Thus, for example, the heat output can be reduced for regular and recurrent periods of absence (e.g. working day) or the temperature can be specifically adapted for presences with different time periods.







- The heating circuit day programs/switching cycles are independent from the hot water day programs (5.11 page 51).
- The preset day programs with defined switching cycles can be adapted and re-named.
- The switching cycles of a day program are only active if the corresponding week program is selected as the basic program.
- A maximum of six switching cycles are possible for each day program.

5.10.1 Default settings for day programs / switching cycles

In the factory setting, the names and the switching cycles of the day programs are predefined. Two of these standard day programs (all day and early & late) are already assigned to both week programs **Week 1** and **Week 2**. If you adapt these two day programs to your individual requirements, you need to consider that both week programs are also changed (5.5 page 15). You can edit the default settings listed below as you require (5.10.5 page 45), rename them at any time (5.10.6 page 47) and reset to the default settings (5.10.7 page 49).

Default settings for day programs

Day programs	Switching cycle / temperature			Example
	from	to	°C	
All day				I work at home and I am present all day.
	00:00	06:00	16	
	06:00	22:00	22	
	22:00	00:00	16	
Longer day				I am at home all day and I go to bed later in the evening.
	00:00	06:00	16	
	06:00	23:00	22	
	23:00	00:00	16	
Early & late				I go to work at 08:00 hours in the morning and I do not return home until 17:00 hours in the evening.
	00:00	06:00	16	
	06:00	08:00	22	
	08:00	16:00	16	
	16:00	22:00	22	
	22:00	00:00	16	
Only evening				I do not need any heating in the morning before I set off to work. I get back home at 17:00 hours in the evening.
	00:00	16:00	16	
	16:00	23:00	22	
	23:00	00:00	16	

NEW



from	to	°C
00:00	06:00	16
06:00	08:00	22
08:00	16:00	16
16:00	22:00	22
22:00	00:00	16

I create my own day program and adapt the switching cycles individually to my requirements. I use the switching cycles of the "Early & late" day program as a template.

5.10.2 Notes on personal day programs

For a clear display of the day programs that you have created, you will find six tables below in which you can make a note of the stored switching cycles and temperature settings. Please remember that only six day programs

can be recorded in the tables. For systems with several heating circuits, please make a copy of the empty tables.

Day program for living area (heating circuit):			
Name of day program	from	to	°C

Day program for living area (heating circuit):			
Name of day program	from	to	°C

Day program for living area (heating circuit):			
Name of day program	from	to	°C

Day program for living area (heating circuit):			
Name of day program	from	to	°C



Day program for living area (heating circuit):			
Name of day program	from	to	°C

Day program for living area (heating circuit):			
Name of day program	from	to	°C

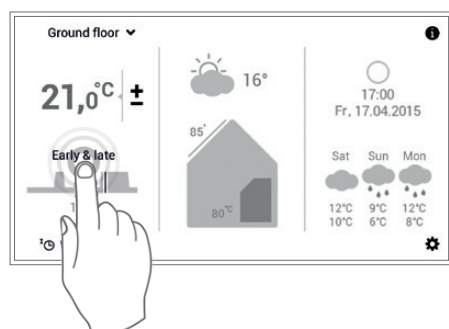
5.10.3 Party and absent

On the TopTronic® E, the day program can be changed at any time when a week program is active (5.7.5 page 24). If you come home earlier, for example, you can immediately activate the heating with a suitable day pro-

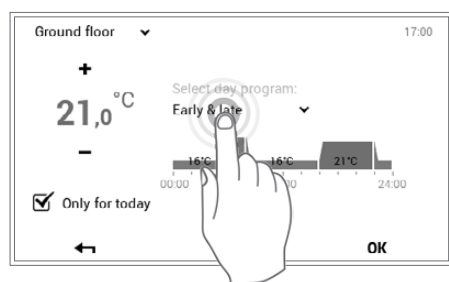
gram. Furthermore, if you are going to have a party or if you will be absent for a short time, you can extend or reduce the heating time with the “Party” or “Absent” programs.

Day program	Possible occasion and function
 Party	<p>You have guests in the evening.</p> <ul style="list-style-type: none"> Continued heating operation at the entered room temperature until the end of the desired period of time (duration) The room temperature should not be lowered at the preset time (day program)
 Absent	<p>You leave home in the afternoon and will only come back late in the evening.</p> <ul style="list-style-type: none"> (Reduced) heating operation at the desired room temperature until the end of the entered period of time (duration) Calorifier frost protected (5 °C)

The two “Party” and “Absent” programs can be selected as follows:



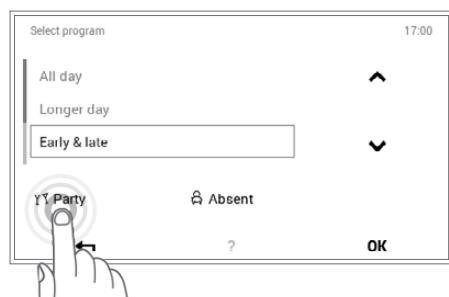
1 Touch the displayed **day program** to select it (example: early & late).



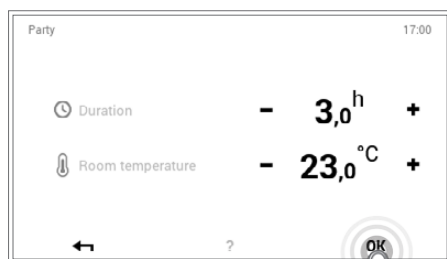
2 Touch the active **day program** to select it.



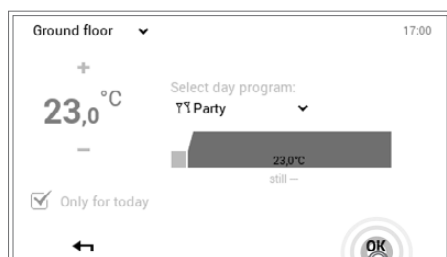
The adaptation to the day program is only accepted in the active week program for the current day. Deactivate the checkbox for “**Only for today**” to store the change in the week program.



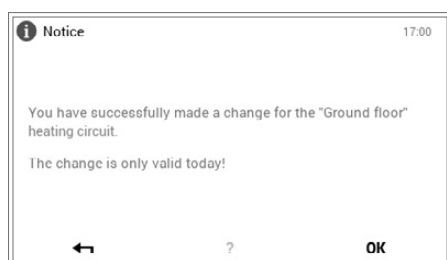
3 Select the desired program, **Party** or **Absent**.




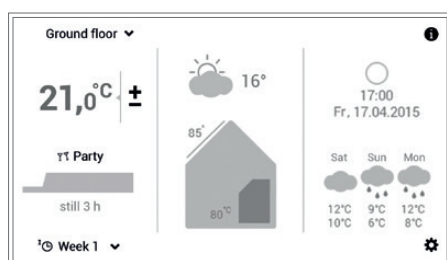
- 4 Press **plus (+)** and **minus (-)** to set the required duration and room temperature and confirm with **OK**.



- 5 The active day program and the set room temperature can be seen on the screen. Accept the setting with **OK**.



- 6 A change message is displayed. Confirm this with **OK**. Touch the **Back** () button if you want to edit the settings again.

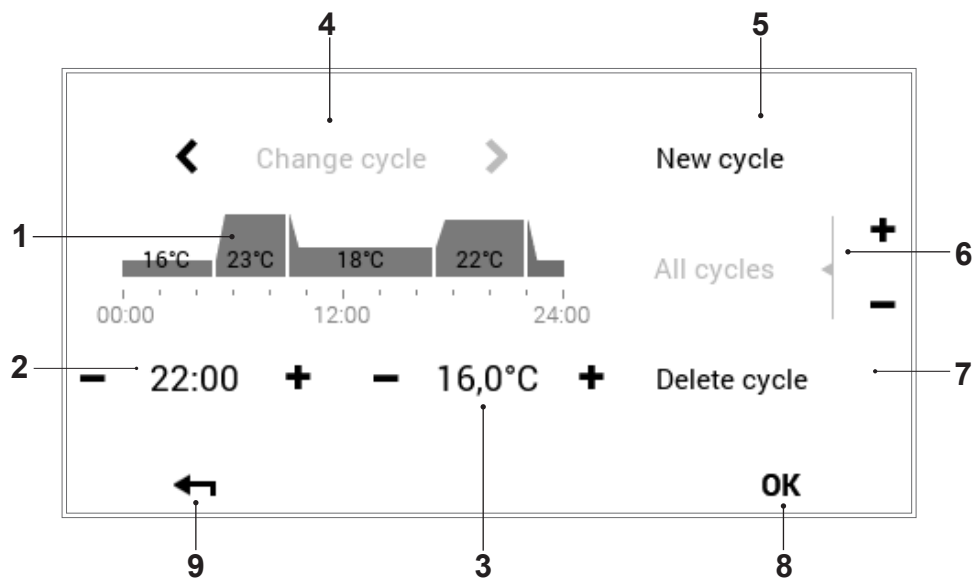


- 7 The new selected day program (Party) is displayed on the start screen.



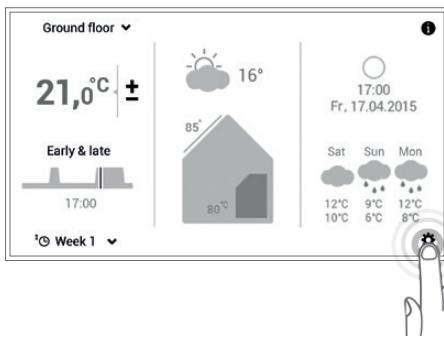
“Party” and “Absent” are special day programs and cannot be included in week programs.

5.10.4 Day program / switching cycles operating elements

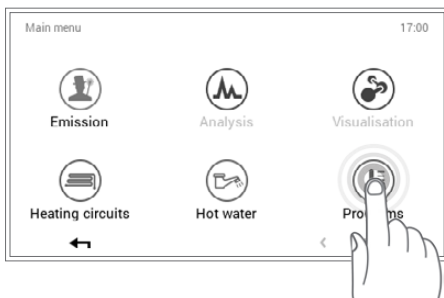


No.	Designation	Function
1	Day program / switching cycles	For adapting the selected day program with time cycles and corresponding temperature specifications. The time period marked in yellow shows the cycle that is active during the editing. The horizontal arrows (◀ ▶) are used for selecting the required period of time. Alternatively, the switching cycle to be edited can also be touched directly.
2	Start time – active cycle	Displays the start time of the selected cycle. Changes can be made to the start time using plus (+) and minus (–).
3	Temperature – active cycle	Represents the room temperature defined in the cycle. The temperature can be changed in the active cycle with plus (+) and minus (–).
4	Change cycle	Switch the cycle to be edited to the left or right. Alternatively, the switching cycle to be edited can also be touched directly.
5	New cycle	Create a new time cycle. The new cycle is added at the end of the day program.
6	All cycles	Increase or reduce the temperature of all cycles with plus (+) and minus (–) in the complete day program.
7	Delete cycle	Remove the selected cycle.
8	OK	Save (OK) the changes in the selected day program and return to the previous screen.
9	Back	Return (↶) to the previous screen.

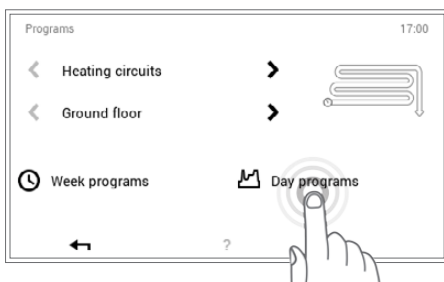
5.10.5 Change room temperatures and switching cycles in the day program



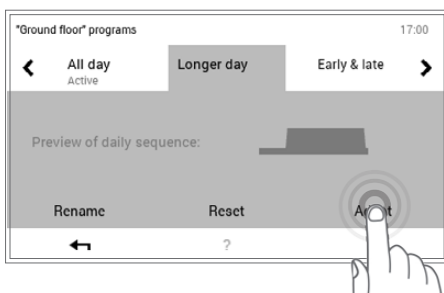
1 Touch the **Main menu** (⚙️) button to select it.



2 Touch the **Programs** button to select it.



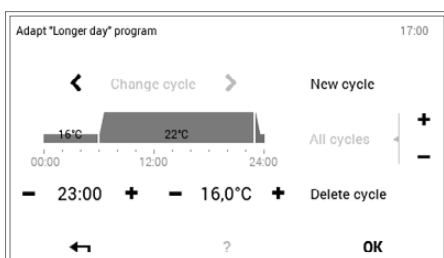
3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Day programs**.



4 Select the desired day program (example: longer day) with the **horizontal arrows** (◀ ▶). Touch the **Adapt** button to make settings in the selected day program.



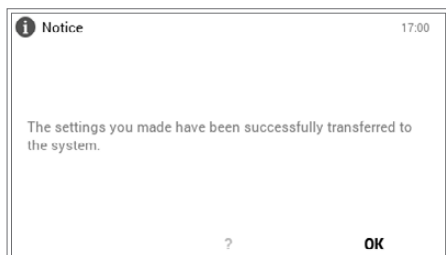
The names of the day programs may be different if they have already been changed.



5 The overview of the selected day program is opened. Various adaptations can be made to the selected day program/switching cycle using **plus** (+) and **minus** (−). Press **OK** to accept the entry.



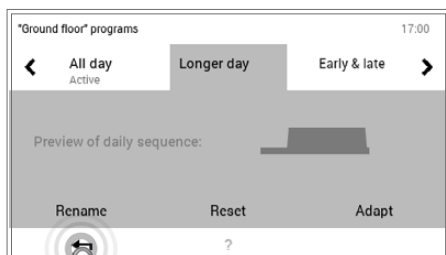
Refer to 5.10.4 page 44 for a detailed description of the day program overview.



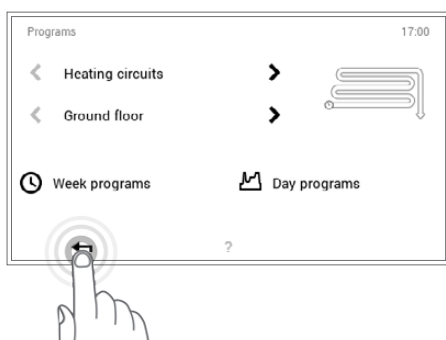
- 6 A change message is displayed. Confirm this with **OK**.



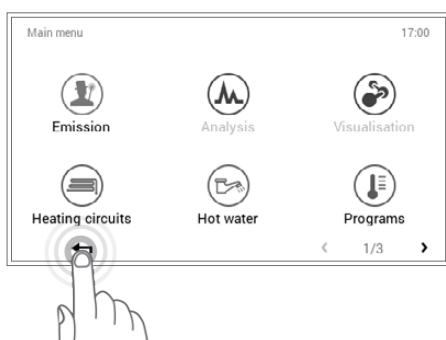
The change now acts both in week program 1 and in week program 2 (on all days of the week to which the changed day program is assigned).



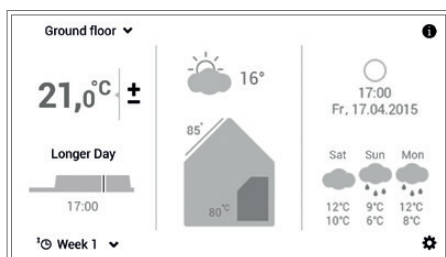
- 7 The adaptations are displayed in the selected day program. Press **Back** (←) to return to the menu item.



- 8 Touch **Back** (←) to close the **Programs** menu item.

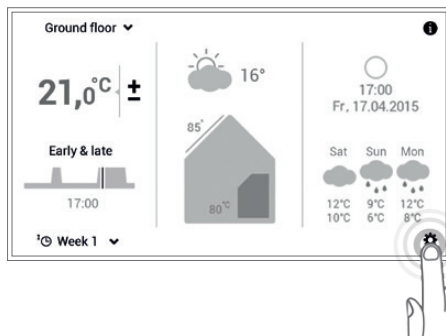


- 9 Select **Back** (←) again to close the main menu.

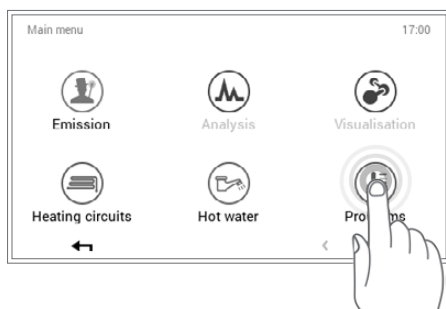


- 10 If the edited day program is active, the settings are displayed on the start screen.

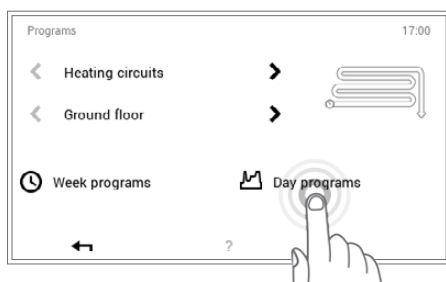
5.10.6 Rename day program



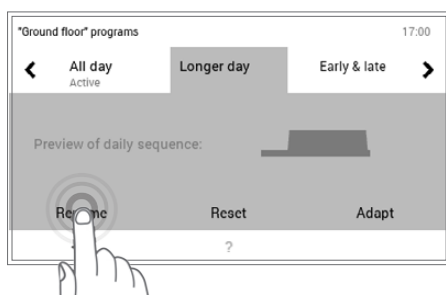
1 Touch the **Main menu** (⚙️) button to select it.



2 Touch the **Programs** button to select it.



3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Day programs**.



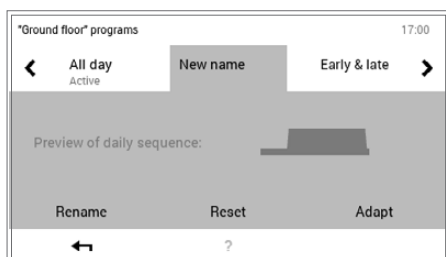
4 Select the desired day program (example: longer day) with the horizontal arrows (◀ ▶). Touch the **Rename** button to select it.



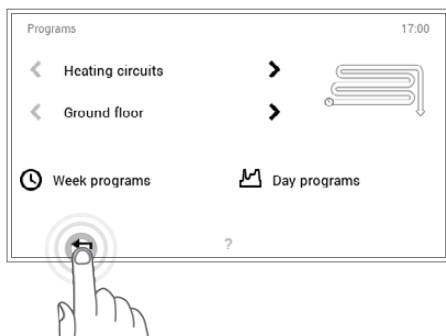
The names of the day programs may be different if they have already been changed.



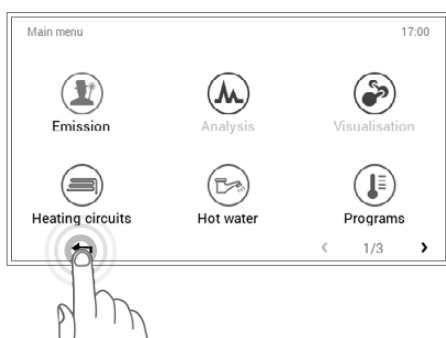
5 A keypad appears on the screen that you can use for renaming the selected day program. Press OK to accept the entry.



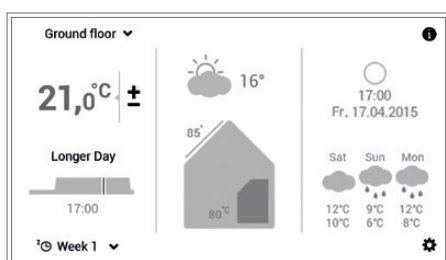
- 6 The new name is displayed in the selected day program. Press **Back** (←) to return to the menu item.



- 7 Touch **Back** (←) to close the **Programs** menu item.

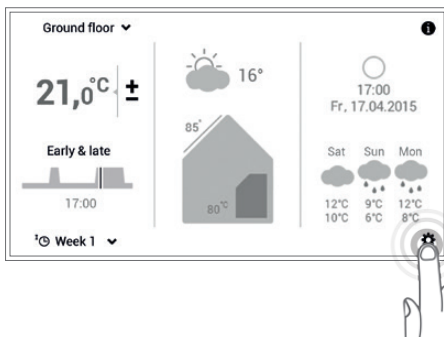


- 8 Select **Back** (←) again to close the main menu.

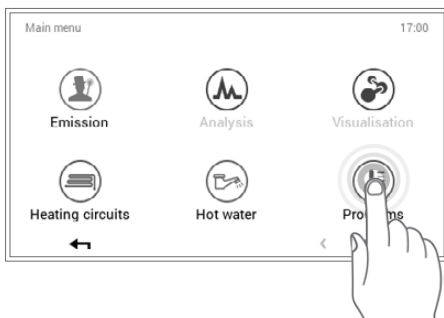


- 9 If the newly named day program is active as the basic program, the new name is displayed on the start screen.

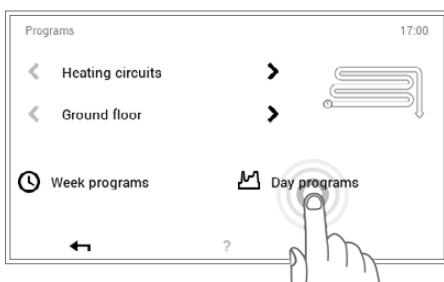
5.10.7 Reset day program



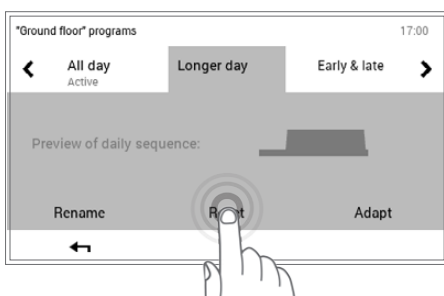
1 Touch the **Main menu** (⚙️) button to select it.



2 Touch the **Programs** button to select it.



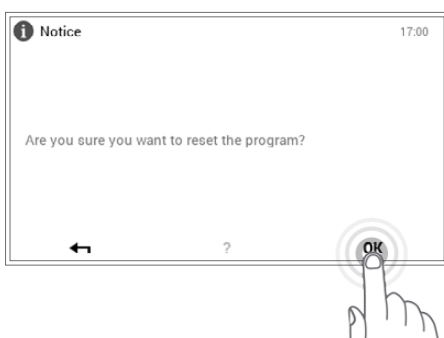
3 The overview for the heating circuit and the program selection appears. Select the required heating circuit and then **Day programs**.



4 Select the desired day program (example: longer day) with the **horizontal arrows** (◀ ▶). Touch the **Reset** button to reset the settings in the selected day program to their default values.



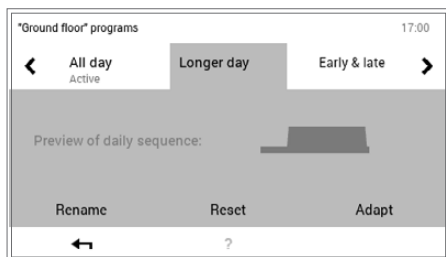
The names of the day programs may be different if they have already been changed.



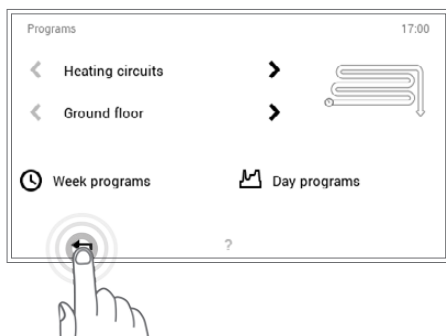
5 A confirmation message is displayed. Confirm this with **OK**. Press **Back** (◀) to go back without resetting the program.



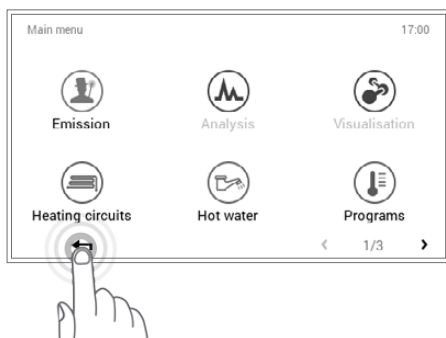
The name, the switching cycles as well as the required room temperatures of the day program are reset to the factory setting. If the reset day program is used in the week program, the factory setting is also active for this.



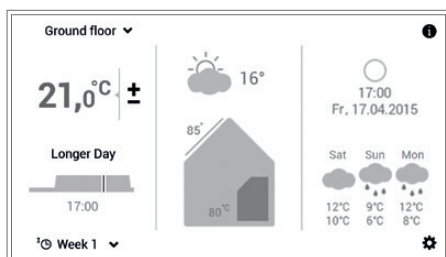
- 6 The pre-programmed standard program is displayed in the selected day program. Press **Back** (←) to return to the menu item.



- 7 Touch **Back** (←) to close the **Programs** menu item.



- 8 Select **Back** (←) again to close the main menu.



- 9 If the reset day program is active, the default settings are displayed on the start screen.

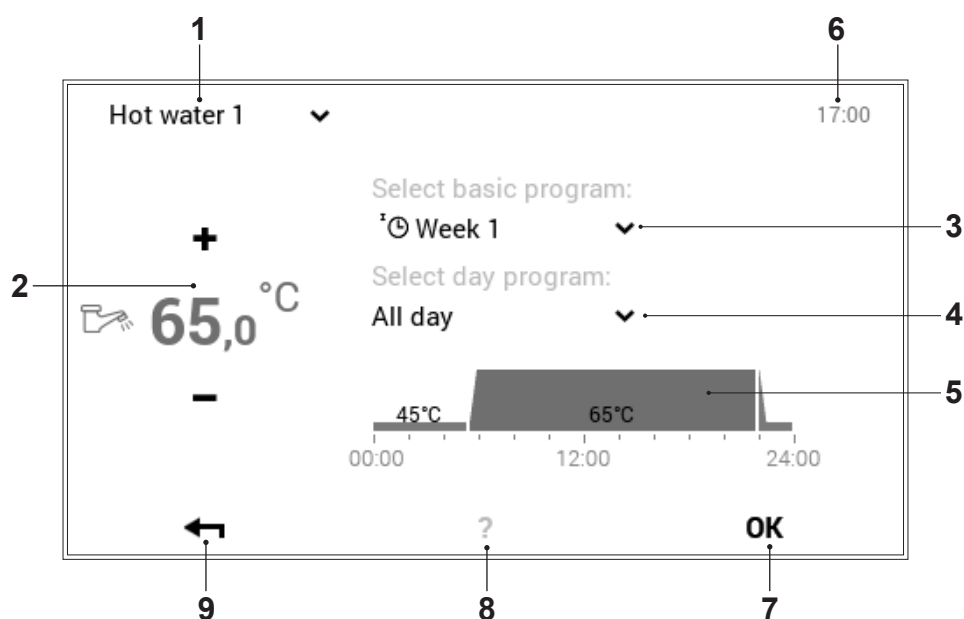
5.11 Hot water

Like in the area of the heating circuits, it is also possible to work with basic, week and day programs for hot water. The hot water programs that can be selected are independent from the heating circuit. Bear in mind that you have to activate each of the basic, week and day programs of the hot water separately (5.7.6 page 25) and edit them (5.12.6 page 63, no. 1).



There is no synchronisation of the hot water temperature during the joint operating mode (5.7.8 page 27).

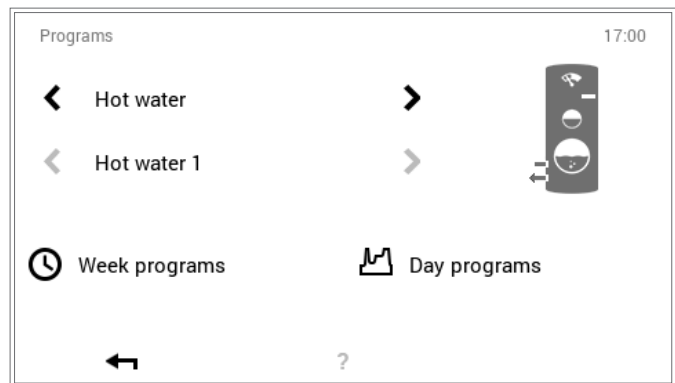
5.11.1 Hot water operating elements



No.	Designation	Function
1	Hot water circuit	Display of the hot water circuit to be edited. Changes to the menu item are only stored in the selected hot water circuit. Use the down arrow (▼) to switch to another hot water circuit in the heating system.
2	Hot water temperature	Represents the hot water temperature desired in the particular switching cycle. The hot water temperature can be changed in the active switching cycle using plus (+) and minus (-).
3	Basic program	Selection of the basic program. Use the down arrow (▼) to select a new program for editing.
4	Day program	Active day program in the week program. Use the down arrow (▼) to change the day program.
5	Switching cycles	Graphical display of the currently selected day program with all time cycles and corresponding temperature specifications. The time period marked in yellow shows the active cycle in which the water temperature can be changed with plus (+) and minus (-).
6	Time of day	Displays the current time.
7	OK	Save (OK) the changes in the selected hot water circuit and return to the previous screen
8	Help	No function is available at present
9	Back	Used as a button (←) for returning to the main menu.

5.11.2 Week programs – hot water

As well as the week and day programs for the heating cycles, the TopTronic® E control module includes additional week and day programs for water heating. The structure of the programs and the functions are identical.



The settings can be made using **Main menu** (⚙) > **Programs**. For a detailed description, refer to 5.12.6 page 63, no. 1.

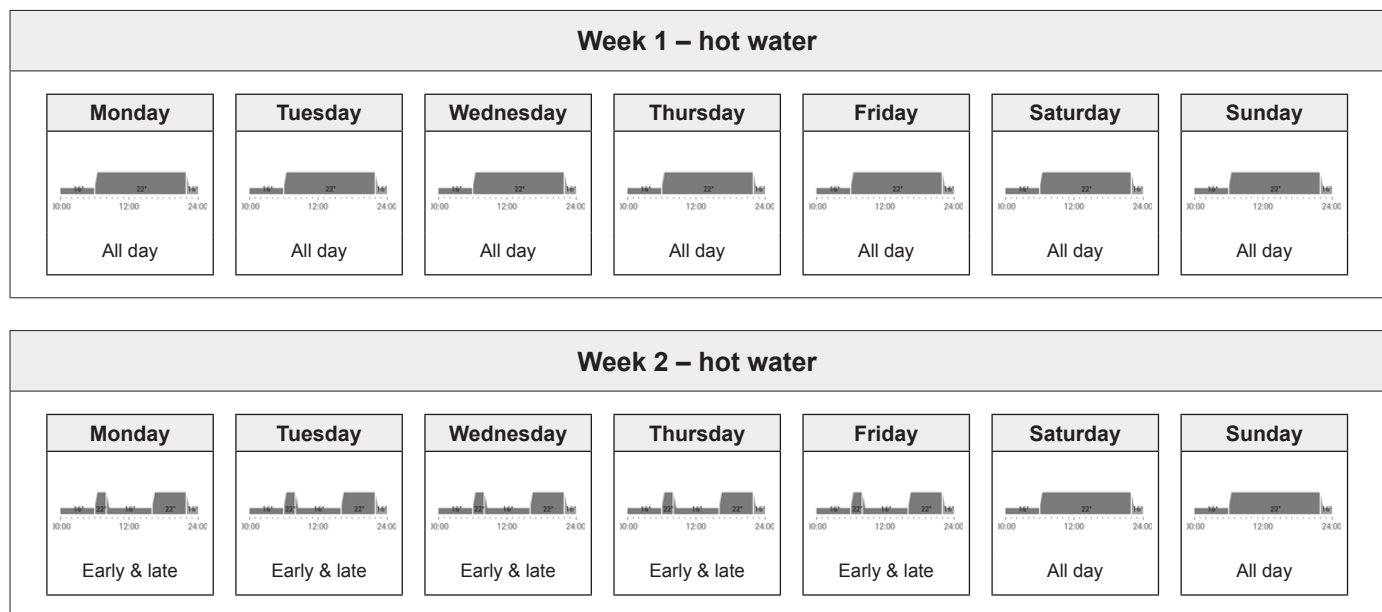
5.11.3 Week program default settings – hot water

The following week programs are used as default settings and can be activated with **Main menu** (⚙) > **Hot water**. The two week programs can be individually edited (5.12.6 page 63), renamed (5.12.6 page 63) and reset (5.12.6 page 63).



Resetting the week programs does not reset the day programs they include!

Week program default settings – hot water:



Attention: Each hot water circuit has two week programs. These can be composed of five different day programs (5.11.4 page 53). These day programs only apply in the particular hot water circuit and are independent from the programs in other circuits!

5.11.4 Day programs / switching cycles for hot water

You can adapt the hot water day programs and switching cycles to your individual requirements and, in this way, control the water heating specifically for the required time period and hot water temperature if you use the hot water on a regular basis, for example.



- The hot water day programs/switching cycles are independent from the heating circuit day programs (5.10 page 40).
- The preset day programs with defined switching cycles can be adapted and renamed.
- The switching cycles of a day program are only active if the corresponding week program is selected as the basic program.
- A maximum of six switching cycles are possible for each day program.

5.11.5 Default settings for day programs / switching cycles – hot water

In the factory setting, the names and the switching cycles of the hot water day programs are predefined as with the heating circuits. Two of these standard day programs (all day and early & late) are assigned to both week programs **Week 1** and **Week 2**. If you adapt these two day programs to your individual requirements, you need to consider that both week programs are also changed (5.11.2 page 52). You can edit the default settings listed below as you require (5.12.6 page 63), rename them at any time (5.12.6 page 63) and reset to the default settings (5.12.6 page 63).

Default settings for day programs – hot water:

Day programs	Switching cycle / temperature			Example
All day	from	to	°C	
	00:00	06:00	45	I work at home and I am present all day.
	05:30	22:00	50	
	22:00	00:00	45	
Early & late	from	to	°C	
	00:00	05:30	45	I go to work at 08:00 hours in the morning and I do not return home until 17:00 hours in the evening.
	05:30	08:00	50	
	08:00	15:30	45	
	15:30	22:00	50	
	22:00	00:00	45	
Only evening	from	to	°C	
	00:00	15:30	45	I do not need any hot water in the morning before I set off to work. I get back home at 17:00 hours in the evening.
	15:30	22:00	50	
	22:00	00:00	45	
All day legio	from	to	°C	
	00:00	05:30	45	I work at home and I am present all day. In addition, the legionella function is active (5.11.6 page 54).
	05:30	15:30	50	
	15:30	16:30	60	
	16:30	22:00	50	
	22:00	00:00	45	

NEW

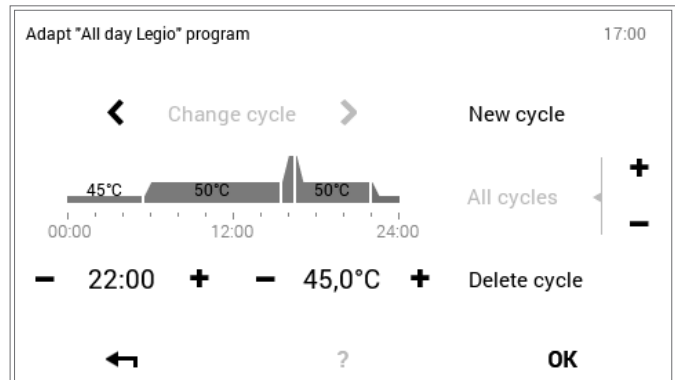


from	to	°C
00:00	05:30	45
05:30	08:00	50
08:00	15:30	45
15:30	22:00	50
22:00	00:00	45

I create my own day program and adapt the switching cycles individually to my requirements. I use the switching cycles of the “Early & late” day program as a template.

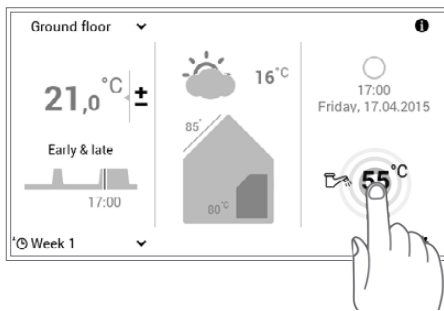
5.11.6 Legionella function

Legionella are bacteria that can cause Legionnaire’s disease. The optimum conditions for these bacteria to exist are hot water that is kept between 25 and 50 °C for long periods. Legionella are killed off when the full content of the water tank is heated through to 60 °C. The TopTronic® E control module includes a separate hot water day program (all day legio) that can be activated once a week in the week program.



The legionella function can be activated in the **Main menu** (⚙) > **Programs** (5.12.6 page 63) by allocating the “all day legio” day program in the week program.

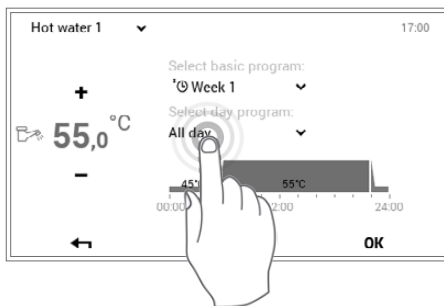
5.11.7 Recharging hot water



- 1 Touch the displayed water temperature to select it.



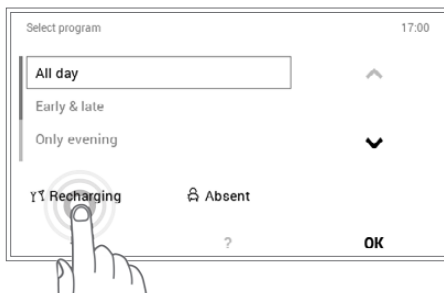
In connection with the TopTronic® E online, the weather forecast is displayed on your start screen as an option. You can also access the function for adapting the required water temperature using **Main menu > Hot water** (5.12.1 page 58).



- 2 Touch the active **hot water day program** to select it.



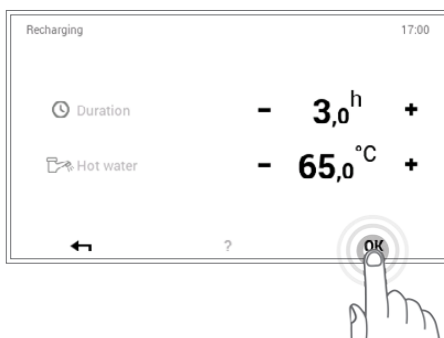
The hot water day program is independent from the heating circuit day program. For example, it can be set to “early & late” while the heating operation is running with “all day”.



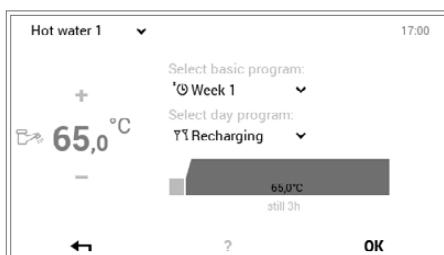
- 3 In the program selection, select the **Recharging** button.



With “Recharging”, it is possible to heat additional hot water. The duration and the hot water temperature can be set individually.



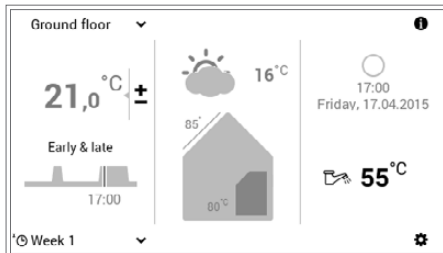
- 4 Press plus (+) and minus (–) to set the required duration and water temperature for recharging. Press **OK** to accept the settings.



- 5 Hot water recharging is shown in the menu. Confirm the entries with **OK**.

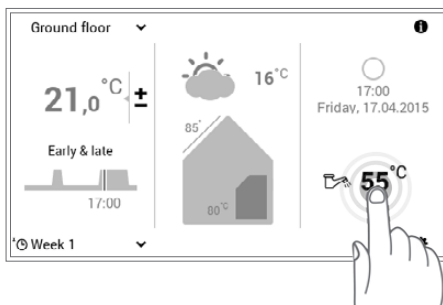


- 6 A confirmation message is displayed. Confirm this with **OK**. Touch the **Back** (←) button if you want to edit the settings again.



- 7 The current hot water temperature is displayed on the start screen and goes up or down until the desired water temperature of the recharging is reached.

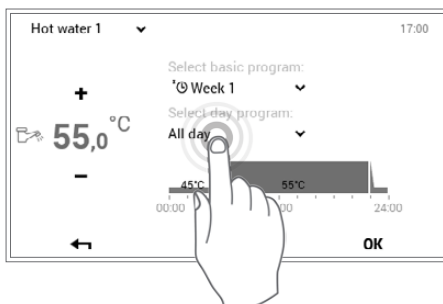
5.11.8 Set hot water program to absent



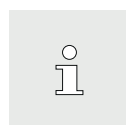
- 1 Touch the displayed **hot water temperature** to select it.



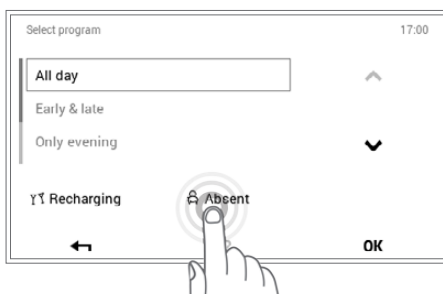
In connection with the TopTronic® E online, the weather forecast is displayed on your start screen as an option. You can also access the function for adapting the required water temperature using **Main menu > Hot water** (5.12.1 page 58).



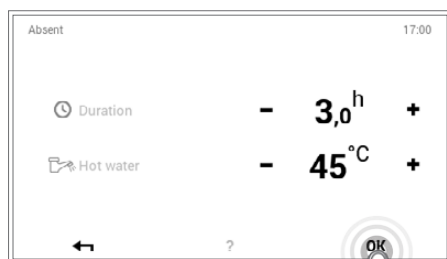
- 2 Touch the active **hot water day program** to select it.



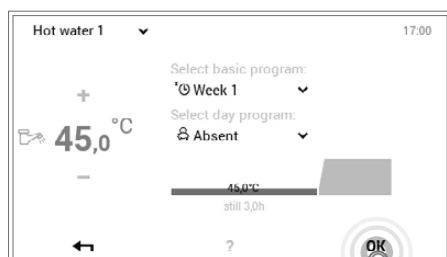
The hot water day program is independent from the heating circuit day program. For example, it can be set to “all day” while the heating operation is running with “early & late”.



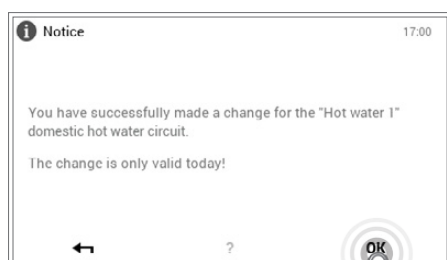
- 3 In the program selection, select the **Absent** button.



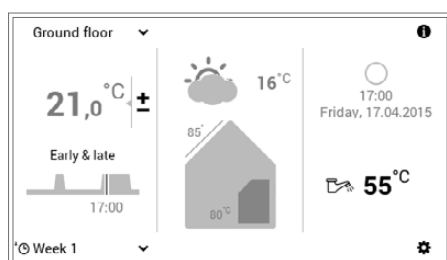
- 4 Press plus (+) and minus (–) to set the required duration of the absence as well as the desired water temperature. Press **OK** to accept the settings.



- 5 **Absent** is shown in the menu. Confirm the entries with **OK**.



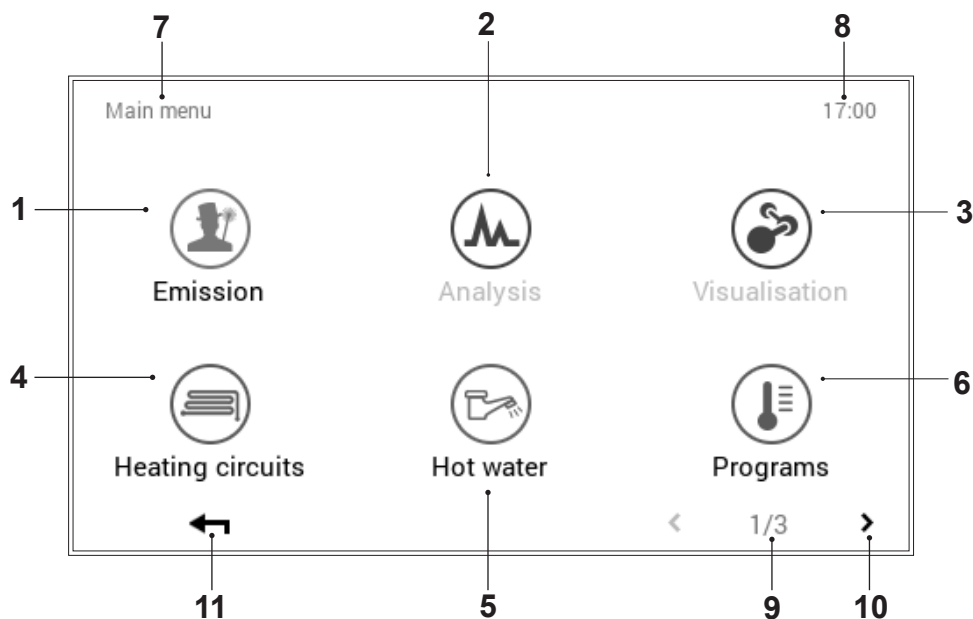
- 6 A confirmation message is displayed. Confirm this with **OK**. Touch the **Back** (←) button if you want to edit the settings again.



- 7 The current hot water temperature is displayed on the start screen and goes up or down until the desired water temperature for the absence is reached.

5.12 Other operating elements

5.12.1 Main menu view 1

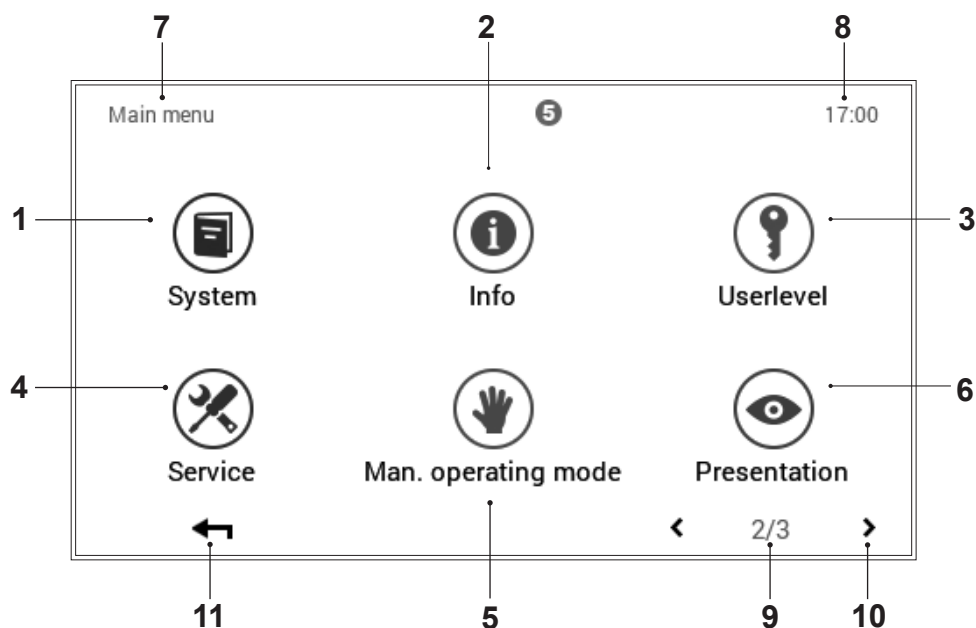


No.	Designation	Function
1	Emission metering	For heating specialist: setting the emission output limitation
2	Analysis	Analysis for the heat generator(s), heating circuits and the hot water
3	Visualisation	For heating specialist: not available with all heat generators
4	Heating circuits	Display and editing possibility of the selected heating circuit. Depending on the structure of the system, it is possible to select between one or more heating circuits. Information about the active operating and day program (5.12.7 page 64)
5	Hot water	Display and editing possibility of the selected hot water circuit. Depending on the structure of the system, it is also possible to select between one or more circuits in the hot water area. Specifications regarding an active operating and day program with adapted hot water temperature (5.11.1 page 51)
6	Programs	Menu item for adapting week and day programs in the selected heating or hot water circuit (5.12.6 page 63)
7	Position in the menu	Name of the currently selected menu item
8	Time of day	Displays the current time.
9	Page in the main menu	Display of the active main menu page (1)
10	Scroll	Arrow (➤) for navigating from main menu page 1 to main menu page 2
11	Back	Used as a button (↶) for returning to the start screen.



Individual menu items are active or inactive depending on the type of control module.

5.12.2 Main menu view 2

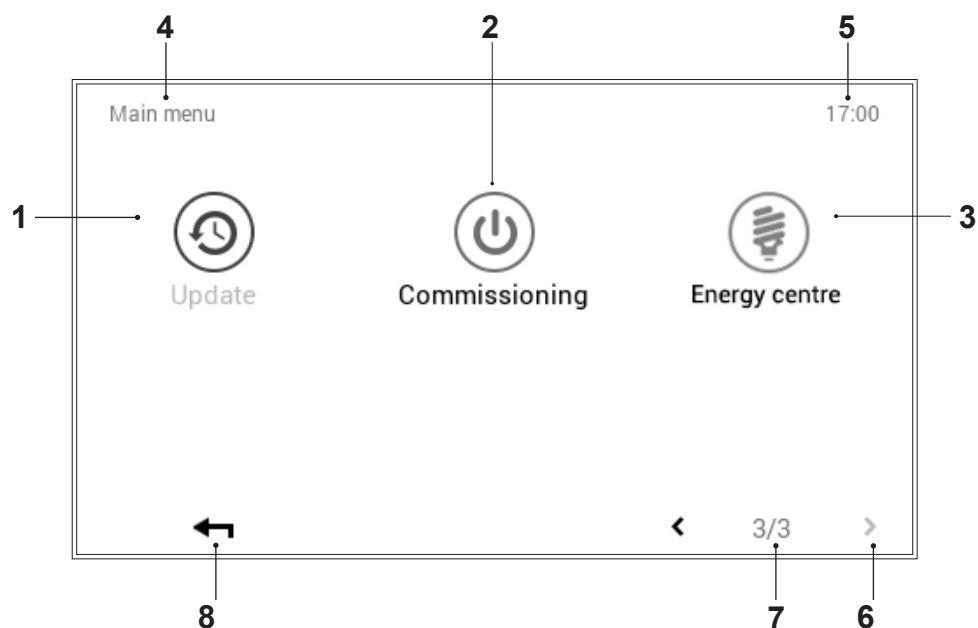


No.	Designation	Function
1	System	Provides information about maintenance, service and cleaning of the system.
2	Info	Display of various information about the system regarding the heat generator, heating circuit, hot water and solar. Bear in mind that a system may include several heat generators and heating or hot water circuits (5.12.8 page 65).
3	User level / authorisation level	For heating specialist: Releasing the authorisation level by entering the particular password
4	Service	For heating specialist: menu item for making adaptations to system settings
5	Manual mode	The heat generators, heating circuits and hot water circuits in the heating system can be operated manually at an adjustable temperature (5.12.11 page 68).
6	Presentation	Changing the current language, changing the colour scheme, adapting the start screen as well as various other settings (5.12.12 page 69, 5.12.13 page 70)
7	Position in the menu	Name of the currently selected menu item
8	Time of day	Displays the current time.
9	Page in the main menu	Display of the active main menu page (2)
10	Scroll	Arrow (◀ ▶) for navigating to main menu page 1 (left arrow) and main menu page 3 (right arrow)
11	Back	Used as a button (↶) for returning to the start screen.



Individual menu items are active or inactive depending on the type of control module.

5.12.3 Main menu view 3

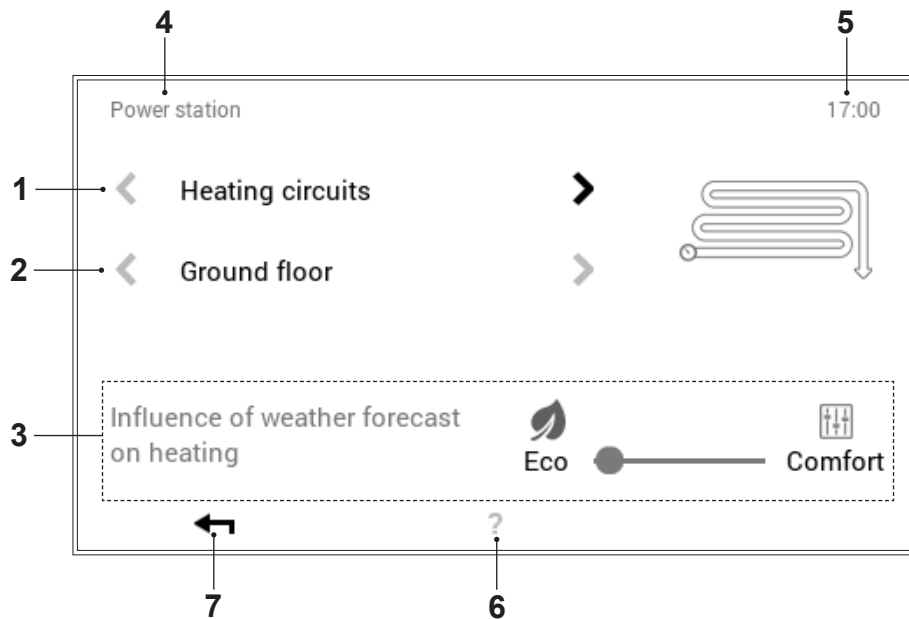


No.	Designation	Function
1	Update	Menu item only for heating specialist
2	Commissioning	Menu item only for heating specialist
3	Power station	Influence of weather forecast on heating. Selection of the heating or hot water circuit to be edited only functions if: <ul style="list-style-type: none"> - the TTE control is connected to the Internet - there is at least 1 heating or 1 hot water circuit with solar
4	Position in the menu	Name of the currently selected menu item
5	Time of day	Displays the current time.
6	Page in the main menu	Display of the active main menu page (1)
7	Scroll	Arrow (◀) for navigating from main menu page 3 to main menu page 2
8	Back	Used as a button (↶) for returning to the start screen.



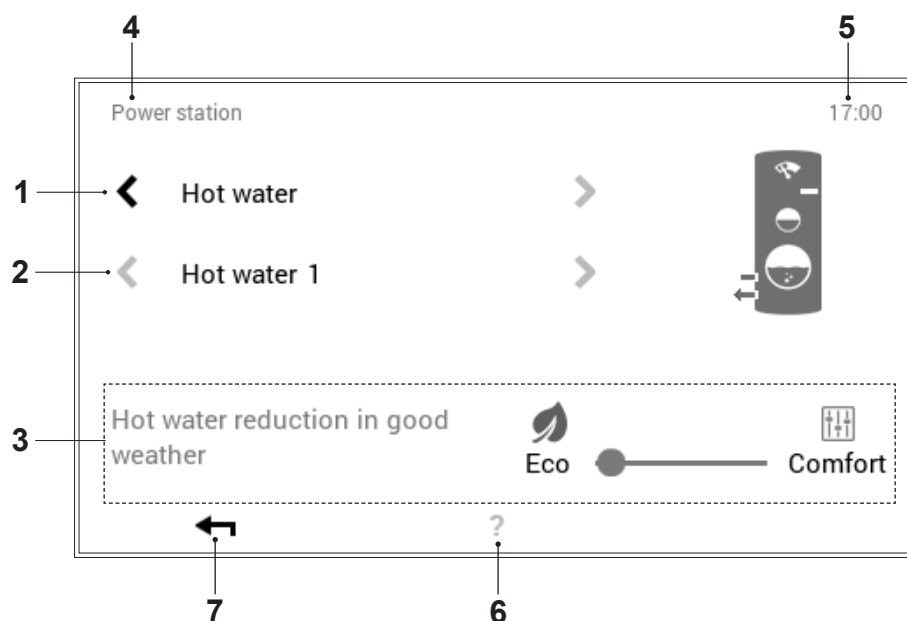
Individual menu items are active or inactive depending on the type of control module.

5.12.4 Power station (Main menu / Energy control)



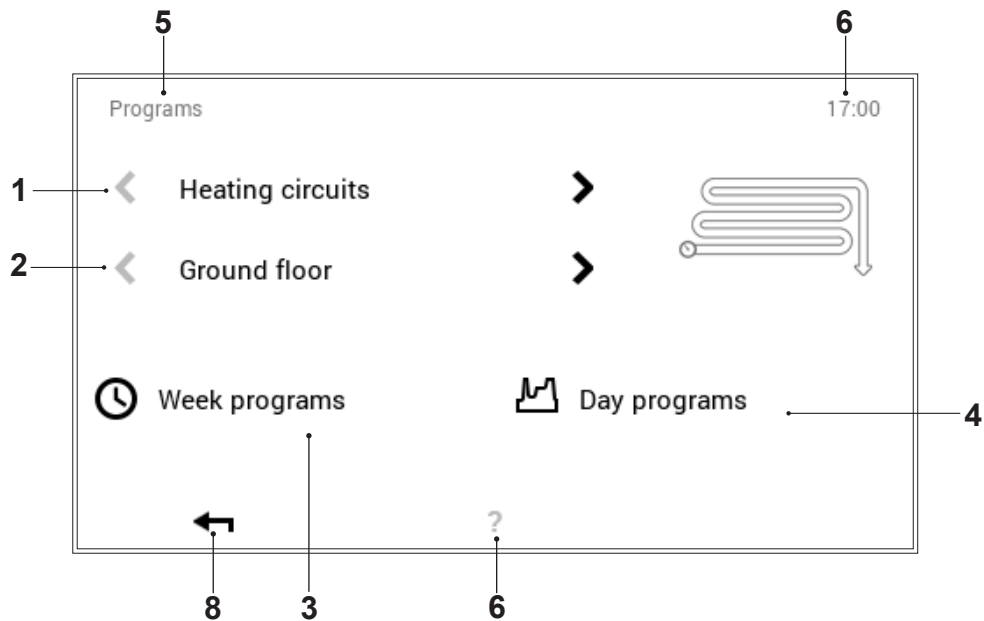
No.	Designation	Function
1	Heating circuits	Selection of the heating circuit to be edited.
2	Circuit selection	There can be several circuits in the selected heating circuit. If the system contains more than one circuit, this is indicated by the white, active horizontal arrows (◀ ▶). If there is only one heating or hot water circuit, the arrows are greyed out.
3	Eco-Comfort slider	<p>If the slider is moved to “Eco”, the heating control is influenced by the weather forecast to the greatest possible extent.</p> <p>If the slider is moved to “Comfort”, the weather forecast is not considered.</p> <div data-bbox="651 1305 770 1429"> </div> <p>If the forecast is not received, it may not be possible for the required room temperature to be maintained. However, the possible energy saving is at its greatest in this position.</p>
4	Position in the menu	Name of the currently selected menu item
5	Time of day	Displays the current time.
6	Help	No function is available at present
7	Back	Used as a button (←) for returning to the main menu.

5.12.5 Power station (Main menu / Energy control)



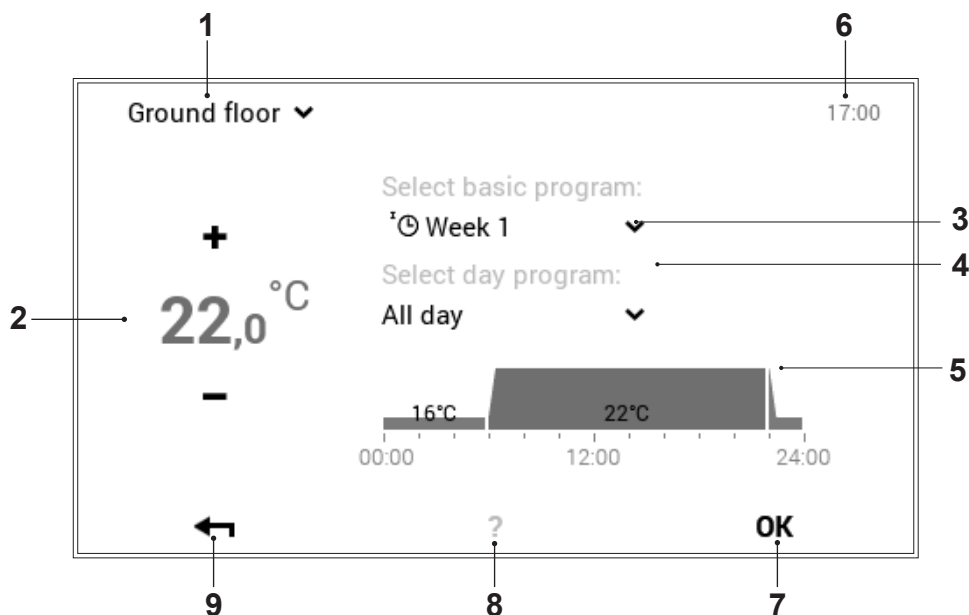
No.	Designation	Function
1	Hot water circuits	Selection of the hot water circuit to be edited
2	Circuit selection	There can be several circuits in the selected hot water circuit. If the system contains more than one circuit, this is indicated by the white, active horizontal arrows (◀ ▶). If there is only one heating or hot water circuit, the arrows are greyed out.
3	Eco-Comfort slider	<p>If the slider is moved to “Eco”, the heat generator is influenced by the weather forecast to the greatest possible extent, i.e. it reduces the amount of hot water in good weather and increases it in bad weather.</p> <p>If the slider is moved to “Comfort”, the weather forecast is not considered.</p> <div data-bbox="587 1335 710 1458"> </div> <p>If the forecast is not received, the amount of hot water in the tank might not be sufficient or the solar plant will not provide its heat to the calorifier.</p>
4	Position in the menu	Name of the currently selected menu item
5	Time of day	Displays the current time.
6	Help	No function is available at present
7	Back	Used as a button (↶) for returning to the main menu.

5.12.6 Programs (Main menu / Programs)



No.	Designation	Function
1	Heating or hot water circuits	Selection of the heating or hot water circuit to be edited. The room temperature is set in the "Heating circuit" menu, the water temperature is set in the hot water circuit. The horizontal arrows (◀ ▶) are used for selecting between the heating or hot water circuit.
2	Circuit selection	There can be several circuits in the selected heating or hot water circuit. If the system contains more than one circuit, this is indicated by the white, active horizontal arrows (◀ ▶). If there is only one heating or hot water circuit, the arrows are greyed out.
3	Week programs	Editing the week programs in the selected heating or hot water circuit. In the week program, a day program can be assigned to the different days of the week, and thus an individual week sequence can be defined (5.9 page 31).
4	Day programs	Day programs can be defined by max. six switching cycles per day. Editing the day programs in the selected heating or hot water circuit. The desired room temperature is set in the heating circuit, the desired hot water temperature is set in the hot water circuit (5.10 page 40).
5	Position in the menu	Name of the currently selected menu item
6	Time of day	Displays the current time.
7	Help	No function is available at present
8	Back	Used as a button (←) for returning to the main menu.

5.12.7 Heating circuit (Main menu / Heating circ.)



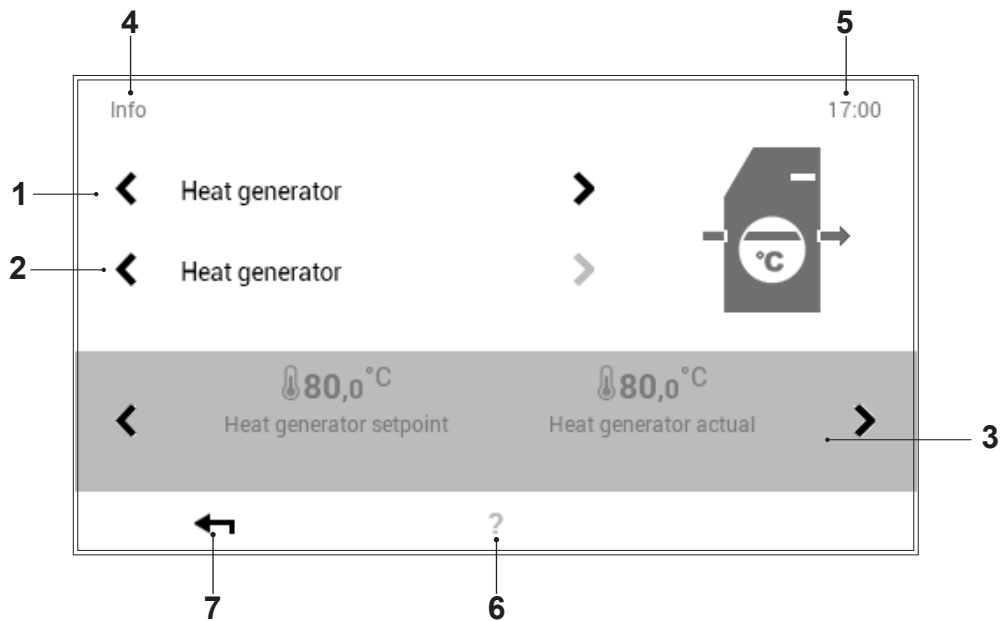
No.	Designation	Function
1	Active heating circuit	Display of the heating circuit to be edited. Changed settings are exclusively accepted in the selected heating circuit. Use the down arrow (▼) to change the heating circuit.
2	Desired temperature	Displays the temperature programmed in the switching cycle. The temperature can be changed in the active switching cycle using plus (+) and minus (−).
3	Basic program	Selection of the basic program. Use the down arrow (▼) to select a new program for editing.
4	Day program	Use the down arrow (▼) to change the day program.
5	Switching cycles	Graphical display of the currently selected day program with all time cycles and corresponding temperature specifications. The time period marked in yellow shows the currently active cycle in which the desired temperature can be changed with plus (+) and minus (−).
6	Time of day	Displays the current time.
7	OK	Save (OK) the changes in the selected heating circuit and return to the previous screen
8	Help	No function is available at present
9	Back	Used as a button (←) for returning to the main menu.



Temporary settings "Only for today" are not possible in the "Heating circ." menu item.

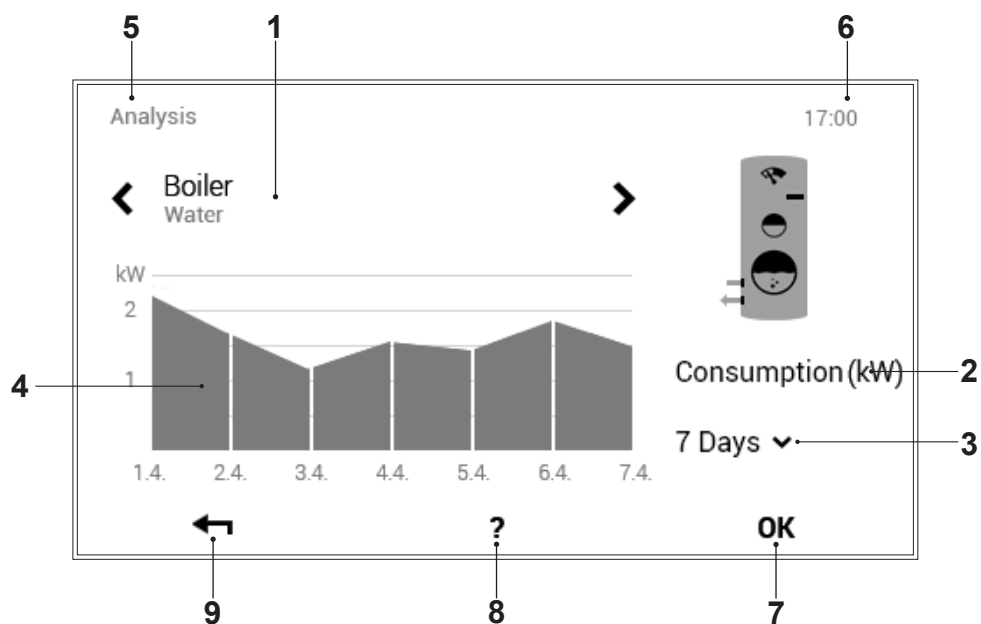
5.12.8 Info

(Main menu / Info)



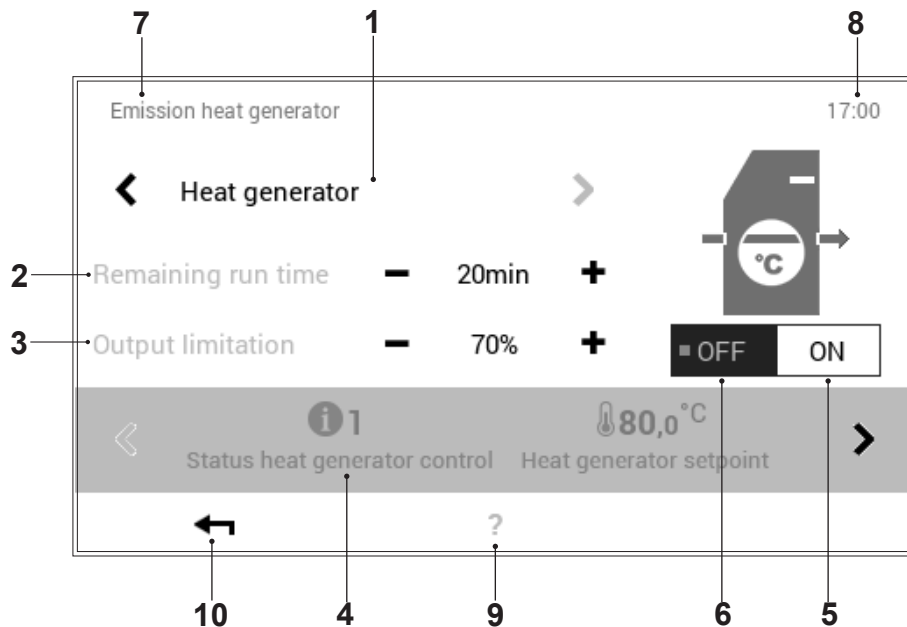
No.	Designation	Function
1	Heat generator / heating circuits / hot water	Selection of the system part. It is possible to switch between the heat generator, the heating circuit and the hot water area using the horizontal arrows (◀ ▶).
2	Detailed selection	Selection of the desired heat generator, heating circuit or hot water circuit. If the system contains several circuits, this is indicated by the white, active horizontal arrows (◀ ▶).
3	Information	Information about the selected system area. Additional output information can be displayed on the screen using the horizontal arrows (◀ ▶).
4	Position in the menu	Name of the currently selected menu item
5	Time of day	Displays the current time.
6	Help	No function is available at present
7	Back	Used as a button (↶) for returning to the main menu.

5.12.9 Analysis (Main menu / Analysis)



No.	Designation	Function
1	Heat generator / heating circuits / hot water	Selection of the area to be analysed. It is possible to select between the heat generator, the heating circuit and the hot water area using the horizontal arrows (◀ ▶).
2	Measuring parameter	Display of the recorded measuring parameter
3	Selection duration	Use the down arrow (▼) to select the required duration.
4	Analysis / graphic	Display of the measuring parameter of the selected heat generator, heating circuit or hot water in the desired duration
5	Position in the menu	Name of the currently selected menu item
6	Time of day	Displays the current time.
7	OK	Save (OK) the changes in the selected heating circuit and return to the previous screen
8	Help	No function is available at present
9	Back	Used as a button (↶) for returning to the main menu.

5.12.10 Emission - only for heating specialist (Main menu / Emission (not in with Heat pumps))



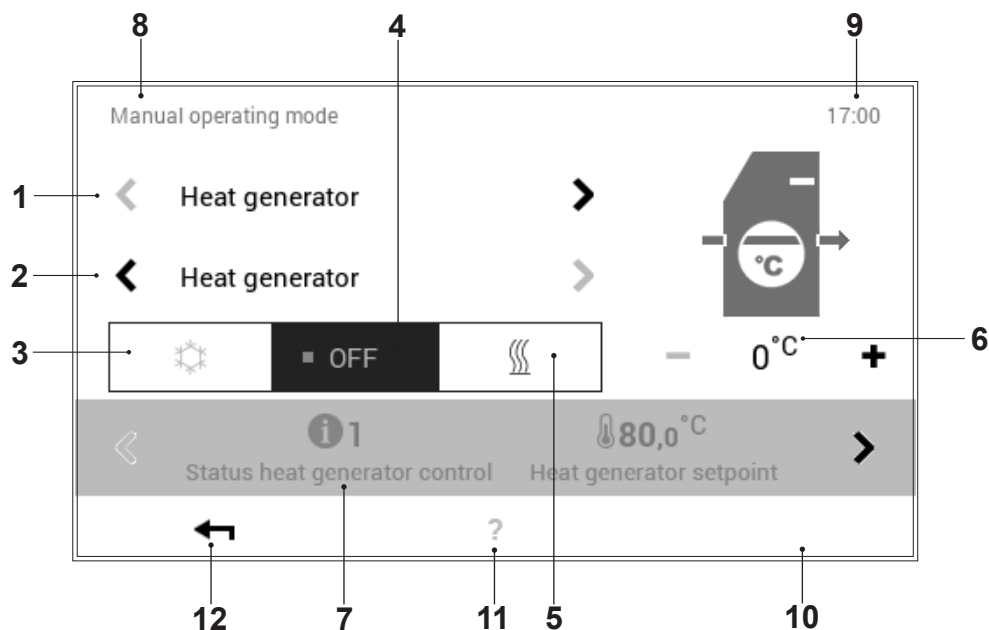
No.	Designation	Function
1	Selection heat generator	Display of the heat generators present in the heating system. The horizontal arrows (◀ ▶) are used for selecting the required heat generator.
2	Time	Duration of emission measurement. Setting the required time with plus (+) and minus (−), i.e. to be defined by the heating specialist before the start of the measurement. The heat generator is switched off after the time has elapsed.
3	Power limitation	Entry of the required power limitation. Regulation of the required power limitation by plus (+) and minus (−).
4	System information	Information about the system in the selected heat generator. Additional information can be displayed with the horizontal arrows (◀ ▶).
5	ON	Switching on the heat generator
6	OFF	Switching off the heat generator
7	Position in the menu	Name of the currently selected menu item
8	Time of day	Displays the current time.
9	Help	No function is available at present
10	Back	Used as a button (↶) for returning to the main menu.



The emission measurement is automatically deactivated when the "Emission" menu item is exited!

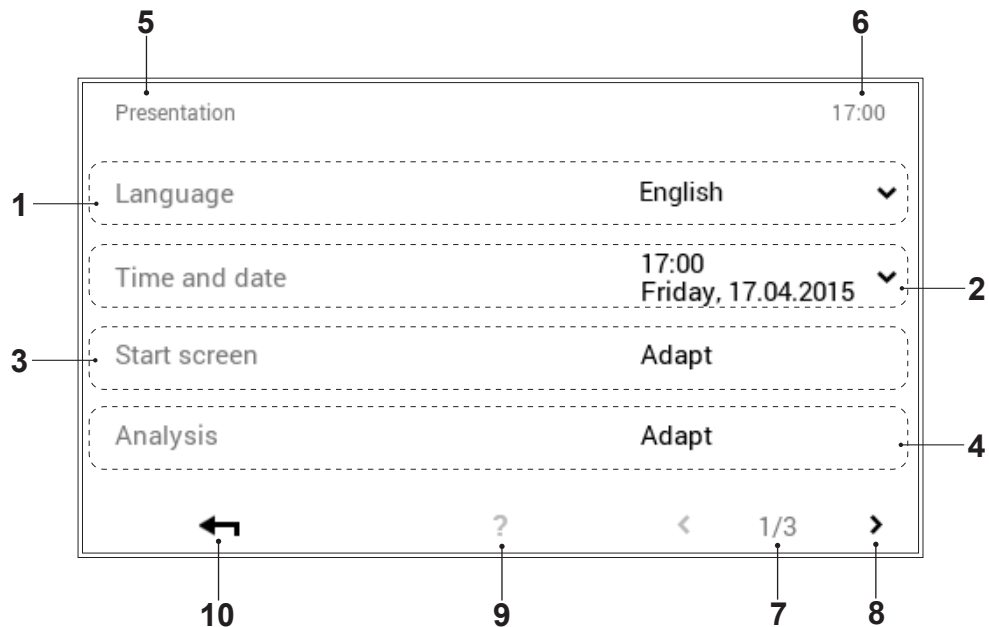
5.12.11 Manual operation

(Main menu / Manual operating mode)



No.	Designation	Function
1	Heat generator / heating circuits	The control permits individual manual operation, i.e. manual operation can be activated on any heat generator and heating circuit that is present.
2	Detailed selection	Selection of the desired heat generator or heating circuit. The system can include several heat generators and heating circuits. If there is more than one heat generator/circuit, the horizontal arrows (◀ ▶) are shown in white. If there is only one heating or hot water circuit available for selection, the arrows are greyed out and cannot be selected.
3	Cooling	Activation of cooling operation (if possible in the system)
4	OFF	Switch off active manual operation. The system switches over to automatic operation.
5	Heating	Activate "Heating" manual operation
6	Temperature	Display of the desired temperature. The temperature can be changed using plus (+) and minus (−).
7	Information	Information about the selected manual operation. Additional information can be displayed on the screen with the horizontal arrows (◀ ▶).
8	Position in the menu	Name of the currently selected menu item
9	Time of day	Displays the current time.
10	OK	Save (OK) the changes in the selected heating circuit and return to the previous screen
11	Help	No function is available at present
12	Back	Used as a button (←) for returning to the main menu.

5.12.12 Presentation 1 (Main menu / Presentation)



No.	Designation	Function
1	Language	Selection of the desired language. The active language can be selected with the down arrow (▼).
2	Time & date	Changing the current date and time
3	Start screen	Selection of the display elements you want on the start screen. Select the "Adapt" button to make adaptations to the start screen.
4	Analysis	Analysis settings (recording)
5	Position in the menu	Name of the currently selected menu item
6	Time of day	Displays the current time.
7	Page in the menu	Display of the active menu page (1). Menu page 3 only for heating specialist.
8	Scroll	Arrow (▶) for navigating from menu page 1 to page 2
9	Help	No function is available at present
10	Back	Used as a button (↶) for returning to the main menu.

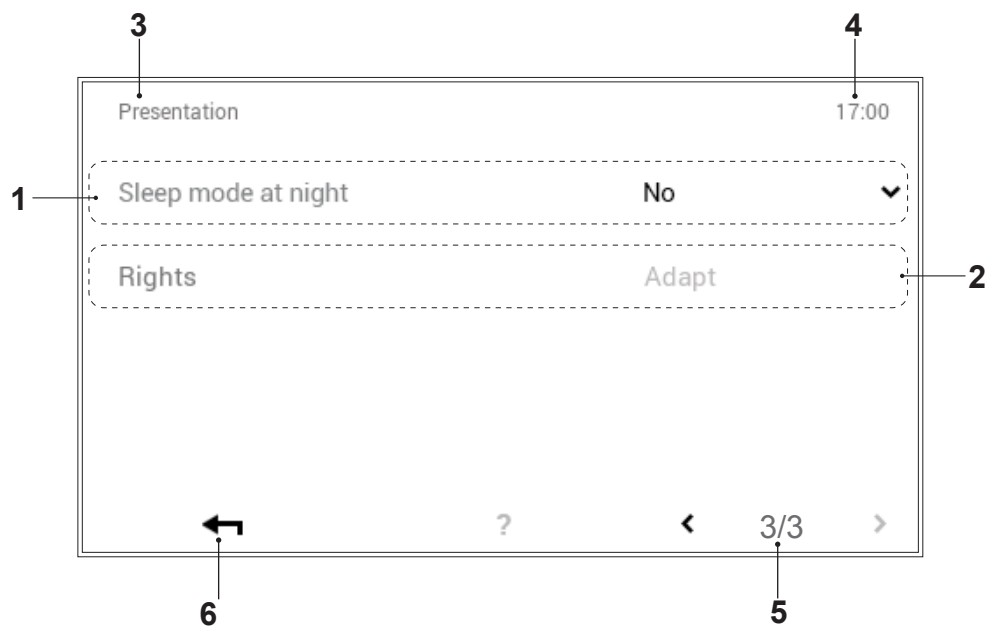
5.12.13 Presentation 2

(Main menu / Presentation)



No.	Designation	Function
1	Background	Adaptation of the colour scheme of the control. The arrow key (▼) can be used for selecting between a black and a white background.
2	Backlighting	Adaptation of the current display mode, time until the screen is darkened as well as percentage specification for maximum and minimum screen brightness.
3	Duration until standby	Entry of the required number of minutes until the control enters standby mode. The number of minutes can be changed with plus (+) and minus (-). To deactivate standby mode, it is necessary for "No standby" to be selected in the "Standby behaviour" menu item (no. 4).
4	Standby behaviour	Screen with active standby modus. Depending on the selection, when the screen enters standby mode, it switches to the start screen, to the "Visualisation" main menu item or to sleep mode (black screen). Selecting "No standby" means that standby mode is deactivated.
5	Position in the menu	Name of the currently selected menu item.
6	Time of day	Displays the current time.
7	Page in the menu	Display of the active menu page (2).
8	Scroll	Arrow (◀) for navigating from menu page 2 to page 1.
9	Wizard	No function is available at present.
10	Back	Used as a button (↶) for returning to the main menu.

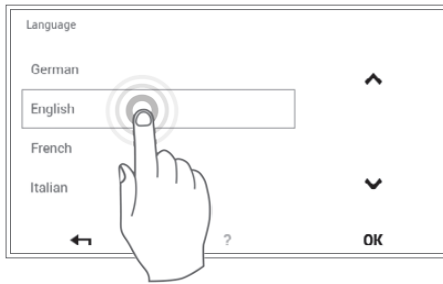
5.12.14 Presentation 3 (Main menu / Presentation)



No.	Designation	Function
1	Sleep mode at night	When it is dark, the touchscreen automatically switches to sleep mode, i.e. the screen switches itself off and is reactivated when daylight returns.
2	Authorisation	Can only be adjusted by the specialist
3	Position in the menu	Name of the currently selected menu item
4	Time of day	Displays the current time.
5	Page in the menu	Display of the active menu page (3).
6	Back	Used as a button (↶) for returning to the main menu.

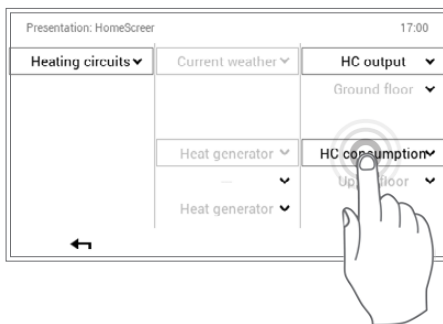
5.13 Further settings

5.13.1 Setting the language



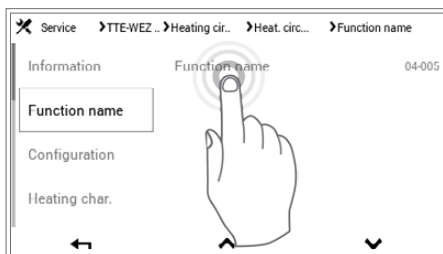
The language of the control can be changed at **Start screen > Main menu (⚙) > Presentation > Language** (5.12.12 page 69, no. 1).

5.13.2 Adapt start screen individually



The elements of the start screen can be individually adapted at **Start screen > Main menu (⚙) > Presentation > Start screen** (5.12.12 page 69, no. 5).

5.13.3 Rename heating circuit



You can give a name to your heating circuit at **Start screen > Main menu > Service > TTE-WEZ > Heating circ. > Select heating circuit > Function name (^v) > Select function name > Select heating circuit > Keyboard inputs**. Bear in mind that your system can include one or more heating circuits.

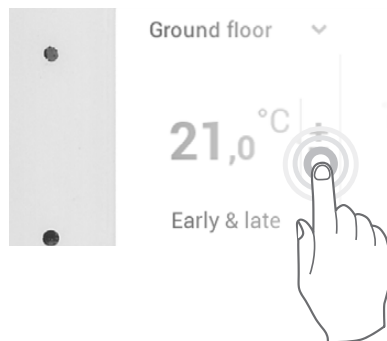
6. Cooling system control (optional)

The "cooling operation" function can be activated by the installation technician during commissioning by using a corresponding device.

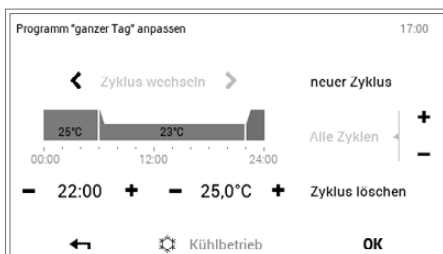


If cooling mode is active, the system changes over automatically between heating operation and cooling operation depending on the outside temperature.

If the room temperature on the start screen is shown in blue, cooling is in progress. The required room temperature can be changed by touching the +/- keys (see Heating operation - chapter 5.7 page 21).



6.1 Setting day program/switching cycles



- 1 The overview of the selected day program can be reached by **Main menu** > **Programs** > **Day programs** > **Adapt.** Various adaptations can be made to the selected day program/switching cycle using **plus (+)** and **minus (-)**. Press **OK** to accept the entry.



For details about the settings for the day program/switching cycle, refer to chapter 5.10.4 page 44



Cooling operation and heating operation have the same switching times. If the switching times for heating operation are changed, the switching times for cooling operation are changed in the same way.

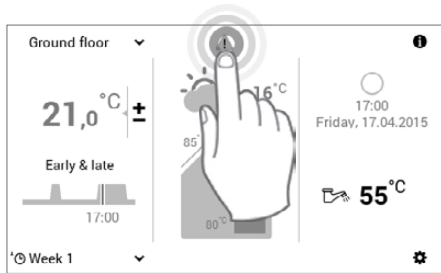
Exclusively the room temperatures can be set differently for heating/cooling operation.



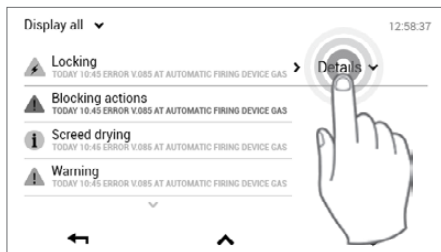
- 2 To be able to set the required room temperatures for cooling operation, it is necessary for **Kühlbetrieb** to be displayed - if it is not, change over by touching.

7. Alarm messages

7.1 Display alarm message



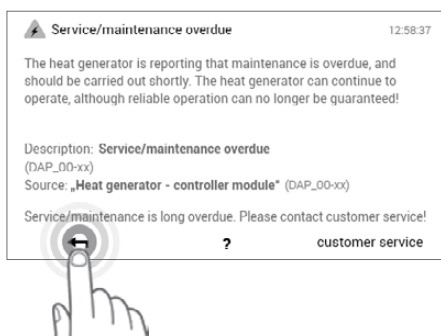
1 Touch the displayed **alarm message icon** to select it.



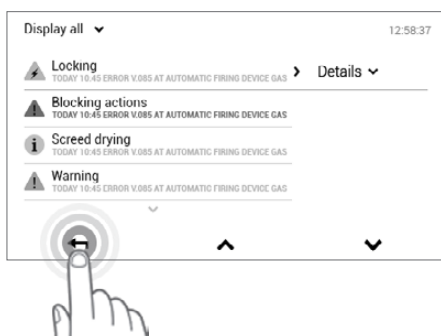
2 Touch **Details** (▼) to select it.



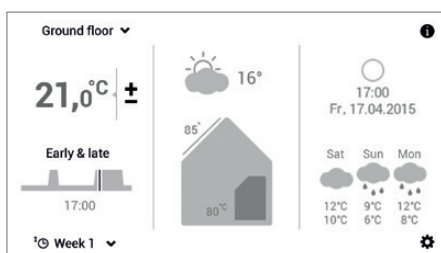
Use the **Display All** (▼) button at the top left of the screen to select all prior alarm messages by category (information, warning, etc.).



3 A detailed alarm message appears. The message contains detailed information about the malfunction. Use **Back** (←) to close the alarm message view.



4 Select **Back** (←) again to close the **alarm message overview**.



5 Once the malfunction has been rectified, the alarm message icon is no longer displayed in the start screen.



If alarm messages cannot be rectified using the information displayed on the control module, contact Hoval customer service.

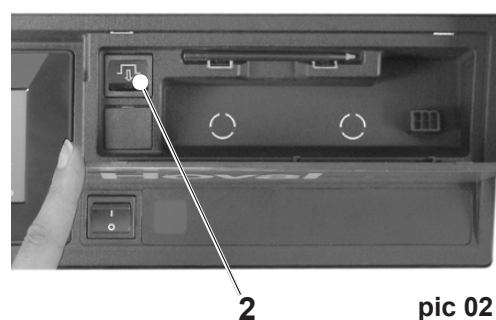
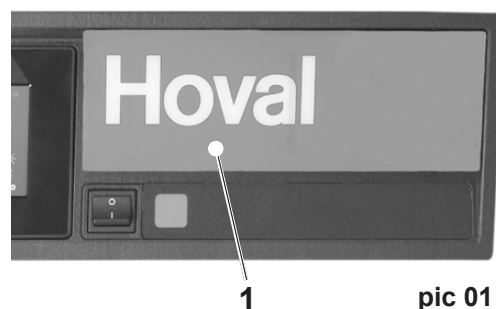
7.2 Alarm messages relating to the heat generator

Alarm messages on the heat generator are indicated by the failure indication lamp on the control panel lighting up. Heating operation is then stopped. The alarm message can be acknowledge by pressing the reset button.



The reset button is allowed to be pressed once at most. If the failure indication lamp continues to be lit, please contact Hoval Customer Service.

1. Control panel (4.1 page 10) with illuminated failure indication lamp can be seen.
2. Open the flap (1, pic 01) on the right of the control panel.
3. Press the reset button (2, pic 02) until the failure indication lamp goes out. The alarm message is rectified and heating is reactivated.
4. Close flap cover (1, pic 01).



8. Maintenance and inspection (heating system)



The work described below is normally performed by the heating specialist in the course of annual maintenance. Nevertheless, carry out the following checks during the year and perform the work described as necessary.

6. Unscrew the hose again after filling to break the connection reliably
7. Check the water pressure again
8. Switch the system on again

8.1 Checking the water pressure

NOTICE



- If the system water pressure is too low (check pressure gauge (Fig. 03)), top it up with water (chapter 8.2) or inform your heating specialist.
- Danger of corrosion due to frequent topping up (more than 1x/year) – contact the heating specialist.
- Complete filling and draining must be performed by the heating engineer.



Fig. 03

8.2 Top up with water

The replacement water must be of the required quality. The quality requirements are stated in the installation instructions in the “Water quality” chapter (paragraph: Filling and replacement water). If the heating system is filled with frost protection agent or treated water, the heating specialist's instructions must be followed.

Procedure

1. Set the blocking switch to “0” and disconnect the heat generator from the mains (main switch, fuse, etc.)
2. The mixing valve (manual adjustment) and the shut-off valves in the heating flow and return must be open
3. The connection between the filling valve and the water tap is made using a hose: fill the hose with water before establishing the connection to prevent any air from entering the heating system
4. Slowly fill with water while checking the water level on the pressure gauge
5. Open the bleed valves after topping up until all the air has been vented from the heating system

9. Saving energy

9.1 Specific steps for saving energy

ENERGY



With only a few simple measures, you can



Save energy on a sustainable basis



Cut energy costs



Protect the environment.

It's easy! Just bear in mind the following tips:

- **Set the room temperature and the heating times independently!**

Adapt the heating times and room temperatures according to when you will be present and absent (5.10.3 page 42 and 5.8.2 page 29). A temperature reduction of only 1 °C can save 6% of your energy costs.

- **Correct ventilation**

Ventilate every three to four hours for a few minutes with the window full open, preferably with a through draft. Avoid leaving the windows tilted open when it is cold outside! Correct heating and ventilation also help to prevent mildew forming. Ventilation is not necessary if you are using a domestic ventilation unit.

- **Close roller blinds and shutters at night**

Keep the roller blinds and shutters on doors and windows closed at night to reduce energy losses. If necessary, seal gaps and cracks at windows and doors.

- **Do not obstruct radiators**

Avoid placing furniture in front of radiators. Also avoid closing curtains during the day. At night, on the other hand, they can have an insulating effect. Furthermore, avoid drying damp laundry directly on the radiators. The heat generated by the radiators cannot get into the room in the first place and the hot water is merely circulated.

- **Reduce the room temperature at night**

Save energy while you sleep by reducing the room temperature at night. The room should not cool down excessively, though. This increases the energy required to reheat it, and pipes could freeze.

- **Set the domestic hot water temperature**

Set the domestic hot water temperature as low as possible. Aim for temperatures between 45 °C and 60 °C. Remember to activate the legionella function once a week in the week programme (5.11.6 page 54).

- **Take a shower rather than a bath**

A bath consumes about three times as much energy and water as a shower.

- **Regular maintenance**

Have your heating system regularly cleaned and checked by a specialist. Bleed the radiators if you hear noises coming from the pipework or if the radiators do not achieve an even temperature.

10. Waste disposal

10.1 Disposal instructions



After the end of the service life, the individual system components must be disposed of correctly. Please contact the heating specialist regarding recycling your heating system.



Dismantling must be performed by a heating specialist.

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