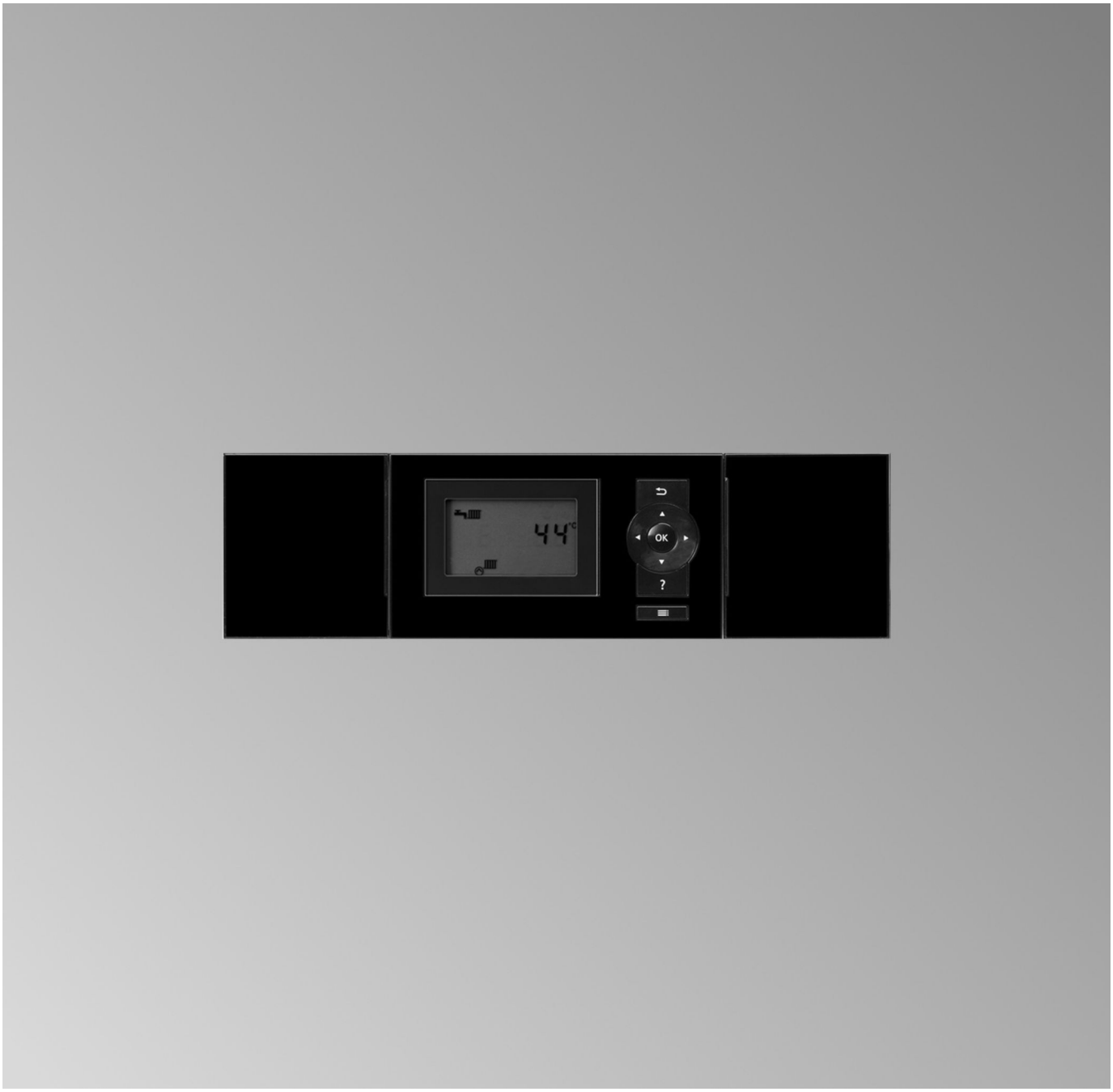
Operating instructions

for the system user

Heating system with Vitotronic 100 control unit, type HC1B, for operation with a constant boiler water temperature

VITODENS
VITOPEND



5592683 GB 5/2022

Please keep safe.

For your safety

⚠ Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained

⚠ **Danger**
This symbol warns against the risk of injury.

! **Please note**
This symbol warns against the risk of material losses and environmental pollution.

Note
Details identified by the word "Note" contain additional information.

Target group

These operating instructions are designed for heating system users.
This appliance can also be operated by children aged 8 and older, as well as by individuals with reduced physical, sensory or mental faculties or those lacking in experience and knowledge, provided such individuals are supervised or have been instructed in the safe use of this appliance and any risks arising from it.

! **Please note**
Supervise children in the proximity of the appliance.
- Never permit children to play with the appliance.
- Cleaning and user maintenance must never be carried out by unsupervised children.

Safety instructions for working on the system

Connecting the appliance

- The appliance may be connected and commissioned only by authorised contractors.
- Only operate the appliance with suitable fuels.
- Observe the specified electrical connection requirements.
- Modifications to the existing installation may only be carried out by authorised specialists.

⚠ **Danger**
Incorrectly executed work on the heating system can lead to life threatening accidents.
- Work on gas installations may only be carried out by a registered gas fitter.
- Work on electrical equipment may only be carried out by a qualified electrician.

5592683

For your safety (cont.)

Working on the appliance

- All settings and work on the appliance must be performed as specified in these operating instructions.
  Further work on the appliance may be carried out only by authorised contractors.
- Do not open the appliance.
- Do not remove casings.
- Do not modify or remove attachments or fitted accessories.
- Do not open or tighten pipe connections.

⚠ **Danger**
Hot surfaces can cause burns.
- Do not open the appliance.
- Never touch the hot surfaces of uninsulated pipes, fittings or flue pipes.

Auxiliary components, spare and wearing parts

! **Please note**
Components not tested with the heating system may damage the system or affect its function.
Have all installation or replacement work carried out exclusively by your contractor.

Safety instructions for operating the system

Damage to the appliance

⚠ **Danger**
Damaged equipment poses a safety hazard.
Check the appliance for external damage. Never start up a damaged appliance.

If you smell gas

⚠ **Danger**
Escaping gas can lead to explosions which may result in serious injury.
- No smoking! Prevent naked flames and sparks. Never switch lights or electrical appliances on or off.
- Close the gas shut-off valve.
- Open windows and doors.
- Evacuate any people from the danger zone.
- Notify your gas and power supply utility and your local heating contractor from outside the building.
- Have the power supply to the building shut off from a safe place (outside the building).

For your safety (cont.)

If you smell flue gas

Danger
Flue gas can lead to life threatening poisoning.
- Shut down the heating system.
- Ventilate the installation site.
- Close all doors in the living space.

If there is a fire

Danger
Fire presents a risk of burns and explosion.
- Shut down the heating system.
- Close the shut-off valves in the fuel supply lines.
- Use a tested fire extinguisher, class ABC.

If water escapes from the appliance

Danger
If water escapes from the appliance there is a risk of electric shock.
- Shut down the heating system at the external isolator (e.g. fuse box, domestic distribution board).
- Please notify your contractor.

If the heating system develops a fault

Danger
Fault messages indicate faults in the heating system. If faults are not rectified, they can have life threatening consequences.
Do not acknowledge fault messages several times in quick succession. Notify contractor so the cause can be analysed and the fault rectified.

Installation room requirements

Danger
Sealed vents result in a lack of combustion air. This leads to incomplete combustion and the formation of life threatening carbon monoxide.
Never cover or close existing vents.
Do not make any subsequent modifications to the building characteristics that could affect safe operation (e.g. cable/pipework routing, cladding or partitions).

Danger
Easily flammable liquids and materials (e.g. naphtha/petrol, solvents, cleaning agents, paints or paper) can cause deflagration and fire.
Never store or use such materials in the boiler room or in direct proximity to the heating system.

Please note
Incorrect ambient conditions can lead to heating system damage and can put safe operation at risk.
- Maintain the permissible ambient temperatures as detailed in these operating instructions.
- Prevent air contamination by halogenated hydrocarbons (e.g. as contained in paints, solvents or cleaning fluids) and excessive dust (e.g. through grinding/polishing work).
- Avoid continuously high humidity levels (e.g. through continuous drying of washing).

For your safety (cont.)

Extractors

The operation of appliances that extract air to the outside (cooker hoods, extractors, air conditioning units, etc.) can create negative pressure. If the boiler is operated at the same time, this can lead to a reverse flow of flue gas.

⚠ **Danger**
The simultaneous operation of the boiler and appliances that extract air to the outside can result in life threatening poisoning due to a reverse flow of flue gas.
Take suitable steps to ensure an adequate supply of combustion air. If necessary, contact your contractor.

Index

1. Introductory information

Symbols ... 8
Terminology ... 8
Intended use ... 8
Product information ... 9
Permissible ambient temperatures in the installation room ... 9
Commissioning ... 9
Your system is preset ... 9
Energy saving tips ... 10
Tips for greater comfort ... 10

2. Operation

Operating principles ... 11
- Programming unit ... 11
- Room temperature controller for room temperature-dependent operation ... 11

How to use the controls ... 11
- Home screen ... 11
- Buttons ... 11
- Symbols ... 11

Calling up the menu for settings and checks ... 12
Operating program ... 12
- Operating programs for central heating, DHW, frost protection ... 12

3. Central heating

Settings for central heating ... 13
Setting the flow temperature ... 13
Setting the operating program for central heating ... 13
Shutting down central heating ... 13
- You do not want to heat any rooms but do want to heat DHW ... 13
- You do not want to heat any rooms or DHW ... 14

4. DHW heating

Settings for DHW heating ... 15
Setting the DHW temperature ... 15
Setting the operating program for DHW heating ... 15
Shutting down DHW heating ... 15
- You do not want to heat DHW, but you do want to heat the rooms ... 15
- You do not want to heat any rooms or DHW ... 16

Activating the comfort function (if available) ... 16
- Ending the comfort function ... 16

5. Further adjustments

Setting the temperature unit (°C/°F) ... 17
Restoring factory settings ... 17

6. Checks

Checking information and resetting values ... 18
Checking maintenance messages ... 19
- Calling up an acknowledged maintenance message ... 19

Checking fault messages ... 19
- Calling up an acknowledged fault message ... 20

7. Multi boiler systems

Special considerations for multi boiler systems ... 21

8. Emissions test mode

Starting emissions test mode ... 22
- Starting emissions test mode ... 22
- Stopping emissions test mode ... 22

9. Start-up/shutdown

Control unit controls ... 23
Shutting down the heating system ... 23
- Shutting down heat generation with frost protection monitoring (standby mode) ... 23
- Shutting down heat generation without frost protection monitoring ... 23

Starting the heating system ... 24

5592683

Index (cont.)

10. What to do if...

Rooms are too cold 25
Rooms are too hot 25
There is no hot water 26
The DHW is too hot 26
"⚠" flashes 26
"🚰" flashes 27
"🔧" flashes 27
"- - EP - -" flashes 27

11. Maintenance

Cleaning 28
Inspection and maintenance 28
- Boiler 28
- DHW cylinder (if installed) 28
- Safety valve (DHW cylinder) 28
- Potable water filter (if installed) 28

Damaged cables / lines 29

12. Keyword index 33

Symbols

Symbol	Meaning
	Reference to other document containing further information
	Step in a diagram: The numbers correspond to the order in which the steps are carried out.
	Warning of material losses and environmental pollution
	Live electrical area
	Pay particular attention.
	▪ Component must audibly click into place. or ▪ Acoustic signal
	▪ Fit new component. or ▪ In conjunction with a tool: Clean the surface.
	Dispose of component correctly.
	Dispose of component at a suitable collection point. Do **not** dispose of component in domestic waste.

Terminology

To provide you with a better understanding of the functions of your control unit, some terminology is explained. This information can be found in chapter "Terminology" in the Appendix.

Intended use

The appliance is intended solely for installation and operation in sealed unvented heating systems that comply with EN 12828, with due attention paid to CECS 215-2017 and the associated installation, service and operating instructions. It is only designed for heating up heating water that is of potable water quality.

Intended use presupposes that a fixed installation in conjunction with permissible, system-specific components has been carried out.

The appliance is intended exclusively for domestic or semi-domestic use; even users who have not had any instruction are able to operate the appliance safely.

Intended use (cont.)

Commercial or industrial usage for a purpose other than heating the building or DHW shall be deemed inappropriate.

Any usage beyond this must be approved by the manufacturer in each individual case.

Incorrect usage or operation of the appliance (e.g. the appliance being opened by the system user) is prohibited and will result in an exclusion of liability. Incorrect usage also occurs if the components in the heating system are modified from their intended use (e.g. if the flue gas and ventilation air paths are sealed).

Product information

The Vitotronic 100 control unit, type HC1B is a boiler and heating circuit control unit for operation with a constant boiler water temperature.
During operation with a constant boiler water temperature, the boiler provides heating water at a constant temperature, independent of the outside temperature. Central heating and DHW heating are provided with a constant boiler water temperature. The flow temperature for the DHW cylinder corresponds to the set boiler water temperature. In conjunction with separately connected control units, the flow temperature for central heating can be regulated to lower temperatures.

In constant operation, 1 heating circuit without mixer can be operated with the control unit.

Note
In systems with several boilers (multi boiler systems), each boiler is equipped with its own control unit. These control units are regulated by a higher control unit. All operating information can be found in the operating instructions of the higher control unit.

Permissible ambient temperatures in the installation room

! **Please note**
The appliance may develop faults if it is operated outside the specified temperature ranges. Ensure that the specified temperature range is maintained in the installation room.

To avoid malfunctions, ensure a temperature between 0 and +40 °C.

Commissioning

The commissioning and matching of the appliance to local conditions and building characteristics, as well as instructing the user in the operation of the system, must be carried out by your contractor.

As the user of new combustion equipment, you may be obliged to notify your local flue gas inspector of the installation [check local regulations]. Your local flue gas inspector will also inform you [where appropriate] about work that may have to be carried out on your combustion equipment (such as regular checks, cleaning).

Your system is preset

The control unit is factory set to **"🚿🏠"** for central heating and DHW heating.
Your heating system is therefore ready for operation:

Central heating
- The rooms are heated in accordance with the settings on your control unit and room temperature controller.
- Your heating contractor can make further settings for you during commissioning.
  You can change all settings individually at any time to suit your requirements: See chapter "Central heating".

Your system is preset (cont.)

DHW heating
- DHW is heated to 50 °C.
- Your heating contractor can make further settings for you during commissioning.
  You can change all settings individually at any time to suit your requirements: See chapter "DHW heating".

Frost protection
- Your heat generator and DHW cylinder (if installed) are protected against frost.

Power failure
All settings are retained if there is a power failure.

Energy saving tips

Saving energy when using central heating

- Do not overheat your rooms; you can save up to 6 % on your heating bills for every degree you reduce your room temperature.
  Do not set your room temperature higher than 20 °C:
  Operating instructions for room temperature controller
- Heat your home to the reduced temperature at night or during regular absences. To do so, adjust the time program for central heating at your room temperature controller:
  Operating instructions for room temperature controller
- Do not set your flow temperature too high: See page 13.
- To switch off functions that are not required (e.g. central heating in summer), set the operating program accordingly.
  - In the summer, if you do not want to heat any rooms but do need DHW, select the **"⚗"** operating program: See page 13.
  - If you do not want to heat any rooms and do not need DHW for a prolonged period of time, select the **"⏻"** operating program: See page 14.

Saving energy on DHW heating

- Do not set the DHW temperature too high: See page 15.
- Activate the **ECO** function for DHW heating: See page 16.

For additional energy saving functions, please contact your contractor.

Tips for greater comfort

More comfort in your home

- Set your individual preferred temperature:
  Operating instructions for room temperature controller
- Set the flow temperature sufficiently high: See page 13
- Set the time program for your heating circuits so that your individual preferred temperature is automatically reached as soon as you are present. To do so, adjust the time program for central heating at your room temperature controller:
  Operating instructions for room temperature controller

Sufficient DHW heating for your needs

- You want to have DHW available immediately. To do this, activate the **COMF** comfort function for DHW heating: See page 16.

5592683

Operating principles

Programming unit

You can change any setting on your heating system centrally at the programming unit of the control unit.

Note
The programming unit can be placed in a wall mounting base. The wall mounting base is available as an accessory. Ask your heating contractor for further information.

Room temperature controller for room temperature-dependent operation

If a room temperature controller is installed in one of your rooms, you can adjust some settings at the room temperature controller.

Operating instructions, room temperature controller

How to use the controls

Home screen

After switching on or activating the control unit the home screen is shown.

Buttons

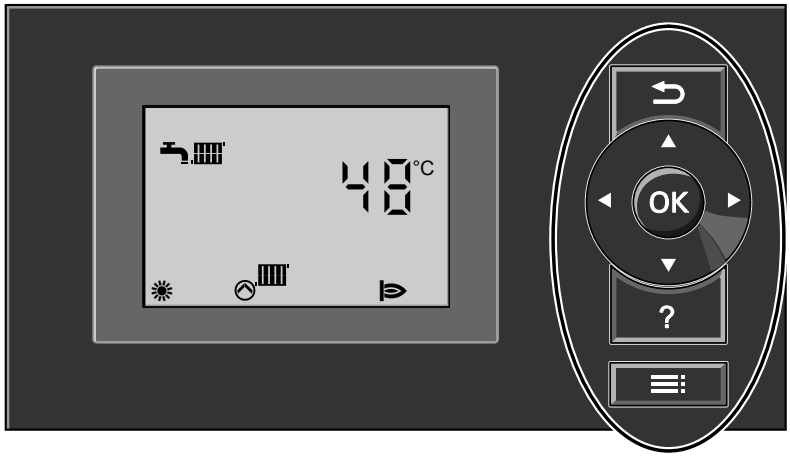


Fig. 1

- ⮌ To take one step back in the menu.
- Navigation buttons
  To scroll through the menu or adjust values
- **OK** To confirm your selection or setting.
- **?** No function
- Enables you to call up the menu for settings and checks.

Symbols

These symbols are not always displayed, but appear subject to the system version and the operating status. Flashing displays indicate that modifications can be made.

Menu
- Central heating
- DHW heating
- Information
- Emissions test mode
- Additional settings

Operating program
- Frost protection monitoring (standby mode)
- DHW heating
- Central heating and DHW heating
- **COMF** Comfort mode for DHW heating
- **ECO** Without comfort mode for DHW heating

5592683

How to use the controls (cont.)

Messages
- Maintenance message
- The maintenance interval has expired.
- Fault message
- Burner fault message

Displays
- Temperature
- Frost protection monitoring
- Central heating
- Heating circuit pump running
- Cylinder loading pump running.
- In conjunction with a solar thermal system: Solar circuit pump running.
- Burner running
- Standard factory setting

Calling up the menu for settings and checks

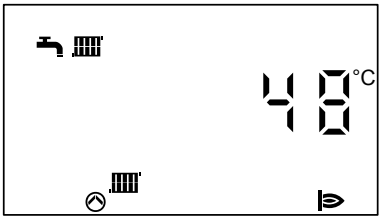


Fig. 2

Press ☰. This takes you to the menu for settings and checks.

Operating program

Operating programs for central heating, DHW, frost protection

Symbol	Operating program	Function
	Central heating and DHW heating	▪ The rooms are heated in accordance with the specifications for room temperature and time program: See chapter "Central heating". ***Note*** *In room temperature-dependent operation, a time program for central heating can only be set at the room temperature controller: See operating instructions for room temperature controller.* ▪ DHW is heated in accordance with the specified DHW temperature: See chapter "DHW heating".
	DHW heating	▪ DHW is heated in accordance with the specified DHW temperature: See chapter "DHW heating". ▪ No central heating ▪ Frost protection is active.
⏻	**Frost protection monitoring (standby mode)**	▪ No central heating ▪ No DHW heating ▪ Frost protection for the boiler and the DHW cylinder is active.

Settings for central heating

If you require central heating, check the following points:

- Have you set the required room temperature?
  Operating instructions for room temperature controller
- Have you set the flow temperature high enough?
  For settings, see the next chapter.
- Have you set the correct operating program?
  For settings, see page 13.
  And
  Operating instructions for room temperature controller
- Have you set the required time program?
  Operating instructions for room temperature controller

Setting the flow temperature

Set the flow temperature high enough that the required room temperature can be achieved.
Factory settings: 74 °C

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. ► for boiler water temperature; **"🌡"** flashes.

4. OK to confirm; the selected temperature flashes.

5. ▲/▼ for the required boiler water temperature.

6. OK to confirm; the new temperature value is saved.

Setting the operating program for central heating

Activate the operating program for central heating.
Factory setting: **"🚿🔥"** for central heating and DHW heating (winter mode)

This setting is only required if one of the following operating programs is set:
🚿 DHW heating only
⏻ Standby mode

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm.

4. ►/◄ until **"🚿🔥"** flashes.

5. OK to confirm; the rooms and DHW are heated.

For information on the operating programs, see page 12.

Shutting down central heating

Deactivate the operating program for central heating.

You do not want to heat any rooms but do want to heat DHW

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"🚿🔥"** flashes.

4. ◄ until **"🚿"** flashes.

5. OK to confirm; central heating is disabled and DHW is heated (summer mode).

5592683

Shutting down central heating (cont.)

You do not want to heat any rooms or DHW

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚰🔥"** flashes.

3. OK to confirm; **"🚰🔥"** flashes.

4. ◄ until **"⏻"** flashes.

5. OK to confirm; central heating and DHW heating are disabled, frost protection monitoring is activated (standby mode).

Settings for DHW heating

If you require DHW heating, check the following points:
- Have you set the required DHW temperature?
  For settings, see the next chapter.
- Have you set the correct operating program?
  For settings, see page 15.

Setting the DHW temperature

Select the set DHW temperature for the DHW cylinder.
Factory settings: 50 °C

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"🚿"**.

3. OK to confirm; temperature flashes.

4. ▲/▼ for required DHW temperature.

5. OK to confirm; the new temperature value is saved.

Setting the operating program for DHW heating

Activate the operating program for DHW heating.
Factory setting: **"🚿🔥"** for central heating and DHW heating (winter mode)
This setting is only required if the ⏻ operating program is set:

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"🚿🔥"** flashes.

4. ►/◄ until **"🚿"** flashes for DHW heating (summer mode, no central heating).
Or
until **"🚿🔥"** flashes for central heating and DHW heating (winter mode).

5. OK to confirm; the selected operating program is activated.

For information on the operating programs, see page 12.

Shutting down DHW heating

Deactivate DHW heating.

You do not want to heat DHW, but you do want to heat the rooms

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"🚿"** flashes.

4. ► until **"🚿🔥"** flashes.

5. OK to confirm; the rooms and DHW are heated (winter mode).

6. ☰ for settings; **"🔥"** flashes.

7. ► for **"🚿"**.

8. OK to confirm; temperature flashes.

9. ▼ to 10 °C.

10. OK to confirm; the new temperature value is saved.

Shutting down DHW heating (cont.)

You do not want to heat any rooms or DHW

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"🚿"** flashes.

4. ◄ until **"⏻"** flashes.

5. OK to confirm; DHW heating and central heating are disabled, frost protection monitoring is activated (standby mode).

Activating the comfort function (if available)

With the comfort function you can preheat the water volume in the plate heat exchanger to the selected DHW temperature. This makes DHW available immediately.

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"🚿"**.

3. OK to confirm; **COMF ECO** flashes.

4. OK to confirm; **ECO** flashes.

5. ◄ for **COMF**.

6. OK to confirm; the comfort function is activated.

Ending the comfort function

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"🚿"**.

3. OK to confirm; **COMF ECO** flashes.

4. OK to confirm; **COMF** flashes.

5. ► for **ECO**.

6. OK to confirm; the comfort function is terminated.

Setting the temperature unit (°C/°F)

Factory setting: °C

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"⚙"**.

3. OK to confirm; **"⇤⇥"** flashes.

4. ▲/▼ for required temperature unit (**°C** or **°F**).

5. OK to confirm; the new temperature unit is saved.

Restoring factory settings

You can simultaneously reset all changed values to their factory settings.

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"⚙"**.

3. OK to confirm; **"⇤⇥"** flashes.

4. OK to confirm; the factory settings are reinstated.

Factory settings:
- Operating program: **"🚰🔥"**
- Flow temperature: 74 °C
- DHW temperature: 50 °C

Checking information and resetting values

Subject to the components connected and the settings made, you can check current temperatures and operating conditions.

Press the following buttons:

1. ☰ for settings; **"▥"** flashes.

2. ► for **"i"**.

3. OK to confirm.

4. ▲/▼ for the required information.

5. OK to confirm; if you want to reset the value to "0" (see following table), **"⊣⊢"** flashes.

6. OK to confirm; the value is reset.

Example:
On the display, you can see "3" which shows the boiler water temperature. The current boiler water temperature is 65 °C.

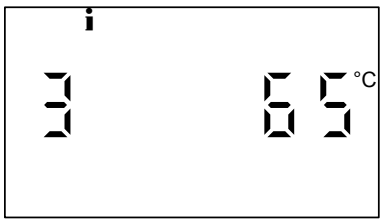


Fig. 3

Note
Checking mode ends automatically after 30 minutes. You can exit the menu at any time with ⮌.

Information appears in the following sequence:

Shown on display			Meaning	Notes
0	10		LON subscriber number	–
1	15	°C	Outside temperature	In conjunction with outside temperature sensor
2	95	°C	Flue gas temperature	–
3	65	°C	Boiler water temperature	–
4	45	°C	Temperature of heating water buffer cylinder or low loss header	In conjunction with heating water buffer cylinder or low loss header
5	50	°C	DHW temperature	In conjunction with DHW cylinder
51	50	°C	DHW temperature, top	Only if 2 cylinder temperature sensors are connected.
52	50	°C	DHW temperature, bottom	
5c	95	°C	Collector temperature	In conjunction with Viessmann solar control module
5□	45	°C	DHW temperature with solar operation	In conjunction with solar thermal system
53	50	°C	Temperature sensor [7]	In conjunction with Viessmann solar control module: Only if a third temperature sensor is connected.
54	50	°C	Temperature sensor [10]	In conjunction with Viessmann solar control module: Only if a fourth temperature sensor is connected.
6	70	°C	Collector temperature	In conjunction with solar thermal system
①	2 6 3 5 7 2	h	Burner hours run	Number of hours run (approximate values only): The hours run can be reset to "0" with "⊣⊢".
③	0 3 0 5 2 9		Burner starts	The number of burner starts can be reset to "0" with "⊣⊢".
⑤	0 0 1 4 1 7	h	Hours run, solar circuit pump	In conjunction with Viessmann solar control module: The hours run can be reset to "0" with "⊣⊢".
⑥	0 0 1 4 2 5		Pump starts, solar circuit pump	In conjunction with Viessmann solar control module: Pump starts can be reset to "0" with "⊣⊢".
⑦	0 0 0 5 0 6	h	Hours run, output 22	In conjunction with Viessmann solar control module: Only if a second circulation pump is connected. The hours run can be reset to "0" with "⊣⊢".

Checking information and resetting values (cont.)

Shown on display	Meaning	Notes
0 0 0 5 0 6 ⑧	Pump starts, output 22	In conjunction with Viessmann solar control module: Only if a second circulation pump is connected. Pump starts can be reset to "0" with "⊣".
0 0 2 8 5 0 ⑨	Solar yield in kWh	In conjunction with Viessmann solar control module: The yielded solar energy can be reset to "0" with "⊣".
4 ① ②	Reception quality for Vitocom 100, type GSM	In conjunction with Vitocom 100, type GSM "0" No reception "5" Very good reception

Checking maintenance messages

Your heating contractor can set a maintenance interval. For example, maintenance after 2500 hours run by the burner or maintenance after 12 months.
If your heating system is due for maintenance, **"🔧"** flashes on the display and the expired maintenance interval is shown.

Example:
Maintenance display with the maintenance interval of 2500 hours run by the burner:

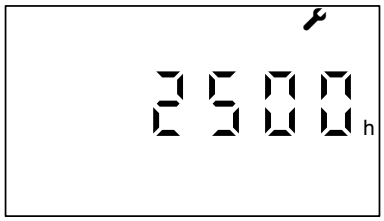


Fig. 4

Maintenance display with the maintenance interval of 12 months:

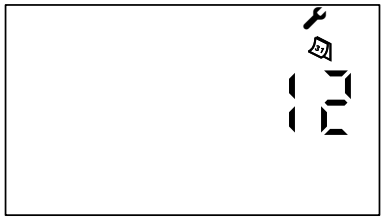


Fig. 5

Please notify your contractor. Acknowledge the maintenance message with **OK**.

Note
If the maintenance cannot be carried out until later, the maintenance message will reappear after 7 days.

Calling up an acknowledged maintenance message

Press **OK** for approximately 4 seconds.

Checking fault messages

If any faults have occurred in your heating system, the **"⚠"** symbol flashes on the display and the fault code is shown. The red fault indicator also flashes: See page 24.

Checking fault messages (cont.)

Example:
Fault code shown: "50"

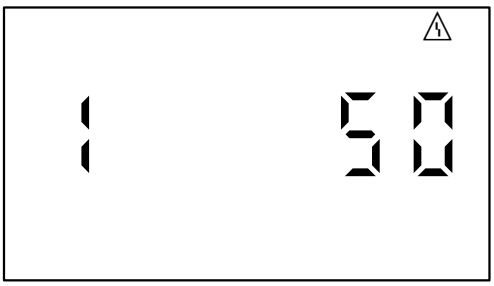


Fig. 6

Danger
If faults are not rectified, they can have life threatening consequences.
Do not acknowledge fault messages several times in quick succession. If a fault occurs repeatedly, notify your contractor so the cause can be analysed and the fault rectified.

1. Inform your contractor of the fault code. This enables the contractor to be better prepared and may save additional travelling costs.

2. Acknowledge the fault message with **OK**. The **"⚠"** symbol no longer flashes.

Note
- *If you have connected a message facility to indicate fault messages (e.g. a buzzer), this is deactivated when the fault message is acknowledged.*
- *If the fault cannot be rectified until later, the fault message will reappear the following day.*

Calling up an acknowledged fault message

Press **OK** for approximately 4 seconds.

Note
If there are several fault messages, you can call these up one after the other with ▼/▲.

5592683

Special considerations for multi boiler systems

In systems with several boilers (multi boiler systems), each boiler is equipped with its own control unit. These control units are regulated by a higher control unit. Settings are made on the higher control unit, e.g. room temperature.

Operating instructions of the higher control unit

Boiler number

In multi boiler systems, each boiler control unit shows the boiler number on the home screen.

Example:
Boiler number "3"

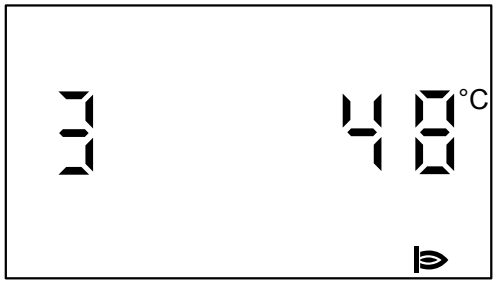


Fig. 7

Boiler number "3" has been blocked by the higher control unit.

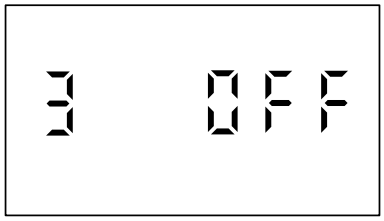


Fig. 8

Operating program in multi boiler systems

- **"⏻"** For frost protection monitoring (standby mode):
  By selecting the **"⏻"** operating program, you shut down the relevant boiler individually.
  Boiler frost protection monitoring is active.
- **"🚿"** For DHW heating (summer mode):
  You **cannot** set the **"🚿"** operating program.

Room temperature/boiler water temperature

You cannot set the room temperature or boiler water temperature at the boiler control unit.

Starting emissions test mode

Starting emissions test mode

Emissions test mode should only be activated by your flue gas inspector during the annual inspection.
Emissions test mode is activated for flue gas measurement with temporarily increased boiler water temperature.

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"🔥"**.

3. OK to confirm; **ON** flashes.
FL appears on boilers with flow rate capturing. Ensure a sufficient flow rate, e.g. open thermostatic valves.

4. OK to start the burner for checking; **ON** will be displayed constantly.
If **FL** and "⚙🔥" flash on boilers that can measure the flow rate, the flow rate is too low. Raise the flow rate by drawing off heat.
When the flow rate is adequate, **ON** will flash.

5. OK to start the burner for checking.
On is displayed continuously.
The display shows the home screen after 4 seconds.

Note
Ensure adequate heat transfer during emissions test mode.

Stopping emissions test mode

Emissions test mode ends automatically after 30 minutes. You can deactivate emissions test mode beforehand.

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. ► for **"🔥"**.

3. OK to confirm; **OFF** flashes.

4. OK to confirm.

Control unit controls

Fig. 9

Ⓐ Fault indicator (red)
Ⓑ ON indicator (green)
Ⓒ Reset button
Ⓓ ON/OFF switch
Ⓔ Pressure gauge (pressure indication)

Shutting down the heating system

Shutting down heat generation with frost protection monitoring (standby mode)

Select operating program **"⏻"** for frost protection monitoring (standby mode).

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"🚿🔥"** flashes.

4. ◄ until **"⏻"** flashes.

5. OK to confirm; frost protection is activated.

- No central heating
- No DHW heating
- Frost protection for the boiler and the DHW cylinder is active.

Note
The circulation pumps are started briefly every 24 hours to prevent them from seizing up.

Ending operating program "⏻"

Select another operating program.

Press the following buttons:

1. ☰ for settings; **"🔥"** flashes.

2. OK to confirm; **"⏻🚿🔥"** flashes.

3. OK to confirm; **"⏻"** flashes.

4. ► until **"🚿🔥"** flashes: The rooms and DHW are heated.
Or
until **"🚿"** flashes: DHW is heated; no central heating.

5. OK to confirm; the selected operating program is activated.

Shutting down heat generation without frost protection monitoring

1. Turn off the ON/OFF switch **"⏻"**.

2. Close the gas shut-off valve.

Note
Ask your contractor to explain where these components are and what to do with them.

5592683

▶▶

Shutting down the heating system (cont.)

3. Isolate the heating system from its main power supply, e.g. at the separate MCB/fuse or at a mains isolator.

   Please note
   If outside temperatures of below 3 °C are expected, take appropriate measures to protect the heating system from frost.
   If necessary, contact your contractor.

Information on prolonged shutdown
As the circulation pumps no longer run for a longer period of time, these may seize.

Starting the heating system

Ask your contractor about the following:
- Necessary commissioning steps
- Required system pressure level (minimum system pressure)
- Position of the following components:
  - Pressure gauge
  - Vents
- Water quality requirements
- Gas shut-off valve

1. Check the pressure of the heating system on the pressure gauge. The system pressure is too low if the indicator is below 1.0 bar (0.1 MPa). If this is the case, top up with water or notify your contractor.

2. For **open** flue operation:
   Check that the vents in the installation room are open and unrestricted.

   Note
   With open flue operation, the combustion air is drawn from the installation room.

3. Open the gas shut-off valve.

   Note
   Ask your heating contractor to explain the positioning and handling of these components.

4. Switch ON the power supply, e.g. at a separate MCB/fuse or a mains isolator.

5. Turn on the ON/OFF switch **"⏻"**.
   After a short while, the display shows the home screen and the green ON indicator illuminates.
   Your heating system and room temperature controller are now ready for operation.

Rooms are too cold

Cause	Remedy
The heating system is switched off.	▪ Turn on the ON/OFF switch **"⏻"**: See page 23. ▪ Switch ON the mains isolator if installed (outside the boiler room). ▪ Reset the MCB in the power distribution board (main domestic MCB).
Control unit or room temperature controller is not set correctly.	Check the settings and correct if required: ▪ **"🛁"** must be set: See page 13. ▪ Room temperature Operating instructions for room temperature controller ▪ Flow temperature: See page 13. ▪ Time program Operating instructions for room temperature controller
Only when operating with DHW heating: DHW heating priority is active: **"🛁"** is displayed	Wait until the DHW cylinder has been heated up: **"🛁"** disappears. In the case of operation with an instantaneous water heater, stop DHW draw-off.
No fuel.	With LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
"⇧" is shown on the display.	Press "**R**": See page 24. Notify your contractor if the burner still fails to start. Acknowledge the fault message with **OK**: See page 19. ⚠ **Danger** If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your contractor if a fault recurs. Your contractor will be able to analyse the cause and rectify the fault.
"⚠" is shown on the display.	Notify your contractor of the fault code shown. Acknowledge the fault message with **OK**: See page 19.

Rooms are too hot

Cause	Remedy
Control unit or room temperature controller is incorrectly set.	Check the settings and correct if required: ▪ Room temperature Operating instructions for room temperature controller ▪ Flow temperature: See page 13. ▪ Time program Operating instructions for room temperature controller
"⚠" is shown on the display.	Inform your contractor of the fault code. Acknowledge the fault message with **OK**: See page 19.

There is no hot water

Cause	Remedy
The heating system is switched off.	▪ Turn on the ON/OFF switch "⏻": See page 23. ▪ Switch ON the mains isolator if installed (outside the boiler room). ▪ Reset the MCB in the power distribution board (main domestic MCB).
Control unit is not set correctly.	Check the settings and correct if required: ▪ DHW heating must be enabled: See page 15. ▪ DHW temperature: See page 15.
No fuel.	With LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
"⇳" is shown on the display.	Press "**R**": See page 24. Notify your contractor if the burner still fails to start. Acknowledge the fault message with **OK**: See page 19. ⚠ **Danger** If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your contractor if a fault recurs. Your contractor will be able to analyse the cause and rectify the fault.
"⚠" is shown on the display.	Inform your contractor of the fault code. Acknowledge the fault message with **OK**: See page 19.

The DHW is too hot

Cause	Remedy
The control unit is incorrectly set.	Check the DHW temperature and correct if necessary: See page 15.

"⚠" flashes

Cause	Remedy
Heating system fault	Inform your contractor of the fault code. Acknowledge the fault message with **OK**: See page 19.

"⇧" flashes

Cause	Remedy
Heating system fault	Press "**R**": See page 24. Acknowledge the fault message with **OK**: See page 19. ⚠ **Danger** If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your contractor if a fault recurs. Your contractor will be able to analyse the cause and rectify the fault.

"🔧" flashes

Cause	Remedy
The time for a service as specified by your contractor has arrived.	Please notify your contractor. Acknowledge the maintenance message with **OK**: See page 19.

"- - EP - -" flashes

Cause	Remedy
The operating program set at the control unit was changed over by an external device.	If required, you can change over the operating program.

Cleaning

The appliance surfaces can be cleaned with a commercially available domestic cleaning agent (non-scouring).

You can clean the front of the programming unit with a microfibre cloth.

Inspection and maintenance

The inspection and maintenance of a heating system is prescribed by the German Energy Saving Ordinance [EnEV] and the DIN 4755, DVGW-TRGI 2018, DIN 1988-8 and EN 806 standards.

Regular maintenance ensures trouble-free, energy efficient, environmentally responsible and safe heating. Your heating system must be serviced by an authorised contractor at least every 2 years. For this, it is best to arrange an inspection and maintenance contract with your local heating contractor.

Boiler

Increasing boiler contamination raises the flue gas temperature and thereby increases energy losses. We recommend having the boiler cleaned annually.

DHW cylinder (if installed)

Standards DIN 1988-8 and EN 806 specify that maintenance and cleaning should be carried out no later than 2 years after commissioning and as required thereafter.
Only a qualified heating contractor should clean the inside of a DHW cylinder and the DHW connections.
If any water treatment equipment (e.g. a sluice or injection system) is installed in the cold water supply of the DHW cylinder, ensure this is refilled in good time.
In this connection, observe the manufacturer's instructions.

In addition for Vitocell 100:
We recommend that the correct function of the sacrificial anode is checked annually by your heating contractor.
The function of the sacrificial anode can be checked without interrupting the system operation. The heating contractor will check the earth current with an anode tester.

Safety valve (DHW cylinder)

The function of the safety valve must be checked every six months by the user or a contractor through venting (see valve manufacturer's instructions). The valve seat may become contaminated.
Water may drip from the safety valve during a heat-up process. The outlet is open to the atmosphere.

! **Please note**
Overpressure can cause damage.
Do not close the safety valve.

Potable water filter (if installed)

To maintain high hygienic standards, proceed as follows:
- Replace filter element on non-back flushing filters every six months (visual inspection every two months).
- On back flushing filters, back flush every two months.

Damaged cables / lines

If there is damage to the connecting cables or lines of the appliance or externally installed accessories, these must be replaced with special cables or lines. Only use Viessmann cables / lines as replacement. For this, notify your qualified contractor.

Terminology

Standby mode

Heat generation is switched off.

Note
Standby mode can be selectively enabled for one or more heating circuits or for DHW heating.

If all heating circuits and DHW heating are shut down: Frost protection is only active for the heat generator and DHW cylinder. No central heating, no DHW heating.

Setback mode (reduced heating mode)

See "Reduced heating mode".

Constant temperature mode

In constant temperature mode, the heating water is constantly heated to the selected boiler water temperature.

Operating program

The operating program determines whether you heat the rooms and DHW, only heat DHW, or whether you shut down your heating system and enable frost protection monitoring.

You can select the following operating programs:
- **"🚿🏠"**
  The rooms and DHW are heated (winter mode).
- **"🚿"**
  DHW is provided but there is no central heating (summer mode).
- **"⏻"**
  Frost protection for the boiler and DHW cylinder is active, no central heating, no DHW heating (standby mode).

Note
There is no operating program for central heating without DHW heating. If the rooms are also to be heated, hot water is generally also required (winter mode).
*If you still only want central heating, select the **"🚿🏠"** operating program and set the DHW temperature to 10 °C: See page 15. This means that you will not heat DHW unnecessarily but the DHW cylinder is protected against frost.*

Heating circuit

A heating circuit is a sealed unvented circuit that connects the boiler and radiators, in which the heating water circulates.

Heating circuit pump

Circulation pump for circulating the heating water in the heating circuit

Actual temperature

Current temperature at the time of the check; e.g. actual DHW temperature.

Boiler water temperature

See "Constant temperature mode".

Terminology (cont.)

Mixer

Hot heating water from the heat generator is mixed with cooled heating water from the heating circuit. The heating water, thus brought to the required temperature, is pumped to the heating circuit by the heating circuit pump. To ensure the required set room temperature is achieved, the control unit adjusts the flow temperature via the mixer to suit different conditions.

Open flue operation

The combustion air is drawn from the room where the heat generator is installed.

Room sealed operation

The combustion air is drawn from outside the building.

Return temperature

The return temperature is the temperature at which the heating water leaves a system component such as a heating circuit.

Safety valve

Safety equipment that must be installed in the cold water pipe by your contractor. The safety valve opens automatically to prevent excess pressure in the DHW cylinder.

The heating circuits are also equipped with safety valves.

Solar circuit pump

In conjunction with solar thermal systems.

The solar circuit pump delivers the cooled heat transfer medium from the indirect coil of the DHW cylinder to the solar collectors.

Set temperature

See "Set temperature".

Summer mode

Operating program **"⇆"**.

In warmer months, you can shut down heating mode. The boiler remains operational for DHW heating.

Cylinder primary pump

Circulation pump for heating the DHW in the DHW cylinder.

Terminology (cont.)

Set temperature

Specific temperature that should be reached, e.g. set DHW temperature for example.

Drinking water filter

A device that removes solids from the drinking water. The drinking water filter is built into the cold water pipework to the DHW cylinder.

Flow temperature

The flow temperature is the temperature at which the heating water enters a system component such as a heating circuit.

Information on disposal

Disposal of packaging

Your contractor will dispose of the packaging from your Viessmann product.

Final decommissioning and disposal of the heating system

Viessmann products can be recycled. Components and fluids from your heating system do not belong in ordinary domestic waste.
Please speak to your contractor about the correct disposal of your old system.

Keyword index

A
Actual temperature....30
Actual temperature, checking....18
Additional settings.... 11
Ambient temperatures....9
Appliance start-up.... 24

B
Boiler number....21
Boiler water temperature....13, 30
Burner.... 12
Burner starts, resetting....18

C
Central heating....11, 12, 13
– Factory setting....9
– Operating program....12, 13
– Shutting down.... 13
Check
– Information.... 18
– Maintenance message.... 19
– Operating conditions.... 18
– Temperatures.... 18
Checking
– Fault message....19
Cleaning....28
Cleaning information.... 28
Cold rooms....25
Comfort (tips).... 10
Comfort function
– Activating....16
– Ending.... 16
Comfort mode....11
Commissioning....9, 24
Constant temperature mode.... 30
Controls....11, 23
Cylinder loading pump.... 12
Cylinder primary pump....31

D
Data, resetting....18
Default factory setting.... 9
Default setting.... 9
DHW heating....9, 11
– Comfort.... 10
– Energy saving.... 10
– Factory setting....10
– Operating program....12, 15
– Shutting down.... 15
DHW temperature.... 15
– Setting....15
Drinking water filter.... 32

E
Emissions test mode.... 11, 22
Energy saving (tips).... 10
Energy saving function....16

F
Factory setting....9, 12
Factory settings, restoring....17
Fault 25, 26, 27
– ⚠....25, 26
– ⚓....25, 27
– Rectifying.... 25
Fault indicator....23
Fault message....12
– Acknowledging.... 19
– Call up (acknowledged)....20
– Checking.... 19
Filter (drinking water).... 32
Flow temperature.... 13, 32
Frost protection.... 10
Frost protection monitoring....11, 12, 13, 16, 23
Fuel consumption, resetting.... 18

H
Heating and DHW.... 9
Heating circuit.... 30
Heating circuit pump.... 12, 30
Heating flow temperature.... 13
Heating mode
– Setting....13
Heating operation
– Constant temperature.... 30
Heating system
– Shutting down.... 23
– Starting up....24
Home screen.... 11
Hot water....26
Hours run, resetting....18
How to use controls....11

I
Information....9, 11
Information, checking.... 18
Inspection....28
Installation room....9

M
Maintenance....27, 28
Maintenance interval hours run....12
Maintenance message.... 12
– Acknowledging....19
– Calling up (acknowledged)....19
– Checks.... 19
Menu.... 12
Multi boiler systems
– Boiler number....21
– Boiler water temperature....21
– Operating program....21
– Room temperature.... 21
– Special considerations.... 21

N
No hot water....26
Notice of completion....9
Notification of completion....9

Keyword index (cont.)

O
ON/OFF switch....23, 24
ON indicator....23
Only central heating....15
Open flue operation....31
Operating conditions, checking....18
Operating program....11, 30, 31
– Central heating, DHW....12
– DHW heating....15
– For central heating....13
– Frost protection....12
– Multi boiler system....21
Operation....11

P
Power failure....10
Pressure gauge....24
Pressure indication....23
Product information....9
Programming unit....11
Pump
– Cylinder heating....31
– Heating circuit....30
– Solar circuit....31

R
Reset....12, 17
Return temperature....31
Room sealed operation....31
Rooms too cold....25
Rooms too warm....25
Room temperature....13

S
Safety valve....31
Service contract....28
Setback mode....30
Set temperature....31, 32
Settings for room temperature....13
Shutdown....23
Shutting down
– Central heating....13
– DHW heating....15
– Heating system....23
– Heating system with frost protection monitoring....23
– System without frost protection monitoring....23
Shutting down heating system....23
Solar thermal system....31
Standard setting....17
Standby mode....10, 11, 12, 13, 16, 23, 30
Starting
– Comfort function....16
– Energy saving function....16
– Frost protection monitoring....23
– Heating system....24
– Standby mode....14, 23
– Summer mode....13
Summer mode....13, 30, 31
Symbols....11

T
Temperature....12, 13
– Actual temperature....30
– Boiler water....30
– Checking....18
– Multi boiler system....21
– Set temperature....31, 32
Temperature unit....17
Terminology....30
Test mode....22

W
Warm rooms....25
Water too cold....26
Water too hot....26
Winter mode....30

Certification

RoHS
compliant
2011 / 65 / EU

Your contact

Contact your local contractor if you have any questions about your system or wish to arrange maintenance or repair work. You can find local contractors on the internet at www.viessmann.de.

Viessmann Climate Solutions SE
35108 Allendorf / Germany
Telephone: +49 6452 70-0
Fax: +49 6452 70-2780
www.viessmann.com

Viessmann Limited
Hortonwood 30, Telford
Shropshire, TF1 7YP, GB
Telephone: +44 1952 675000
Fax: +44 1952 675040
E-mail: info-uk@viessmann.com