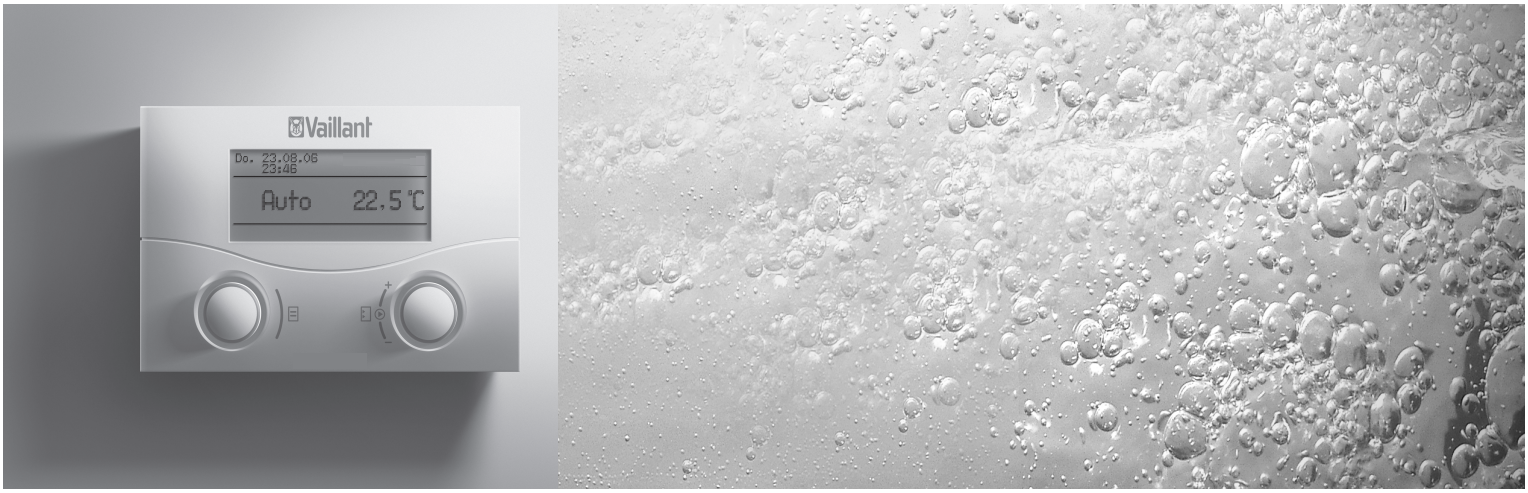
For the heating engineer/for the user

Operating and Installation Manual

VRT 392



Room thermostat and hot water programmer

VRT 392

GB

For the user

Operating manual

VRT 392

Room thermostat VRT 392

Contents

Equipment properties

Application
The VRT 392 is a programmable room thermostat with hot water programmer

Using the VRT 392 you can programme various room temperatures – for different times of the day and for different days of the week.
In automatic operation, the VRT 392 controls your heating in accordance with these programmed times and temperatures (see Fig 0.1).

The VRT 392 also has an in-built hot water programmer.

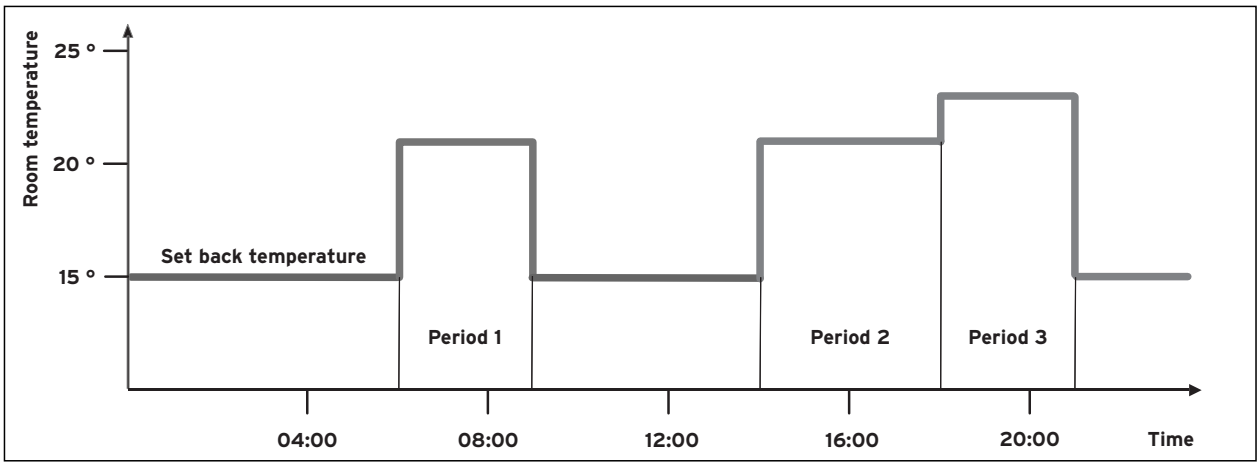


Fig. 0.1 Automatic operation of the heating: Examples of the presets for the room temperatures for different times of the day

The VRT 392 can also be used to control the following accessories:
- Circulation pump for hot water preparation in combination with a multi-function module VR 40
- Ventilation installation
- Conventional hot water cylinder
- Vaillant layer cylinder actoSTOR
- Commercially available 230 V components (e.g. valves, cylinder thermostats)

The VRT 392 can be part of a new heating and hot water system or it can be incorporated in existing heating systems . The VRT 392 can only be used with Vaillant boilers with eBus interface.

eBUS is a communications standard for data exchange between the components in heating technology.

Product specifications
- eBUS interface
- Data connection with a Vaillant boiler via an eBUS line
- Illuminated graphic display
- Operation by two dials in accordance with the Vaillant principle "Turn and Click"
- Compatible with the Vaillant diagnosis software vrDIALOG 810/2 and with the Vaillant Internet Communication System vrnetDIALOG, i.e. remote diagnosis and remote setting

1 Notes on the documentation

The following information is intended to help you throughout the entire documentation. Further documents apply in combination with this operating manual.
We accept no liability for any damage caused by failure to observe these instructions.

Other applicable documents:
- The installation instructions for the Vaillant room temperature controller VRT 392 (Part 2 of this document; for the heating engineer)
- The operating and installation instructions of your heating system
- All instructions for the accessories

Glossary:
At the end of this document, in the appendix, you will find– alphabetically sorted – the explanation of technical terms and important functions.

1.1 Storage of the documents

Please store this operating manual and all related documents in such a way that they are available whenever required.

1.2 Symbols used

When using this appliance please observe the safety instructions in this manual.

Danger!
Immediate risk of serious injury or death!

Danger!
Danger of death by electric shock!

Attention!
Danger of burning and scalding!

Caution!
Potentially dangerous situation for the product and environment!

Note!
Useful information and instructions

⇒ **Symbol for a necessary task**

1.3 Validity of the instructions

These operating instructions are exclusively applicable to the equipment with the following part numbers.

00 2002 8509 VRT 392

The part number of your equipment can be obtained from your installer.

1.4 CE label

The CE mark documents the fact that the Vaillant room thermostat VRT 392 fulfils the fundamental requirements of the guidelines on the subject.

2 Safety

The VRT 392 may only be installed by a suitably qualified heating engineer. This engineer also assumes responsibility for installing the appliance properly and putting it into service for the first time.

Attention!
Risk of being scalded by hot water!
At the draw-off points of the hot water there is a danger of scalding at temperatures in excess of 60 °C. Small children and elderly people can be at danger even at lower temperatures.
Select the target temperature so that nobody is at danger.

Attention!
Risk of being scalded by hot water!
If your heating engineer has activated the legionella protection, the hot water at the draw-off points can exceed 60 °C at certain times.
Ask your heating engineer, whether he has activated the legionella protection, and if so, at which day and at which time.

3 Instructions on operation

3.1 Intended use

The VRT 392 is a state-of-the-art device which has been constructed in accordance with recognised safety regulations.
However, in the event of improper use or use not as intended, impairment of the equipment and other items can arise.

The VRT 392 is designed to control a heating system with or without a hot water system or hot water circulation pump according to time and temperature, in connection with a Vaillant boiler with an eBus interface.
Operation with the following accessories is permitted:

- Circulation pump for hot water preparation in combination with a multi-function module VR 40
- Ventilation installation
- Conventional hot water cylinder
- Vaillant layer cylinder actoSTOR
- Commercially available 230 V components (e.g. valves, cylinder thermostats) in combination with the Control Center VR 65
- 230 V cylinder thermostat in combination with the relay box VR 41

Any other use or extended use is considered to be use other than intended. The manufacturer or supplier is not liable for any resulting damage. The user alone bears any risk.
Intended use also includes observing the operating and installation instructions and all other documents having validity.

3.2 Ambient conditions

Please make sure:
- that the air in the room can circulate freely and that the VRT 392 is not obscured by furniture, curtains or other objects.
- that all the radiator valves in the room where the VRT 392 is fitted are fully open.

3.3 Care

Clean the casing of the VRT 392 with a damp cloth.
Do not use any scouring or cleaning agents which could damage the operating elements or the display.

3.4 Service, Warranty

Vaillant 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.

Vaillant warranty
We only grant a Vaillant manufacturers warranty if a suitably qualified engineer has installed the system in accordance with Vaillant instructions.
The system user 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).

3.5 Recycling and disposal

Both your VRT 392 and its packaging are primarily made of recyclable raw materials.

Appliance
Neither the VRT 392 or any of its accessories belong in the household waste. Make sure the old appliance and any accessories are disposed of properly.

Packaging
Please leave the disposal of the transport packaging to the qualified servicing company which installed the appliance.

4 Operation

Note!
The installer should explain the operation of the VRT 392 after installation. This will prevent inadvertent changes to the settings.

4.1 Overview operating and display front

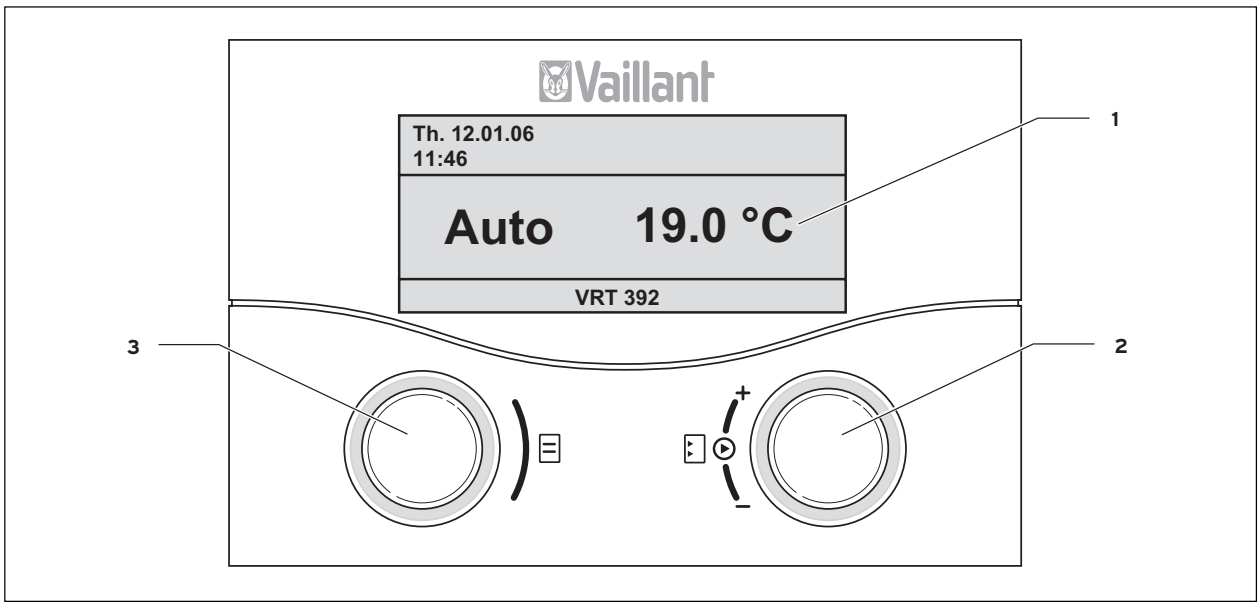


Fig. 4.1 Overview operating and display front

Key
1 Display
2 Operating element right-hand dial
3 Operating element left-hand dial

Fig. 4.1 shows the default display. It provides the following information:
- the operating mode (automatic. manual, or off) of the heating circuit
- the current room temperature

The default display is described in detail in Chapter 4.3.3.

The function of the two dials is described in Chapter 4.3.

4.2 Overview of the display

The parameters and settings (operating values) of the VRT 392 are shown on different screens.
The screens are sub-divided into:
- default display (Fig. 4.1)
- basic display (Fig. 4.2)
- display/input screens for certain parameters in the user level
- display/input screens for operation and installation specific parameters in the installer level

All screens are divided into three areas.

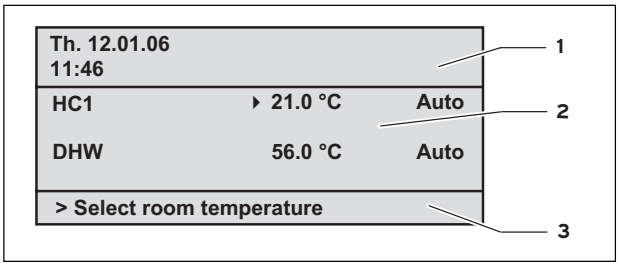


Fig. 4.2 Overview displays (example basic display)

Key
1 Area for basic data, title of the screen or status and error messages
2 Area for display and entry of parameters
3 Area for display and explanation

The basic data are:
- Weekday
- Date
- Time of the day

In the screens for specific parameters the title of the screen appears instead of the basic data.

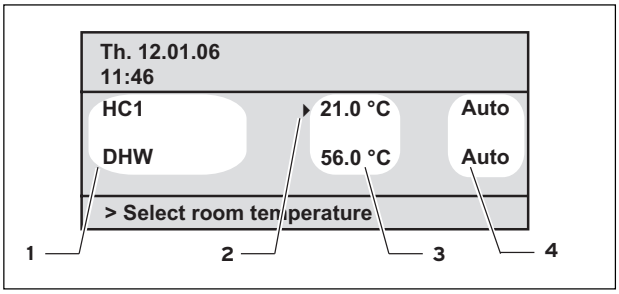


Fig. 4.3 Area for display and entry of parameters (example basic display)

Key
1 Parameter name (only display)
2 Cursor ▸ marks the scroll to a modifiable value
3 Input field for parameter values here: target temperature
4 Input field for parameter values here: Operating mode

4.3 Operating concept

The operation of the default display is described in Chapter 4.3.3.
The operating concept described below applies to the basic display (Fig 4.2) and to different screens in the user level.

The two dials (Fig. 4.1 Items 2 and 3) function according to the Vaillant principle "Turn and Click".
When turning the dials (clockwise or anti-clockwise), they index positively with each step. Each index step also moves the cursor one position forwards or backwards in the display.

By clicking (pressing) you can highlight or accept changes to a parameter.

	Action	Outcome
Left-hand dial	Turn	Scroll to the next screen
Right-hand dial	Turn	Scroll to a field within a screen (marked by the cursor ▸)
	Changing the parameter	
	Clicking (pushing)	Highlight for changing
	Turn	Change the parameter value
	Clicking (pushing)	Save the value

Table 4.1 Operating concept

4.3.1 Showing different screens

By turning the left-hand dial you can page through the individual screens of the display like a book.

Example:
You are now located in the basic display. To get to the basic display see Chapter 4.3.3.

⇒ Turn the left-hand dial clockwise by one notch.

In the screen 1 appears with the possible settings for the basic data.

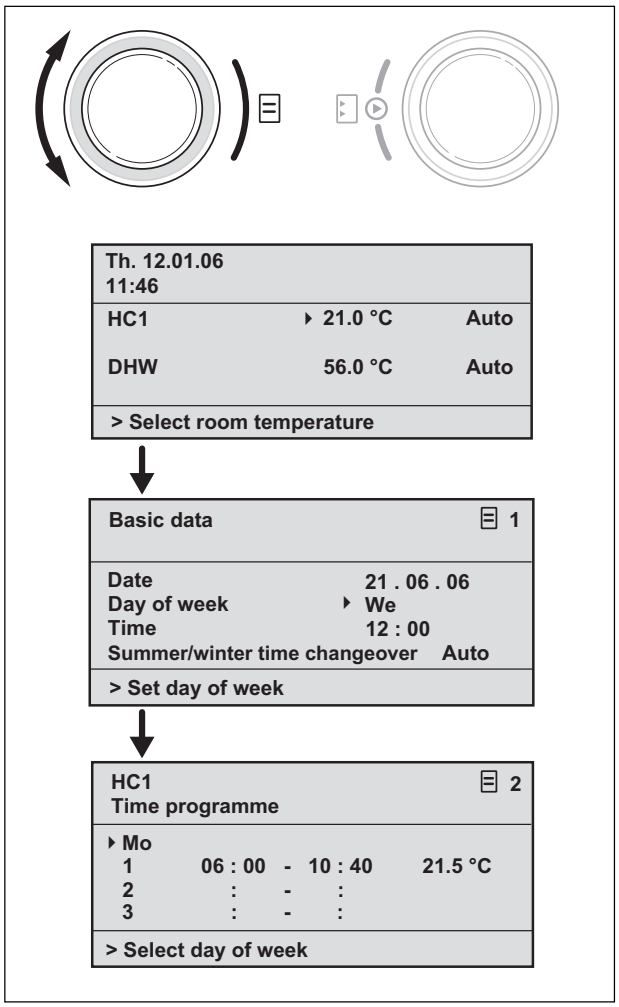


Fig. 4.4 Display of different screens

4.3.2 Changing parameters

⇒ Turn the right-hand dial to scroll through the parameters within the screen.

The position is indicated by the cursor ▸ (see Fig. 4.5).

If the parameter (e.g. a date with day, month, year) consists of several elements, you can scroll between one element and the next by turning the right-hand dial.

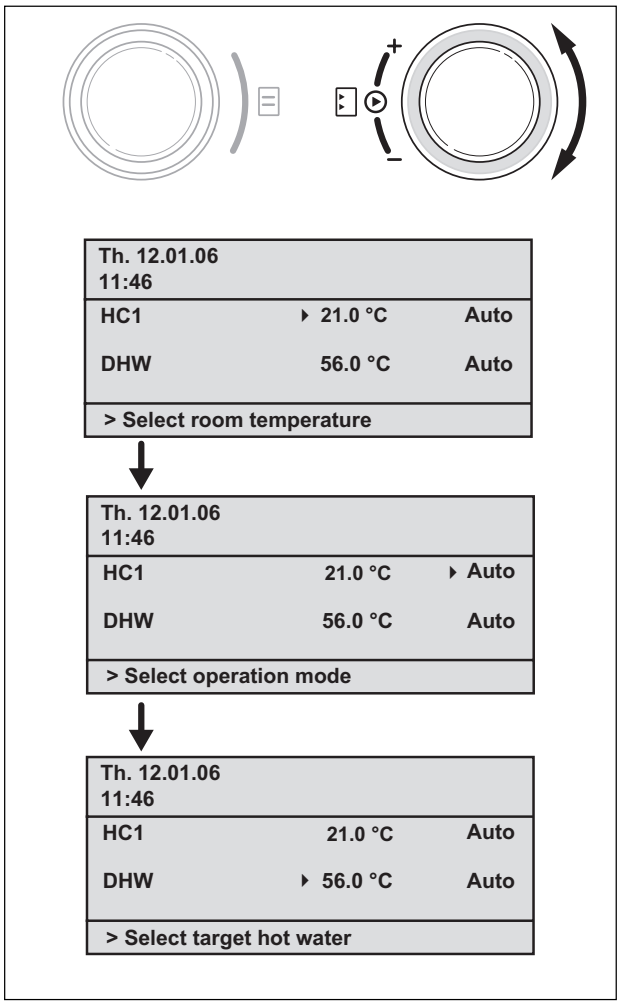


Fig. 4.5 Scroll through various modifiable parameters

⇒ Click the right-hand dial.

The parameter marked with the cursor is ▸ highlighted.

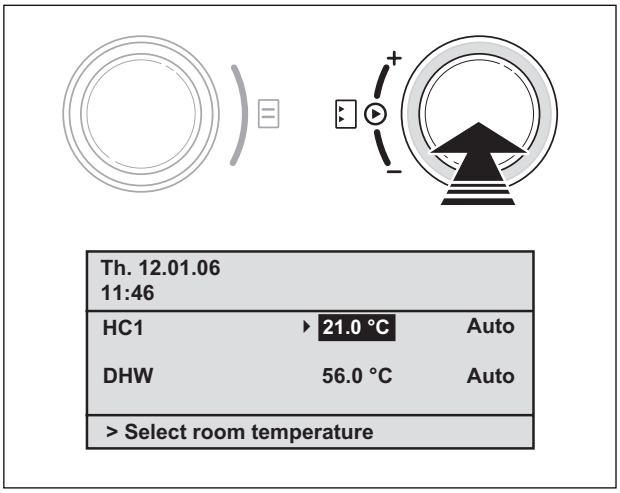


Fig. 4.6 Highlighting a parameter

⇒ Turn the right-hand dial to display the possible values .

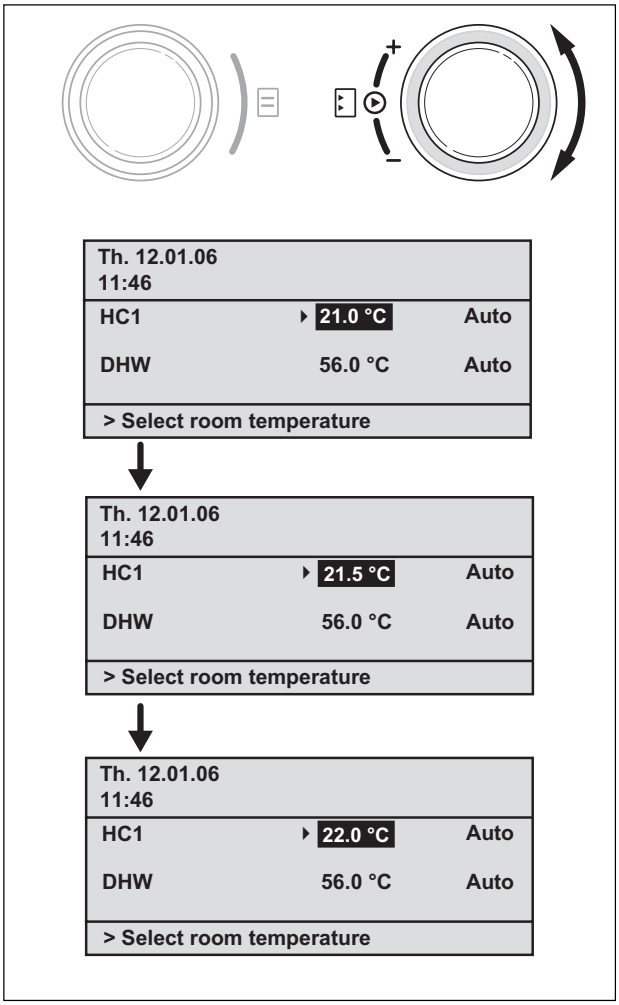


Fig. 4.7 Changing the values of a parameter

⇒ Click the right-hand dial.

The value is saved and is no longer highlighted.

Parameter changing in the basic display

	Parameter	Meaning
Heating circuit (HK1)	Room temperature	The heating is controlled according to the target room temperature and according to the operating mode, see also Chapter 4.4.
	Operating mode Auto(matic)	The boiler is controlled according to the target room temperature, the time programme and other parameters such as e.g. the set-back temperature. Some of these parameters are set by your installer.
	Operating mode Manual	The heating is constantly on and is controlled to achieve the target room temperature.
	Operating mode OFF	The heating is off. The room temperature is not displayed. Frost protection is active (room temperature = 5 °C).
Hot water	Hot water target value	The hot water is on depending on the operating mode and is controlled to achieve the target temperature. See also Chapter 4.4.
	Operating mode Auto(matic)	The hot water is constantly on according to the time programme.
	Operating mode Manual	The hot water is constantly on and is controlled to achieve the target temperature.
	Operating mode OFF	The hot water is switched off. Frost protection is active.

Table 4.2 Modifiable parameters in the basic display

Example: Change the room temperature
Start situation: You are in the basic display (see Fig. 4.2). The way you get to the basic display is described in Chapter 4.3.3.

⇒ Turn the right-hand dial until the cursor ▸ appears in front of the target value (room temperature) of the heating circuit (HC1).

⇒ Click the right-hand dial.

The value is highlighted.

⇒ Turn the right-hand dial.

The value for the room temperature changes by 0.5 °C for each index turn of the dial.

⇒ When the desired value is reached, click the right-hand dial.

The new value is saved and the value is no longer highlighted
The duration of validity of the new value for the control system depends upon the set operating mode; see also Chapter 4.4.

4.3.3 Operating in the default display

In the default display (Fig. 4.8) the operating mode for heating and the current room temperature are displayed in the central area..
The default display also allows you to change the two most important parameters of your heating system quickly and comfortably:

- You can change the operating mode (automatic, manual, off) by turning the left-hand dial.
- By turning the right-hand dial you can change between the actual room temperature and the set room temperature. .

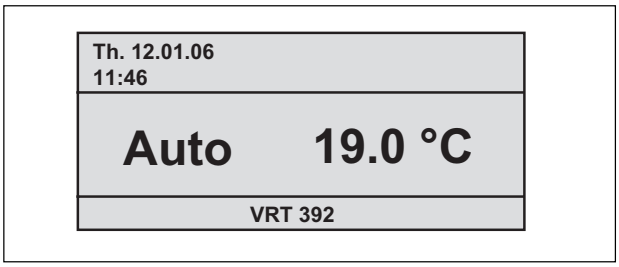


Fig. 4.8 Default display (example)

By clicking either dial you can proceed from the default display to the next screen (see Fig. 4.2).

If there has been no operation of the controller for longer than 5 minutes, the display returns to the default display.

Changing the operating mode in the default display

Operating mode	Meaning
Auto(matic)	The boiler is controlled according to the programmed room temperature, time programmes and other parameters such as e.g. the set-back temperature. Some of these parameters are set by the installer.
Manual	The control of the boiler depends upon the set room temperature.
OFF	The boiler is switched off. The room temperature is not displayed and is also not capable of being modified. Frost protection (room temperature = 5 °C) is guaranteed.

Table 4.3 Operating modes of the heating circuit

This is how to do it:

⇒ Turn the left-hand dial.

The operating mode is highlighted.
After a delay of 1 second, you can select the operating mode.

⇒ Turn the left-hand dial further until the desired operating mode is displayed.

After a delay of 2 seconds the value is saved and no longer highlighted..

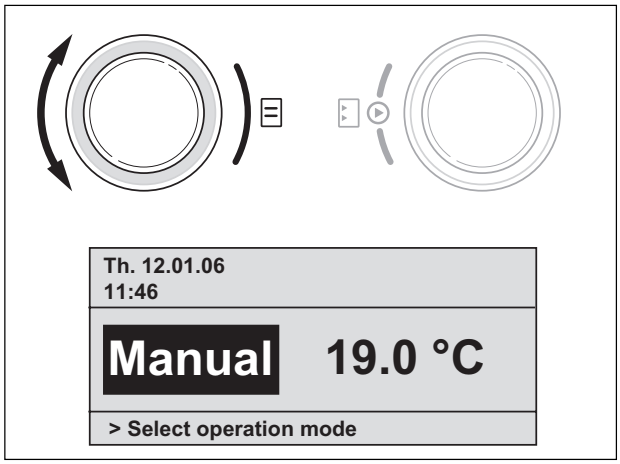


Fig. 4.9 Changing the operating mode in the default display

Changing the room temperature in the default display
The control of the boiler depends upon the set room temperature. The controller ensures that the target room temperature is achieved quickly and is maintained at this value.

⇒ Turn the right-hand dial.

Instead of the actual room temperature, the target room temperature is highlighted. After a delay of 1 second, you can change the target room temperature:

⇒ Turn the right-hand dial further until the desired room temperature appears.

After a delay of 2 seconds, the new room temperature is saved, the temperature is no longer highlighted and the actual room temperature is displayed.

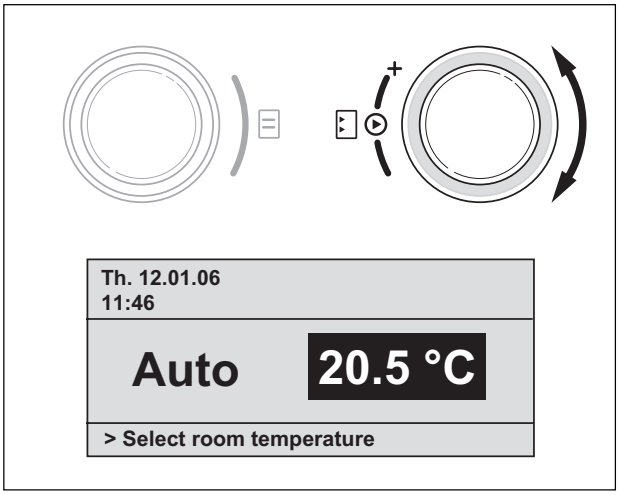


Fig. 4.10 Changing the room temperature in the basic display

The new room temperature is used instead of the programmed temperature until the end of the current time programme. This duration depends upon the operating mode; see also Chapter 4.4.

4.4 Changing the target room temperature

If you change a target value - either the room temperature or the hot water target value - in the basic display or in the default display, the new value overrides the programmed temperatures.

When in „Manual“ mode, the control uses the temporary temperatures until either the operation mode or the temperature is changed.

When in „automatic“ mode, the control uses the temporary temperature until the next time window starts (if you have changed the set target value outside a time window) or until the end of the current time window (if you have changed the set target value within the time window); see Fig. 4.11.

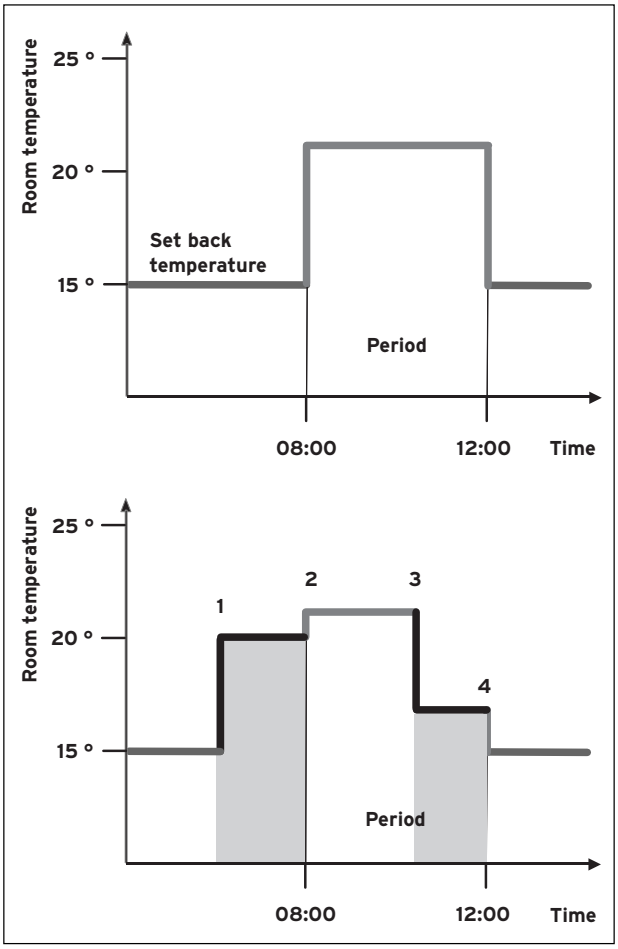


Fig. 4.11 Duration of validity of target value changes (here: room temperature)

The upper diagram in Fig. 4.11 shows a programmed time window (see Chapter 4.7.1) with associated room temperature (21 °C).

In the lower diagram at (**1**) the room target value is changed (20 °C). This room target value is used until the start of the time window.
From here (**2**) the control system uses the room target value of the time window (21 °C).
At (**3**) the room target value is set (17 °C).
This value is used for the control system until the end of the time window (**4**).
After the time window, the control system uses the set-back temperature (15 °C) again.

☞ **Note!**
The same characteristics apply in the same way for the hot water target value.

4.5 Level for the user, level for the installer

The VRT 392 has two levels for display/input. Each level contains several different screens where the parameters can be displayed, adjusted or changed.

- Level for the user
  It serves to display and set/change the fundamental parameters. The setting/changing of the parameters can be carried out by the user without any special previous knowledge and during normal operation.

- Level for the installer
  It serves to the display and set/change specific parameters and is limited to the installer.

4.6 Screens in the level for the user

The screens in the level for the user are arranged in the same sequence as shown in the following table 4.4. This table shows which parameters can be changed. Examples of this can be seen in Chapter 4.7 and onwards.

This is the way you get from the default display to the first screen "basic data" of the user level:

⇒ Click with one or both dials.

You get to the basic display.

⇒ Turn the left-hand dial clockwise by one or two notches.

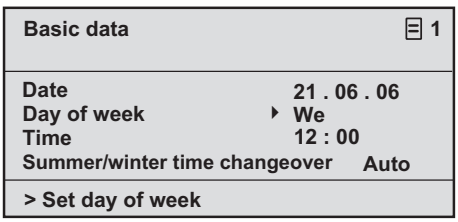


Fig. 4.12 Screen "basic data" (example: select day of the week)

By turning the left-hand dial you scroll from one screen to the next.
Other screens apart from those shown in Table 4.4, e.g. 3 or 6, only appear if accessories are installed and if their control is done by the VRT 392.

Screen	Title screen	adjustable operating values (just display = A)	Remarks	Unit	Min. value	Max. value	Step width/ Selection possibility	Preset value
1	Basic data	Date weekday time of the day	Day, Month and year selected separately Hours and minutes selected separately					
		Summer/winter changeover					Auto, Off	Off
2	HC1 time programmes	Day of week / week block	Select single weekday or block of days (e.g. Mo-Fr)					
		1 Start/End time of the day 2 3	Three time periods are available per day or block of days	Hours/ minutes			10 min	
		Temperature per time period	An individual room temperature can be set for each time period	°C	5	30	0,5	20
4	Hot water time programmes	Day of week / week block	Select single weekday or block of days (e.g. Mo-Fr)					
		1 Start/End time of the day 2 3	Three time periods are available per day or block of days	Hours/ minutes			10 min	
5	Circulation pump time programmes	Day of week / week block	Select single weekday or block of days (e.g. Mo-Fr)					
		1 Start/End time of the day 2 3	Three time periods are available per day or block of days	Hours/ minutes			10 min	
7	Holiday programming of the complete system	Holiday period	Start Day, Month, Year End Day, Month, Year					
		Holiday target value heating	Room temperature for holiday period	°C	5	30	0,5	10
8	HC1 Parameter	Set-back temperature	For the times between the time windows you can set a set-back temperature.	°C	5	30	0,5	15
10	Hot water parameters	Hot water set target temperature	Hot water target temperature	°C	35	70	1,0	60
14	Changing the name	Heating circuit 1	Any name with up to 8 characters can be entered					Heating circuit 1
		Hot water						Hot water
15	Code level	Code number	Access for the installer only with input of saved code number					1000

Table 4.4 Screens in the level for the user

4.7 User screens (examples)

4.7.1 Entering time programmes (example for heating)

Using the time programmes you can set up to three time windows per weekday or block of days (e.g. Mo - Fr). In these time windows, the heating control system provides the room temperature you have entered, the so-called comfort temperature. Outside the time windows the room temperature is set back. You can also set this set-back temperature.

Note!
If you programme the control to match your lifestyle in the most optimum manner then you will save energy whilst maintaining heating comfort.

The way to set the time windows is shown in the following example for the heating circuit. Time windows can be set in the same way for the hot water preparation and for a circulation pump.

⇒ Turn the left-hand dial further until the screen ⊟ 2, HC1 is displayed.

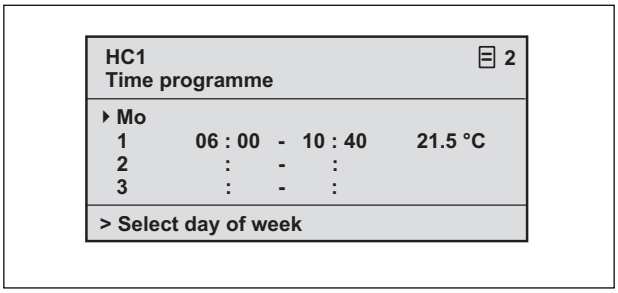


Fig. 4.13 Screen ⊟ 2 (example)

⇒ Turn the right-hand dial until the cursor ▸ is in front of the input field for the weekday or block of days.
⇒ Click the right-hand dial.

The field is highlighted.

⇒ Select the desired weekday or block of days by turning the right-hand dial. The options are:
- Mo, Tu, .. etc.
- Mo - Fr (Block)
- Sa - Su (Block)
- Mo - Su (Block)

⇒ Confirm the selection by clicking with the right-hand dial.

1, 2 and 3 in the display signify the "time window" that you can set for the selected weekday or block of days. Within a time window (e.g. from 06:00 to 10:40) the VRT 392 provides heating in accordance with the associated comfort temperature (e.g. 21.5 °C).

⇒ Turn the right-hand dial until the cursor ▸ is located in front of the input field for the start time of time window 1.
⇒ Click the right-hand dial.

The field is highlighted.

⇒ Select the desired start time by turning the right-hand dial.

Per step of the dial the time changes by 10 minutes.

⇒ When the desired start time is displayed confirm by clicking with the right-hand dial.

The time for the end of the time window 1 should be set accordingly.

The desired comfort temperature for the time window 1 is set as follows:

⇒ Turn the right-hand dial until the cursor ▸ is located in front of the input field for the comfort temperature in time window 1.
⇒ Click the right-hand dial.

The field is highlighted.

⇒ Select the desired comfort temperature by turning the right-hand dial (one step corresponds to a change of 0.5 °C).
⇒ When the desired comfort temperature is displayed, confirm by clicking with the right-hand dial.

Note!
The control supports the user when programming time windows:
a) The programmed times can only be chronological.
b) A programmed time window cannot overlap an earlier time window.
A time window can only be located between 0:00 and 24:00.
An existing time window can be deleted as follows:
Set the start time and the end of a window to the same time.

Note!
The time programmes for hot water or for a dhw circulation pump are set in the same way as described for heating circuit 1. For hot water and the dhw circulation pump, it is not necessary to programme comfort temperatures.

4.7.2 Programming holiday periods

If you are not at home for a longer period, you can set a lower room temperature. This will save heating energy. The VRT 392 makes sure that the heating system heats the living rooms only to the set temperature.
You can, e.g. set a room temperature of 15 °C, if you are on holiday from the 10th - 24th February. The living rooms are only heated up to 15 °C during this period.

Holiday times can be set as follows:

⇒ Turn the left-hand dial until the screen 7 "Holiday programming for the cpl. system" is reached.

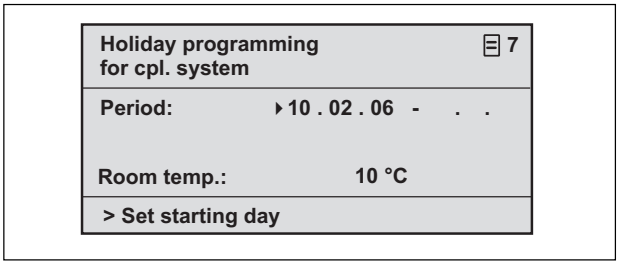


Fig. 4.14 Screen 7 (example)

⇒ Turn the right-hand dial until the cursor ▸ is at the start of the start date.

In the display area for explanation the text "Set starting day" appears.

⇒ Click the right-hand dial.

The field is highlighted.

⇒ Turn the right-hand dial until the day of the desired day of the starting date is displayed.
⇒ Click the right-hand dial.

The day is now saved and the value is no longer highlighted.

⇒ Set the month and the year of the starting date in the same way.

In the display area of the explanation the text "Set starting month" or "Set starting year" appears.
⇒ Set the end date of the holiday period in the same way.

Enter the room temperature as follows:

⇒ Turn the right-hand dial until the cursor ▸ is located in front of the input field for the room target temperature.

In the display field for the explanation the text "Select room temperature" appears.

⇒ Click the right-hand dial.

The field is highlighted.

⇒ Turn the right-hand dial until the desired value is displayed (values from 5 °C to 30 °C in half degree steps are possible).
⇒ Click the right-hand dial.

The desired room temperature is set. The value is saved and no longer highlighted.

4.7.3 Heating settings

Here you can enter the set-back temperature. The heating is set to this temperature outside the specified time windows.

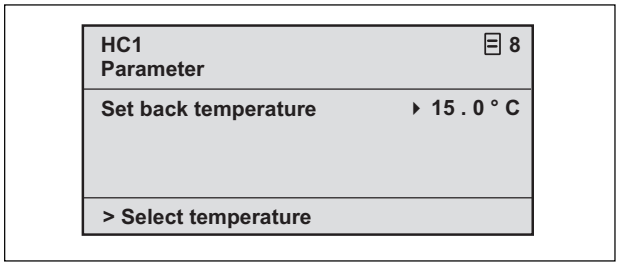


Fig. 4.15 Screen 8 (example)

In the display area for explanation the text "Select temperature" appears.

⇒ Click the right-hand dial.

The field is highlighted.

⇒ Turn the right-hand dial until the desired value is displayed (values from 5 °C to 30 °C in half degree steps are possible).
⇒ Click the right-hand dial.

The desired set-back temperature is set. The value is saved and no longer highlighted.

4.7.4 Hot water settings

If the hot water provision for your home is done by the boiler the target value can be entered using the VRT 392.

⇒ Turn the left-hand dial until the screen 10 "Hot water parameters" is reached.

The cursor appears ▸ in front of the value for the target temperature.

⇒ Click the right-hand dial.

The field is highlighted.

⇒ Turn the right-hand dial until the desired value is displayed (values from 35 °C to 70 °1 C in half degree steps are possible).
⇒ Click the right-hand dial.

The desired target temperature is set. The value is saved and no longer highlighted.

Attention!
Risk of being scalded by hot water!
At the draw-off points of the hot water there is a danger of scalding at temperatures in excess of 60 °C. Small children and elderly people can be at danger even at lower temperatures. Select the target temperature so that nobody is at danger.

4.7.5 Changing the name of the system components

On the screen 14 you can see which names of components you can change.

Change names		14
HC1	:	HC1
DHW	:	▸ Bathroom 1
	:	
> Select		

Fig. 4.16 Screen 14 (example)

You can enter a new name to the right of the colon (numbers 0-9, spaces, capital/small letters). This is how to do it:

⇒ Turn the left-hand dial until the screen 14 "Change names" is reached.
⇒ Turn the right-hand dial until the cursor ▸ is in front of the component name that you want to change.
⇒ Click the right-hand dial.

The input field of the first character is highlighted.

⇒ Turn the right-hand dial until the desired character is displayed.
⇒ Click the right-hand dial.

The desired character is accepted. The character is saved and no longer highlighted.

⇒ Turn the left-hand dial by one notch in the clockwise direction.

The next character is marked by the cursor.

⇒ Click the right-hand dial.

The field is highlighted.

⇒ Turn the right-hand dial until the desired character is displayed.
⇒ Proceed in the same way for the remaining characters of the name.

Note!
Entire names or extra characters can be deleted by entering spaces.

5 Status and error messages

Status and error messages are displayed in the second row of the area for basic data.

Status messages

- Holiday programme active

  Within a set holiday time period the heating is controlled to the room target temperature for this period.

- Maintenance + telephone number of the installer

  Indicates maintenance for the heating system is required.
  In addition, the telephone number of the installer appears if it has been programmed in by him.

Fault signal

Fault at boiler.

Indicates a fault in the boiler.

⇒ Contact your installer.

If the display remains dark or if you can‘t manage any changes in the display with the dials, the device is faulty.

⇒ Contact your installer.

For the heating engineer

Installation instructions

VRT 392

Room thermostat and hot water programmer VRT 392

Contents

1 Notes on the documentation

The following information is intended to help you throughout the entire documentation. Further documents apply in combination with this installation manual.
We accept no liability for any damage caused by failure to observe these instructions.

Other applicable documents
- The operating instructions for the Vaillant room thermostat VRT 392
- The operating and installation instructions of your heating system
- All instructions for the accessories

1.1 Storage of the documents

Please pass on this installation manual and all other valid documents and auxiliary equipment to the user of the installation, This person takes over the responsibility for safekeeping. The documents must be made available if required.

1.2 Symbols used

Please observe the safety instructions in this manual for the installation of the appliance.

Danger!
Immediate risk of serious injury or death!

Danger!
Danger of death by electric shock!

Attention!
Danger of burning and scalding!

Caution!
Potentially dangerous situation for the product and environment!

Note!
Useful information and instructions

⇒ Symbol for a necessary task

1.3 Validity of the instructions

These installation instructions are exclusively applicable to the equipment with the following part number:

00 2002 8509 VRT 392

The part number of the control is shown on the identification plate.

2 Description of the device

The VRT 392 is a programmable room temperature thermostat for heating and hot water programmes for use in combination with a Vaillant boiler (eBUS capable). The VRT 392 can also be used to control the following accessories:

- Domestic hot water circulation pump in combination with a multi-function module VR 40
- Ventilation installation
- Conventional hot water cylinder
- Vaillant layer cylinder actoSTOR
- Commercially available 230 V components (e.g. valves, cylinder thermostats)

Data exchange and power supply to the VRT 392 is via eBUS interface.

The VRT 392 is compatible with the Vaillant diagnosis software vrDIALOG 810/2 and with the Vaillant Internet Communication System vrnetDIALOG, i.e. for remote diagnosis and remote setting.

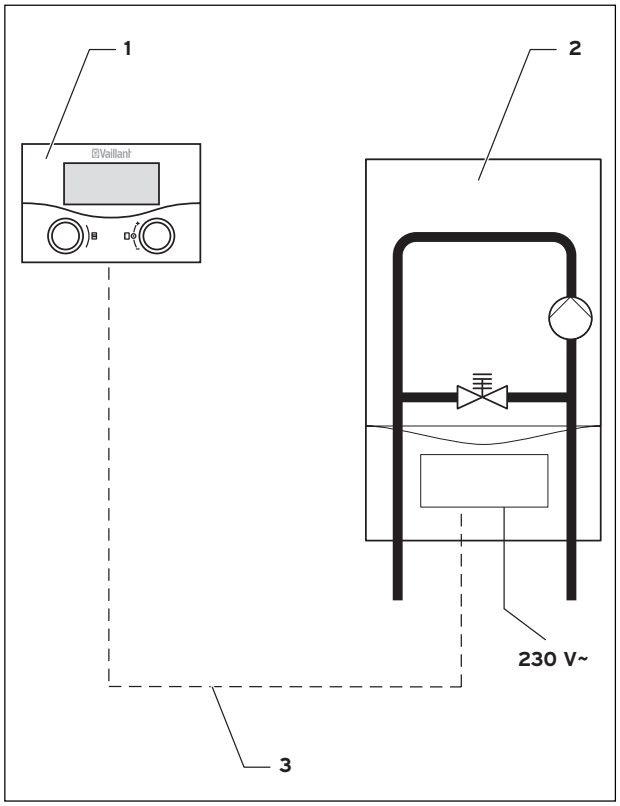


Fig. 2.1 System schematic

Key
1 VRT 392
2 Boiler
3 eBUS connection (twin-core)

2.1 Identification plate

The identification plate is located on the rear of the controller electronics (printed circuit board).

2.2 CE label

The CE mark documents the fact that the Vaillant Room Thermostat VRT 392 fulfils the fundamental requirements of the following Directives:
- Electromagnetic compatibility directive (Guideline 89/336/EEC)
- Low voltage directive (Guideline 73/23/EEC)

2.3 Intended use

The room temperature thermostats VRT 392 are state-of-the-art appliances which are designed in accordance with approved safety regulations.
However, in the event of improper use or use not as intended, impairment of the equipment and other items can arise.
The VRT 392 room thermostat is designed to control a heating system with or without a hot water system or hot water circulation pump according to time and temperature, in connection with a Vaillant boiler with an eBus interface.
Operation with the following accessories is permitted:

- Circulation pump for hot water preparation in combination with a multi-function module VR 40
- Ventilation installation
- Conventional hot water cylinder
- Vaillant layer cylinder actoSTOR
- Commercially available 230-V components (e.g. valves, cylinder thermostats) in combination with the Control Center VR 65
- 230 V cylinder thermostat in combination with the relay box VR 41

Any other use or extended use is considered to be use other than intended. The manufacturer or supplier is not liable for any resulting damage. The user alone bears any risk.
Intended use also includes observing the operating and installation instructions and all other documents having validity.

3 Safety instructions and regulations

The VRT 392 must be installed by a suitably qualified heating engineer, who is responsible for adhering to the existing standards and regulations. We accept no liability for any damage caused by failure to observe these instructions.

3.1 Safety instruction

Danger!
Connections carrying voltage!
There is a danger to life from electric shock when working in the switch box of the boiler. Switch off the power supply to the switch box of the boiler and secure against re-connection before carrying out any work.
Only open the switch box if the boiler is potential free.

3.2 Regulations

During the electrical installation, observe the regulations of your power supplier.
All wiring must be in accordance with Building Regulations Part P and BS 7671 (IEE Wiring Regulations), and must be carried out by a suitably qualified person

Use standard commercial cables for wiring.
Minimum cross-section for the Bus line: 0.75 mm^2
Do not exceed following maximum wire lengths:

– eBUS line 300 m

In locations where eBUS lines run parallel with 230 V lines over a distance in excess of 10 m, they must be run separately with a distance of at least 25cm.
Do not use free terminals of the appliances as support terminals for other wiring.

4 Assembly

The VRT 392 is mounted on a wall in a living area. Communication to the boiler is by twin-core eBUS line.

4.1 Scope of delivery

Using Table 4.1, check the scope of delivery

Pos.	Quantity	Component
1	1	VRT 392 room thermostat
2	1	Wall mounting screws
3	1	Operating and Installation Manual

Table 4.1 Scope of delivery VRT 392

4.2 Accessories

The following accessories can be used in addition to the VRT 392 :

Multi-function module VR 40
The multi-function module VR 40 can be used by the VRT 392 to control a domestic hot water circulation pump.

Control Center VR 65
Using the Control Center VR 65, the VRT 392 can control commercially-available 230 V components (e.g. valves, cylinder thermostats).

Relay box VR 41
Using the relay box VR 41, a 230 V cylinder thermostat can be incorporated in the control system of the VRT 392.

Note!
Observe the instructions of the accessories if the VRT 392 is fitted with accessories.

4.3 Installation location

Install the VRT 392 in dry rooms only.

Mount the VRT 392 in such a way that the room temperature can be properly evaluated; e.g. on an internal wall of the main living room, at a height of approx. 1.5 m

Inform the user that, in the room where the VRT 392 is fitted, all the radiator valves must be fully open.

4.4 Wall-mounting

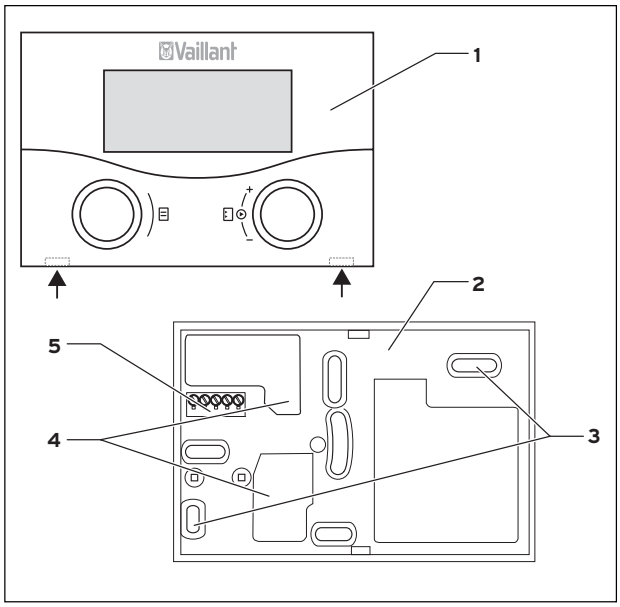


Fig. 4.1 Fitting the VRT 392

Key
1 VRT 392 room thermostat
2 Wall socket
3 Fixing apertures
4 Apertures for cable entry
5 Terminals for eBUS line and plug connection socket for pin rail

This is how to do it:

⇒ Pull the room thermostat (**1**) off the wall socket (**2**). Insert a screwdriver into the two retainer straps to do this (see Fig. 4.1 arrows).
⇒ Mark the suitable location on the wall. Observe the cable run for the eBUS line.
⇒ Drill two holes 6 mm diameter corresponding to the fixing apertures (**3**).
⇒ Insert the plugs provided.
⇒ Insert the eBUS cable through one of the cable entry points (**4**).
⇒ Fix the wall socket with the screws provided.
⇒ Electrical installation is described in Chapter 5.1.
⇒ Carefully push the thermostat onto the wall socket until it clicks in position. The pin rail on the back of the thermostat must fit into the plug connection (**5**) provided on the wall socket.

5 Installation

Danger!
Connections carrying voltage!
There is a danger to life from electric shock when working in the switch box of the boiler.
Switch off the power supply to the switch box of the boiler and secure against re-connection before carrying out any work.
Only open the switch box if the boiler is potential free.

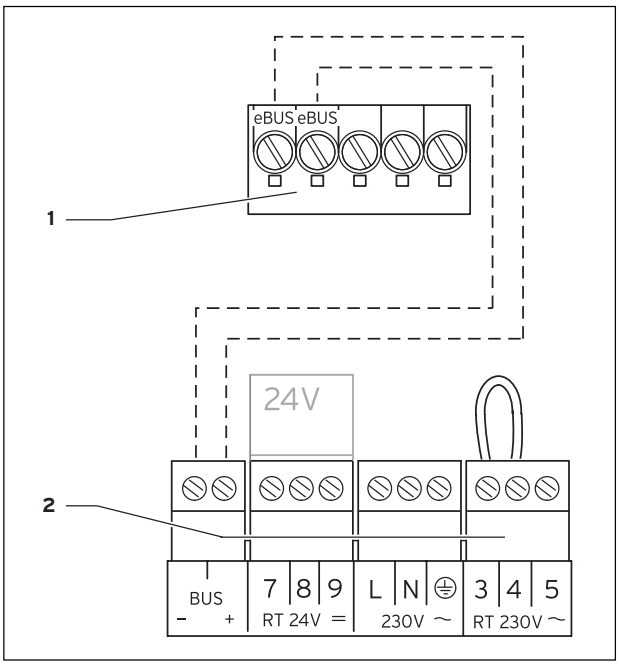


Fig. 5.1 Electrical connection of the VRT 392

Key
1 Terminal rail VRT 392
2 Terminal rail boiler

This is how to do it:

⇒ Connect the eBUS cable to the terminal rail on the VRT 392.
⇒ Connect the eBUS cable to the terminal rail on the boiler.

Note!
Do not remove the jumper between terminals 3 and 4 (Fig. 5.1).
When connecting the eBUS cable there is no need to observe the correct polarity.
Communication is not adversely affected by swapping the two connections over.

6 Initial commissioning

Start situation:
The VRT 392 is mounted correctly and is electrically connected.
The boiler is switched on and is ready for operation.

Note!
To ensure an optimal control by the VRT 392, watch the position of the dials on the heatung unit:
- Set the hot water dial on the boiler to maximum (turn all the way to the right).
- Set the central heating dial on the boiler to maximum flow temperature.

The operating concept of the VRT 392 is described in the operating instruction in Chapter 4.3.

6.1 Installation assistant

When commissioning for the first time you will be supported by the installation assistant. The installation assistant recognises the connected components of the heating system.
Depending upon the configuration of the heating system up to six screens (A1 to A6) are at your disposal. With the installation assistant the most important parameters for the heating system can be entered.

The installation assistant starts with screen A1, language selection.

⇒ Select the language in accordance with the operating concept (operating instructions Chapter 4.3).

⇒ Turn the left-hand dial clockwise to get to screen A2.

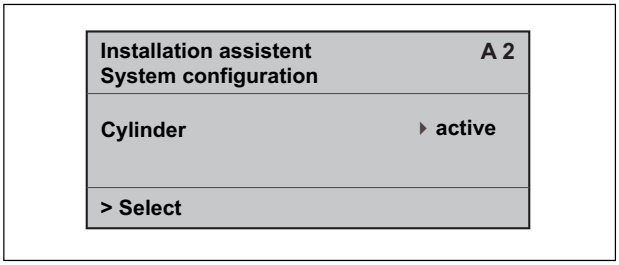


Fig. 6.1 Installation assistant screen A2

The configuration of the heating system is shown in screen A2.
In the case of the cylinder you can switch between active and inactive.

If you wish to leave the installation assistant:

⇒ Turn the left-hand dial clockwise to get to screen A6.
⇒ Confirm the end of the installation with "yes".

Note!
If you confirmed the end of the installation with "yes" you can only access the installation assistant via the code-protected installer level.

After the installation is concluded, you will automatically reach the default display.

6.2 Operation level for the installer

The level for the installer displays specific system operating parameters and allows the installer to change some parameters to optimise the control to the heating system requirements.

The level for the installer consists of the screens C1 to C26 and the screens A1, A2 and A6 of the installation assistant described above.
The screens C1 to C26 in the VRT 392 appear in the same sequence as shown in the following Table 6.1.
This table shows which parameters can be adjusted and changed.

Depending upon the configuration selected, parameters and screens not required in the installation assistant (e.g. screen A2) are hidden.

The settings/changes take place in accordance with the operating concept as described in Chapter 4.3 of the operating instructions .

In order to access the level for the installer you need to enter an access code.

From the default display you can access the installer level as follows:

⇒ Click with one or both of the dials to get from the default display to the basic display.
⇒ Turn the left-hand dial clockwise until you see the screen 15.
⇒ Enter the code number.

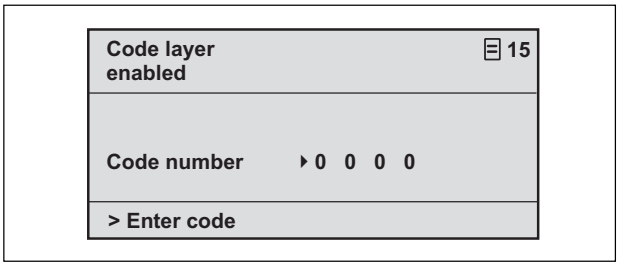


Fig. 6.2 Screen 15

The factory setting of the code number is 1 0 0 0.
You can change the code number on screen C24.

After entering the correct code you automatically get to the screen C1, the level for the installer.

6.3 Resetting the parameters to the factory setting

The factory as-delivered condition of the VRT 392 can be recovered as follows:

⇒ Push both dials together for 10 seconds

You will reach the screen for the factory settings:

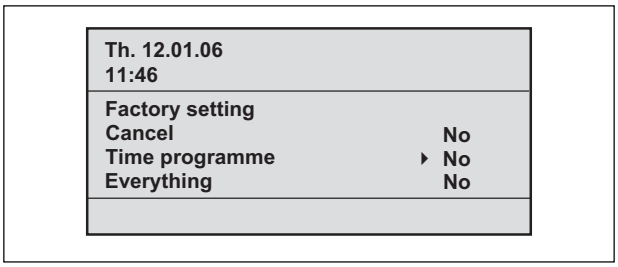


Fig. 6.3 Screen factory setting

Menu point	Input	Result
Aborting	Yes	The set parameters remain effective
Time programmes	Yes	All programmed time windows are deleted
Everything	Yes	All set parameters are reset back to the factory setting

Table 6.1 Menu selection of the screen factory setting

After confirmation of the input, the display jumps back to the basic display or to the default display.

6.4 Handing over the device to the user

The user of the VRT 392 must be instructed about its functions and how to operate it.

⇒ Hand the instruction manuals and equipment documentation to the user for safekeeping.
⇒ Tell the user the part number.
⇒ Point out to the user that the manual must be kept near to the VRT 392.
⇒ Go through the operating manual with the customer and answer any questions.

Screen	Title screen	adjustable operating values (just display = A)	Remarks	Unit	Min. value	Max. value	Step width/ Selection possibility	Preset value
C1	HC1 Information	Flow target (A)	Flow temperature target value	°C			1	
C4	Hot water information	hot water target temperature (A)	Hot water target temperature of the cylinder	°C			1	
		Cylinder sensor 1 (A)	Actual hot water cylinder temperature	°C			1	
		Circulation pump status (A)					On, Off	
C9	HC1 Parameter	Set-back temperature	For the times between the time windows you can set a set-back temperature.	°C	5	30	1	15
		Room temperature control strategy	Determines the type of room temperature control Thermostat on/off control; With modulating control, the boiler flow temperature is controlled depending on the actual and target room temperature				Thermostat, Modulating	Two-point
		Distance adjustment	For optimum matching the control process to the size of the room or radiator arrangement. (Positive values: slow-acting switching behaviour of the regulator; negative values: faster acting switching behaviour of the regulator;		-5	+5	1	0
C16	Hot water parameters	Legionella protection day	Weekday or block of days; cylinder heated to 70 °C for one hour				OFF, MO, TU, WE, TH, FR, SA, SU, MO-SU	OFF
		Start legionella protection time of the day			0:00	24:00	0:10	4:00
C24	Service	Telephone number	Telephone number for service support					
		Changing the code number			0000	9999	each 1	1000
		Maintenance date	Day/Month/Year adjustable					
C25	Tools	Room temperature display correction	Matching the room temperature sensor	R	-3	3	0,5	0
		Display contrast			0	15	1	6
C26	Software versions	Software version per module (A)	Display of version number					

Table 6.1 Screens in the level for the installer

7 Service, Warranty

Vaillant 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.

Vaillant warranty
We only grant a Vaillant manufacturers warranty if a suitably qualified engineer has installed the system in accordance with Vaillant instructions.
The system user 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 (08708 503072)

8 Recycling and disposal

Both your VRT 392 and its packaging are primarily made of recyclable raw materials.

Appliance VRT 392
Neither the controller or any of its accessories belong in the household waste. Make sure the old appliance and any accessories are disposed of properly.

Packaging
The disposal of the transport packaging is undertaken by the specialist company that installed the equipment.

9 Technical data

	VRT 392
Operating voltage Umax	24 V
Current consumption	< 45 mA
Cross-section connection lines	0,75...1,5 mm^2
Level of protection	IP 20
Protection class	III
Maximum permissible ambient temperature	50 °C
Height mm	97
Width mm	146
Depth mm	41

Table 9.1 Technical data VRT 392

Glossary

Circulation pump
When you open the hot water tap it can take a few moments - depending upon the length of the pipe - before hot water comes out. A circulation pump pumps hot water through the pipes in the hot water circuit. This ensures that hot water is immediately available when you open the tap. Time windows can be programmed for the circulation pump.

Forward flow temperature
See heating feed temperature.

Heating circuit (HC1)
HC1 indicates heating circuit 1. This refers to the heating of your heating system. If you wish to use a special designation you can use a different designation in place of HC1 (see operating instructions Section 4.7.5).

Heating feed temperature
Your boiler heats water which is pumped through your heating system. The temperature of this hot water as it leaves the boiler is referred to as the feed temperature.

Hot water generation
Your boiler heats the water in the hot water cylinder to the selected target temperature. If the temperature in the hot water cylinder falls by specific value, the water is heated up again to the target temperature. Time windows can be programmed for the hot water generation.

Internal temperature
The internal temperature is the actual current temperature in your apartment.

Operating level for the installer
It serves to display and to set/change specific parameters. This user level is reserved for the installer and is therefore protected by an access code.

Operating level for the user
It serves to display and to set/change the fundamental parameters. Setting/changing the parameters can be performed by the user without previous special knowledge and during normal operation. The heating system is continuously matched to the requirements of the user by corresponding adjustment of the fundamental parameters.

Operating mode
Operating modes "Auto" (Automatic), "Manual" and "OFF" are available. You can specify the way in which your room heating and water heating are controlled using the operating modes (see operating instructions Section 4.3.2, Table 4.2).

Parameter
Parameters are the properties of your heating system. You can influence these properties by altering the value of a parameter, such as, e.g. reducing the value of the parameter "Set-back Temperature" from 15 °C to 12 °C.

Set-back temperature
The set-back temperature is the temperature to which your heating lowers the internal temperature to outside the programmed time windows.

Summer/Winter changeover
In the screen 1 "Basic Data" in the menu point "Mode selection" you can determine whether the changeover from summer to winter should take place automatically (Selection: Auto).
The factory setting (as-supplied condition) is for automatic changeover not to take place (Selection: Off).

Target room temperature
The target room temperature is the temperature that you would like in your apartment and which is specified in your controller. Your boiler continues to provide heat until the internal temperature is equal to the target room temperature.
When entering the time programmes, the target room temperature is also referred to as the comfort temperature.

Target values
Target values are the desired values which you specify to the controller. e. g. the target room temperature or the target temperature for the hot water preparation.

Time window
For the heating, the hot water generation and the circulation pump three time windows per day can be programmed (see operating instructions Section 4.7.1).
A target value is allocated to each time window programmed for the heating.
The programmed time windows for hot water generation refer to the hot water target value (see screen 10 "hot water parameter")
In the case of the circulation pump the time windows determine the operating times.
In automatic mode the control is in accordance with the specified values in the time windows.

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