



BOSCH

Operating instructions

Indoor unit for liquid to air heat pumps

Compress Hybrid 7000i AW

HC7000iAW 9 I

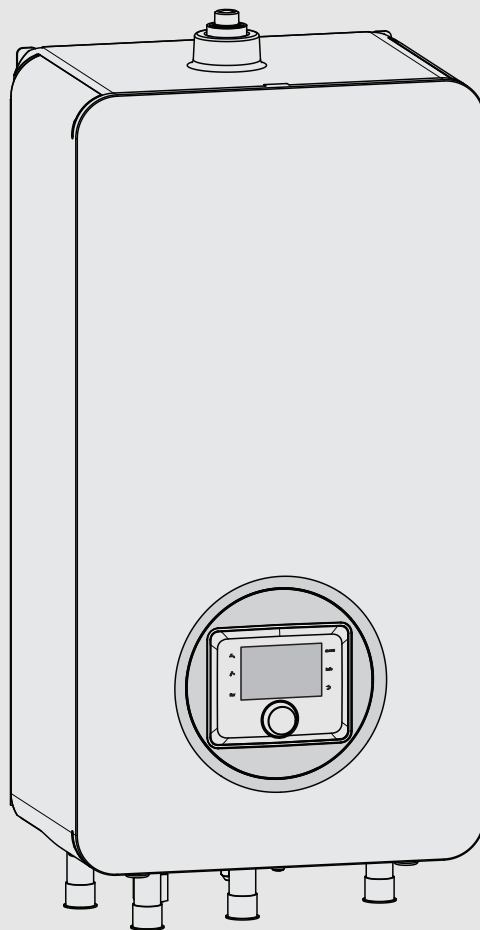


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1 Explanation of symbols and safety instructions


1.1 Explanation of symbols


Warnings

In warnings, signal words at the beginning of a warning are used to indicate the type and seriousness of the ensuing risk if measures for minimizing danger are not taken.

The following signal words are defined and can be used in this document:


 **DANGER**
DANGER indicates that severe or life-threatening personal injury will occur.

 **WARNING**
WARNING indicates that severe to life-threatening personal injury may occur.

 **CAUTION**
CAUTION indicates that minor to medium personal injury may occur.

NOTICE
NOTICE indicates that material damage may occur.

Important information


 The info symbol indicates important information where there is no risk to people or property.

Additional symbols

Symbol	Meaning
▶	a step in an action sequence
→	a reference to a related part in the document
•	a list entry
–	a list entry (second level)

Table 1

1.2 General safety instructions

1.2.1 Application area

The heat pump may only be used in sealed heating systems according to EN 12828.

Other uses are not appropriate. Any damage that results from such use is excluded from liability.

The heat pump must undergo maintenance according to EN1717 4.6.

Safety of electrical devices for domestic use and similar purposes

The following requirements apply in accordance with EN 60335-1 in order to prevent hazards from occurring when using electrical appliances:

“This appliance can be used by children of 8 years and older, as well as by people with reduced physical, sensory or mental capabilities or lacking in experience and knowledge, if they are supervised and have been given instruction in the safe use of the appliance and understand the resulting dangers. Children shall not play with the appliance. Cleaning and user maintenance must not be performed by children without supervision.”

“If the power cable is damaged, it must be replaced by the manufacturer, its customer service department or a similarly qualified person, so that risks are avoided.”

Inspection and maintenance

Regular inspection and maintenance are prerequisites for safe and energy efficient operation of the heating system.

We recommend you enter into a contract for the annual inspection and demand-dependent maintenance with an authorised installer.

- ▶ Have work carried out only by an approved installer.
- ▶ If any faults are discovered, have them remedied immediately.

Inspection and maintenance

If there is a lack of cleaning, inspection or maintenance, or if these are carried out incorrectly, this may result in material damage and/or personal injury, including possible risk to life.

- ▶ Have work carried out only by an approved contractor.
- ▶ Do not take off the heat pump cover.
- ▶ Do not modify the heat pump or other parts of the heating system.

⚠ Room air

The air in the installation room must be free of combustible or chemically aggressive substances.

- ▶ Do not use or store combustible or explosive materials (paper, propellants, thinners, paints, etc.) within the vicinity of the appliance.
- ▶ Do not use or store corrosive substances (solvents, adhesives, chlorinated cleaning agents, etc.) within the vicinity of the appliance.

⚠ Damage caused by frost

The solar system can freeze if it is switched off:

- ▶ Observe the notices regarding frost protection.
- ▶ Due to the additional functions, e.g. DHW heating or pump anti-seizure protection, the system should always be left on.
- ▶ Correct any faults immediately.

⚠ Risk of scalding at the DHW draw-off points

- ▶ If DHW temperatures above 60 °C are set or if thermal disinfection is activated, a mixer must be installed. If in doubt, ask your installer.

2 Product Information

2.1 Declaration of conformity

The design and operating characteristics of this product comply with the European and national requirements.

CE The CE marking declares that the product complies with all the applicable EU legislation, which is stipulated by attaching this marking.

The complete text of the Declaration of Conformity is available on the Internet: worcester-bosch.co.uk.

The Compress Hybrid 7000i AW heat pump belongs to a series of heat pumps that recover energy from the outdoor air for heating and domestic hot water heating.

By reversing this process and removing heat from the heating water and releasing it to the outdoor air, the heat pump can also be used for cooling if necessary. To do this however, the heating system must be configured for cooling mode.

In order to obtain a complete heating system, the outdoor unit which is set up outdoors must be connected to an indoor unit in the building.

The heating system is controlled by the control unit HPC410 which is located in the indoor unit. The control unit controls the system using a range of different settings for the heating, cooling, domestic hot water and other operations. The monitoring function switches the heat pump off in the event that faults occur, for example, as this prevents the main components from being damaged.

2.2 Control unit

The HPC410 control unit in the indoor unit controls the heat production based on the outdoor sensor values, possibly in combination with the room temperature-dependent controller CR10H (accessory). The temperature in the building is adapted automatically, based on the outside temperature.

The user specifies the temperature of the heating system by setting the required room temperature on the control unit or room temperature-dependent controller.

Various accessories (e.g. swimming pool, solar and room temperature-dependent controller) can be connected to the indoor unit via the EMS plus bus. Additional functions and setting options therefore become available and can also be controlled via the control unit. For more information on accessories, refer to the relevant instructions.

2.3 Heat pump details

Following the installation and commissioning of the heat pump and indoor unit, specific tasks must be performed at regular intervals. These include checking whether alarms have been triggered and simple maintenance work. These actions can normally be performed by the user unassisted. However, if problems persist it may be necessary to contact the system installer.

2.4 Heating installation

The heating system consists of two parts: the heat pump outdoor unit in the open air and the indoor unit.

A gas condensing appliance can also be connected as a secondary source of heat.

If domestic hot water is connected to the system, a distinction is made between heating water and domestic hot water. The heating water is channeled to the radiators and the underfloor heating system. The domestic hot water is routed to the shower and the water taps.



The heat pump switches off at an outside temperature of approx. $-20\text{ }^{\circ}\text{C}$. An external heat source then takes over the heating and DHW heating.

2.5 Heat pump (outdoor unit)

The heat pump has the task of recovering energy from the outdoor air and transferring it to the indoor unit.

The heat pump is equipped with an inverter control, i.e. it varies the speed of the compressor automatically so that precisely the required amount of energy is supplied in each instance. The speed of the fan can also be controlled and it regulates its speed according to the requirements. This keeps the energy consumption as low as possible.

Defrosting

Ice can form on the evaporator at low outside temperatures. If the layer of ice becomes so thick that it impedes the flow of air through the evaporator, an automatic de-icing process is initiated. As soon as all the ice has melted, the heat pump reverts to normal mode.

At low outside temperatures, defrosting is achieved by reversing the flow direction of the refrigerant in a circuit via a 4-way valve; this type of defrosting is referred to as 'reverse circulation'.

2.5.1 Generic overview of the refrigerant circuit

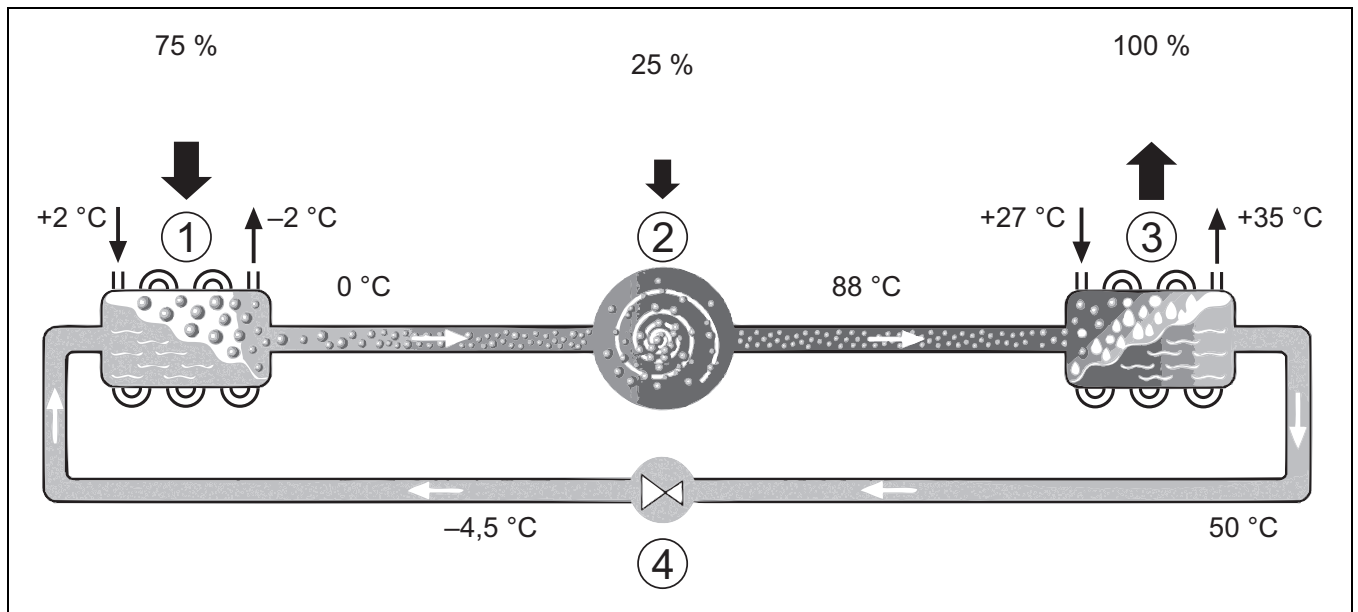


Fig. 1 Functional principle of the refrigerant circuit in the heat pump

- [1] Evaporator
- [2] Compressor
- [3] Condenser
- [4] Expansion valve

2.6 Indoor unit

The purpose of the indoor unit is to distribute the heat from the heat pump outdoor unit to the heating system and DHW cylinder. The speed of the pump in the indoor unit is controlled so that it automatically reduces when demand is low. The energy consumption falls as a result.

If the heat energy demand is higher at low outside temperatures, an external heat source may be required. External heat generators can be connected or disconnected via the control unit in the indoor unit.

2.7 Hints on energy saving

- Use the normal heating mode, thus the heating system will use the least energy. Set the desired room temperature according to your personal comfort needs.
- Open the thermostatic vents fully in all rooms. Increase the temperature setting on the control only when the desired room temperature has not been reached for some time. Close the thermostatic valve in a specific room, only if that room is warmer than the others.
- If there is a room controller installed, this can be used to set the optimal room temperature. Avoid influence of external heating (i.e. sunlight or wood stove). Otherwise unwanted fluctuations in the room temperature may occur.
- Avoid placing big objects i.e. a sofa in front of the radiators (minimum 50 cm distance). This will block the circulation of the heated air in the room.
- Do not set a too low temperature for cooling. Cooling will also consume energy.

Vent the room correctly

Open the windows fully for a short period instead of leaving them ajar. Leaving the windows ajar will let the heated air out of the room constantly without increasing the air quality. Close the thermostatic valves or lower the heating setting on the room controller while the room is vented.

2.8 Warranty conditions

- ▶ For the warranty conditions, please refer to the accompanying certificate of guarantee.
- ▶ Fill out the certificate of guarantee together with the installer directly after installation.
- ▶ Send this to the address specified on the certificate of guarantee. This makes the process easier when making any claims under the manufacturer's warranty and/or calling on our customer service.

3 Operation



WARNING

Material damage from frost!

The heating or auxiliary heater may be irreparably damaged by frost.

- ▶ Do not start the indoor unit if there is a possibility of the heating or auxiliary heater being frozen.

3.1 Control unit

The user interface HPC410 controls max. 4 heating circuits individually in one of the respective control modes:

- **Outdoor-temp.-compensated**
 - The control unit sets the flow temperature in accordance with an optimised heating curve.
- **Outdoor-temp.-compensated with low end¹⁾**
 - The control unit sets the flow temperature in accordance with a simplified heating curve.

For both control modes, a remote control can be installed in the reference room to enable it to be influenced by the measured and the required room temperature. The heating curve is then adapted correspondingly.



The HPC410 control unit is integrated into the device and cannot be used as a remote control. Ask your contractor which remote controls are available.



Rule of thumb for outdoor-temp.-compensated control with influence of room temperature: the thermostatic valves in the reference room (the room in which the remote control is installed) must be fully open!

Depending on the software version of the user interface, the texts shown in the display may differ from the texts in these instructions.

The adjustment ranges, default settings and functional scope may differ from the information in these instructions, depending on the system installed at the site.

- If 2 or more heating circuits are installed, settings for different heating circuits are available and are necessary.
- If special system components and modules are installed (e.g. MS 200 solar module, pool module MP 100), corresponding settings are available and necessary.
- If certain types of heat source are installed, additional settings may be available and necessary.

3.1.1 Operation after power failure

At electric power failure or periods with disconnected heat source, no settings are lost. The control unit will restart when the power is restored. It is possible that time and date may need to be reset. No other settings are needed.

1) This setting is not available in Finland, Norway or Sweden

3.1.2 Overview of control elements and symbols

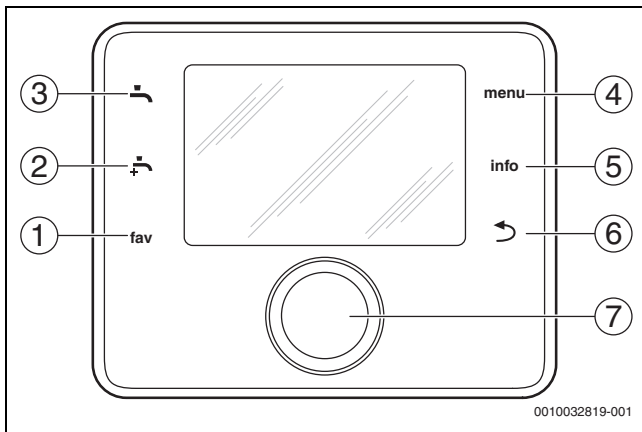


Fig. 2 Control elements

- [1] **fav** key: calls up the favourites menu
- [2] **extra DHW** key: starts extra DHW charging
- [3] **DHW** key: set the operating mode for DHW heating
- [4] **menu** key: main menu (press briefly)
- [5] **info** key: info menu or further information about the current selection
- [6] **↶** key: returns to previous menu or discards a value (press briefly); returns to the standard display (hold down)
- [7] **Selector**: select (turn) and confirm (press)



If the display lighting is off, only the lighting goes on when the selector is pressed for the first time. When the selector is turned and another control element is pressed at the same time, the lighting is switched on in addition to the effect described. The descriptions of the steps to be carried out by the operator in these instructions always assume that the lighting is activated. If no control element is actuated, the lighting turns off automatically (after approx. 30 s with the standard display, after approx. 30 min in the menu, after 24 h in the event of a fault).

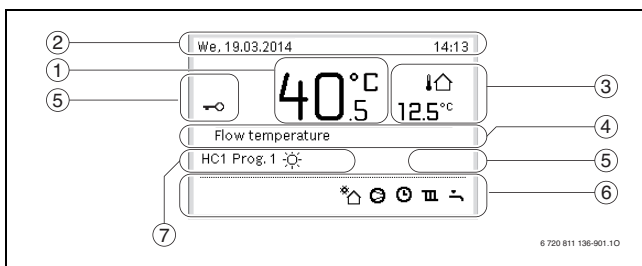


Fig. 3 Symbols in the standard display (example display)



The standard display refers only to the displayed heating circuit. Changing the required room temperature in the standard display only affects the heating circuit displayed.

Item	Symbol	Explanation
1	20.5 °C	Value display (current temperature): <ul style="list-style-type: none"> • Room temperature if a remote control is installed for the actual heating circuit. • Heat source temperature if there are no remote control installed.
2	-	Info line: display of time of day, day of the week and date.

Item	Symbol	Explanation
3		Additional temperature display: outside temperature, temperature of the solar collector or a DHW system.
		For ventilation: display of the ventilation level.
		For ventilation: frost protection (reduced ventilation).
4	-	Text information: e.g. the designation of the temperature currently displayed (→ Fig. 3, [1]). If a fault is present, corresponding information will be displayed here until the fault has been rectified.
5		The key block is active (hold down the DHW key and selector to activate or deactivate the key block).
6		Solar circulation pump is in operation.
		DHW heating is active
		DHW thermal disinfection active
		Extra DHW active
		Pool heating active
		Heating active
		Cooling active
		Energy supplier interruption
		External input active (remote)
		Holiday mode active
		Time program active
		Smart grid function active
		Screed drying active
		Electric booster heater active
		Power guard active
		Additional heat source active
		Defrost function active
		Compressor (Heat pump) active
		An IP-module is installed and communication to the server is active.
	7	Op. mode
		Operating mode: heating mode active.
		Operating mode: setback mode active.

Table 2 Symbols in the display

3.2 Control panel

An overview of the structure of the main menu and the position of the individual menu items can be found at the end of this document.

An overview of the items that can be found in the info menu is also found at the end of this document. The info menu is useful to get instant information of the status of the heat pump.

Each of the following descriptions takes the standard display as its starting point (→ Fig. 3).

3.2.1 Switching off

The user interface is powered via the BUS interface and is normally switched on. The system should only be shutdown temporarily, for example when cleaning filters. The complete system is deactivated and there is no frost protection during a shutdown.

- ▶ To temporarily switch off the system:
 - Press and hold the selector until a pop-up menu is displayed.
 - Select **Yes** in the menu **Switch to standby mode?**
- ▶ To switch on the system:
 - Press and hold the selector until a pop-up menu is displayed.
 - Select **Yes** in the menu **Switch from standby mode to normal operation?**

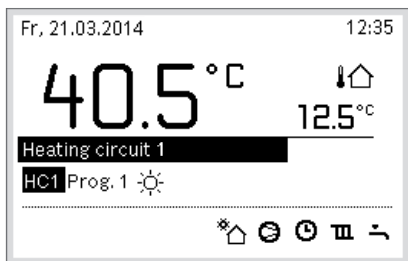


After a prolonged power failure or extended period of idleness, the date and time may need to be reset. All other settings are retained permanently.

3.2.2 Selecting a heating circuit for the standard display

The standard display only ever shows data for one heating circuit. If 2 or more heating circuits are installed, a setting can be made to determine which heating circuit the data in the standard display relates to.

- ▶ Press the selector and turn to select a heating circuit.



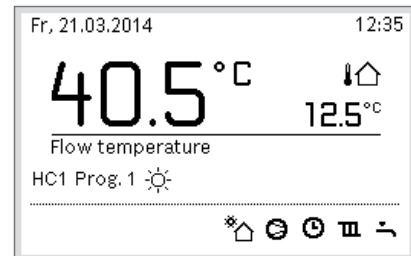
- ▶ Wait a few seconds or press the selector to confirm.

3.2.3 Set operating mode

Activate automatic mode (with time program)

If manual operation is active:

- ▶ Press the **menu** key.
- ▶ Press the selector to open the Sum./winter changeover menu.
- ▶ Press the selector to open the Op. mode menu.
- ▶ Highlight the desired heating circuit and press the selector.
- ▶ Choose auto and press the selector.
- ▶ Press and hold the **↵** key to return to the standard display.

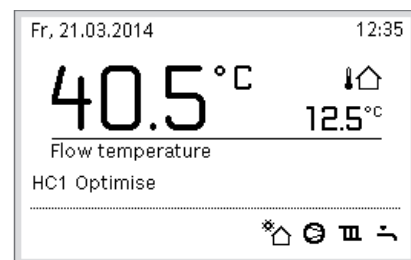


A pop-up window is displayed and the time program is activated. The currently valid temperature flashes.

Activating optimised operation (without time program)

If manual operation is active:

- ▶ Press the **menu** key.
- ▶ Press the selector to open the Sum./winter changeover menu.
- ▶ Press the selector to open the Op. mode menu.
- ▶ Highlight the desired heating circuit and press the selector.
- ▶ Choose Optimise and press the selector.
- ▶ Press and hold the **↵** key to return to the standard display.

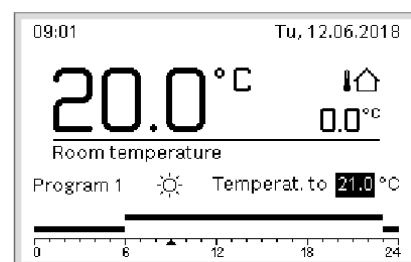


A pop-up window is displayed and the required room temperature is shown.

3.2.4 Changing the room temperature temporarily

Retaining automatic mode

- ▶ Turn and press the selector to set the required room temperature. The corresponding time slot is displayed differently to the other time slots.



The change applies until the next switching time in the active time program is reached.

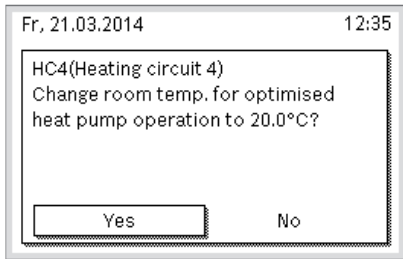
Cancelling the temperature change:

- ▶ Turn and press the selector to set the value stored in the time program.

3.2.5 Changing the room temperature permanently

Optimised operation (without time program)

- ▶ Turn and press the selector to set the temperature.



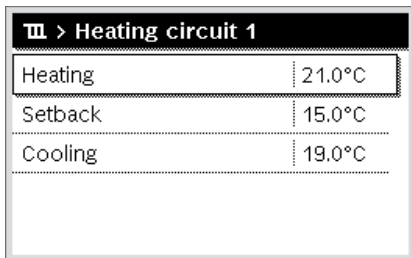
6 720 812 775-06.1O

-or-

- ▶ Open the **Sum./winter changeover > Temperature settings > Optimised operation** menu.
- ▶ Select the desired temperature and confirm or select **Heating off** and confirm.

Automatic mode

- ▶ Open the **Heating or Heating/Cooling > Temperature settings > Heating, Setback or Cooling** menu.



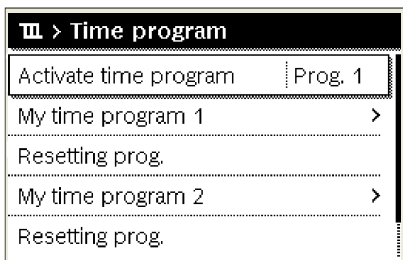
6 720 811 136-07.1O

- ▶ Set the desired temperatures for each mode and confirm, or select and confirm for the **Heating off** setback mode.
- ▶ Assign the operating modes to the required time slots via the time program.

3.2.6 Adapting the heating system settings using the time program (automatic mode)

Open the menu for adapting a time program for the heating system

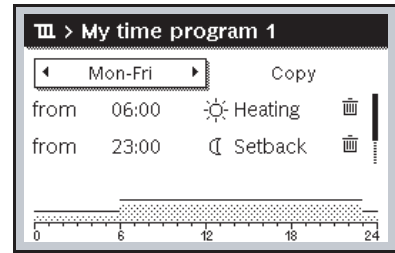
- ▶ Open the main menu.
- ▶ Open the menu **Heating or Heating/Cooling > Time program > My time program 1 or 2**.



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Selecting the day of the week or group of days

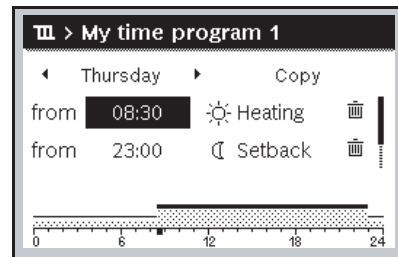
- ▶ Open the menu for adapting a time program for the heating system.
- ▶ Press the selector to activate the input field for the day of the week or group of days.
- ▶ Select a day of the week or group of days and confirm.



0010010088-001

Moving switching time

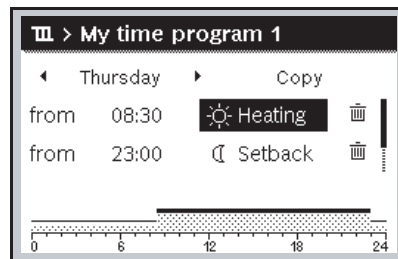
- ▶ Open the menu for adapting a time program for the heating system.
- ▶ Turn and press the selector to activate the input field for a switching time.
- ▶ Set and confirm the switching time.



0010010089-001

Adjusting the temperature/operating mode for a time slot

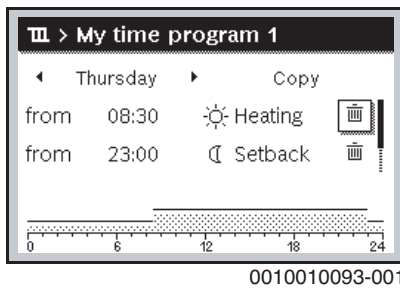
- ▶ Open the menu for adapting a time program for the heating system.
- ▶ Turn and press the selector to activate the input field for the operating mode of a time slot.
- ▶ Set and confirm operating mode.



0010010090-2001

Deleting switching time

- ▶ Open the menu for adapting a time program for the heating system.
- ▶ Select symbol for deleting switching time (🗑️) and confirm.

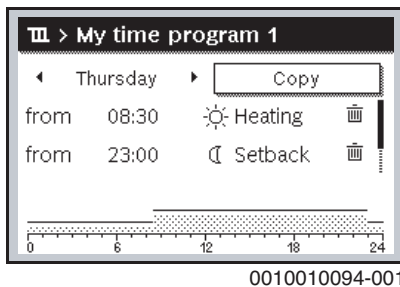


The symbol is associated with the switching time on the same line.

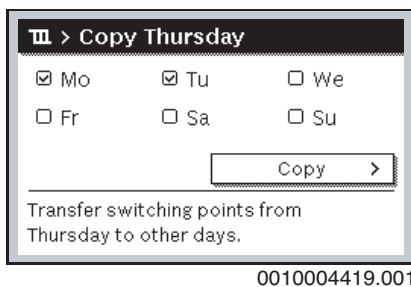
- ▶ Select **Yes** and confirm to delete the switching time. The previous time slot is extended to the next switching time. The switching times are automatically sorted in chronological order.

Copying time program

- ▶ Open the menu for adapting a time program for the heating system.
- ▶ Select the day of the week to be copied, e.g. Thursday.



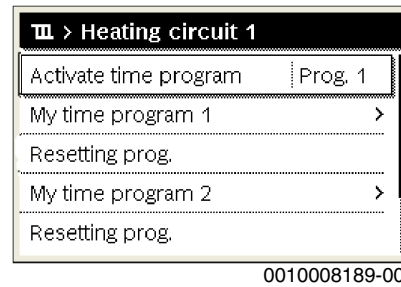
- ▶ Select and confirm **Copy**. A pick list of the days of the week is displayed.
- ▶ Select days (e.g. Monday and Tuesday) that are to be overwritten with the previously selected time program and confirm.



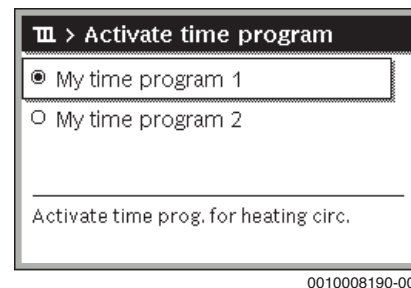
- ▶ Select and confirm **Copy**.

3.2.7 Selecting active time program for the heating system

- ▶ Open the main menu.
- ▶ Open **Heating** or **Heating/Cooling** > **Time program** > **Activate time program**.



- ▶ Select **My time program 1** or **2** and confirm.



The user interface operates in automatic mode with the selected time program. If 2 or more heating circuits are installed, this setting only applies for the selected heating circuit.

3.2.8 Renaming a time program or heating circuit

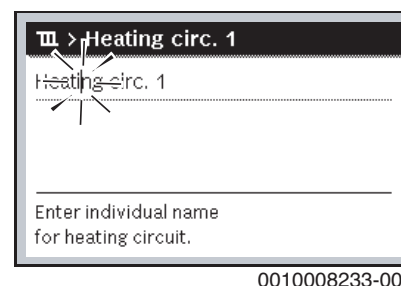
Standard designations are preassigned to the time programs and heating circuits.

Open the menu for renaming a time program

- ▶ Open the main menu.
- ▶ Open the **Heating** or **Heating/Cooling** > **Time program** > Heating circuit 1...4 > **Rename time prog.** menu. The cursor flashes to indicate the start position for data input.

Open the menu for renaming a heating circuit (only available if 2 or more heating circuits are installed)

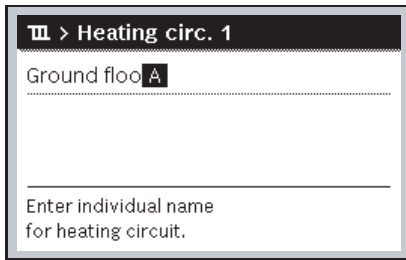
- ▶ Open the main menu.
- ▶ Open **Heating** or **Heating/Cooling** > **Time program** > **Heating circuit 1** > **Rename heating circuit** menu (or other heating circuit).



The cursor flashes to indicate the start position for data input.

Entering/adding characters

- ▶ Open menu for renaming a time program or heating circuit.
- ▶ Turn the selector to position the cursor in the required location.
- ▶ Press the selector to activate the input field (to the right of the cursor).
- ▶ Select character and confirm.



0010008199-001

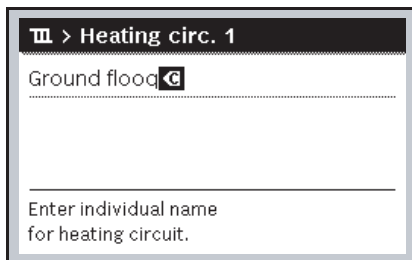
The selected character is entered (added). The input field for the next character in the text is activated.

- ▶ Press the **↩** key to complete the input.

Deleting characters/resetting name

To delete a character:

- ▶ Open menu for renaming a time program or heating circuit.
- ▶ Place the cursor behind the character to be deleted by turning the selector.
- ▶ Press the selector to activate the input field.
- ▶ Select the character **<C** and confirm.



0010008200-001

The character to the left of the input field is deleted.

To reset the name:

- ▶ Delete all characters.
The standard designation is entered again automatically.

3.2.9 DHW settings

In hybrid systems, DHW is only supplied by the external booster heater, which means that all DHW settings at the control unit of the indoor unit have no effect and must therefore be deactivated.

To do this, select Op. mode **Off** (→ Chapter 3.3.2, tab. 5).

All other DHW settings apply for DHW systems with cylinder.



When the thermal disinfection function is activated, the DHW cylinder is heated to the corresponding temperature set. The higher temperature hot water can be used for thermal disinfection of the hot water system.

- ▶ Observe regional and local requirements and operating conditions for the DHW circulation pump, including the water quality and instructions of the heat source.

Select the operating mode for DHW heating

Press the DHW key

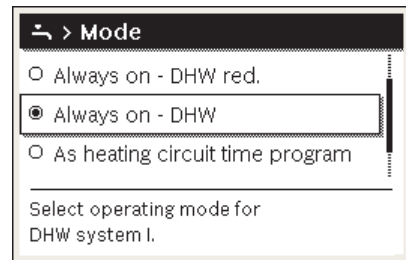
- ▶ Select and confirm **Always on - DHW Eco+¹⁾**
Lowest DHW temperature mode that results in lowest energy consumption.

-or-

- ▶ **Always on - DHW Eco**
Medium DHW temperature mode that results in medium energy consumption.

-or-

- ▶ **Always on - DHW comfort**
Highest temperature mode that results in higher energy consumption and may also lead to a higher sound level from the system.



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The DHW temperatures for each mode is set by the installer.

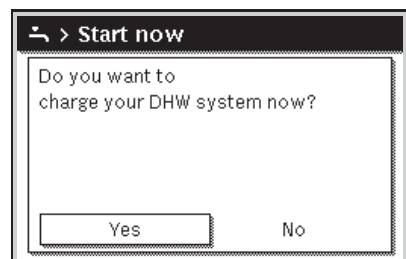
Activate extra DHW cylinder charging

If you have a temporary need of more hot water outside of normal DHW charging or time program:

- ▶ Press the button.

-or-

- ▶ Open the menu DHW > Extra hot water.
- ▶ Set the maximum DHW temperature and duration as desired.
- ▶ Select and confirm **Start now**.



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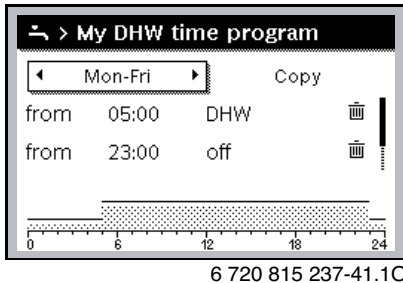
- ▶ Select **Yes** in the pop-up window and confirm.

1) Not available for fresh water station.

- ▶ The water heating becomes active immediately. Once the set duration time has expired, the extra DHW cylinder charging switches off again automatically.

Open the menu for adapting the time program for DHW heating

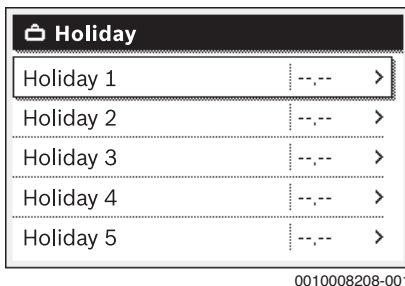
- ▶ Open the main menu.
- ▶ Open the **DHW > Time program** menu.
- ▶ Select **Own time program** and confirm.
- ▶ Set switching times and operation modes.



3.2.10 Setting up a holiday program

Open the menu for the holiday program

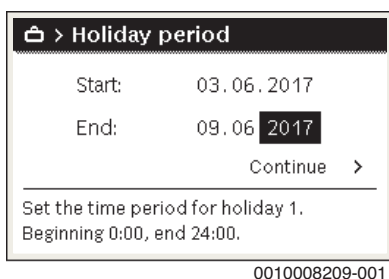
- ▶ Open the main menu.
- ▶ Open the menu **Holiday > Holiday 1, 2, 3, 4 or 5**.



Once the holiday period for the chosen holiday program has been set, the corresponding menu **Holiday 1, 2, 3, 4 or 5** is displayed.

Setting the holiday period

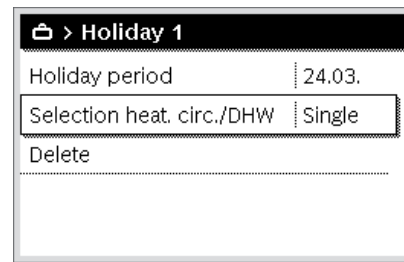
- ▶ Open the menu for the holiday program.
- ▶ If the holiday period for the chosen holiday program has already been set, open the **Holiday period** menu.
- ▶ Select and confirm the day, month and year for **Start:** and **End:** of the holiday period.



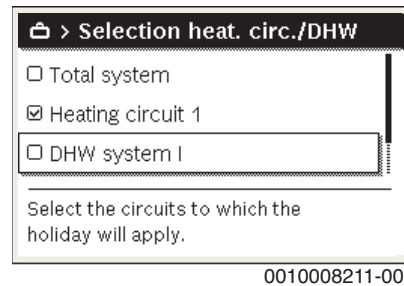
- ▶ To complete the entry, select **Next** and confirm.

Setting the heating and DHW for the holiday program

- ▶ Open the menu for the holiday program.
- ▶ Open the **Selection of htg circ./DHW** menu.



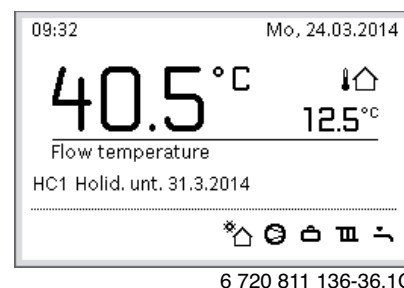
- ▶ Select and confirm the heating circuits and DHW systems.



- ▶ The holiday program is valid for the selected heating circuits and DHW systems.
- ▶ To complete the selection, select **Next** and confirm.
- ▶ Check the settings for **Heating** and **DHW** in the menu for the chosen holiday program, and modify if required.

Interrupting a holiday program

During the holiday period, the display indicates until when the holiday program will be active.



If 2 or more heating circuits are installed, the relevant heating circuit must be selected in the standard display before interrupting the holiday program.

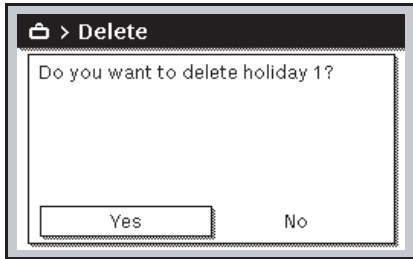
If the holiday program is set to As Saturday:

- ▶ Turn the selector and set the desired temperature. The change applies until the next switching time in the active time program is reached.

If no time program is active the holiday program is interrupted by deleting it.

Clearing a holiday program

- ▶ Open the menu for the holiday program.
- ▶ Select and confirm **Delete**.
- ▶ Select **Yes** in the pop-up window and confirm.



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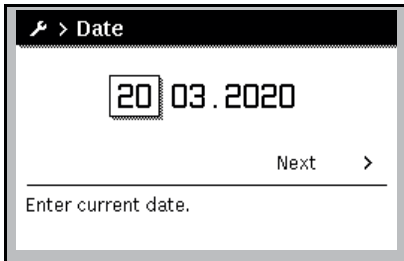
The holiday program is deleted.

3.2.11 More settings

Setting the time and date

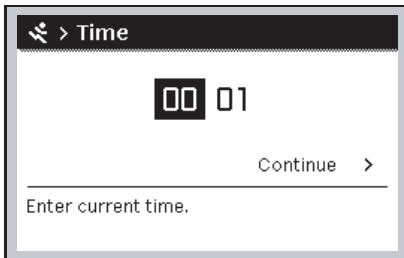
If the user interface has been disconnected from the power supply for a prolonged period, the date and time must be set:

- ▶ Restore the power supply.
The user interface displays the setting for the date.



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- ▶ Set the day, month and year respectively and confirm.
- ▶ Confirm **Next**.
The user interface displays the setting for the time.



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- ▶ Set the hours and minutes respectively and confirm.
- ▶ Confirm **Next**.
No other settings are required for recommissioning.

Switching the key block on/off

To switch the key block on or off:

- ▶ Press the **selector** and **DHW** key simultaneously until the key symbol in the display appears/disappears.

Setting up the favourite functions

The **fav** key gives direct access to often used functions for heating circuit 1. Press the key once to open the menu.

To adapt the list of favourites in the menu:

- ▶ Press and hold the **fav** key until the configuration menu is displayed.
- ▶ Turn and press the selector to select a function (**Yes**) or to cancel the selection (**No**).
- ▶ Press the **↶** key to close the menu.

Config. favourites menu	
My time program 1	No
Holiday	No
Activate time program	No
Silent mode on	No
Duration of extra DHW	Yes

6 720 811 136-15.10

3.3 Main menu

Depending on the heating appliance and how the user interface is used, not all menu items will be available for selection; see overview of main menu at the end of this document.

3.3.1 Heating settings

Adapting the Time program for the automatic mode

Menu: **Time program**

Menu item	Description
Activate time program	Activating automatic mode triggers control of the room temperature according to the settings in the selected time program [My time program 1] or [My time program 2].
My time program 1	2 switching times can be set for each day or group of days. One of the two operating modes (or a temperature) can be assigned to each switching time in automatic mode. The minimum duration of a time slot between two switching times is 15 minutes.
Resetting prog.	The default setting for [My time program 1] can be restored here.
My time program 2	→ See [My time program 1]
Resetting prog.	The default setting for [My time program 2] can be restored here.
Rename time prog.	The names of the time programs can be changed in the same way as the names of the heating circuits. This helps to select the correct time program, e.g. "family" or "night shift".

Table 3 Time program settings for heating

Setting the summer/winter switchover threshold



CAUTION

Risk of system damage!

- ▶ Do not switch over to summer mode if there is a risk of frost.

Menu: **Summer/winter changeover**

Menu item	Description
Heating/Cooling	<ul style="list-style-type: none"> • In summer, heating/cooling mode can be switched off [Continuous summer]. • The heating/cooling mode can be activated/shut down based on the outside temperature (this is only available if the [Automatic mode] is active in the heating circuit). • The heating mode can be active [Continuous heating]. However, heating starts only if it is too cold inside. • The cooling mode can be active [Cooling]. However, cooling starts only if it is too hot inside. <p>If more than one heating circuit is installed, [Heating circuit 1 ... 4] is displayed instead of this menu item.</p>
Heating mode from ¹⁾	If the outside temperature ²⁾ falls below the temperature threshold set here, the heating system is switched on. In systems with more than one heating circuit, this setting always relates to the corresponding heating circuit in each case.
Cooling mode from	If the outside temperature exceeds the temperature threshold set here, the heating system is switched off and cooling is enabled. In systems with more than one heating circuit, this setting always relates to the corresponding heating circuit in each case.

- 1) This menu item is only displayed if the outdoor-temperature-dependent switching between summer and winter modes is active for the heating circuit concerned.
- 2) When the outside temperature is adjusted (damped), changes to the measured outside temperature are delayed and fluctuations reduced.

Table 4 Settings for the summer/winter changeover

3.3.2 DHW settings

Setting the operation mode for DHW heating

The installer sets the temperatures for the different modes.

Menu: Op. mode

Menu item	Description
Op. mode	<ul style="list-style-type: none"> • [Off]: Deactivated, no DHW production. • [Always on - DHW Eco+]¹⁾: Lowest DHW temperature mode that results in lowest energy consumption. • [Always on - DHW Eco]: Medium DHW temperature mode that results in medium energy consumption. • [Always on - DHW comfort]: Highest temperature mode that results in higher energy consumption. • [Own time program]: DHW time program that operates independently of any heating circuit time program.

1) Not available for fresh water station

Table 5 Settings for operation mode of DHW

Setting the time program for DHW heating

Menu: **Time program**

Menu item	Description
My DHW time prog.	Own time program for DHW heating that works independently of the time program for the heating system. 6 switching times can be set for each day or group of days. One of the operating modes can be assigned to each switching time in automatic mode. The minimum duration of a time slot between two switching times is 15 minutes.
Resetting prog.	The time program for the DHW system is reset to the default setting with this menu item.

Table 6 Time program settings for DHW

Activating extra DHW heating

Menu: Extra hot water

Menu item	Description
Start now/ Cancel now	After activation of the extra hot water function, DHW is heated for the set duration to the set temperature. When the function is active, [Cancel now] is displayed in the menu. Select this setting for immediate deactivation of the extra hot water function.
Temperature	Desired DHW temperature for the extra hot water function.
Duration	Duration for the extra hot water function. When the time has expired, the function automatically switches off and the system goes back to normal DHW operation.

Table 7 Settings for the extra hot water function

Thermal disinfection

 **WARNING**

Danger to life from legionella!

Legionella can form in domestic hot water at DHW temperatures that are too low.

- ▶ Activate thermal disinfection
-or-
- ▶ Have daily heat-up set in the service menu by the specialist technician.
- ▶ Thermal disinfection may be terminated prematurely due to the system configuration or frequent water extraction. In this case the control unit issues a fault display. When thermal disinfection is activated, attention must be paid to ensuring, that this is performed successfully without a fault display.
- ▶ Observe the statutory regulations on drinking water.



If the thermal disinfection has terminated prematurely a notification is shown in the display. The system will repeat the thermal disinfection 24 hours later.



If the thermal disinfection is set and activated at an external heat source, the settings at the user interface have no effect on the thermal disinfection.

 **WARNING**

Risk of scalding!

If thermal disinfection or the daily heat-up has been activated to avoid legionella, the DHW is heated once to in excess of 60 °C (e.g. Tuesday night at 02:00).

- ▶ Only carry out thermal disinfection/daily heat-up outside normal hours of use.
- ▶ Make sure that a thermal mixer is installed. If in doubt, ask your installer.

Menu: **Autom. therm. disinfect.**

Menu item	Description
Start	The entire DHW volume is automatically heated to the set temperature once a week or daily, if [Auto] is set here.
Start now/ Cancel now	Immediate start or cancellation of thermal disinfection independently of the set day of the week.
Weekday	Day of the week, on which thermal disinfection is automatically carried out once a week, or daily thermal disinfection.
Time of Day	Time of day for the automatic start of thermal disinfection.

Table 8 Settings for thermal disinfection

Setting the DHW alternating operation

If DHW alternating operation is not activated, DHW heating has priority and interrupts the heat requirement of the heating system, if necessary.

Menu: **DHW alternating operation**

Menu item	Description
DHW alt. operation on	In the event of simultaneous DHW and heating demand, the system will alternate between DHW heating and heating mode based on the times set in [Prioritise DHW for] and [Heating priority for].
Prioritise DHW for	Duration of DHW heating.
Heating priority for	Duration of heating mode.

Table 9 Settings for the DHW alternating operation

Settings for the DHW circulation

Menu: **Circulation**

Menu item	Description
Op. mode	<ul style="list-style-type: none"> • [Off]: Circulation is switched off permanently. • [On]: The pump will run according to the settings under [Start frequency]. The time program for the DHW circulation pump is not active. • The circulation can be linked to the time program for DHW heating. • [My circulation time prog.]: Set a time program for the DHW circulation pump that works independently of the time program for DHW.
Start frequency	The start frequency determines how often the DHW circulation pump goes into operation for three minutes at a time every hour (1 x 3 minutes/h ... 6 x 3 minutes/h) or if it is constantly in operation. Whatever the case, circulation is only active during the times set in the time program.
My circulation time prog.	6 switching times can be set for each day or group of days. The DHW circulation pump can be switched on or off at each switching time. The minimum duration of a time slot between two switching times is 15 minutes.
Resetting prog.	The time program is reset to factory default.

Table 10 Settings for the circulation

3.3.3 Setting up a holiday program

Menu: **Holiday**

CAUTION

Risk of system damage!

- ▶ Before a prolonged period of absence, only change the settings under **Holiday**.
- ▶ After a long absence, check the operating pressure of the heating system and check the pressure gauge of the solar system if applicable.
- ▶ Do not switch off the solar system during long absences.

Cooling mode will not be activated during a holiday program.

Menu: **Holiday 1, Holiday 2, Holiday 3, Holiday 4 and Holiday 5**

Menu item	Description
Holiday period	Set the start and end date of the absence during holiday: the holiday program starts at the set start time at 00:00 o'clock. The holiday program ends at the set end time at 24:00 o'clock.
Selection of htg circ./DHW	The holiday program is applied to the sections of the system highlighted here. Only the heating circuits and DHW systems actually installed in the system are available for selection.
Heating	Control of the room temperature for the selected heating circuits during the holiday period: <ul style="list-style-type: none"> • Any [Constant temperature] can be set for the selected heating circuits throughout the entire holiday period. • The [Off] setting deactivates the heating system completely for the selected heating circuits.
DHW	DHW settings for the selected DHW systems during the holiday period. <ul style="list-style-type: none"> • If [Off] is set, no DHW at all will be available during the holiday period. • If [Off + therm. disinfection on] is set, DHW heating is deactivated but thermal disinfection is still carried out as normal either once a week or once a day. Note: If the holiday is spent at home, the DHW systems must not be selected under [Selection of htg circ./DHW] to ensure DHW remains available.
Delete	Delete all settings for the selected holiday program

Table 11 Settings for holiday programs

3.3.4 Settings for other systems or devices

If other specific systems or devices are installed in the system, additional menu items will be available. Depending on which system or device is being used and the associated assemblies or components, various settings can be made. Observe the additional information on the settings and functions in the technical documentation for the relevant system or device.

Settings for a swimming pool

Menu: **Pool**

Menu item	Description
Switch on pool heating	This setting enables the pool heating when it is activated.
Pool temperature	The water in the pool is heated to this temperature.
Allow add. heater for pool	This setting allows the auxiliary heater to supply heating for the pool if the heat pump cannot reach the set temperature.

Table 12 Settings for pool heating

Settings for smart grid

This menu is only available if a smart grid system is installed.

Menu item	Control range: Function description
Heating	The energy available in the smart grid is used for heating, if the system is in heating mode. [Selectable peak]: 0...5 °C Set how much the room temperature may be increased. [Forced peak]: 2...5 °C Set how much the room temperature is forced to increase.
DHW	The energy available in the smart grid is used for DHW. [Selectable peak]: [Yes] [No] If enabled the DHW is heated to the temperature set for DHW operating mode [Always on - DHW comfort]. No heating is done if the holiday program is active.

Table 13 Settings in the smart grid data menu

Settings for a hybrid system

This menu is only available if a hybrid system is installed. The system then has two heat sources; a heat pump and a separate conventional gas or oil burner.

Depending on the current situation and heat requirements, either the heat pump or the conventional heat source offers a more favourable energy/price ratio. Based on this ratio the controller decides which heat source to operate.

The energy/price ratio must be adjusted regularly to the actual price ratios.

The ratio is calculated with these formulas:

- Ratio for gas = (cost of electricity per kWh / cost of gas per kWh) X heat factor of boiler
- Ratio for oil = (cost of electricity per kWh / cost of oil per liter) X heat factor of boiler

Example:

- Cost of electricity = 24 ct/kWh
- Cost of gas = 8 ct/kWh
- Heat factor of boiler = 0,902
- **Energy/price ratio = (24/8) X 0,902 = 2,7**

The heat factor of the boiler (boiler efficiency) must be adapted to the installed appliance (→ manual of the appliance).

Menu: **Hybrid system**

Menu item	Description
Energy/price ratio	Enter the calculated energy/price ratio.

Table 14 Settings for a hybrid system

Setting a time program for an auxiliary heater

This menu is only available if an auxiliary heater is installed in the heating system.

 Menu: **Time prog., add. heater**

Menu item	Description
Time pr. aux. heater on	With this setting activated the auxiliary heater will only be allowed to operate in the [On] phases.
My time program	Set the time program for the auxiliary heater.
Reset time prog.	Reset the time program to the default settings.
Time prog min outd temp	Below this outdoor temperature the time program is off and the auxiliary heater can operate at any time. [Off] means that the time program runs regardless of the outdoor temperature.

Table 15 Settings of time program for auxiliary heater

Settings for a photovoltaic system

Make the photovoltaic (PV) specific settings in this menu. Select if the available energy should be used for **Heating** or DHW.

If photovoltaic energy is available and a buffer cylinder is installed with all heating circuits mixed, the buffer cylinder will be heated to the heat pump maximum temperature.

 Menu: **PV system**

Menu item	Control range: Function description
Heating peak	The energy available in the PV system is used for heating, if the system is in heating mode. Set how much the room temperature may be increased 0...5 °C.
DHW peak	The energy available in the PV system is used for DHW. [Yes] [No] If enabled the DHW is heated to the temperature set for DHW operating mode [Always on - DHW comfort]. No heating is done if the holiday program is active.
Cooling setback mode	The energy available in the PV system is used for cooling. [Yes] [No] If enabled the room temperature is decreased to the temperature set for cooling operating mode. No cooling is done if the holiday program is active.
Only cool with PV	Cooling mode is activated only if energy is available in the PV system. [Yes] [No] If enabled the room temperature is decreased to the temperature set for cooling operating mode. No cooling is done if the holiday program is active.

Table 16 Settings in the PV system data menu

3.4 Calling up information about the system

The current system values and the active operating conditions can be displayed easily via the info menu. No changes can be made in this menu.

To open the info menu:

- ▶ Press the **info** key in the standard display.

 Menu: **Sum./winter changeover**

Menu item	Description
Heating/cooling mode	Currently valid operating mode in the selected heating circuit.
Set room temp.	The desired room temperature that is currently valid in the selected heating circuit: <ul style="list-style-type: none"> • In automatic mode, this can change several times a day, if necessary. • In normal operation, it is always constant.
Measured room temp.	Currently measured room temperature in the selected heating circuit
Measured flow temp.	Currently measured flow temperature in the selected heating circuit

Table 17 Information about the heating

 Menu: **DHW**

Menu item	Description
Set temp.	Desired DHW temperature.
Measured temp.	Currently measured DHW temperature.

Table 18 Information about DHW

 Menu: **Ventilation**

Menu item	Description
Op. mode	Currently selected operating mode and ventilation level
Outside temperature	Display of Outside temperature
Supply air temp.	Display of supply air temperature
Ex. air temp.	Display of extract air temperature
Exhaust air temp.	Display of exhaust air temperature
Reheat supp. air temp.	Display of supply air temperature from the re-heater
Ex. air humid.	Display of exhaust air humidity
Ex. air quality	Display of exhaust air quality
Humidity remote ctrl	Display of humidity in the installation room of the remote control
Amb. air humid.	Display of ambient air humidity
Amb. air quality	Display of ambient air quality
Bypass	Display of bypass-settings
Rem. filter elapsed time	Display of duration in days until the next filter change time

Table 19 Information about the ventilation unit

 Menu: **Pool**

Menu item	Description
Set pool temperature	Desired pool temperature.
Current pool temperature	Currently measured pool temperature.

Table 20 Information about pool

Menu: **Operating data**

Menu item	Description
Control operating hours	Hours run by the control since the heat pump was commissioned or since the last reset.
Aux. heater energy cons.	Output of the electric booster heater since commissioning or since the last reset.
Op. hours for comp. heat.	Hours run by the compressor in heating mode since commissioning or since the last reset.
Op. hours for comp. cool.	Hours run by the compressor in cooling mode since commissioning or since the last reset.
Op. hours for comp. DHW	Hours run by the compressor in DHW operation since commissioning or since the last reset.
Op. hours for comp. pool	Hours run by the compressor in pool operation since commissioning or since the last reset.
Number of heating starts	Number of compressor starts in heating mode since commissioning or since the last reset.
Number of cooling starts	Number of compressor starts in cooling mode since commissioning or since the last reset.
Number of DHW starts	Number of compressor starts in DHW operation since commissioning or since the last reset.
Number of pool starts	Number of compressor starts in pool operation since commissioning or since the last reset.

Table 21 Operation data

Menu: **Energy consump.**

Menu item	Description
Total	Cumulated total energy consumed by the heating system.

Table 22 Total energy consumption data

Menu: **Energy consump. > Electric auxiliary heater**

Menu item	Description
Total	Cumulated total energy consumed by the electric booster heater.
Heating	Cumulated energy consumed by the electric booster heater in heating mode.
DHW	Cumulated energy consumed by the electric booster heater in DHW mode.
Pool	Cumulated energy consumed by the electric booster heater in pool heating mode.

Table 23 Energy consumption data for electric booster heater

Menu: **Energy consump. > Compressor**

Menu item	Description
Total	Cumulated total energy consumed by the heat pump.
Heating	Cumulated energy consumed by the heat pump in heating mode.
DHW	Cumulated energy consumed by the heat pump in DHW mode.
Cooling	Cumulated energy consumed by the heat pump in cooling mode.
Pool	Cumulated energy consumed by the heat pump in pool heating mode.

Table 24 Energy consumption data for heat pump

Menu: **Energy supplied**

Menu item	Description
Total energy suppl.	Cumulated total energy output of the heat pump.
Heating energy suppl.	Cumulated energy output of the heat pump in heating mode.
DHW energy suppl.	Cumulated energy output of the heat pump in DHW mode.
Emitted cooling energy	Cumulated energy output of the heat pump in cooling mode.
Pool energy suppl.	Cumulated energy output of the heat pump in pool heating mode.

Table 25 Energy output data for heat pump

Menu: **Solar**

Menu item	Description
Solar sensor (graphic)	Current measured temperatures with display of position of the selected temperature sensor in the solar system hydraulics (with graphic visualisation of the current operating conditions of the actuators in the solar system).
Solar yield	Solar yield for last week, solar yield for current week and total yield of solar system since the solar system was commissioned.

Table 26 Information about the solar system

Menu: **Outdoor temp**

The currently measured outside temperature is displayed in this menu. In addition, a diagram of the outside temperature profile for today and yesterday (from 00:00 to 24:00 in each case) is displayed here.

Menu: **Internet**

Menu item	Description
IP connection	Status of the connection between communication module and router.
Server connection	Status of the connection between communication module and Internet (via the router).
Connected network	Status of the connection between communication module and the network and display of WLAN-SSID.
IP address	IPV4 address of the communication module.
SW version	Software version of the communication module.
Login data	Login name and password for the login into the App to operate the system via a smartphone.
MAC address	MAC address of the communication module.

Table 27 Information about the Internet connection

3.5 Faults

If a fault persists:

- ▶ Confirm the fault by pressing the selector.
- ▶ Faults that are still active are displayed by pressing the ↵ key.
- ▶ Call an authorised contractor or customer service and give them the fault code and sub-code, as well as the ID no. of the user interface.



Table 28 Your contractor must enter the ID no. here.

Faults on additional heat source:

- ▶ Check the display of the additional heat source for information.
- ▶ Reset the additional heat source.
- ▶ If the fault persists; contact your contractor.

4 Maintenance

Both the owner and the operator are responsible for the safety and environmental compatibility of the heating system.

Regular inspection and maintenance are prerequisites for safe and environmentally compatible operation of the heating system.

- ▶ Have the appliance serviced every 2 years by an authorised contractor to ensure it is in good working order.
- ▶ With this in mind, you should ideally conclude a maintenance and inspection contract.

DANGER

Risk of electric shock.

Grave personal injuries may occur.

- ▶ Disconnect the power supply before carrying out maintenance work.

Using the wrong cleaning product may damage the units!

- ▶ Do not use acid or chlorine based products or products that contain abrasives.

4.1 Indoor unit

4.1.1 Checking the operating pressure

The pressure should be checked 1-2 times per year.

- ▶ Check the pressure at the pressure gauge.
- ▶ If the pressure is less than 0.5 bar, increase the pressure slowly to max. 2 bar by filling with water via the fill valve.
- ▶ If you have any questions about the procedure, consult the installer of the system.

4.1.2 Moisture in cooling mode

NOTICE

If moisture frequently forms near the indoor unit or the fan convectors in cooling mode, this could mean that the condensation insulation is defective.

- ▶ If moisture forms in the vicinity of components of the heating system, switch the heat pump off and consult the system installer.

4.1.3 Checking the safety valves

The safety valves should be checked 1-2 times each a year.

Water is expelled from the safety valve during heat-up. Never close the safety valve.

- ▶ The safety valve should only let water out if the maximum pressure is exceeded. Contact the installer if water is coming from the safety valve at pressures below 2 bar.
- ▶ The drainage hose from the safety valve shall be discharged into the sewage / floor well.

4.2 Heat pump (outdoor unit)

The heat pump requires very little in the way of inspection and maintenance. The following inspection and maintenance steps are carried out several times per year in order that the heat pump's maximum output will be maintained:

- Remove soiling and foliage at the evaporator and casing.

DANGER

Risk of electric shock.

- ▶ Always de-energize the electrical connection before carrying out maintenance work on the device (fuse, circuit breaker).

Damage to system due to use of unsuitable cleaning agents!

- ▶ Do not use acidic or alkaline cleaning agents or cleaning agents containing chlorine or abrasive products.

4.2.1 Removing dirt and leaves

- ▶ Remove dirt and leaves with a brush.

4.2.2 Casing

Dust and other dirt particles concentrate in the heat pump's outdoor unit over time.

- ▶ If required, clean the outside with a damp cloth.
- ▶ Spot repair cracks and damage on the casing with anti-corrosive paint.
- ▶ Standard car wax can be applied to protect the paint.

4.2.3 Evaporator

Wash off any layers of e.g. dust or dirt deposited on the surface of the evaporator.

WARNING

The thin aluminium fins are sensitive and can be damaged easily through incorrect handling. Never dry the fins directly with a cloth.

- ▶ Wear protective gloves during cleaning to protect your hands from cuts.
- ▶ Never use water pressure that is too high.

Damage to system due to use of unsuitable cleaning agents!

- ▶ Do not use acidic cleaning agents or cleaning agents containing chlorine or abrasive products.
- ▶ Do not use strong alkaline cleaning agents, e.g. sodium hydroxide.

Cleaning the evaporator:

- ▶ Spray detergent on the evaporator fins on the back of the heat pump.
- ▶ Rinse all coatings and cleaning agents off completely with water.

4.2.4 Snow and ice

In certain geographical regions or during periods of heavy snow, snow can get stuck on the back and the top of the heat pump. To prevent subsequent formation of ice, remove the snow.

- ▶ Clear the snow off the top.
- ▶ Hot water can be used to rinse off the ice.

Moisture can form under the outdoor unit due to condensate not falling into the condensation catch pan. This is normal and no special action is required.

5 Faults

Display rendition

6 Environmental protection and disposal

Environmental protection is a fundamental corporate strategy of the Bosch Group.

The quality of our products, their economy and environmental safety are all of equal importance to us and all environmental protection legislation and regulations are strictly observed.

We use the best possible technology and materials for protecting the environment taking account of economic considerations.

Packaging

Where packaging is concerned, we participate in country-specific recycling processes that ensure optimum recycling.

All of our packaging materials are environmentally compatible and can be recycled.

Used appliances

Used appliances contain valuable materials that can be recycled.

The various assemblies can be easily dismantled. Synthetic materials are marked accordingly. Assemblies can therefore be sorted by composition and passed on for recycling or disposal.

Old electrical and electronic appliances



This symbol means that the product must not be disposed of with other waste, and instead must be taken to the waste collection points for treatment, collection, recycling and disposal.

The symbol is valid in countries where waste electrical and electronic equipment regulations apply, e.g. "European Directive 2012/19/EC on old electronic and electrical appliances". These regulations define the framework for the return and recycling of old electronic appliances that apply in each country.

As electronic devices may contain hazardous substances, it needs to be recycled responsibly in order to minimize any potential harm to the environment and human health. Furthermore, recycling of electronic scrap helps preserve natural resources.

For additional information on the environmentally compatible disposal of old electrical and electronic appliances, please contact the relevant local authorities, your household waste disposal service or the retailer where you purchased the product.

You can find more information here:

www.weee.bosch-thermotechnology.com/

7 Data Protection Notice



We, **Bosch Thermotechnology Ltd., Cotswold Way, Warndon, Worcester WR4 9SW, United Kingdom** process product and installation information, technical and connection data, communication data, product registration and client history data to provide product functionality (art. 6 (1) sentence 1 (b)

GDPR), to fulfil our duty of product surveillance and for product safety and security reasons (art. 6 (1) sentence 1 (f) GDPR), to safeguard our rights in connection with warranty and product registration questions (art. 6 (1) sentence 1 (f) GDPR) and to analyze the distribution of our products and to provide individualized information and offers related to the product (art. 6 (1) sentence 1 (f) GDPR). To provide services such as sales and marketing services, contract management, payment handling, programming, data hosting and hotline services we can commission and transfer data to external service providers and/or Bosch affiliated enterprises. In some cases, but only if appropriate data protection is ensured, personal data might be transferred to recipients located outside of the European Economic Area. Further information are provided on request. You can contact our Data Protection Officer under: Data Protection Officer, Information Security and Privacy (C/ISP), Robert Bosch GmbH, Postfach 30 02 20, 70442 Stuttgart, GERMANY.

You have the right to object, on grounds relating to your particular situation or where personal data are processed for direct marketing purposes, at any time to processing of your personal data which is based on art. 6 (1) sentence 1 (f) GDPR. To exercise your rights, please contact us via privacy.ttgb@bosch.com To find further information, please follow the QR-Code.

8 Product data for energy consumption

8.1 Tech data

	Unit	HC7000iAW 9 I
Electrical data		
Power infeed	V	230 ¹⁾
Fuse size (recommended), class gL/C	A	10
Connected load	kW	0.5
Heating system		
Type of connection (heating flow, heat pump and flow/return of the auxiliary heater)	inch	3/4" (external thread)
Type of connection (heating return)	inch	3/4" (external thread)
Maximum operating pressure	bar	3
Expansion Vessel	l	Not integrated
Heat transfer medium		
Minimum flow (when defrosting)	l/s	0.32
Pump type PC0		Grundfos UPM2K 25-75 PWM
General		
Waste water connection	mm	Ø 32
Protection index		IPX1D
Dimensions (width x depth x height)	mm	350 x 246 x 706
Weight	kg	18
Sound pressure level	dB(A)	36
Maximum possible installation altitude of boiler above sea level	m	2000

1) 1N AC, 50 Hz

9 Technical terms

Heat pump (outdoor unit)

The central heat source. Installed in the open air. Alternative designation: outdoor unit. Contains the cooling circuit. Heated or cooled water is channeled from the outdoor unit to the heat pump module (indoor unit).

Indoor unit

Installed in the building and distributes the heat from the outdoor unit to the heating system or the DHW cylinder. Contains the control unit and the pump in the heat transfer medium line for the outdoor unit.

Heating installation

Designation for the entire installation, comprising the heat pump, heat pump module, DHW cylinder, heating system and accessories.

Heating system

Comprises the heat source, container, radiators, underfloor heating system or fan convectors or a combination of these elements if the heating system is made up of several heating circuits.

Heat. circ.

The part of the heating system that distributes the heat throughout the various rooms. Consists of pipework, pump and radiators, heating hoses of the underfloor heating system or fan convectors. Only one of the specified alternatives is possible within a circuit. However, if for example the heating system is equipped with two circuits, radiators can be installed in one and an underfloor heating system installed in the other. Heating circuits can be configured with and without mixers.

Heating water/domestic hot water

If domestic hot water is connected to the system, a distinction is made between heating water and domestic hot water. The heating water is channeled to the radiators and the underfloor heating system. Shower and water taps are supplied with domestic hot water.

If a DHW cylinder is present in the system, the control unit switches between heating and DHW mode so that maximum comfort is achieved. The DHW or heating mode can be prioritised by selecting an option on the control unit.

Heating circuit without mixer

In a heating circuit without mixer the temperature in the circuit is controlled purely by the energy from the heat source.

Heating circuit with mixer

In a heating circuit with mixer, the mixer mixes return water from the circuit with water from the heat pump. This allows heating circuits with mixer to be operated at a lower temperature than the other heating system, e.g. so that underfloor heating systems that operate at lower temperatures can be separated from radiators that require higher temperatures.

Mixer

The mixer is a valve that steadily mixes colder return water with hot water from the heat source in order to achieve a specific temperature. The mixer can be situated in a heating circuit or in the heat pump module for the external auxiliary heater.

3-way valve

The 3-way valve distributes thermal energy to the heating circuits or the DHW cylinder. It has two defined settings so that heating and DHW heating cannot occur at the same time. This is also the most effective operating mode, as the DHW is always heated to a specific temperature, while the heating water temperature is continuously adjusted to the outdoor air temperature in each case.

External auxiliary heater (extra)

The external auxiliary heater is a separate heat source which is connected via pipework to the indoor unit. The heat produced in the auxiliary heater is controlled via a mixer. It is therefore also referred to as an auxiliary heater with mixer. The control unit controls the activation and deactivation of the auxiliary heater according to the existing heat energy demand. Heat sources are electric, oil-fired or floor standing gas boilers.

Heat transfer medium circuit

The part of the heating system that transports the heat from the outdoor unit to the indoor unit.

Cooling circuit

The main part of the outdoor unit that obtains energy from the outdoor air and transfers this as heat to the heat transfer medium circuit. Consists of evaporator, compressor, condenser and expansion valve. The refrigerant circulates in the cooling circuit.

Evaporator

Heat exchanger between air and refrigerant. The energy from the air that is drawn in through the evaporator causes the refrigerant to boil and turn to gas as a result.

Compressor

Moves the refrigerant through the cooling circuit from the evaporator to the condenser. Increases the pressure of the gaseous refrigerant. The temperature also increases as the pressure increases.

Condenser

Heat exchanger between refrigerant in the cooling circuit and water in the heat transfer medium circuit. During the heat transfer, the temperature of the refrigerant falls as it changes into the liquid aggregation state.

Expansion valve

Reduces the pressure of the refrigerant after it is discharged from the condenser. The refrigerant is then channeled back to the evaporator where the process starts again.

Inverter

Located in the outdoor unit and enables the speed of the compressor to be controlled based on the heat energy demand in each case.



Setback phase

A period during the time-controlled operation involving the **setback** operating mode.

Time-controlled operation

The heating system is heated in accordance with the time program and switching between the operating modes occurs automatically.

Operating phase

The heating operating phases are: **heating** and **setback**. They are depicted by the symbols  and .

The operating phases for DHW heating are: **DHW**, **DHW reduced** and **Off**. A temperature can be set for each operating phase (except for **Off**).

Frost protection

Depending on the type of frost protection selected, the outdoor unit is switched on if the outside temperature or room temperature falls below a certain critical threshold. Frost protection prevents the heating system from freezing up.

Desired room temperature

The room temperature to be achieved by the heating system. It can be set individually.

Default settings

Values saved permanently on the control unit, which are available at all times and can be reset as necessary.

Heating phase

A period during the time-controlled operation involving the **heating** operating mode.

Parental lock

Settings in the standard display and in the menu can only be changed if the parental lock (key block) is switched off.

Mixer/mixing valve

Assembly that automatically ensures that DHW can be drawn from the draw-off points at a temperature no higher than the temperature set on the mixing valve.

Normal Operation

In normal mode, automatic mode (the heating system time program) is not active and the home is steadily heated at the temperature set for normal mode.

Reference room

The room in your home where the remote control is installed is the reference room. The room temperature in this room acts as the control variable for the assigned heating circuit (which can include several rooms or the entire house if only one circuit is present).

Switching time

A particular time when the heating temperature, for example, is increased or reduced. A switching time is a component of a time program.

Temperature during an operating phase

A temperature that is assigned to an operating phase. The temperature is adjustable. Refer to the explanations about the operating mode.

Flow temperature

The temperature that the heating water in the heating circuit retains from the heat source through to the radiators or the underfloor heating system in the room.

Hot water cylinder

A DHW cylinder stores large volumes of heated potable water. Sufficient hot water is available at the draw-off points (e.g. water taps) as a result.

Time program for heating

This time program ensures automatic switchover between the operating phases at defined switching times.



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