

For the operator

Operating instructions



## VRC 700

VRC 700

GB, IE

**Publisher/manufacturer**

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## 1 Safety

### 1.1 Action-related warnings

#### Classification of action-related warnings

The action-related warnings are classified in accordance with the severity of the possible danger using the following warning signs and signal words:

#### Warning symbols and signal words

**Danger!**

Imminent danger to life or risk of severe personal injury

**Danger!**

Risk of death from electric shock

**Warning.**

Risk of minor personal injury

**Caution.**

Risk of material or environmental damage

### 1.2 General safety information

#### 1.2.1 Installation by competent persons only

Installation of the unit can be only carried out by a competent person. This competent person is also responsible for proper installation and start-up.

#### 1.2.2 Danger caused by improper operation

Improper operation may present a danger to you and others, and cause material damage.

- ▶ Carefully read the enclosed instructions and all other applicable documents, particularly the "Safety" section and the warnings.

#### 1.2.3 Danger caused by a malfunction

- ▶ Ensure that air can circulate freely around the controller, and that the controller is not covered by furniture, curtains or other objects.
- ▶ Ensure that all radiator valves in the room where the controller is fitted are fully open.

#### 1.2.4 Risk of material damage caused by frost

- ▶ Ensure that the heating installation always remains in operation during freezing con-

ditions and that all rooms are sufficiently heated.

- ▶ If you cannot ensure the operation, have a competent person drain the heating installation.

#### 1.2.5 Moisture and mould damage due to inadequate exchange of air

In heavily insulated rooms that only allow a small exchange of air, moisture and mould damage may occur.

- ▶ Ventilate the rooms regularly by opening windows and activate the **1 x ventilation boost** function once to save energy.

### 1.3 Intended use

In the event of inappropriate or improper use, damage to the product and other property may arise.

The product controls a heating installation with a Vaillant heat generator with an eBUS interface in a way that is weather-controlled and time-dependent.

Intended use includes the following:

- observance of the operating instructions included for the product and any other system components
- compliance with all inspection and maintenance conditions listed in the instructions.

Any other use that is not specified in these instructions, or use beyond that specified in this document shall be considered improper use. Any direct commercial or industrial use is also deemed to be improper.

**Caution.**

Improper use of any kind is prohibited.





## 2 Notes on the documentation

### 2 Notes on the documentation

#### 2.1 Observing other applicable documents

- ▶ You must observe all operating instructions enclosed with the system components.

#### 2.2 Storing documents

- ▶ Keep this manual and all other applicable documents safe for future use.

#### 2.3 Applicability of the instructions

These instructions apply only to:

##### VRC 700 – Article number

Great Britain	0020171316
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## 3 Product overview

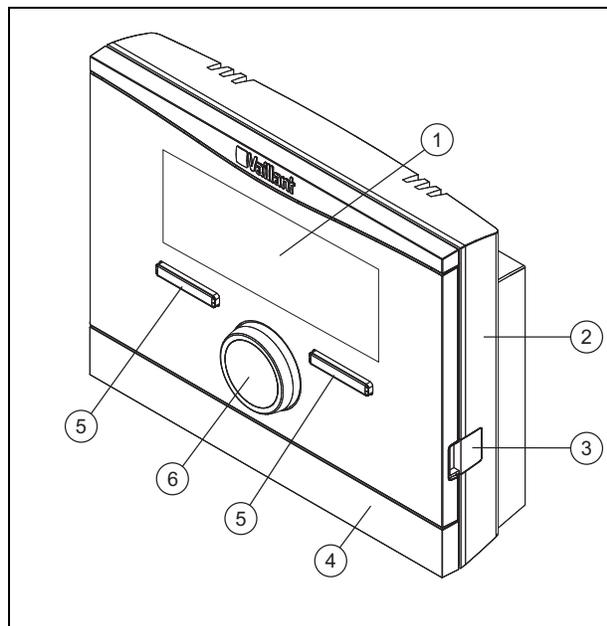
### 3.1 CE label



The CE label shows that the products comply with the basic requirements of the applicable directives as stated on the identification plate.

The declaration of conformity can be viewed at the manufacturer's site.

### 3.2 Design of the product



- |   |                    |   |                          |
|---|--------------------|---|--------------------------|
| 1 | Display            | 4 | Wall-mounting base cover |
| 2 | Wall-mounting base | 5 | Selection button         |
| 3 | Diagnostics socket | 6 | Rotary knob              |

### 3.3 Identification plate

The identification plate is located inside the product and is not accessible from the outside.

### 3.4 Serial number

The 10-digit article number can be found in the serial number. You can view the serial number under **Menu → Information Serial number**. The article number is found in the second line of the serial number.

### 3.5 Control function

The product controls the **Vaillant** heating installation, the hot water generation for a connected domestic hot water cylinder and the ventilation of a connected ventilation unit.

If the controller is installed in a living area, you can operate the heating installation, hot water generation and ventilation from a living area.

#### 3.5.1 Heating installation

##### 3.5.1.1 Heating

You can use the controller to set the desired temperature for different times of the day and for different days of the week.

The controller is a weather compensator with a temperature sensor fitted in the open air. The temperature sensor measures the outside temperature and sends the values to the controller. When the outside temperature is low, the controller increases the flow temperature of the heating installation. When the outside temperature rises, the controller reduces the flow temperature. Thus, the controller reacts to fluctuations in the outside temperature and, using the flow temperature, keeps the room temperature constantly at the set desired temperature.

##### 3.5.1.2 Cooling

You can use the controller to set the desired temperature for different times of the day and for different days of the week.

The room temperature sensor measures the room temperature and sends the data to the controller. If the room temperature is higher than the desired temperature that is set, the controller switches cooling on.

##### 3.5.1.3 Ventilation

You can use the controller to set the desired ventilation level and time for the ventilation.

##### 3.5.1.4 Zones

If more than one zone is available, the controller controls the available zones.

You require more than one zone if, for example:

- Underfloor heating and radiator heating (dependent zones) are installed in a house.
- A house contains more than one independent residential unit (independent zones).

#### 3.5.2 Hot water generation

You can use the controller to set the temperature and time for the hot water generation. The heat generator heats the water in the domestic hot water cylinder until it reaches the

set temperature. You can set a time period during which hot water should be available in the domestic hot water cylinder.

### 3.5.3 Circulation

If a circulation pump is installed in the heating installation, you can set a period for circulation. During the set period, hot water circulates from the domestic hot water cylinder to the water taps and back to the domestic hot water cylinder.

### 3.6 Frost protection function

The frost protection function protects the heating system and apartment from frost damage. The frost protection function monitors the outside temperature.

If the outside temperature

- falls below 4 °C, the controller switches the heat generator on after a frost protection delay time, and brings the target room temperature to 5 °C.
- rises above 5 °C, the controller does not switch the heat generator on but monitors the outside temperature.



**Note**

The competent person can set the frost protection delay time.

## 4 Operating

### 4.1 Operating structure

#### 4.1.1 Level for the operator

No special prior knowledge is required for this level. Via a menu structure, you can access configurable or read-only values.

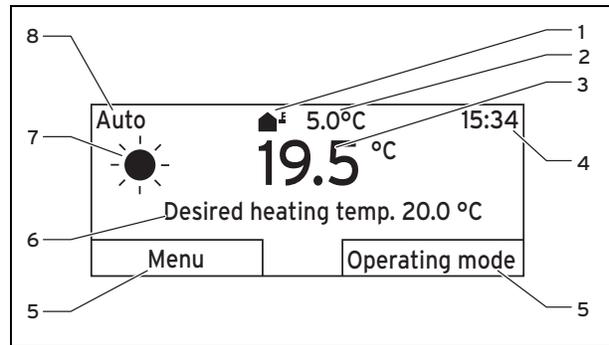
#### 4.1.2 Level for the competent person

Using the level for the competent person, the competent person sets further values for the heating installation. The settings may only be made by someone with specialist knowledge; this level is therefore code-protected.

#### 4.1.3 Menu structure design

The menu structure of the controller is split into four levels. There are three selection levels and one setting level. From the basic display, you access selection level 1 and, from there, you can access the menu structure for one level up or down. The setting level is accessed from the lowest selection level.

### 4.1.4 Basic display



- |   |  |   |  |
|---|--|---|--|
| 1 | Symbol for the current outside temperature | 5 | Current function of the selection buttons            |
| 2 | Current outside temperature                | 6 | Desired setting (e.g. <b>Desired heating temp.</b> ) |
| 3 | Current room temperature                   | 7 | Symbol for <b>Auto</b> operating mode                |
| 4 | Time                                       | 8 | Operating mode set                                   |

The basic display shows the current settings and values of the heating installation. If you make a setting on the controller, the display on the screen switches from the basic display to the display with the new setting.

The basic display appears when you:

- press the left-hand selection button and thus exit selection level 1.
- do not operate the controller for more than 5 minutes.

The basic display shows the key displays heating, cooling and ventilation and the corresponding operating modes as well as the status of the time period.

If your heating installation has independent zones, the competent person sets the zone whose values are to appear on the basic display.

#### 4.1.4.1 Symbols for Auto mode

Symbol	Meaning
	Comfort mode: Within a set time period
	Set-back mode: Outside a set time period

#### 4.1.4.2 Soft key function

Both selection buttons have a soft key function. The current functions of the selection buttons are displayed in the bottom display line. Depending on the selection level selected in the menu structure, the list entry or the value, the current function for the left and right selection buttons may be different.

If, for instance, you press the left-hand function key, the current function of the left function key switches from **Menu** to **Back**.

## 4 Operating

### 4.1.4.3 Menu

If you press the left-hand selector button, **Menu**, you switch from the basic display to selection level 1 of the menu structure.

### 4.1.4.4 Operating mode

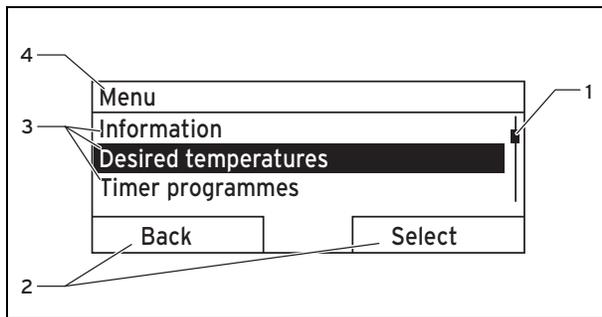
If you press the right-hand selection button, **Operating mode**, you access the settings directly from the basic display under **Operating mode**.

### 4.1.4.5 Desired setting

Depending on the basic setting selected, a different display text appears, e.g.:

- For the **Heating** basic setting, **Desired heating temp.** appears
- For the **Cooling** basic setting, **Desired cooling temp.** appears
- **Ventilation stage** appears for the **Ventilation** basic setting
- Depending on the operating mode selected, no display text appears

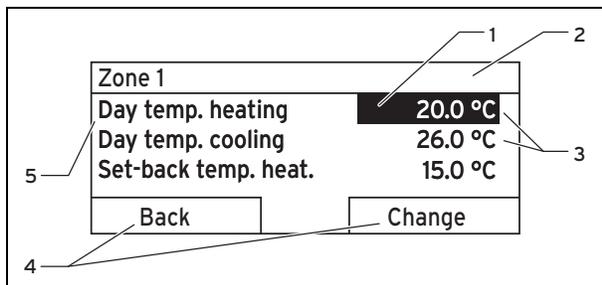
### 4.1.5 Selection level



- |   |  |   |                                     |
|---|--|---|-------------------------------------|
| 1 | Scroll bar                                 | 3 | Selection level list entries        |
| 2 | Current functions of the selection buttons | 4 | Current function or selection level |

Through the selection levels, you navigate to the setting level in which you wish to read or change settings.

### 4.1.6 Setting level



- |   |                         |   |  |
|---|-------------------------|---|--|
| 1 | Current selection       | 4 | Current functions of the selection buttons |
| 2 | Current selection level | 5 | Setting level                              |
| 3 | Values                  |   |  |

In the setting level, you can select the values you want to read or change.

## 4.2 Operating concept

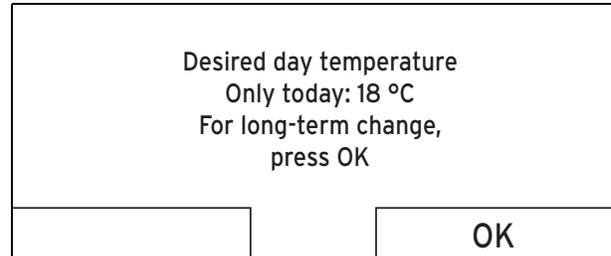
The controller is operated using two selection buttons and a rotary knob.

The display shows an element that is highlighted by white writing on a black background. A flashing, highlighted value means that you can change the value.

If you do not operate the controller during a period of more than 5 minutes, the basic display appears again.

### 4.2.1 Example: Operation in the basic display

From the basic display, you can change the **Desired day temperature** directly for the current day by turning the rotary knob.



In the display, a request appears asking if you want to change the **Desired day temperature** for the current day or on a permanent basis.

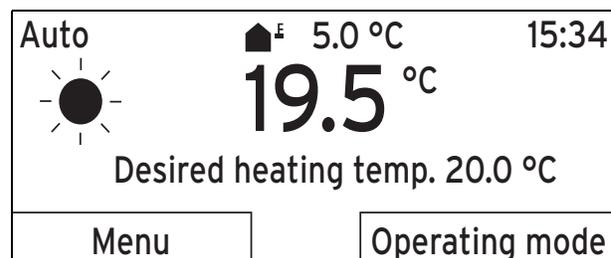
#### 4.2.1.1 Changing the Desired day temperature for the current day

- ▶ Turn the rotary knob to set the desired temperature.
  - ◁ The display switches back to the basic display after a few seconds. The desired temperature that has been set applies for the next six hours.

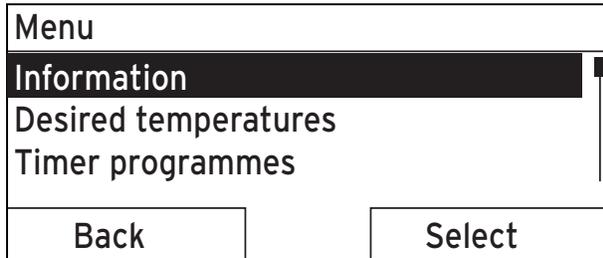
#### 4.2.1.2 Changing the Desired day temperature permanently

1. Turn the rotary knob to set the desired temperature.
2. Press the right-hand selection button, **OK**.
  - ◁ The display switches to the basic display. The change to the **Desired day temperature** has been applied for the long-term.

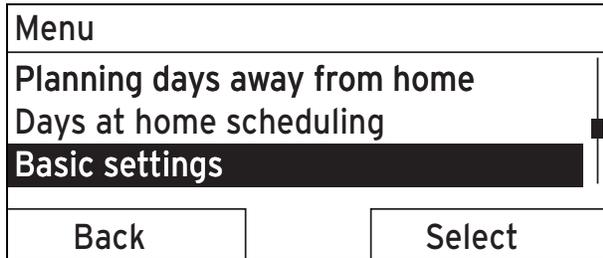
### 4.2.2 Example, changing the display contrast



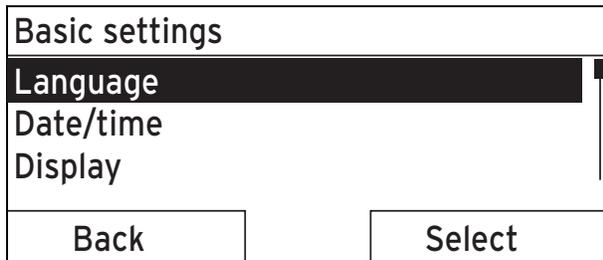
1. If the display does not show the basic display, press the left-hand selection button, **Back**, until the basic display appears again.
2. Press the left-hand selection button, **Menu**.
  - ◁ The controller switches to selection level 1.



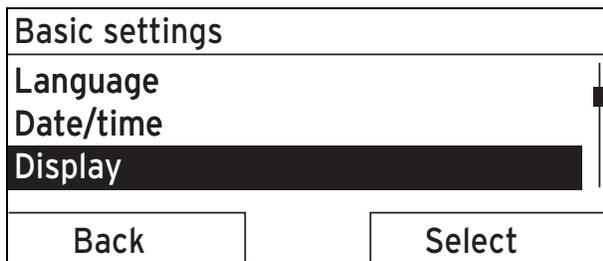
- Turn the rotary knob until the **Basic settings** list entry is highlighted.



- Press the right-hand selection button, **Select**.  
 ◀ The controller switches to selection level 2.



- Turn the rotary knob until the **Display** list entry is highlighted.



- Press the right-hand selection button, **Select**.  
 ◀ The controller switches to the **Display** setting level. The adjustable value for the **Display contrast** is highlighted.



- Press the right-hand selection button, **Change**.  
 ◀ The highlighted value flashes.



- Turn the rotary knob to change the value.



- Press the right-hand selection button, **OK**, to confirm the change.  
 ◀ The controller has saved the changed value.
- Press the left-hand selection button **Back** several times to go back to the basic display.

## 5 Operating and display functions



### Note

The functions described in this section are not available for all system configurations.

### Overview table of the operating modes and operating levels

Operating modes (→ Page 18)

Overview of operating levels (→ Page 18)

The path details given at the start of each function description indicate how you reach this function in the menu structure.

The description of the functions for **ZONE1** also applies for all available zones.

### 5.1 Information

#### 5.1.1 Reading the system status

Menu → Information → System status

- Under **System status**, there is a list containing information that provides an overview of the current system status, and current settings that you can change there.

## 5 Operating and display functions

### 5.1.1.1 System

#### Menu → Information → System status → Fault status

- If no maintenance is required and no faults have occurred, the value **No fault** is shown for **Fault status**. If maintenance is required or a fault has occurred, the value **Fault list** is shown for **Fault status**. In this case, the right-hand selection button has the function **Display**. If you press the right-hand selection button **Display**, the list of fault messages is shown on the display.

#### Menu → Information → System status → Water pressure

- You can use this function to read the water pressure of the heating installation.

#### Menu → Information → System status → System status

- You can use this function to read the heating installation's operating mode.
- **Standby**: The heating installation has no energy requirement and is in standby.
- **Heat. mode**: The heating installation heats the living rooms to the **Desired heating temp.**.
- **Cooling**: The heating installation cools the living rooms to the **Desired cooling temp.**.
- **Domestic hot water**: The heating installation heats the hot water in the cylinder to the **Desired temperature for Domestic hot water**.

#### Menu → Information → System status → Collector temp

- You can use this function to read the current temperature on the collector temperature sensor.

#### Menu → Information → System status → Solar yield

- You can use this function to read the total solar yield.

#### Menu → Information → System status → Reset solar yield

- If you select the setting **Yes** under the **Reset solar yield** function and press the right-hand selection button **OK**, you reset the previously totalled solar yield to 0 kWh.

#### Menu → Information → System status → Environment yield

- You can use this function to read the total environment yield.

#### Menu → Information → System status → Reset environment yield

- If you select the setting **Yes** under the function **Reset environment yield** and press the right-hand selection button **OK**, you reset the previously totalled environmental yield to 0 kWh.

#### Menu → Information → System status → Curr. room air humidity

- You can use this function to read the current room air humidity. The room air humidity sensor is installed in the controller.

#### Menu → Information → System status → Current dew point

- You can use this function to read the current dew point. The dew point indicates the temperature at which the water vapour in the air condenses and settles on objects.

#### Menu → Information → System status → triVAI

- You can use this function to read whether the heat pump or the auxiliary heater (gas, oil or electricity) is currently covering the energy requirement. The energy manager uses the **triVAI** and the comfort criteria to decide which heat generator to use.

If the value that is read is greater than 1, the heat pump is better at covering the energy requirement than the auxiliary boiler.

### 5.1.1.2 ZONE1

#### Menu → Information → System status → Day temp. heating

- You can use this function to set the desired day temperature for the zone.

**Day temp. heating** is the temperature that you want in the rooms during the day or when you are at home (Comfort mode).

#### Menu → Information → System status → Day temp. cooling

- You can use this function to set the desired day temperature for the zone.

**Day temp. cooling** is the temperature that you want in the rooms during the day or when you are at home (Comfort mode).

#### Menu → Information → System status → Set-back temp. heat.

- You can use this function to set the desired set-back temperature for the zone.

**Set-back temp. heat.** is the temperature that you want in the rooms during the night or when you are away from home (Set-back mode).

#### Menu → Information → System status → Room temperature

- If the controller is installed outside of the heat generator, you can read the current room temperature.

The controller has an integrated temperature sensor, which determines the room temperature.

### 5.1.1.3 Ventilation

#### Menu → Information → System status → Air quality sensor 1/2/3

- You can use this function to read the measured values from the air quality sensor.

#### Menu → Information → System status → Exhaust air humidity

- You can use this function to read the exhaust air humidity in the ventilation unit's ventilation shaft.

### 5.1.2 Consumption

Some components do not support the calculation of consumption, the total of which is shown on the display. In the instructions for the components, you can find out if and how the individual components determine the consumption.

#### Menu → Information → Consumption → Current month → Heating → Electricity

- You can use this function to read the total electrical consumption for heating in the current month.

## Menu → Information → Consumption → Current month → Heating → Fuel

- You can use this function to read the total fuel consumption in kWh for heating in the current month.

## Menu → Information → Consumption → Current month → Domestic hot water → Electricity

- You can use this function to read the total electrical consumption for hot water in the current month.

## Menu → Information → Consumption → Current month → Domestic hot water → Fuel

- You can use this function to read the total fuel consumption in kWh for hot water in the current month.

## Menu → Information → Consumption → Last month → Heating → Electricity

- You can use this function to read the total electrical consumption for heating in the last month.

## Menu → Information → Consumption → Last month → Heating → Fuel

- You can use this function to read the total fuel consumption in kWh for heating in the last month.

## Menu → Information → Consumption → Last month → Domestic hot water → Electricity

- You can use this function to read the total electrical consumption for hot water in the last month.

## Menu → Information → Consumption → Last month → Domestic hot water → Fuel

- You can use this function to read the total fuel consumption in kWh for hot water in the last month.

## Menu → Information → Consumption → History → Heating → Electricity

- You can use this function to read the total electrical consumption for heating since start-up.

## Menu → Information → Consumption → History → Heating → Fuel

- You can use this function to read the total fuel consumption in kWh for heating since start-up.

## Menu → Information → Consumption → History → Domestic hot water → Electricity

- You can use this function to read the total electrical consumption for hot water since start-up.

## Menu → Information → Consumption → History → Domestic hot water → Fuel

- You can use this function to read the total fuel consumption in kWh for hot water since start-up.

### 5.1.3 Diagram: Reading the solar yield

#### Menu → Information → Solar yield

- The diagram under **Solar yield** shows a comparison of the monthly solar yields between the previous and the current year.

The total yield is displayed on the bottom right. The highest value achieved in one month for the last two years is displayed in the top right.

### 5.1.4 Diagram: Reading the environmental yield

#### Menu → Information → Environment yield

- The diagram under **Environment yield** shows a comparison of the monthly environment yields between the previous and the current year.

The total yield is displayed on the bottom right. The highest value achieved in one month for the last two years is displayed in the top right.

### 5.1.5 Diagram: Reading the electrical consumption

#### Menu → Information → Electrical consumption

- The diagram under **Electrical consumption** shows a comparison of the monthly consumption of electricity between the previous and the current year.

The total yield is displayed on the bottom right. The highest value achieved in one month for the last two years is displayed in the top right.

### 5.1.6 Diagram: Reading the fuel consumption

#### Menu → Information → Fuel consumption

- The diagram below **Fuel consumption** shows a comparison between the monthly fuel consumption for the previous year and for the current year.

The total yield is displayed on the bottom right. The highest value achieved in one month for the last two years is displayed in the top right.

### 5.1.7 Diagram: Reading the heat recovery yield

#### Menu → Information → Heat recovery

- The diagram under **Heat recovery** shows a comparison between the monthly heat recovery yield for the previous year and for the current year.

The total yield is displayed on the bottom right. The highest value achieved in one month for the last two years is displayed in the top right.

### 5.1.8 Read competent person contact details

#### Menu → Information → Contact details

- If the competent person entered their company name and telephone number during the installation, you can read this data under **Contact details**.

### 5.1.9 Reading the serial number and article number

#### Menu → Information → Serial number

- **Serial number** shows the serial number of the controller, which the competent person may require you to tell him. The article number is found in the second line of the serial number.

## 5 Operating and display functions

### 5.2 Settings

#### 5.2.1 Setting desired temperatures

This function is used to set the desired temperatures for the zone and hot water generation.

##### 5.2.1.1 Zone

Menu → Desired temperatures → ZONE1

- You can set different desired temperatures for the zone:

##### Heating

- The desired **Day temp. heating** temperature is the temperature that you want in the rooms during the day or when you are at home (Comfort mode).
- The desired **Set-back temp. heat.** temperature is the temperature that you want in the rooms during the night or when you are away from home (Set-back mode).

##### Cooling

- The desired **Day temp. cooling** temperature is the temperature that you want in the rooms during the day or when you are at home (Comfort mode).

#### 5.2.1.2 Hot water generation

Menu → Desired temperatures → DHW circuit

- You can set the desired **Domestic hot water** temperature for the hot water circuit.

#### 5.2.2 Setting the ventilation level

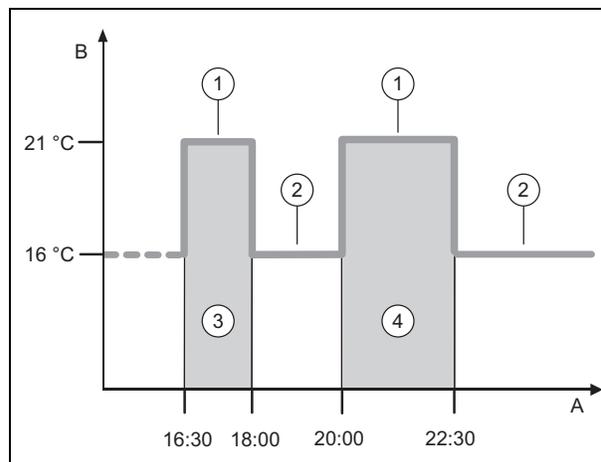
Menu → Ventilation level

- You can use this function to set how quickly the used room air is replaced with fresh outside air.

The **Max. vent. stage: Day** ventilation stage ensures the rate of exchange of air that you want in the rooms during the day or when you are at home (Comfort mode). The **Max. vent. stge: Night** ventilation level ensures the rate of exchange of air that you want in rooms during the night or when you are not at home (set-back mode). The operating instructions for the ventilation unit explain how the ventilation unit works with the ventilation levels.

### 5.2.3 Setting time programmes

#### 5.2.3.1 Showing time periods for one day



A	Time	2	<b>Set-back temp. heat.</b>
B	Temperature	3	desired temperature
1	<b>Day temp. Heating</b>	4	Time period 1
			Time period 2

You can use the **Time programmes** function to set the time periods.

If you have not set any time periods, the controller uses the time periods set in the factory settings.

#### 5.2.3.2 Setting time periods for days and blocks

For each day and block, you can set up to three time periods.

The time periods set for a day have priority over the time periods set for a block.

**Day temp. heating:** 21 °C

**Set-back temp. heat.:** 16 °C

Period 1: 06.00-08.00

Period 2: 16.30-18.00

Period 3: 20.00-22.30

Within the time periods, the controller brings the room temperature to the **Day temp. heating** that has been set (Comfort mode).

Outside of the time period, the controller brings the room temperature to the **Set-back temp. heat.** that has been set (Set-back mode).

#### 5.2.3.3 Setting time programmes quickly

If, for example, you require different time periods for just one working day in the week, first set the times for the entire block **Monday - Friday**". Then set the different time period for the working day.

## 5.2.3.4 Displaying and changing different times in the block

Monday - Sunday	
Period 1:	!! : !! - !! : !!
Period 2:	!! : !! - !! : !!
Period 3:	!! : !! - !! : !!
Back	Select

If you view a block in the display and have defined a different period for a day in this block, then the display indicates the different time periods in the block with !! .

Individual dates vary from the selected time programme Mo-Su.	
Back	OK

If you press the right-hand selection button **Select**, a message appears on the display which informs you about different time periods. You do not need to adjust the times.

The set times for the block marked with !! can be viewed and changed if you press the right-hand selection button **OK** in the display.

## 5.2.3.5 For the zone

Menu → Time programmes → ZONE1

- The time programmes are only effective in **Automatic mode** (→ Page 14). The desired circuit temperature that is set applies in each time period that is set. Within the time periods, the controller switches to **Comfort mode** and the zone heats the connected rooms to the **Day temp. heating**. Outside of the time periods, the controller switches to the operating mode that the competent person has set: Eco or Set-back temp.

## 5.2.3.6 For hot water generation

Menu → Time programmes → Domestic hot water → Preparation

- For hot water generation, the time programmes are only effective in **Automatic mode**. In each time period that is set, the desired **DHW circuit** temperature applies. At the end of a time period, the controller switches the hot water generation off until the start of the next time period.

## 5.2.3.7 For the cooling

Menu → Time programmes → ZONE1: Cooling

- The time programmes are effective in **Cooling** mode and in the **Manual cooling** advanced functions. In each set time period, the desired temperature that you set in the **Desired temperatures** function applies. Within the time periods, the zone cools the living areas to the desired **Day temp. cooling** temperature. The heating circuit is not cooled outside of this time period.

## 5.2.3.8 For circulation

Menu → Time programmes → Domestic hot water → Circulation

- For circulation, the time programmes are only effective in **Automatic mode**. The set time periods determine the operating times for circulation. Within the time period, the circulation is switched on. Outside the time period, the circulation is switched off.

## 5.2.3.9 For ventilation

Menu → Time programmes → Ventilation

- The time programmes are only effective in **Automatic mode**. In each time period that is set, the ventilation stage that you have set with the **Ventilation** function applies. Within the time periods, the controller regulates the ventilation unit to a **Max. vent. stage: Day**. Outside the time periods, the controller regulates the ventilation unit to a **Max. vent. stge: Night**.

## 5.2.3.10 For the noise reduction periods

Menu → Time programmes → Noise reduction periods

- You can reduce the rotational speed of the heat pump's ventilator. A reduction in the fan speed also negatively affects the heating output, particularly at low outside temperatures. The efficiency of the heat pump system is reduced.

## 5.2.3.11 For the high tariff periods

Menu → Time programmes → Tariff periods

- The times of high tariff depend on your energy supplier.

## 5.2.4 Days away from home scheduling

Menu → Days away from home scheduling

- You can use this function to set a period with a start and end date and a temperature for days during which you are away from home. Thus, you do not need to change time periods for which you have set, for example, no reduction of the desired temperature over the course of the day.
  - The hot water is not being heated.
  - The previously set temperature applies for all zones.
  - The ventilation runs at the lowest ventilation stage.
  - The cooling is switched off.

While the **Days away from home scheduling** function is activated, it has priority over the set operating mode. At the end of the specified period, or if you cancel the function, the heating installation returns to the pre-set mode.



### Note

The **Cooling** function remains switched on if this is required by national law. The competent person adjusts your heating installation in such a way that the **Cooling** function remains switched on at the desired temperature during your absence.



### Note

Daylight saving time means Central European summer time: Start = last Sunday in March, End = last Sunday in October.

If the outside temperature sensor is equipped with a DCF77 receiver, the daylight saving time setting is irrelevant.

### 5.2.5 Day at home scheduling

Menu → Days at home scheduling

- In the specified period, the heating installation works in **Automatic mode** and uses the day settings for **Sunday**, which were set using the **Time programmes** function. At the end of the specified period, or if you cancel the function, the heating installation returns to the pre-set mode.

### 5.2.6 Select language

Menu → Basic settings → Language

- If the language of e.g. a service technician differs from the set language, you can change the language using this function.

#### 5.2.6.1 Setting your language

1. Press the left-hand selection button repeatedly until the basic display appears.
2. Press the left-hand selection button again.
3. Rotate the rotary knob clockwise until the dotted line appears.
4. Turn the rotary knob anti-clockwise until the second list entry above the dotted line is highlighted.
5. Press the right-hand selection button twice.
6. Turn the rotary knob until you find a language that you understand.
7. Press the right-hand selection button.

### 5.2.7 Setting the date

Menu → Basic settings → Date/time → Date

- Select this function to set the current date. All controller functions that contain a date relate to the set date.

### 5.2.8 Setting the time

Menu → Basic settings → Date/time → Time

- Select this function to set the current time. All controller functions that contain a time relate to the set time.

### 5.2.9 Activating the automatic or manual change-over to daylight saving time

Menu → Basic settings → Date/time → Daylight saving time

- You can use this function to set whether the controller automatically changes over to daylight saving time, or whether you want to do this manually.
- **Auto:** The controller automatically changes over to daylight saving time.
- **Manual:** You have to change over to daylight saving time manually.

### 5.2.10 Set display contrast

Menu → Basic settings → Display → Display contrast

- You can set the display contrast in relation to the brightness of the surroundings, to ensure that the display is clearly legible.

### 5.2.11 Activating the button lock

Menu → Basic settings → Display → Button lock

- You can use this function to activate the button lock. After one minute of not pressing any button or operating the rotary knob, the button lock is active and you can no longer change any functions unintentionally.

Each time you actuate the controller, the message **Button lock active To unlock, press OK for 3 seconds** appears in the display. If you press and hold the OK button for three seconds, the basic display appears and you can change functions. The button lock becomes active again if you do not press any button or operate the rotary knob for one minute.

To permanently remove the button lock, you must first release the button lock and then select **Off** in the **Button lock** function.

### 5.2.12 Setting the preferred display

Menu → Basic settings → Display → Preferred display

- You can use this function to choose whether you see the data for heating, cooling or ventilation in the basic display.

### 5.2.13 Setting costs

You must specify all tariffs in the unit of currency per kWh for the calculation to be correct.

If your energy provider specifies the gas and electricity rate in the unit of currency per m<sup>3</sup>, ask for the precise gas and electricity rate in the unit of currency per kWh.

Round the amount up or down to one decimal place.

Example:

	Costs	Setting/factor
<b>Tariff for auxiliary boiler</b> (Gas, oil, electricity)	11.3 currency units/kWh	113
<b>Low-tariff electricity rate</b> (heat pump)	14.5 currency units/kWh	145
<b>High-tariff electricity rate</b> (heat pump)	18.7 currency units/kWh	187

## 5.2.13.1 Setting the tariff for the auxiliary boiler

**Menu** → **Basic settings** → **Costs** → **Tariff for auxiliary boiler**

- The factor/value that is set requires the hybrid manager to calculate costs correctly.

To set the correct factor/value, you must ask your energy provider what your gas and electricity tariff is.

## 5.2.13.2 Setting the low-tariff electricity rate

**Menu** → **Basic settings** → **Costs** → **Low-tariff electricity rate**

- The factor/value that is set requires the hybrid manager to calculate costs correctly.

To correctly set the **Low-tariff electricity rate**, you must ask your energy supplier what your electricity rate is.

## 5.2.13.3 Setting the high-tariff electricity rate

**Menu** → **Basic settings** → **Costs** → **High-tariff electricity rate**

- The factor/value that is set requires the hybrid manager to calculate costs correctly.

To correctly set the **High-tariff electricity rate**, you must ask your energy supplier what your electricity rate is.

## 5.2.14 Set offset room temperature

**Menu** → **Basic settings** → **Offset** → **Room temperature**

- The controller can display the current room temperature if it is installed in a living room.

A thermometer is integrated in the controller for measuring the room temperature. You can use the offset to correct the measured temperature value.

## 5.2.15 Set offset outside temperature

**Menu** → **Basic settings** → **Offset** → **Outside temperature**

- The thermometer in the controller's outside temperature sensor measures the outside temperature. You can use the offset to correct the measured temperature value.

## 5.2.16 Changing a zone name

**Menu** → **Basic settings** → **Enter zone name**

- You can now modify the factory-specified zone names as you wish. The name is limited to 10 characters.

## 5.2.17 Activating heat recovery

**Menu** → **Basic settings** → **Heat recovery**

- The **Heat recovery** function has been set to **Auto**. This means that an internal control system checks whether heat recovery makes sense, or whether the outdoor air can be guided directly into the living room. For more information, see the operating instructions for **recoVAIR.../4** and later models.

If you have selected **Activate**, heat recovery will be used constantly.

## 5.2.18 Setting the room air humidity

**Menu** → **Basic settings** → **Room air humidity**

- If the room air humidity exceeds the value set, a connected dehumidifier is activated. As soon as the value drops below the value that is set, the dehumidifier switches off again.

## 5.2.19 Resetting to factory setting

You can reset the settings for the **Time programmes** or for **Everything** to the factory setting.

**Menu** → **Basic settings** → **Default setting** → **Time programmes**

- With **Time programmes**, you reset all the settings you have made in the **Time programmes** function to the default setting. All other settings that include times, such as **Date/Time**, are not affected.

While the controller is resetting the time programme settings to the factory settings, **In progress** is shown on the display. The basic display is then displayed.



### Caution.

#### Risk of a malfunction.

The **Everything** function restores all settings to the factory settings, including those set by the competent person. It may be the case that it is no longer possible to operate the heating installation after this.

- ▶ Arrange for the competent person to reset all settings to factory settings.

**Menu** → **Basic settings** → **Default setting** → **Everything**

- While the controller is resetting the settings to the factory settings, **In progress** is shown on the display. Then the installation assistant appears in the display, which only the competent person may operate.

## 5.2.20 Installer level

The Installer level is reserved for the competent person and is therefore protected by an access code. At this level, the competent person can implement the required settings.

## 5.3 Operating modes

The operating modes can be activated directly from any operating mode using the right-hand selection button **Operating mode**. If the heating installation is equipped with more than one zone, the activated operating mode only applies for the zone that was preset by the competent person.

If more than one zone is activated, you can set a separate operating mode for each zone using the left-hand selection button **Menu** → **Basic setting**.

The path details given at the start of each operating mode description indicate how you reach this operating mode in the menu structure.

## 5 Operating and display functions

### 5.3.1 Operating modes for the zones

#### 5.3.1.1 Automatic mode

Operating mode → Heating → Auto

Menu → Basic settings → Operating mode → ZONE1 → Auto

- The **Auto** function controls the zone in accordance with the desired temperature that has been set and the time periods that have been set.

Within the time periods, the controller brings the room temperature to the set desired **Day** temperature (Comfort mode).

Outside the time periods, the controller regulates in accordance with the controller behaviour set by the competent person.

- **ECO** (factory setting): The heating function is switched off and the controller monitors the outside temperature. If the outside temperature falls below 3 °C, the controller switches the heating function on after the end of the frost protection delay time and brings the room temperature to the set desired temperature **Set-back** (Set-back mode). Despite the heating function being activated, the burner is only active on demand. If the outside temperature rises above 4 °C, the controller switches the heating function off, but continues to monitor the outside temperature.
- **Set-back temperature**: The heating function is on and the controller brings the room temperature to the desired **Set-back** temperature set (Set-back mode).

#### 5.3.1.2 Comfort mode

Operating mode → Heating → Day

Menu → Basic settings → Operating mode → ZONE1 → Day

- The **Day** operating mode brings the zone to the desired **Day** temperature set, without taking time periods into account.

#### 5.3.1.3 Set-back mode

Operating mode → Heating → Set-back

Menu → Basic settings → Operating mode → ZONE1 → Set-back

- The **Set-back** operating mode brings the zone to the desired **Set-back** temperature set, without taking time periods into account.

#### 5.3.1.4 Off

Operating mode → Heating → Off

Menu → Basic settings → Operating mode → ZONE1 → Off

- The **Heating** function has been switched off for the zone and the frost protection function has been activated.

### 5.3.2 Operating modes for ventilation

The operating instructions for the ventilation unit explain how the ventilation unit works with the ventilation levels.

### 5.3.2.1 Automatic mode

Operating mode → Ventilation → Auto

- The **Auto** function controls the ventilation in accordance with the ventilation stage set and the time periods set.

Within the time periods, the controller regulates the exchange of air using the **Max. vent. stage: Day** ventilation level set (Comfort mode).

Outside the time periods, the controller regulates the exchange of air using the **Max. vent. stage: Night** ventilation level set (Set-back mode).

### 5.3.2.2 Comfort mode

Operating mode → Ventilation → Day

- The **Day** operating mode regulates the exchange of air using the **Max. vent. stage: Day** ventilation level set, without taking time periods into account.

### 5.3.2.3 Set-back mode

Operating mode → Ventilation → Set-back

- The **Set-back** operating mode regulates the exchange of air using the **Max. vent. stage: Night**, without taking time periods into account.

### 5.3.3 Operating modes for hot water generation

#### 5.3.3.1 Automatic mode

Operating mode → Domestic hot water → Auto

- The **Auto** operating mode controls the hot water generation in accordance with the desired temperature set for **DHW circuit** and the time periods set.

Within the time period, hot water generation is switched on and maintains the hot water in the domestic hot water cylinder at the preset temperature. Outside the time period, hot water generation is switched off.

#### 5.3.3.2 Comfort mode

Operating mode → Domestic hot water → Day

- The **Day** operating mode controls the hot water generation in accordance with the desired temperature set for **DHW circuit**, without taking the time periods into consideration.

#### 5.3.3.3 Off

Operating mode → Domestic hot water → Off

- Hot water generation is switched off and the Frost protection function is active.

### 5.3.4 Operating modes for circulation

The operating mode for the circulation always corresponds to the operating mode for the hot water generation. You cannot set a different operating mode.

## 5.3.5 Operating modes for cooling

### 5.3.5.1 Automatic mode

**Operating mode** → **Cooling** → **Auto**

- The automatic mode controls the zone in accordance with the set desired temperature and the set time periods.

Within the time periods, the controller brings the room temperature to the desired **Day cooling** temperature set (comfort mode).

Outside of the time period, the **Cooling** function is switched off.

### 5.3.5.2 Comfort mode

**Operating mode** → **Cooling** → **Day**

- The **Day** operating mode brings the zone to the desired **Day cooling** temperature set, without taking time periods into account.

### 5.3.5.3 Off

**Operating mode** → **Cooling** → **Off**

- The **Cooling** function is switched off.

## 5.4 Advanced functions

The advanced functions can be activated directly from any operating mode using the right-hand selection button **Operating mode**. If the heating installation is equipped with more than one zone, the activated advanced function only applies for the zone that was preset by the competent person.

If more than one zone is activated, you can use the left-hand selection button **Menu** → **Basic setting** to set a separate advanced function for each zone.

The path details given at the start of each advanced function description indicate how you can access this advanced function in the menu structure.

### 5.4.1 Manual cooling

**Operating mode** → **Manual cooling**

- If the outside temperature is high, you can activate the **Manual cooling** advanced function. You define for how many days you want to activate the advanced function. If you activate **Manual cooling**, you cannot use the heating function at the same time. The **Manual cooling** function takes priority over heating.

The setting applies for as long as the advanced function is active. The advanced function is deactivated if the days that are set have elapsed or if the outside temperature falls below 4 °C.

If you want to set the temperature separately for more than one zone, you can set these temperatures using the **Desired temperatures** function.

### 5.4.2 1 day at home

**Operating mode** → **1 day at home**

**Menu** → **Basic settings** → **Operating mode** → **ZONE1** → **1 day at home**

- If you are spending a weekday at home, activate the **1 day at home** advanced function. This advanced function

activates **Automatic mode** for one day with the settings for **Sunday**, as set using the **Time programmes** function.

The advanced function is automatically deactivated after 24:00 hours or if you cancel the advanced function first. The heating installation will then return to the pre-set mode.

### 5.4.3 1 day away from home

**Operating mode** → **1 day away from home**

**Menu** → **Basic settings** → **Operating mode** → **ZONE1** → **1 day away from home**

- If you are only away from home for one day, activate the **1 day away from home** advanced function. This advanced function brings the room temperature to the desired **Set-back** temperature.

Hot water generation and circulation are switched off and the frost protection is activated.

The advanced function is automatically deactivated after 24:00 hours or if you cancel the advanced function first. The heating installation will then return to the pre-set mode.

Ventilation is activated and works at the lowest ventilation level.

### 5.4.4 Ventilation boost

**Operating mode** → **Ventilation boost**

**Menu** → **Basic settings** → **Operating mode** → **ZONE1** → **Ventilation boost**

- If you want to switch off the zone while the living areas are being ventilated, activate the **Ventilation boost** advanced function.

This advanced function switches the zone off for 30 minutes. The frost protection function is activated, and hot water generation and circulation remain active.

Ventilation is activated and works at the highest ventilation level.

The advanced function is automatically deactivated after 30 minutes or if you cancel the advanced function early. The heating installation will then return to the pre-set mode.

### 5.4.5 Party

**Operating mode** → **Party function**

**Menu** → **Basic settings** → **Operating mode** → **ZONE1** → **Party**

- If you want to switch on the zone, hot water generation, ventilation and circulation temporarily, activate the **Party** advanced function.

The advanced function brings the room temperature to the set desired **Day** temperature, in accordance with the set time periods.

The advanced function is deactivated after six seconds or if you cancel it before the six seconds is up. The heating installation will then return to the pre-set mode.

### 5.4.6 Cylinder boost

**Operating mode** → **Cylinder boost**

- If you have switched off hot water generation or require hot water outside of a time period, activate the **Cylinder boost** advanced function.

## 6 Service and troubleshooting

The advanced function heats the water in the domestic hot water cylinder once until the desired **DHW circuit** temperature set is reached or until you cancel the advanced function early. The heating installation will then return to the pre-set mode.

### 5.4.7 System OFF (frost protection active)

#### Operating mode → System OFF

- The heating function, hot water circuit and cooling are switched off. The frost protection function is activated.

The circulation is switched off.

Ventilation is activated and works at the lowest ventilation level.

## 5.5 Messages

### 5.5.1 Service message

If maintenance is required, the controller displays a maintenance message  on the display.

To prevent the heating installation from breaking down and to prevent damage, you must pay attention to the service message:

- ▶ If the operating instructions for the unit that is displayed contain maintenance instructions for the service message, carry out maintenance work according to the maintenance instructions.
- ▶ If the operating instructions for the unit displayed do not contain maintenance instructions for the service message, or if you do not want to carry out the maintenance work yourself, inform a competent person.

The following service messages may appear:

- **Service heat generator 1** (boiler, heat pump)
- **Service heat generator 2** (boiler, heat pump)
- **Maintenance** (of the heating installation)
- **Water deficiency, heat generator 1** (boiler, heat pump)
- **Water deficiency, heat generator 2** (boiler, heat pump)
- **Low water pressure, add. module** (heat pump)
- **Service ventilation unit**

### 5.5.2 Fault message

If a fault occurs in the heating installation,  appears on the display, along with a fault message. The competent person must clear any faults or repair the heating installation, otherwise, material damage may occur or the heating installation may fail.

- ▶ Inform a competent person.

If you want to view the Basic display on the display, press the left-hand selection button **Back**.

You can read the current fault messages under **Menu** → **Information** → **System status** → **Fault status**. As soon as a fault message occurs for the heating installation, the **Fault status** setting level displays the value **Fault list**. The right-hand selection button has been assigned the function **Display**.

## 6 Service and troubleshooting

### 6.1 Caring for the product



#### Caution.

**Risk of material damage caused by unsuitable cleaning agents.**

- ▶ Do not use sprays, scouring agents, detergents, solvents or cleaning agents that contain chlorine.

- ▶ Clean the casing with a damp cloth and a little solvent-free soap.

### 6.2 Overview of the faults

Detecting and rectifying faults (→ Page 23)

If the fault message **Restricted operation/comfort protection inactive** appears in the display, the heat pump has failed and the controller enters limp home mode. The auxiliary heater now supplies the heating installation with heating energy. During installation, the competent person has restricted the temperature for limp home mode. You can feel that the hot water and heating are not becoming very hot.

While you wait for the competent person to come, you can use the rotary knob to implement the following settings:

- **Inactive:** The controller works in limp home mode; heating and hot water only at a moderately warm temperature
- **Heating:** The auxiliary heater over the heating mode; heating hot, hot water cold
- **DHW:** The auxiliary heater takes over the hot water handling mode; hot water hot, heating cold
- **DHW+heat.:** The auxiliary heater takes over the heating and hot water handling mode; heating and hot water hot

The auxiliary heater is not as efficient as the heat pump, meaning that using only the auxiliary heater to generate heat is expensive.

If you want to implement settings on the controller, click on **Back** and the basic display appears in the display. After five minutes of no operation, the fault message appears again in the display.

## 7 Decommissioning

### 7.1 Replacing the controller

If the controller of the heating system needs to be replaced, the heating system must be shut down.

- ▶ This work should be carried out by a competent person.

## 7.2 Recycling and disposal

- ▶ The competent person who installed your product is responsible for the disposal of the packaging.



If the product is identified with this symbol:

- ▶ In this case, do not dispose of the product with the household waste.
- ▶ Instead, hand in the product to a collection centre for old electrical or electronic appliances.



If the product contains batteries that are marked with this symbol, these batteries may contain substances that are hazardous to human health and the environment.

- ▶ In this case, dispose of the batteries at a collection point for batteries.

## 8 Guarantee and customer service

### 8.1 Guarantee

We only grant a Vaillant manufacturers warranty if a suitably qualified engineer has installed the system in accordance with Vaillant instructions. The system owner will be granted a warranty in accordance with the Vaillant terms and conditions. All requests for work during the guarantee period must be made to Vaillant Service Solutions (0870 6060 777).

### 8.2 Customer service

To ensure regular servicing, it is strongly recommended that arrangements are made for a Maintenance Agreement. Please contact Vaillant Service Solutions (0870 6060 777) for further details.

## 9 Technical data

### 9.1 Technical data

<b>Max. operating voltage</b>	24 V
<b>Current consumption</b>	< 50 mA
<b>Supply line cross-section</b>	0.75 ... 1.5 mm <sup>2</sup>
<b>Level of protection</b>	IP 20
<b>Protection class</b>	III
<b>Maximum permitted ambient temperature</b>	0 ... 60 °C
<b>Curr. room air hum.</b>	35 ... 95 %
<b>Height</b>	115 mm
<b>Width</b>	147 mm
<b>Depth</b>	50 mm

### 9.2 Product data in accordance with EU Ordinance no. 811/2013, 812/2013

On units with integrated weather compensators, including a room thermostat function that can be activated, the seasonal room-heating efficiency always includes the correction factor for controller technology class VI. The seasonal room-heating efficiency may deviate if this function is deactivated.

<b>Temperature control class</b>	VI
<b>Contribution to the seasonal room-heating energy efficiency <math>\eta_s</math></b>	4.0 %

### 9.3 Sensor resistances

Temperature (°C)	Resistance (ohms)
-25	2167
-20	2067
-15	1976
-10	1862
-5	1745
0	1619
5	1494
10	1387
15	1246
20	1128
25	1020
30	920
35	831
40	740

## Appendix

### A Overview of the operating and display functions



#### Note

The listed functions in the overview of the operating modes and overview of the operating levels are not available for all system configurations.

#### A.1 Operating modes

Operating mode	Setting	Default setting
Operating mode		
Heating	Off, Auto, Day, Set-back	Auto
Cooling	Off, Auto, Day	Auto
Ventilation	Auto, Day, Set-back	Auto
Domestic hot water	Off, Auto, Day	Auto
Advanced functions		
Manual cooling	Active	–
1 day at home	Active	–
1 day away from home	Active	–
1 x ventilation boost	Active	–
Party	Active	–
Cylinder boost	Active	–
System OFF active	Active	–

#### A.2 Operating levels

The description of the functions for **ZONE1** also applies for all available zones.

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Information → System status →					
System ----					
Fault status	Current value			No fault, Fault list	
Water pressure	Current value		bar		
System status	Current value			Standby, Heat. mode, Cooling, DHW	
Collector temperature	Current value		°C		
Solar yield	Current value		kWh		
Reset solar yield	Current value			Yes, No	No
Environment yield	Current value		kWh		
Reset env.yield	Current value			Yes, No	No
Curr. room air hum.	Current value		%		
Current dew point	Current value		°C		
triVAI	Current value				
ZONE1 ----					
Day temp. Heating	Current value		°C	0.5	20
	5	30			
Day temp. Cooling	Current value		°C	0.5	24
	15	30			
Set-back temp. heat.	Current value		°C	0.5	15
	5	30			
Room temperature	Current value		°C		
Ventilation ----					

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Air quality sensor 1	Current value		ppm		
Air quality sensor 2	Current value		ppm		
Air quality sensor 3	Current value		ppm		
Exhaust air humidity	Current value		%rel		
<b>Information → Consumption → Current month → Heating →</b>					
Electricity	Total value for the current month		kWh		
Fuel	Total value for the current month		kWh		
<b>Information → Consumption → Current month → Domestic hot water →</b>					
Electricity	Total value for the current month		kWh		
Fuel	Total value for the current month		kWh		
<b>Information → Consumption → Last month → Heating →</b>					
Electricity	Total value for the last month		kWh		
Fuel	Total value for the last month		kWh		
<b>Information → Consumption → Last month → Domestic hot water →</b>					
Electricity	Total value since start-up		kWh		
Fuel	Total value since start-up		kWh		
<b>Information → Consumption → History → Heating →</b>					
Electricity	Total value since start-up		kWh		
Fuel	Total value since start-up		kWh		
<b>Information → Consumption → History → Domestic hot water →</b>					
Electricity	Total value since start-up		kWh		
Fuel	Total value since start-up		kWh		
<b>Information → Solar yield →</b>					
Bar chart	Previous year to current year comparison		kWh/month		
<b>Information → Environmental yield →</b>					
Bar chart	Previous year to current year comparison		kWh/month		
<b>Information → Electrical consumption →</b>					
Bar chart	Previous year to current year comparison		kWh/month		

# Appendix

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
<b>Information → Fuel consumption →</b>					
Bar chart	Previous year to current year comparison		kWh/month		
<b>Information → Heat recovery →</b>					
Bar chart	Previous year to current year comparison		kWh/month		
<b>Information → Contact details →</b>					
Installer Phone number	Current values				
<b>Information → Serial number</b>					
Unit number	Permanent value				
<b>Desired temperatures → ZONE1 →</b>					
Day temp. Heating	5	30	°C	0.5	20
Day temp. Cooling	15	30	°C	0.5	24
Set-back temp. heat.	5	30	°C	0.5	15
<b>Desired temperatures → Domestic hot water →</b>					
Domestic hot water	35	70	°C	1	60
<b>Ventilation stage →</b>					
Max. vent. stage: Day	1	10		1	7
Max. vent. stge: Night	1	10		1	3
<b>Time programmes → ZONE1: Heating →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Time programmes → Domestic hot water → Hot water generation →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo to Fr: 05:30-22:00 Sa: 07:00-23:30 Su: 07:00-22:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Time programmes → Domestic hot water → Circulation →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
<b>Time programmes → ZONE1: Cooling →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Time programmes → Ventilation →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo - Fr: 06:00-22:00 Sa: 07:30-23:30 Su: 07:30-22:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Time programmes → Noise reduction operation →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo to Su: 00:00-00:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Time programmes → High tariff →</b>					
Individual days and blocks				<b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday and Monday - Friday, Saturday - Sunday, Monday - Sunday</b>	Mo - Su: 11:00-13:00
Time period 1: Start - End Time period 2: Start - End Time period 3: Start - End	00:00	24:00	h:min	00:10	
<b>Days away scheduling →</b>					
Start	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
End	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
Temperature	5	30	°C	1	15
<b>Days at home scheduling →</b>					
Start	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
End	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.14
<b>Basic settings → Language →</b>					

# Appendix

Setting level	Values		Unit	Increment, select	Default setting
	Min.	Max.			
				Selectable language	Deutsch
<b>Basic settings → Date/Time →</b>					
Date	01.01.01	31.12.99	dd.mm.yy	Day.Month.Year	01.01.15
Time	00:00	23:59	h:min	00:10	08:00
Daylight saving time				Manual, Auto	Manual
<b>Basic settings → Display →</b>					
Display contrast	1	15		1	9
Button lock				Off, On	Off
Preferred display				Heating, Cooling, Ventilation	Heating
<b>Basic settings → Costs →</b>					
Tariff for auxiliary boiler	1	999		1	12
Low electricity tariff	1	999		1	16
High electricity tariff	1	999		1	20
<b>Basic settings → Offset →</b>					
Room temperature	-3.0	3.0	K	0.5	0.0
Outside temperature	-3.0	3.0	K	0.5	0.0
<b>Basic settings → Operating mode → ZONE1 →</b>					
Heating				Off, Auto, Day, Set-back	Auto
Cooling				Off, Auto, Day	Auto
1 day at home				Active, Not active	Not active
1 day away from home				Active, Not active	Not active
Ventilation boost				Active, Not active	Not active
Party				Active, Not active	Not active
<b>Basic settings → Enter zone name →</b>					
ZONE1	1	10	Letter/number	A to Z, 0 to 9, space	ZONE1
<b>Basic settings → Ventilation →</b>					
Heat recovery				Auto, Activate, Off	Auto
<b>Basic settings → Room air humidity →</b>					
Max. room air humidity	30	70	%rel	1	40
<b>Basic settings → Reset to factory settings →</b>					
Time programmes				Yes, No	No
Everything				Yes, No	No
<b>Installer level →</b>					
Enter code	000	999		1	000

## B Detecting and rectifying faults

Fault	Cause	Remedy
Display is dark	Appliance fault	<ul style="list-style-type: none"> <li>– Switch off the mains switch on all heat generators for approx. 1 minute and then switch them on again</li> <li>– If the fault is still present, inform the competent person</li> </ul>
No changes in the display when the rotary knob is turned		
No changes in the display when the selection buttons are pressed		
<p>It is not possible to change the settings or values</p> <p>Display view: <b>Button lock active To unlock, press OK for 3 seconds</b></p>	Button lock is active	<p>If you want to change the values without deactivating the button lock:</p> <ol style="list-style-type: none"> <li>1. Press and hold the OK button for three seconds.</li> <li>2. Select the function for which you want to change a value.</li> <li>3. Change the value.</li> </ol> <p>After one minute of not pressing anything, the button lock is reactivated.</p> <p>If you want to deactivate the button lock:</p> <ol style="list-style-type: none"> <li>1. Press and hold the OK button for three seconds.</li> <li>2. Select the <b>Button lock</b> function.</li> <li>3. Change the value to <b>Off</b> .</li> </ol>
Insufficient heating-up of the heating and the hot water	Heat pump does not work	<ol style="list-style-type: none"> <li>1. Inform the competent person.</li> </ol> <p>Temporary settings until the competent person arrives:</p> <ol style="list-style-type: none"> <li>2. Use the rotary knob to select the setting: <ul style="list-style-type: none"> <li>– <b>Inactive</b>: The controller works in limp home mode; heating and hot water at a moderately warm temperature</li> <li>– <b>Heating*</b>: The auxiliary heater takes over the heating mode</li> <li>– <b>DHW*</b>: The auxiliary heater takes over the hot water handling mode</li> <li>– <b>DHW+heat.*</b>: The auxiliary heater takes over the heating and hot water handling modes</li> </ul> </li> </ol>

\*The auxiliary heater is not as efficient as the heat pump, meaning that using only the auxiliary heater to generate heat is expensive.

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