Operating Instructions

Vitodens 200-W, B2HA and B2HB
Models 19 to 150, 68 to 530
Wall-mounted, gas-fired condensing boiler
For operation with natural gas and liquid propane gas
Heating input: 12 to 530 MBH
3.5 to 155 kW

Vitodens 222-F B2TA and B2TB
Models 19, 35, 68, 125
Floor-mounted, gas-fired condensing storage combi boiler
For operation with natural gas and liquid propane gas
Heating input: 12 to 125 MBH
3.5 to 37 kW

VITODENS® 200-W/222-F

With Vitotronic 200 HO1B Controls



NSF/ANSI 372

AHRI CERTIFIED® www.ahridirectory.org

Energy Verified

⚠ WARNING

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Do not store or use gasoline or other flammable liquids in the vicinity of this or any other appliance.

WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any appliances.**
- **Do not touch any electrical switches, do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

⚠ WARNING

Improper installation, adjustment, and/ or operation could cause carbon monoxide poisoning resulting in injury or loss of life.

This product must be installed and serviced by a professional service technician who is experienced and qualified in hot water boiler installation and gas combustion.

Product may not be exactly as shown

IMPORTANT

Read and save these instructions for future reference.

5461 885 - 06 01/2023

Please file in Service Binder

Safety, Installation and Warranty Requirements

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause product/property damage, severe personal injury, and/or loss of life. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

- **Product documentation**
  Read all applicable documentation before commencing installation. Store documentation near boiler in a readily accessible location for reference in the future by service personnel.
  
  ▶*For a listing of applicable literature, please see section entitled "Important Regulatory and Safety Requirements".*

- **Warranty**
  Information contained in this and related product documentation must be read and followed. Failure to do so renders the warranty null and void.
  

- **Licensed professional heating contractor**
  The installation, adjustment, service and maintenance of this equipment must be performed by a licensed professional heating contractor.
  
  ▶*Please see section entitled "Important Regulatory and Installation Requirements".*

- **Contaminated air**
  Air contaminated by chemicals can cause by-products in the combustion process, which are poisonous to inhabitants and destructive to Viessmann equipment.
  
  ▶*For a listing of chemicals which cannot be stored in or near the boiler room, please see subsection entitled "Mechanical room" in the "Installation Instructions".*

- **Advice to owner**
  Once the installation work is complete, the heating contractor must familiarize the system operator/ ultimate owner with all equipment, as well as safety precautions/requirements, shutdown procedure, and the need for professional service annually before the heating season begins.

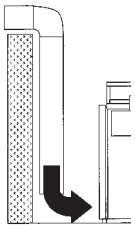
⚠ WARNING

Installers must follow local regulations with respect to installation of carbon monoxide detectors. Follow the Viessmann maintenance schedule of the boiler contained in this manual.

Operating and Service Documentation

It is recommended that all product documentation such as parts lists, operating and service instructions be handed over to the system user for storage. Documentation is to be stored near boiler in a readily accessible location for reference by service personnel.

- **Carbon monoxide**
  Improper installation, adjustment, service and/or maintenance can cause flue products to flow into living space. Flue products contain poisonous carbon monoxide gas.
  
  ▶*For information pertaining to the proper installation, adjustment, service and maintenance of this equipment to avoid formation of carbon monoxide, please see subsection entitled "Mechanical room" and "Venting requirements" in the "Installation Instructions".*

- **Fresh air**
  This equipment requires fresh air for safe operation and must be installed ensuring provisions for adequate combustion and ventilation air exist.
  
  ▶*For information pertaining to the fresh air requirements of this product, please see subsection entitled "Mechanical room" in the "Installation Instructions".*

- **Equipment venting**
  Never operate boiler without an installed venting system. An improper venting system can cause carbon monoxide poisoning.
  
  ▶*For information pertaining to venting and chimney requirements, please see section entitled "Venting Connection". All products of combustion must be safely vented to the outdoors.*

⚠ WARNING

This boiler requires fresh air for safe operation and must be installed with provisions for adequate combustion and ventilation air (in accordance with local codes and regulations of authorities having jurisdiction).

Do not operate this boiler in areas with contaminated combustion air. High levels of contaminants such as dust, lint or chemicals can be found at construction sites, home renovations, in garages, workshops, in dry cleaning/laundry facilities, near swimming pools and in manufacturing facilities.

Contaminated combustion air will damage the boiler and may lead to substantial property damage, severe personal injury and/or loss of life. Ensure boiler/burner is inspected and serviced by a qualified heating contractor at least once a year in accordance with the Service Instructions of the boiler.

⚠ WARNING

Do Not operate the boiler without the front cover in place.

5461 885 - 06

Page

Safety

Safety, Installation and Warranty Requirements.....2
About these Instructions.....5

For your Safety.....5
Operation.....5
Working on the equipment.....5
Maintenance and cleaning.....5
Flue gas smell.....5
Dangerous conditions.....5
Technical Information.....5
Carbon monoxide.....6
For safe operation.....6
Frozen water pipe hazard.....7
Replacement components, spare and wear parts.....7
Installation area conditions.....7
Sources of combustion and ventilation air contaminants.....7

General Information

Getting Started.....8
Your System is Preset at the Factory.....8
Central heating.....8
Time and date.....8
Power failure.....8
DHW heating.....8
Frost protection.....8
Wintertime/summertime changeover.....8

Controls

Overview of Controls.....9
On-Board Vitotronic 200, HO1B Control.....9
Modular structure.....9
Programming unit (HO1B).....9

Menu.....10
Programming unit.....10
“Help” menu.....10
Standard menu.....10
Symbols on the display.....11
Extended menu.....11

How to Use the Controls.....12
Zone Circuit Steps.....14

Start-up/Shutdown

Starting the Heating System.....15
Shutting Down the Heating System.....15

Heating

Required Settings (Central Heating).....16
Selecting a Heating Circuit.....16
Settings the Room Temperature.....17
Setting the Heating Program for Central Heating.....17
Setting the Time Program for Central Heating.....18
Changing the Heating Curve.....19
Stopping the Central Heating.....19
Comfort and Energy Saving Functions.....20
Required Settings (DHW heating).....22
Setting the DHW Temperature.....22
Setting the Heating Program for DHW Heating.....22
Setting the Time Program for DHW Heating.....23

5461 885 - 06

Page

Central Heating - Zone Circuits (ZC)

Room Temperature....26
Heating Curve....26

Additional Adjustments

Setting the Display Contrast....27
Setting the Display Brightness....27
Entering Names for the Heating Circuits....27
Setting the Language....28
Changing the Time and Date....28
Changing the Standard Menu....29
Setting the Temperature Unit °F (°C)....29
Restoring Factory Settings....29

Scanning

Scanning Information....30
Scanning Service Messages....31
Scanning Fault Messages....32

Emissions

Emissions Test Mode....33

Troubleshooting

Rooms are too Cold....34
Rooms are too Hot....34
There is no Hot Water....35
The DHW is too Hot....35
"⚠" Flashes and "Fault" is Displayed....35
"🔧" Flashes and "Service" is Displayed....36
"Controls Locked Out" is Displayed....36
"External Hook-up" is Displayed....36
"External Program" is Displayed....36

Maintenance

Inspection/Cleaning/Maintenance....37

Additional Information

Menu Overview....38
Extended menu....38
Scanning options in the extended menu....39
Terminology....40

About these Instructions

Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.

WARNING

Indicates an imminently hazardous situation which, if not avoided, could result in loss of life, serious injury or substantial product/property damage.

▶ *Warnings draw your attention to the presence of potential hazards or important product information.*

CAUTION

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/ property damage.

▶ *Cautions draw your attention to the presence of potential hazards or important product information.*

IMPORTANT

▶ *Helpful hints for installation, operation or maintenance which pertain to the product.*

▶

▶ *This symbol indicates that additional, pertinent information is to be found.*



▶ *This symbol indicates that other instructions must be referenced.*

For your Safety

Operation

Before operating the boiler, make sure you fully understand its method of operation. Your heating contractor should always perform the initial start-up and explain the system. Any warranty is null and void if these instructions are not followed.

Working on the equipment

All personnel working on the equipment or the heating system must have the proper qualifications and hold all necessary licenses.

Ensure main power to equipment, heating system, and all external controls has been deactivated. Close main gas supply valve. Take precautions in all instances to avoid accidental activation of power during service work.

Maintenance and cleaning

Regular inspection and service by a qualified heating contractor is important to the performance of the Viessmann Vitodens 200/222 Series. Neglected maintenance impacts on warranty; regular inspection ensures clean, environmentally friendly and efficient operation. We recommend a maintenance contract with a qualified heating contractor.

Flue gas smell

- Deactivate heating equipment.
- Open windows and doors.
- Inform your heating contractor.

Dangerous conditions

- Deactivate main power immediately.
- Close gas supply valve.

Technical information

Literature applicable to all aspects of the Vitodens 200/222 Series:

- Technical Data Manual
- Installation Instructions
- Service Instructions
- Operating Instructions and User's Information Manual

Additional applicable literature:

- Accessory manuals

5461 885 - 06

For your Safety *(continued)*

Carbon monoxide

The U.S. Consumer Product Safety Commission strongly recommends the installation of carbon monoxide detectors in buildings in which gas-burning equipment is installed. Carbon monoxide (CO) is a colorless, odorless gas, which may be produced during incomplete combustion of fuel and/or when the flame does not receive an adequate supply of combustion air.

Carbon monoxide can cause severe personal injury or loss of life.

Therefore, carbon monoxide detectors that are in compliance with a nationally recognized standard (e.g. ANSI/UL 2034, CSA 6.19 latest edition) should be installed and maintained in buildings that contain gas-burning equipment.

Note: Viessmann does not test any detectors and makes no representation regarding any brand or type of detector.

WARNING

This product burns gas to produce heat. The appliance must be properly installed, operated and maintained to avoid exposure to appreciable levels of carbon monoxide and the installer is required to confirm that at least one carbon monoxide alarm is installed in the living space before the appliance is put into operation. It is important for the carbon monoxide alarms to be installed, maintained, and replaced following the alarm manufacturer's instructions and applicable local codes.

For safe operation

We recommend that you frequently:

- Check for debris which could obstruct the flow of flue gases. The vent or chimney must not be blocked. A blocked or partially blocked vent or chimney can cause flue gases to leak into the structure.
  Flue gases leaking into the house can cause injury or loss of life. Blocked or partially blocked chimneys must have the blockage removed by a qualified heating contractor.
- Check pressure gage for correct system (water) pressure. Check for water on the floor from the discharge pipe of the pressure relief valve or any other pipe, pipe joint, valve or air vent.
- Check for moisture, water, or appearance of rust on the flue gas pipes, their joints as well as vent dampers, or side wall vent terminals (if so equipped).
- Ensure that nothing is obstructing the flow of combustion and ventilation air and no chemicals, garbage, gasoline, combustible materials, flammable vapors and liquids are stored (not even temporarily) in the vicinity of the boiler.
- Do not allow unsupervised children near the boiler.

Service/inspection of the boiler and the system is recommended once a year. Maintenance, service and cleaning are specified in the Installation Instructions.

Before the heating season begins, it is recommended that the boiler and burner be serviced by a qualified heating contractor. Service contracts may be established through gas suppliers or other licensed contractors in your area.

WARNING

As there are no user-serviceable parts on the boiler, burner or control, the end-user must not perform service activities or adjustments of any kind on system components. Failure to heed this warning can cause property damage, severe personal injury, or loss of life.

WARNING

Improper installation, adjustment, service, or maintenance can cause flue products to flow into living space. Flue products contain poisonous carbon monoxide gas which can cause nausea or asphyxiation resulting in severe personal injury or loss of life.

CAUTION

Should overheating occur or the gas supply fail to shut off, do not disconnect the electrical supply to the pump. Instead, shut off the gas supply at a location external to the appliance.

WARNING

The operator/ultimate owner is required to have the heating boiler, burners, and controls checked, as a minimum once per year, by the original installer or by a competent heating contractor familiar with the equipment. Defects must be corrected immediately.

CAUTION

Do not use this boiler if any part has been under water. Immediately call a qualified heating contractor to inspect the boiler and to replace any part of the control system and any gas control which has been under water.

WARNING

Do Not operate the boiler without the front cover in place.

For your Safety *(continued)*

Frozen water pipe hazard

Your heating boiler is designed to provide a warm and comfortable living environment. It is not designed to ensure against freezing of water pipes.
The boiler is equipped with several safety devices that are designed to shut down the boiler and to prevent it from restarting in the event of various unsafe conditions.

If your boiler remains off for an extended period of time during cold weather, water pipes may freeze and burst, resulting in extensive water damage and conditions in which mold could grow. Certain molds are known to cause respiratory problems, as well as to pose other serious health risks. In case of water damage, immediate measures should be taken to dry out affected areas as quickly as possible to prevent mold from developing.

If your home will be unattended for an extended period of time during cold weather, you should...

- Shut off the water supply to the building, drain the water pipes and add an antifreeze for potable water to drain traps and toilet tanks. Open faucets where appropriate.

Or..

- Have someone check the building frequently during cold weather and call a qualified service agency if required.

Or...

- Install a reliable remote temperature sensor that will notify somebody of freezing conditions within the home.

⚠ WARNING

Failure to protect against frozen pipes could result in burst water pipes, serious property damage and/or personal injury. Boiler may shut down. Do not leave your home unattended for long periods of time during freezing weather conditions without turning off the water supply and draining water pipes or otherwise protecting against the risk of frozen pipes.

Replacement components, spare and wear parts

IMPORTANT

Components which are not tested with the heating system may damage the heating system or affect its functions. Installation or replacement may only be performed by a qualified heating contractor.

Installation area conditions

⚠ WARNING

Incorrect ambient conditions can lead to damage to the heating system and put safe operation at risk.

Ensure ambient temperatures are higher than 32°F (0°C) and lower than 104°F (40°C).

- Prevent the air from becoming contaminated by halogenated hydrocarbons (e.g. as contained in paint solvents or cleaning fluids) and excessive dust (e.g. through grinding or polishing work). Combustion air for the heating process, and ventilation of the boiler room must be free of corrosive contaminants. To that end, any boiler must be installed in an area that has no chemical exposure.
  The list below indicates the main, currently known sources.
- Avoid continuously high levels of humidity (e.g. through frequent drying of laundry).
- Never close existing ventilation openings.

Sources of combustion and ventilation air contaminants
Areas likely to contain contaminants:

- New building construction
- Swimming pools
- Remodelling areas, hobby rooms
- Garages with workshops
- Furniture refinishing areas
- Dry cleaning/laundry areas and establishments
- Auto body shops
- Refrigeration repair shops
- Metal fabrication plants
- Plastic manufacturing plants
- Photo processing plants
- Beauty salons

Products containing contaminants:

- Chlorine-type bleaches, detergents and cleaning solvents found in household laundry rooms
- Paint and varnish removers
- Hydrochloric acid, muriatic acid
- Chlorine-based swimming pool chemicals
- Spray cans containing chlorofluorocarbons
- Chlorinated waxes and cleaners
- Cements and glues
- Refrigerant leaks
- Calcium chloride used for thawing
- Sodium chloride used for water softening salt
- Permanent wave solutions
- Adhesives used to fasten building products and other similar items
- Antistatic fabric softeners used in clothes dryers

Getting Started

The timer of the control unit switches between “normal room temperature” and “reduced room temperature” at the required times.

1. Normal room temperature for the times you spend at home and require a comfortably warm room temperature [e.g. 68ºF (20ºC)].

   Note: Times and duration of the two room temperatures can be set on the programming unit of your control.
   The temperature settings for both the “normal room temperature” and “reduced room temperature” can be set according to your personal preference.

2. Reduced room temperature for the times you are away from home. To save energy, a lower temperature is typically selected [e.g. 57ºF (14ºC)].

The timer of the control unit switches domestic hot water production on and off at the required times.

1. Domestic hot water heating can be set to take place during the times you spend at home and require hot water for your daily DHW requirements (e.g. for showering).

   Note: Times and duration of the domestic hot water production period can be set on the programming unit of your control. You may select a DHW temperature setting based on your personal preference of up to 140ºF (60ºC).

   The domestic hot water recirculation pump (if installed) ensures that domestic hot water is readily available when domestic hot water is drawn.

2. Domestic hot water heating can be set not to take place for the times you spend sleeping, for example.

Your System is Preset at the Factory

The control unit is factory-set to “Heating and DHW”. Your heating system is therefore ready for use.

Central heating

- Constant 24 h, the rooms are heated to 68°F (20°C) “Room temp setpoint” (standard heating mode).
- Reduced room temperature, the rooms are heated to 64°F (18°C) “Red. room temp setpoint” (reduced room temperature, frost protection when used with time program).
- Your heating contractor can make further settings for you during commissioning. You can change any settings individually at any time to suit your requirements (see “Central heating”).

Time and date

- The day and time were set by your heating contractor during commissioning

Power failure

- All data is saved if there is a power failure.

DHW heating

- Constant 24 h, the DHW tank is heated to 122°F (50°C) “Set DHW temperature”. Any installed DHW recirculation pump is on. Set time program for night setback.

Frost protection

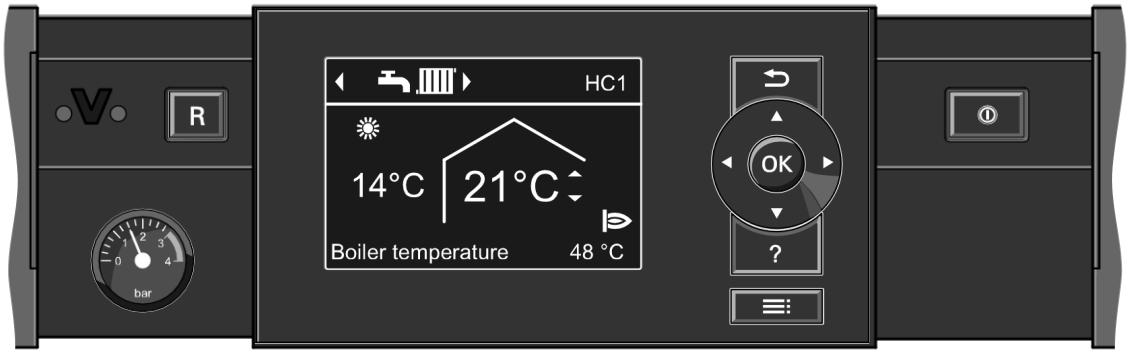
- Your boiler and DHW tank are protected against frost.

Wintertime/summertime changeover

- This changeover is automatic.

Overview of Controls

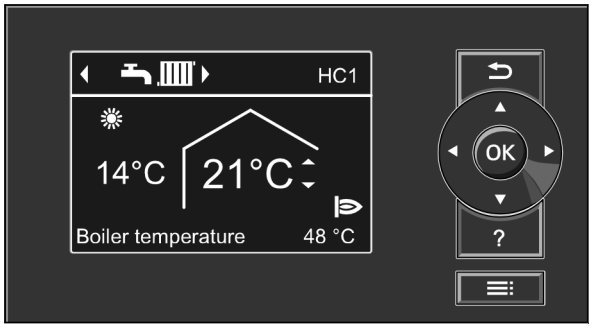
On-Board Vitotronic 200, HO1B Control



Modular structure

The control unit is integrated into the boiler. The control unit comprises a standard unit, electronics modules and a programming unit.

Standard unit:
- ON/OFF switch
- Optolink laptop interface
- Operating and fault indicators
- Reset button
- Fuses
- Boiler pressure gauge (psi)

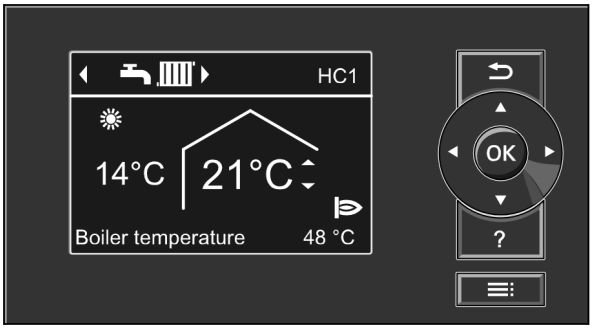


Programming unit (HO1B):
- Easy operation through:
  - Plain text display with graphic ability
  - Large font and black & white depiction for good contrast
  - Context-sensitive help text
  - Removable programming unit; can be mounted on the wall with separate accessory
- With digital time switch
- Control keys for:
  - Navigation
  - Confirmation
  - Help and additional information
  - Menu
- Setting the:
  - Room temperature
  - Reduced room temperature
  - DHW temperature
  - Heating program
  - Time programs for central heating, DHW heating and DHW recirculation
  - Economy mode
  - Party mode
  - Holiday program
  - Heating curves
  - Codes
  - Actuator tests
  - Test mode
  - Zone control temperature setpoint
- Displaying the:
  - Boiler water temperature
  - DHW temperature
  - Operating details
  - Diagnostic details
  - Fault messages

Menu

You can change any settings on your heating system centrally at the programming unit of the control unit. If remote controls are installed in your rooms, you can also adjust the settings at the remote controls.

Refer to the remote control operating instructions



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

Programming unit

- ⮌ Takes you to the previous step in the menu or cancels a setting that has been started
- Cursor keys To scroll through the menu or to set values
- OK Confirms your selection or saves the setting
- ? Calls up help texts for the selected menu option
- ☰ Calls up the extended menu

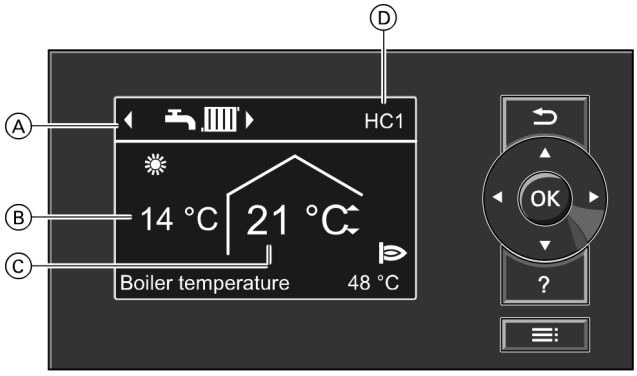
"Help" menu

You can view a short guide giving an explanation of the controls and information about heating circuit selection (see page 16).

Call up the short guide as follows:

- If the screen saver is active (see page 12): Press **?**.
- If you are somewhere in the menu: Press ⮌ until the standard menu is shown (see the following chapter). Press **?**.

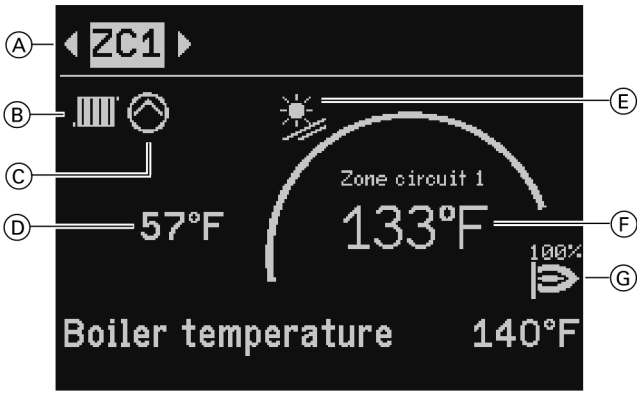
There are two control levels available, the "Standard menu" and the "Extended menu".



Standard menu (heating circuit only)

Ⓐ Header (shows the heating program for displayed heating circuit Ⓓ)
Ⓑ Current outside temperature
Ⓒ Set room temperature
Ⓓ Heating circuit which is selected for operation in the standard menu

Standard menu (when zone circuit is set)



Ⓐ Header zone circuit which is selected for operation in the standard menu.
Ⓑ Heating
Ⓒ Zone circuit pump output active
Ⓓ Current outdoor temperature. Only for zone circuits with weather compensated operation.
Ⓔ In conjunction with solar thermal system: Solar circuit pump running
Ⓕ Set zone circuit temperature
Ⓖ Burner in operation with modulation rate in %.

5461 885 - 06

Menu *(continued)*

Standard menu *(continued)*

Note: If your heating system has 2 or 3 heating circuits: You can select the heating circuit "HC1", "HC2" or "HC3" to be displayed in the standard menu (see page 10).
- If your heating system only has one heating circuit: No heating circuit name "HC..." is shown in the header.

In the standard menu, you can adjust and scan the most frequently used settings for the heating circuit shown in the header:

■ Set room temperature

Press the following keys:

▲/▼ for the required value
OK to confirm

■ Heating program

Heating programs:
Standby mode with frost protection monitoring
Only DHW
Heating and DHW

Press the following keys:

▶/◀ for the required heating program
OK to confirm

Note: For any other connected heating circuits, use the settings in the extended menu.

Call up the standard menu as follows:

■ If the screen saver is active (see page 12): Press any key except ?.

■ If you are somewhere in the menu: Keep pressing ⮌ until the standard menu appears.

Note: 2 minutes after any setting has been made, the display automatically reverts to the standard menu.

Symbols on the display

These symbols are not always displayed, but appear subject to the system version and the operating state.

Heating programs:

Standby mode with frost protection monitoring
Only DHW
Heating and DHW
Central heating with standard temperature
Central heating with reduced temperature
Party mode enabled
Economy mode enabled
In conjunction with a solar thermal system:
Solar circuit pump running
Burner in operation

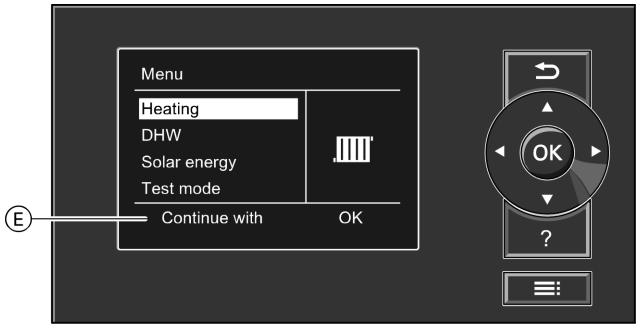
Displays

HC1 (2, 3) To display the heating circuit selected in the standard menu. To change this, (see page 16).
Frost protection monitoring

Messages

Service message
Fault message

Extended menu



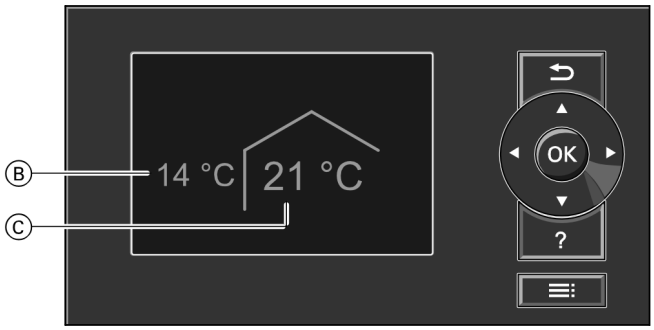
In the extended menu, you can adjust and scan the settings from the control unit's range of functions used less frequently, e.g. time programs and holiday programs. The menu overview can be found on page 38.

Call up the extended menu as follows:

■ If the screen saver is active: Press any key except ? and then press ☰.

■ If you are somewhere in the menu: Press ☰.

How to Use the Controls



Legend
Ⓑ Current outside temperature
Ⓒ Set room temperature

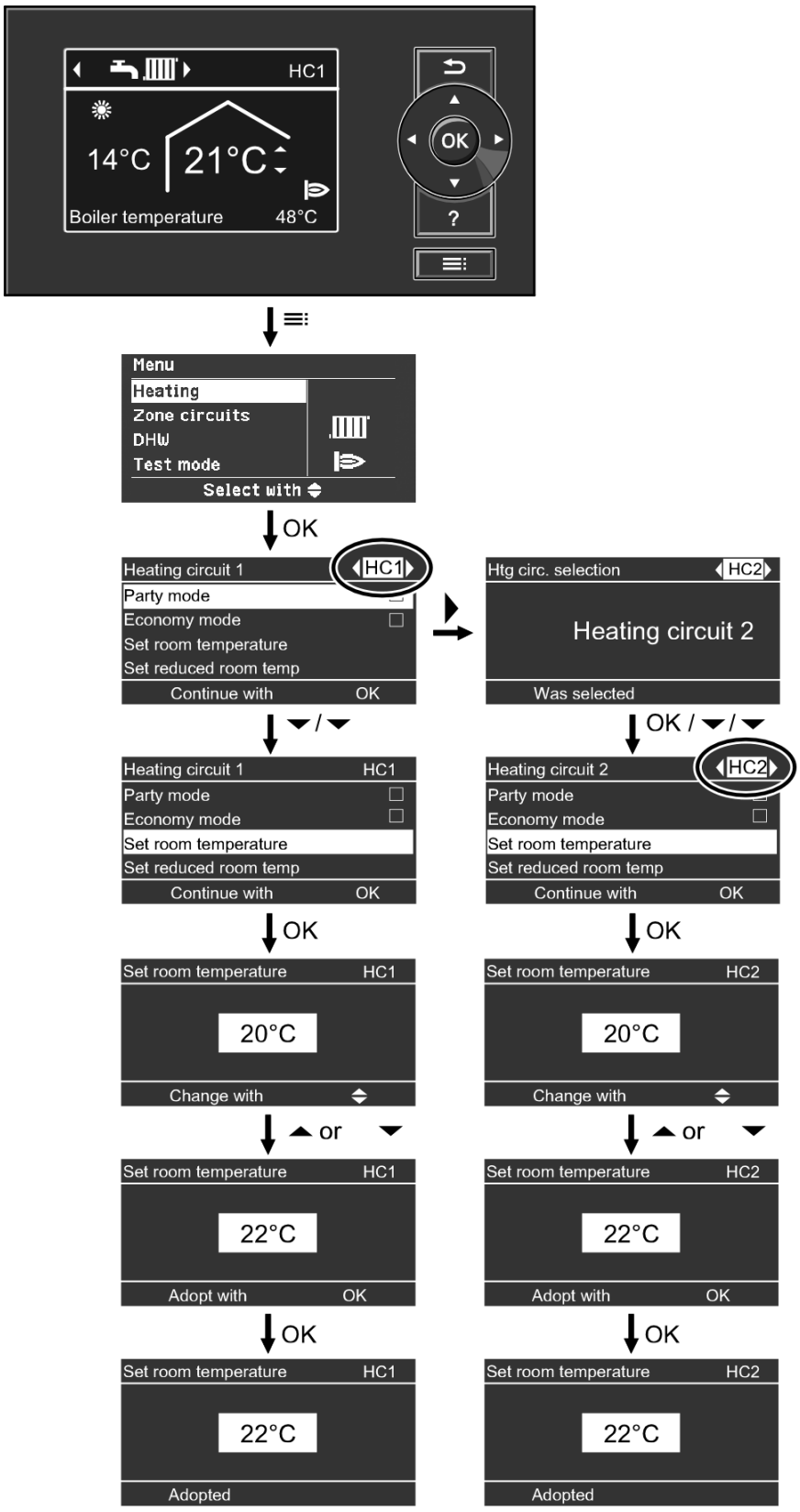
The screen saver will become active if you have not adjusted any settings on the programming unit for a few minutes. The display brightness is reduced.

1. Press OK. This takes you to the standard menu (see page 10).
2. Press ☰ This takes you to the extended menu (see page 11). The selected menu option is highlighted in white. The dialogue line Ⓔ (see diagram on page 11) then shows the necessary instructions.

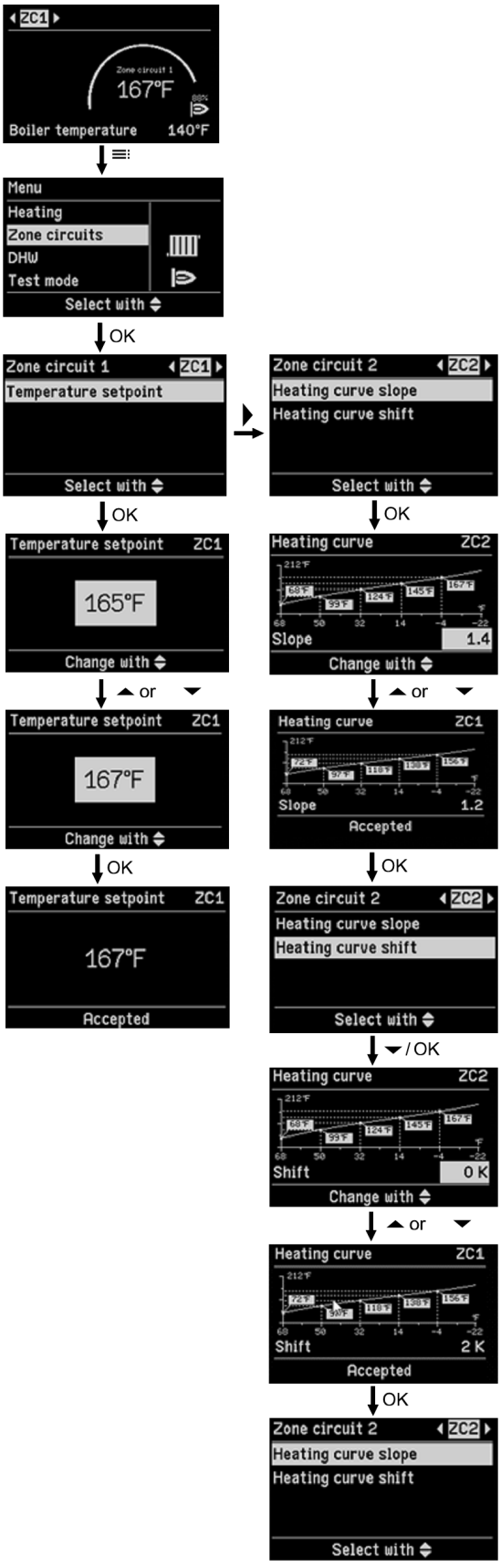
The following diagram shows how to make settings with different dialogue lines, using the set room temperature setting as an example.

5461 885 - 06

How to Use the Controls *(continued)*



Zone Circuits Steps



5461 885 - 06

Starting the Heating System



Legend

Ⓐ Fault indicator (red)
Ⓑ ON indicator (green)
Ⓒ Reset button (R)
Ⓓ ON/OFF switch "⏻"
Ⓔ Pressure gauge (psi)

1. Check the heating system pressure at the pressure gauge. The heating system pressure is too low if the indicator points to the area below 14 psi (1 bar). In this case, top up with water or notify your local heating contractor.
2. For open flue operation: Check that the ventilation apertures of the boiler room are open and unrestricted.
   Note: With open flue operation, the combustion air is drawn from the boiler room.
3. For Vitodens: 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 the ON/OFF switch "⏻" ON. After a short time, the standard menu is displayed (see page 9) and the green ON indicator illuminates. Your heating system and, if installed, your remote controls are now ready for operation.

Shutting Down the Heating System

With frost protection monitoring

For every heating circuit, select heating program "Standby mode".

- No central heating.
- No DHW heating.
- Frost protection for the boiler and the DHW tank is enabled.

For the heating circuit displayed in the header

Standard menu

1. ▶/◀ for the heating program "Standby mode" (frost protection monitoring)
2. OK to confirm

For the other heating circuits

Extended menu

1. ☰
2. "Heating"
3. Select the heating circuit if necessary (see page 16)
4. "Heating program"
5. "Standby mode" (frost protection monitoring)
   Note: The circulation pumps are briefly started every 24 hours to prevent them from seizing up.

Ending the heating program "Standby mode"

Select another heating program.

Without frost protection monitoring

1. Switch the ON/OFF switch OFF.
2. Close the shut-off valves.
3. Isolate the heating system from its main power supply, e.g. at a separate MCB/fuse or a mains isolator.
4. Where outside temperatures of below 37°F (3°C) are anticipated, please take suitable measures to protect the heating system against frost. If necessary, contact your heating contractor.

Information on an extended shutdown

- Circulation pumps may seize up if they are not supplied with power.
- After an extended shutdown, it may be necessary to reset the date and time (see page 28).

Required Settings (Central Heating)

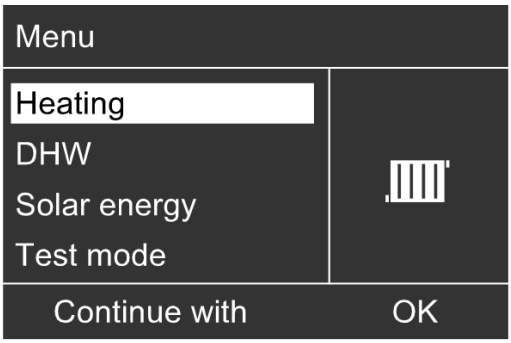
If you want central heating, check the following points:

- Have you selected the heating circuit?
  For settings, see ‘selecting a heating circuit’ below.
- Have you set the required room temperature?
  For settings, see page 17.
- Have you set the correct heating program?
  For settings, see page 17.
- Have you set the required time program?
  For settings, see page 18.

Selecting a Heating Circuit

The heating of all rooms can, if necessary, be split over several heating circuits.

- In the case of heating systems with several heating circuits, for all central heating settings, first select the heating circuit where you want to make a change.
- This selection is not possible in heating systems with only one heating circuit.



Example:

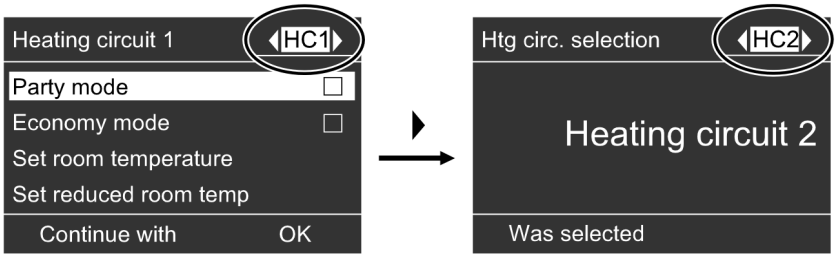
- “Heating circuit 1” is the heating circuit for the rooms occupied by you.
- “Heating circuit 2” is the heating circuit for the rooms of a separate apartment.

The heating circuits are marked at the factory as “Heating circuit 1” (HC1), “Heating circuit 2” (HC2) and “Heating circuit 3” (HC3).

If you or your heating contractor have renamed the heating circuits (e.g. as “Apartment”, etc.), the name is displayed instead of “Heating circuit ...” (see page 28).

Extended menu

1. ☰
2. “Heating”
3. ▶/◀ for the required heating circuit



Note: If you return to the standard menu with ⮌, the header will again display “HC1” (see page 10).
For changes to the heating circuit display in the standard menu, see page 29.

5461 885 - 06

Setting the Room Temperature

Setting the room temperature for standard heating mode

Factory setting: 68°F (20°C).

For the heating circuit displayed in the header

Proceed as described on page 11.

For the other heating circuits

Extended menu:

1. ☰
2. “Heating”
3. Select the heating circuit if necessary (see page 16)
4. “Set room temperature”
5. Set the required value

Setting the room temperature for reduced heating mode (night setback)

Factory setting: 65°F (18°C).

Extended menu:

1. ☰
2. “Heating”
3. Select the heating circuit if necessary (see page 16)
4. “Set reduced room temp”
5. Set the required value

The rooms are heated to this temperature:

- Between the time phases for standard heating mode (see page 18).
- In the holiday program (see page 21).

Setting the Heating Program for Central Heating

Factory setting: “Heating and DHW”

For the heating circuit displayed in the header

Proceed as described on page 11.

For the other heating circuits

Extended menu:

1. ☰
2. “Heating”
3. Select the heating circuit if necessary (see page 16)
4. “Heating program”
5. “Heating and DHW”

- The rooms of the selected heating circuit are heated in accordance with the room temperature and time program settings.
- DHW is reheated in accordance with the set DHW temperature and time program (see chapter “DHW heating”).

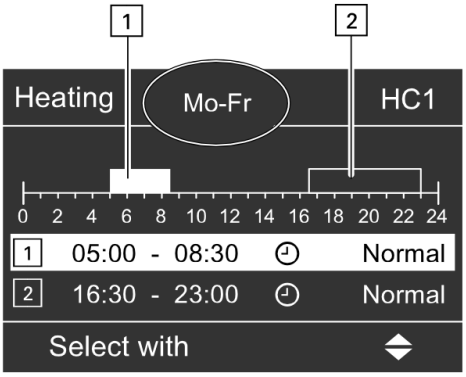
Setting the Time Program for Central Heating

- The time program for central heating is made up of time phases. Constant 24 h for every day of the week is set at the factory.
- You can set the time program individually, to be the same for every day of the week or different: You can select up to 4 time phases per day for standard heating mode. Set the start and end points for each time phase. Between these time phases, the rooms are heated with the reduced room temperature (see chapter “Setting the room temperature for reduced heating mode”).
- When setting, bear in mind that your heating system requires some time to heat the rooms to the required temperature.
- In the extended menu, you can scan the current time program under “Information” (see chapter “Scanning information”, “Heating circuit ...” group).

Extended menu:

1. ☰
2. “Heating”
3. Select the heating circuit if necessary.
4. “Heating time program”
5. Select part of the week or a day.
6. Select the time phase 1, 2, 3 or 4.
7. Set the start and end points for the relevant time phase.
8. Press ⮌ to exit the menu.

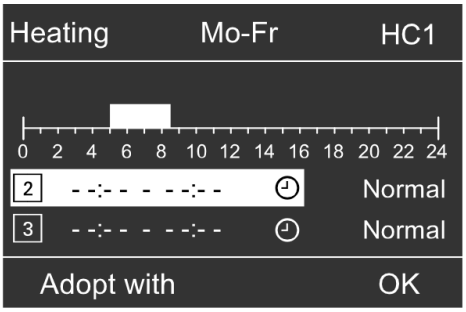
Note: If you want to terminate a time phase setting process prematurely, keep pressing ⮌ until the required display appears.



Example shown:
- Time program for Monday to Friday (“Mo-Fr”)
- Time phase 1: From 05:00 to 08:30 h
- Time phase 2: From 16:30 to 23:00 h

Example:
You want to set the same time program for every day except Monday:

Select the period “Monday–Sunday” and set the time program.
Then select “Monday” and set the time program for this.



Deleting a time phase

Set the time for the end point to the same time that was set for the start point. The display shows the selected time phase

5461 885 - 06

Changing the Heating Curve

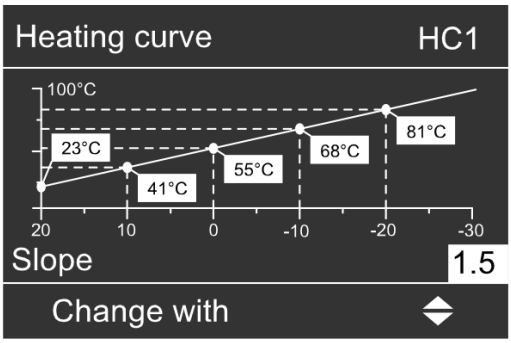
Your system's heating characteristics are affected by the slope and the level of the selected heating curve. Further information about the heating curve can be found under "Terminology" on page 40.

Factory setting:

- Slope: 1.4
- Heating curve level: 0
- Standard room temperature (set value): 68°F (20°C)
- Reduced room temperature (set value): 65°F (18°C)

Extended menu:

1. ☰
2. "Heating"
3. Select the heating circuit if necessary (see page 16)
4. "Heating curve"
5. "Slope" or "Level"
   Note: Tips on when and how to change the heating curve slope and level are displayed by pressing **?**.
6. Set the required value



Example:
Change the heating curve slope to 1.5.
A graph clearly shows the change in the heating curve as soon as you alter the value for the slope or level.

Depending on various outside temperatures (shown on the horizontal axis), the assigned set flow temperatures for the heating circuit are highlighted white.

Stopping the Central Heating

For the heating circuit displayed in the header

Standard menu:

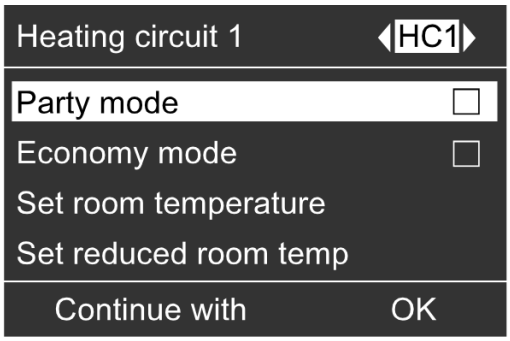
1. ▶/◀ for the heating program
   "Only DHW" (summer mode, no central heating)
   or
   "Standby mode" (frost protection monitoring)
2. OK to confirm

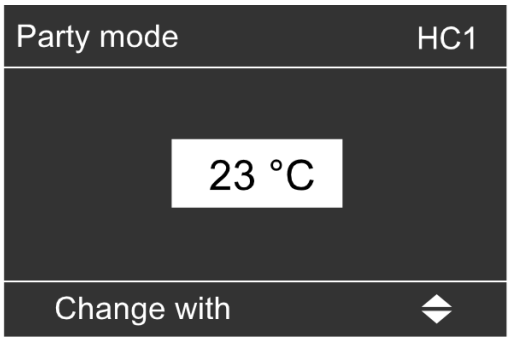
For the other heating circuits

Extended menu:

1. ☰
2. "Heating"
3. Select the heating circuit if necessary (see page 16)
4. "Heating program"
5. "Only DHW" (summer mode, no central heating)
   or
   "Standby mode" (frost protection monitoring)

Comfort and Energy Saving Functions

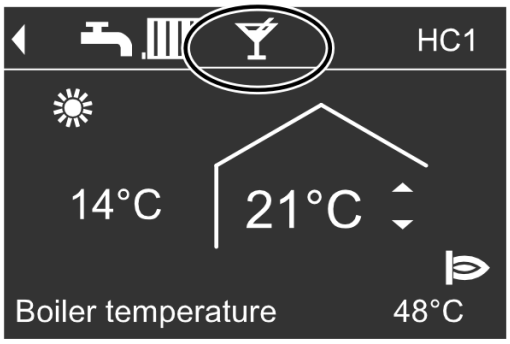




Selecting the comfort function "Party mode"
With this function, you can change the room temperature for several hours, e.g. if guests unexpectedly stay longer in the evening. You do not have to change any existing control settings. The DHW is reheated in this function to the selected set temperature.

Extended menu

1. ☰
2. "Heating"
3. Select the heating circuit if necessary (see page 16)
4. "Party mode"
5. Set the required room temperature during party mode

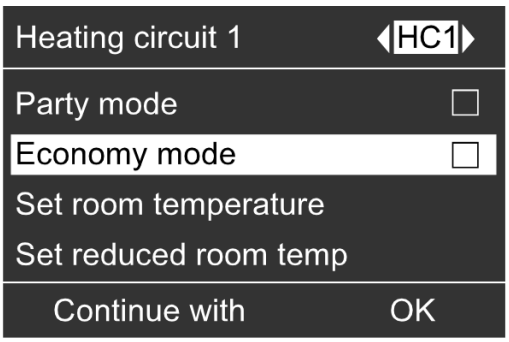


Display in the standard menu

- The rooms are heated to the required temperature.
- DHW is reheated to the selected set temperature.

Ending the comfort function

- Automatically after 8 hours.
  or
- Automatically when the system switches to standard heating mode in accordance with the time program.
  or
- In the extended menu, set "Party mode" to "OFF".

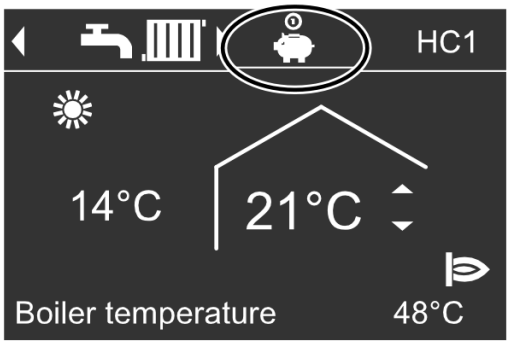


Selecting the energy saving function "Economy mode"
To save energy, you can reduce the room temperature in standard heating mode. For example, if you leave the house for a few hours.

Extended menu

1. ☰
2. "Heating"
3. Select the heating circuit if necessary (see page 16)
4. "Economy mode"

Comfort and Energy Saving Functions *(continued)*

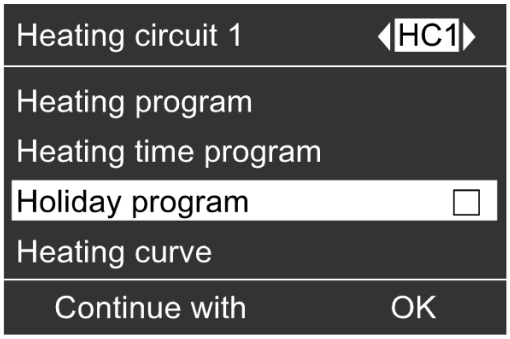


Display in the standard menu

Note: The display of the selected set room temperature does not change.

Ending economy mode

- Automatically when the system switches to reduced heating mode in accordance with the time program.
- In the extended menu, set “Economy mode” to “OFF”.



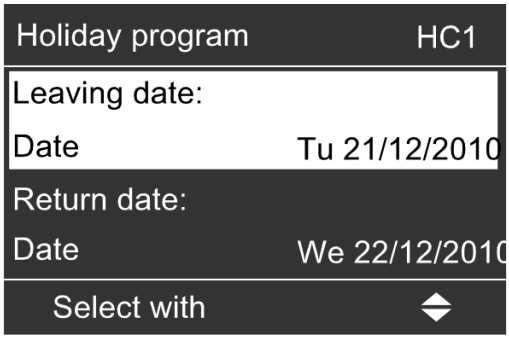
Selecting the energy saving function “Holiday program”

To save energy, for example over long holidays, you can activate the “Holiday program”.

The control unit is set so that the holiday program applies to all heating circuits. If you want to make changes, contact your local heating contractor.

Depending on the heating program selected, the holiday program can have various effects:

- Heating program “Heating and DHW”: The rooms are heated to the selected reduced room temperature (see page 17). DHW heating is switched OFF.
- Heating program “Only DHW”: For all heating circuits, frost protection monitoring is only enabled for the boiler and the DHW tank.
- The holiday program starts at 00:00 h the day following your departure and ends at 00:00 h on the day of your return. This means the selected time program is active on the days of departure and return (see page 18).



Extended menu:

1. ☰
2. “Heating”
3. “Holiday program”
4. Set the required departure and return dates

Terminating or deleting a holiday program

Extended menu:

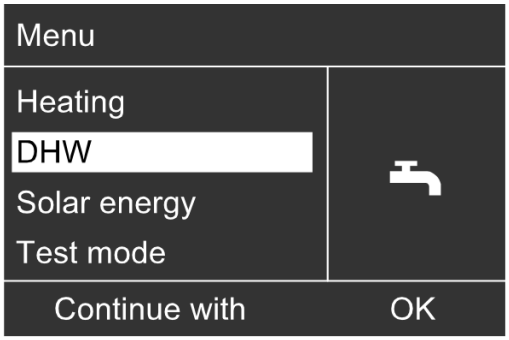
1. ☰
2. “Heating”
3. “Holiday program”
4. “Delete program”

Required Settings (DHW Heating)

If you want DHW heating, check the following points:

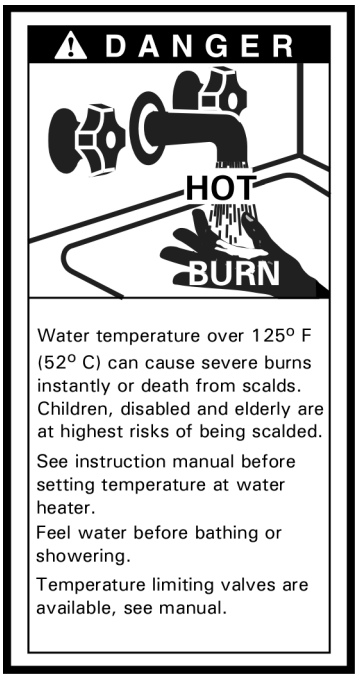
- Have you set the required DHW temperature?
  For settings, see ‘setting the DHW temperature’ below.
- Have you set the correct heating program?
  For settings, see ‘setting the heating program for DHW heating’ below.
- Have you set the required time program?
  For settings, see page 23.

Setting the DHW Temperature



Extended menu:

1. ☰
2. “DHW”
3. “Set DHW temperature”
4. Set the required value



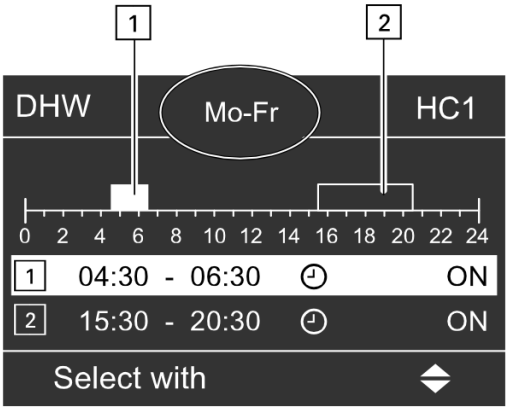
Setting the Heating Program for DHW Heating

Note: The control unit is set so that DHW heating applies to all heating circuits. If you want to make changes, contact your local heating contractor.

Extended menu:

1. ☰
2. “Heating”
3. Select the heating circuit if necessary (see page 16)
4. “Heating program”
5. “Heating and DHW” (with central heating)
   or
   “Only DHW” (summer mode, no central heating)

Setting the Time Program for DHW Heating



- The time program for DHW heating is made up of time phases. One 24 h time phase is set for every day of the week at the factory.
- Automatic mode is set at the factory for DHW heating. This means that, in standard heating mode, the DHW is reheated to the set temperature. To ensure that hot water is available at the start of standard heating mode, the time phase for DHW heating begins automatically half an hour earlier than the time phase for standard heating mode.
- If you don't want the automatic mode, you can select up to 4 individual time phases per day for DHW heating, which can be the same for every day of the week or different. Set the start and end points for each time phase.
- When setting, bear in mind that your heating system requires some time to heat the DHW to the required temperature.
- In the "Extended menu", you can scan the current time program under "Information" (see chapter "Scanning information", "DHW" group).

Extended menu:

1. ☰
2. "DHW"
3. "DHW time prog"
4. "Individual"
5. Select part of the week or a day.
6. Select the time phase 1, 2, 3 or 4.
7. Set the start and end points for the relevant time phase.
8. Press ⮌ to exit the menu.

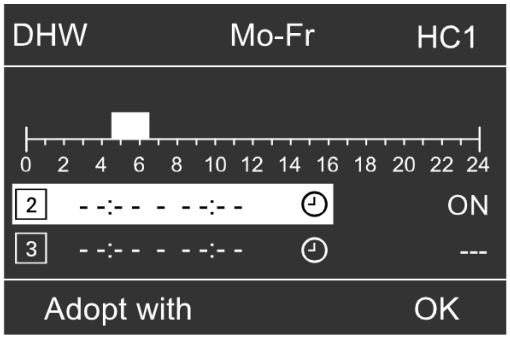
Note: If you want to terminate a time phase setting process prematurely, keep pressing ⮌ until the required display appears.

Example shown:

- Time program for Monday to Friday ("Mo-Fr")
- Time phase 1: From 04:30 to 06:30 h
- Time phase 2: From 15:30 to 20:30 h

Example:
You want to set the same time program for every day except Monday: Select the period "Monday–Sunday" and set the time program. Then select "Monday" and set the time program for this.

Setting the Time Program for DHW Heating *(continued)*



Deleting a time phase

Set the time for the end point to the same time that was set for the start point. The display shows the selected time phase "- - : - -".

DHW heating once, no longer in the time program

Note: The heating program "Heating and DHW" or "Only DHW" must be set for at least one system heating circuit.

Extended menu:

1. ☰
2. "Heating"
3. "Party mode"
4. Disable "Party mode" again with "OFF" to prevent unintentional central heating with standard room temperature.

Heating system with DHW circulation pump

Further information about the DHW circulation pump can be found under "Terminology" on page 40.

- **Automatic mode** is set for the DHW circulation pump time program. In other words, the DHW circulation pump operates in parallel to the DHW heating time program.
- If you don't want the automatic mode, you can select up to 4 individual time phases per day for the DHW circulation pump, which can be the same for every day of the week or different. Set the start and end points for each time phase.
- In the "Information" menu, you can scan the current time program (see chapter "Scanning information", "DHW" group).

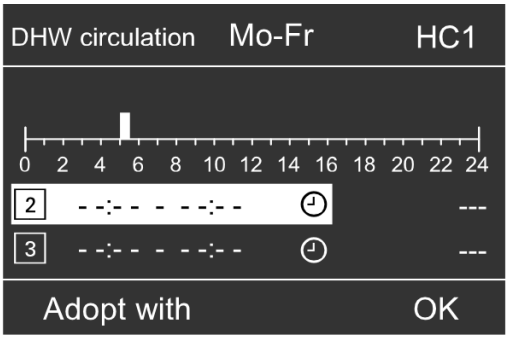
Note: Activating the DHW circulation pump is only advisable for those times when DHW is actually drawn.

Extended menu:

1. ☰
2. "DHW"
3. "DHW circ time prog"
4. "Individual"
5. Select part of the week or a day
6. Select the time phase 1, 2, 3 or 4.
7. Set the start and end points for the relevant time phase

Note: If you want to terminate the setting process prematurely, keep pressing ⮌ until the required display appears.

Setting the Time Program for DHW Heating *(continued)*



Deleting a time phase for DHW recirculation pump

Set the time for the end point to the same time that was set for the start point. The display shows the selected time phase "- - : - -".

Stopping DHW heating

You do not want to have DHW or heat the rooms.

For the heating circuit displayed in the header

Standard menu:

1. ▶/◀ for the heating program "Standby mode" (frost protection monitoring)
2. OK to confirm

For the other heating circuits

Extended menu:

1. ☰
2. Select the heating circuit if necessary (see page 16)
3. "Heating"
4. "Heating program"
5. "Standby mode" (frost protection monitoring)

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

Extended menu:

1. ☰
2. Select the heating circuit if necessary (see page 16)
3. "Heating"
4. "Heating program"
5. "Heating and DHW"
6. ↩ until the menu is displayed
7. "DHW"
8. "Set DHW temperature"
9. Select 50°F (10°C)

Room Temperature

Further information can be found in “Terminology” page 40.

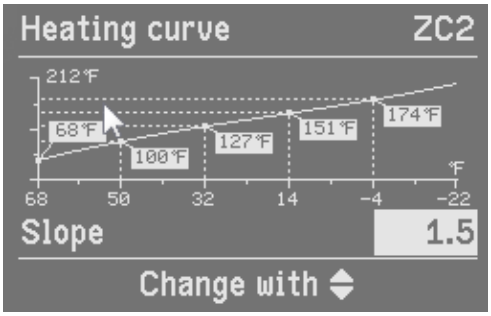
Factory setting: 165°F (74°C)

For all fixed setpoint zone circuits

Extended menu

1. ☰
2. “Zone Circuits”
3. Poss. ◄/► for the required zone circuit.
4. “Zone temp setpoint”
5. Set the required value.
6. OK to confirm

Heating Curve



Example: Changing the heating curve slope to 1.5
A graph clearly shows the change in the heating curve as soon as you alter the value for the slope or shift.

Depending on various outside temperatures (shown on the horizontal axis), the assigned set supply temperatures for the heating circuit are highlighted in white.

Your system’s heating characteristics are affected by the slope and the shift of the selected heating curve. Further information about the heating curve can be found under “Terminology” on page 40.

Setting the heating curve

Factory setting:

- “Slope”: 1.4
- “Shift” of the heating curve: 0

Extended menu:

1. ☰
2. “Zone Circuit”
3. Poss. ◄/► for the required heating circuit.
4. “Heating curve slope”
5. Set the required valve.
6. “Heating curve shift”
7. Set the required value.

Note: Tips on when and how to change the heating curve slope and shift are displayed by pressing ?.

Setting the Display Contrast

Extended menu:

1. ☰
2. “Settings”
3. “Contrast”
4. Set the required contrast.

Setting the Display Brightness

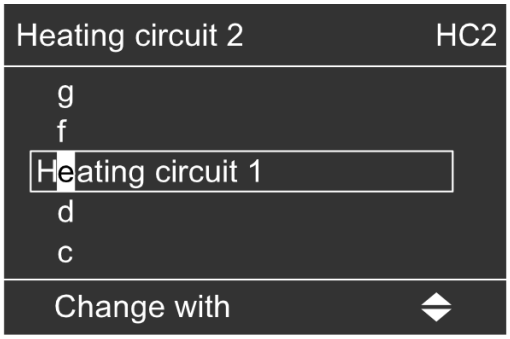
If you would like the texts in the menu to be more clearly legible, change the brightness for “Control”.
You can also alter the screen saver brightness.

Extended menu:

1. ☰
2. “Settings”
3. “Brightness”
4. “Control” or “Screen saver”
5. Set the required brightness.

Entering Names for the Heating Circuits

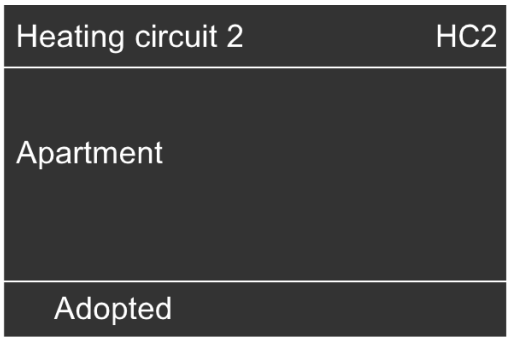
You can give heating circuits 1, 2 and 3 (“HC1”, “HC2” and “HC3”) individual names. The abbreviations “HC1”, “HC2” and “HC3” will be retained.

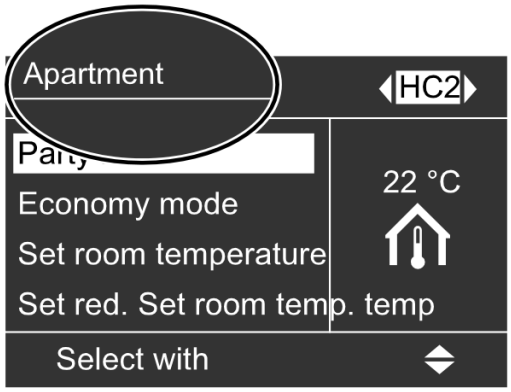


Extended menu:

1. ☰
2. “Settings”
3. “Name for heating circ.”
4. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3”
5. “Change?”
6. You can select the required symbol with ▲/▼ .
7. ►/◄ takes you to the next character.
8. Press OK to accept all entered characters at once and simultaneously exit this menu.

Entering Names for the Heating Circuits *(continued)*





Note: The entered term is deleted with “Reset?”;
“Heating circuit 1” will then be shown again.

Example:
Name for “Heating circuit 2”: Apartment

The menu shows “Apartment” for “Heating circuit 2”

Setting the Language



At the commissioning stage, the display is in German.

1. “Sprache” (Language) Deutsch DE (German)
2. Select the required language with ▲/▼
3. Accept by pressing OK.

To change the language
Extended menu:
1. ☰
2. “Settings”
3. “Language”
4. Select the required language with ▲/▼
5. Accept by pressing OK.

Setting the Time and Date

The time and date are factory-set. If your heating system has been shut down for a long time, it may be necessary to set the time and date.

Extended menu:
1. ☰
2. “Settings”
3. “Time/Date”
4. Set the time and date.

5461 885 - 06

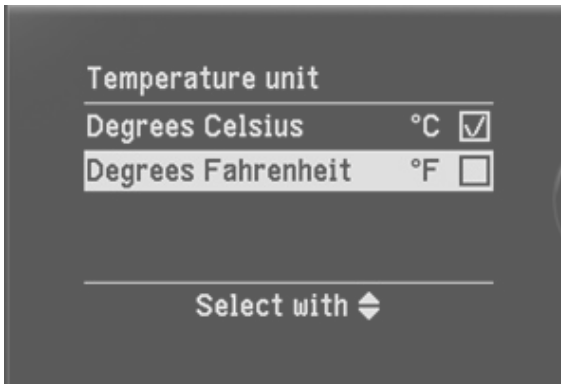
Changing the Standard Menu

You want to have details about heating circuit 2 (HC2) or heating circuit 3 (HC3) displayed in the header of the standard menu (see page 11).

Extended menu:

1. ☰
2. “Settings”
3. “Standard menu”
4. Select the heating circuit

Setting the Temperature Unit °F (°C)



Factory setting: °C
Extended menu:

1. ☰
2. “Settings”
3. “Temperature unit”
4. Select the temperature unit “°C” or “°F”.

Restoring Factory Settings

You can reset the factory settings of all modified values for each heating circuit separately.

Extended menu:

1. ☰
2. “Settings”
3. “Standard setting”
4. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3”

The following settings and values are reset:

- Set room temperature for standard heating mode (“Set room temperature”).
- Set room temperature for reduced heating mode (“Set red. room temp”).
- Heating program (“Heating program”).
- Set DHW temperature (“Set DHW temperature”).
- Time program for central heating (“Heating time program”).
- Time program for DHW heating (“DHW time prog”).
- Time program for DHW circulation pump (“DHW circ time prog”).
- Heating curve slope (“Slope”) and level (“Level”).

Party mode, economy mode and holiday program are deleted.

Scanning Information

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

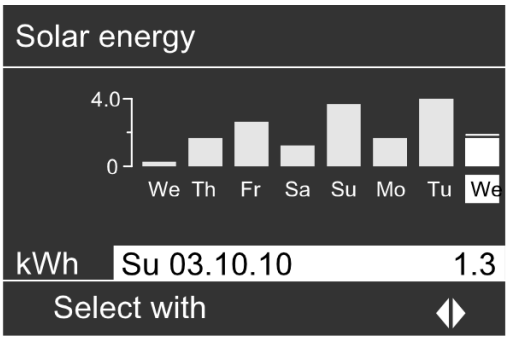
The extended menu splits the information into groups:

- "General"
- "Heating circuit 1"
- "Heating circuit 2"
- "Heating circuit 3"
- "DHW"
- "Solar"
- "Reset data"

Note: If heating circuits have been given names, the name is displayed (see chapter "Entering names for the heating circuits"). For detailed scanning options for the individual groups, see chapter "Scanning options in the extended menu".

Extended menu:

1. ☰
2. "Information"
3. Select the category.
4. Select the required scan.



Scanning in conjunction with solar thermal systems

Extended menu:

1. ☰
2. "Solar energy"

The solar energy yield for the past 7 days is displayed on a graph.

The flashing line on the graph indicates that the current day is not yet over.

Note: Further scanning options, e.g. for the solar circuit pump hours run, can be found in the extended menu under "Information" in the "Solar" group.

Resetting data

You can reset the following data:

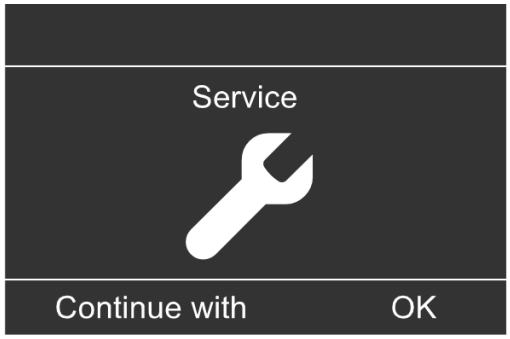
- Burner hours run.
- Fuel consumption, if set by your heating contractor.
- In conjunction with a solar thermal system:
  Solar energy yield, solar circuit pump hours run and hours run output 22.
- All the above data simultaneously.

Extended menu:

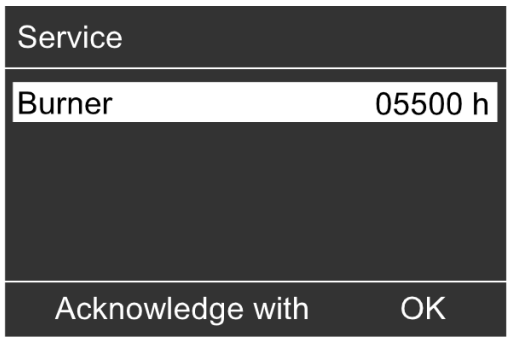
1. ☰
2. "Information"
3. "Reset data"

5461 885 - 06

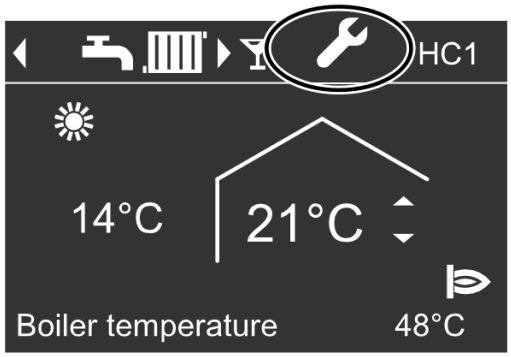
Scanning Service Messages



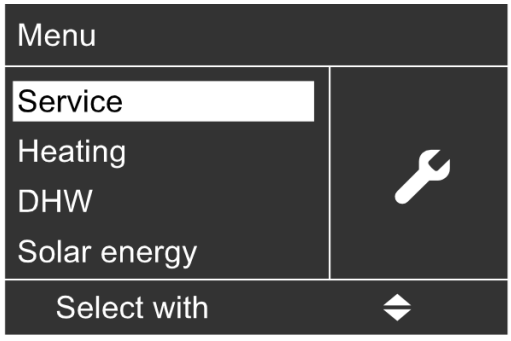
If your heating system is due for a service, the symbol flashes in the display, and “Service” appears.



1. You can call up the reason for the service with OK.
2. Pressing ? calls up information on the service that is due.
3. If you want to acknowledge the service message, follow the instructions in the menu. Contact your local heating contractor. The service message is transferred to the menu.



Display in the standard menu



Display in the extended menu

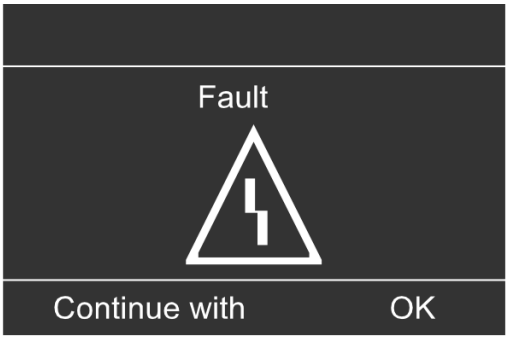
Note: If the service can only be carried out at a later date, the service message is displayed again the following Monday.

Calling up an acknowledged service message

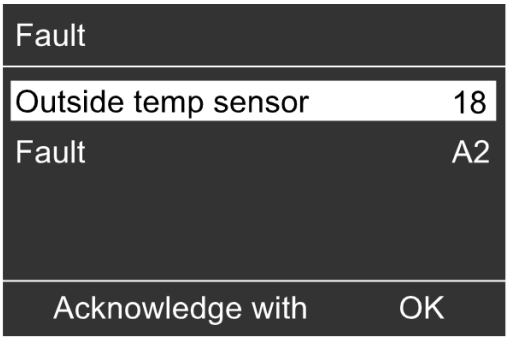
Extended menu:

1. ☰
2. “Service”

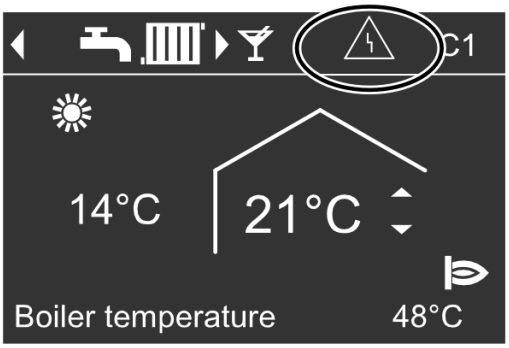
Scanning Fault Messages



If any faults have occurred in your heating system, the symbol flashes in the display, and “Fault” appears. The red fault indicator also flashes (see chapter “Starting the heating system”).

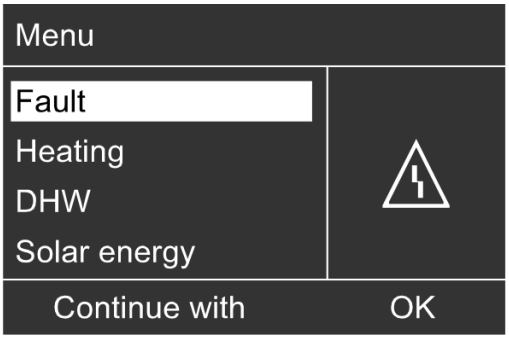


1. You can call up the cause of the fault with OK.
2. Pressing **?** calls up information on the heating system performance. Tips on which measures you can take yourself before notifying your heating contractor are also displayed.
3. Make a note of the cause of the fault and the fault code next to it on the right. In this example: “Outside temp sensor 18” and “Fault A2”. This enables the heating contractor to be better prepared for the service call and may save additional travelling costs.
4. If you want to acknowledge the fault message, follow the instructions in the menu. The fault message is transferred to the menu.



Display in the standard menu

Note: - If you have connected up signalling equipment (e.g. a buzzer) for fault messages, this is deactivated when the fault message is acknowledged.
- If the fault can only be rectified at a later date, the fault message will be displayed again the next day and the signalling equipment will be switched on again.



Display in the extended menu

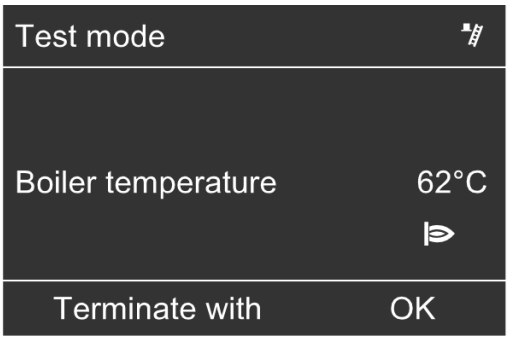
Calling up an acknowledged fault message

Extended menu:

1. ☰
2. “Fault”

5461 885 - 06

Emissions Test Mode



Emissions test mode should only be activated by a certified technician during the annual inspection.

Extended menu:

1. ☰
2. “Test mode”
3. “Flue gas test ON”

If the burner is on, the symbol is shown.

Note: You can also enable emissions test mode if the controls are locked out by your heating contractor.

Ending emissions test mode

- Automatically after 30 min.
- Press OK.

Rooms are too Cold

Cause	Remedy
The heating system is off.	- Switch the ON/OFF switch ON (see diagrams page 10). - Switch ON the mains isolator, if installed (outside the boiler room). - Reset the fuse/MCB in the power distribution board (main domestic fuse/ MCB).
Control unit or remote control incorrectly adjusted.	Check settings and correct if required: - "Heating and DHW" must be selected (see page 16). - Room temperature (see page 17). - Time (see page 28). - Time program (see page 18).
Only when operating with DHW heating: DHW priority is enabled.	Wait until the DHW tank has been heated up. In the case of operation with an instantaneous water heater, stop DHW draw-off.
No fuel.	With liquid propane gas: 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.
"Combustion controller" is shown on the display.	Press R (reset button) see page 15. Acknowledge the fault (see page 32). Notify your heating contractor if this fault recurs. The fault message is displayed until the cause is rectified.
"Fault" is displayed, and the red fault indicator flashes.	Scan and acknowledge the type of fault (see page 32). If necessary, notify your heating contractor.
Mixing valves motor faulty.	Adjust the mixing valves manually.

Rooms are too Hot

Cause	Remedy
Control unit or remote control is incorrectly adjusted.	Check settings and correct if required: - Room temperature (see page 17). - Time (see page 28). - Time program (see page 18).
"Fault" is displayed, and the red fault indicator flashes.	Scan and acknowledge the type of fault (see page 32). If necessary, notify your heating contractor.
Mixing valves motor faulty.	Adjust the mixing valves manually.

There is no Hot Water

Cause	Remedy
The heating system is off.	- Switch the ON/OFF switch ON (see diagrams page 15). - Switch ON the mains isolator, if installed (outside the boiler room). - Reset the fuse/MCB in the power distribution board (main domestic fuse/ MCB).
Control unit or remote control incorrectly adjusted.	Check settings and correct if required: - DHW heating must be enabled (see page 22). - DHW temperature (see page 22). - Time program (see page 23). - Time (see page 28).
No fuel.	With liquid propane gas: 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.
“Fault” is displayed, and the red fault indicator flashes.	Scan and acknowledge the type of fault (see page 32). If necessary, notify your heating contractor.

The DHW is too Hot

Cause	Remedy
The control unit is incorrectly adjusted.	Check and correct the DHW temperature if required (see page 22).

“⚠” Flashes and “Fault” is Displayed

Cause	Remedy
Heating system fault.	Proceed as described (see page 32).

"🔧" Flashes and "Service" is Displayed

Cause	Remedy
The time for a service, as specified by your heating contractor, has arrived.	Proceed as described on page 32.

"Controls Locked Out" is Displayed

Cause	Remedy
This function is blocked.	Your heating contractor can lift this block.

"External Hook-up" is Displayed

Cause	Remedy
The heating program set at the control unit was changed by an external device, e.g. extension EA1.	No remedy is required.

"External Program" is Displayed

Cause	Remedy
The heating program set at the control unit was changed by the Vitocom communication interface	You can change the heating program.

Inspection/Cleaning/Maintenance

Cleaning

You can clean the surface of the programming unit with a microfiber cloth. All equipment can be cleaned with a commercially available domestic cleaning agent (non-scouring).

Inspection and maintenance

Inspection and maintenance of your heating system is recommended.
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, we advise you 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.
For that reason, all boilers should be cleaned annually.

DHW tank

Maintenance and cleaning should be carried out no later than two years after commissioning and thereafter as required.
Only a qualified heating contractor should clean the inside of a DHW tank and the DHW connections.
Refill any water treatment equipment (e.g. water softener or water filtration unit) on time, if such equipment is installed in the cold water supply of the DHW tank.
Observe the manufacturer's instructions.

Safety valve (DHW tank)

The safety valve function should be checked every six months by venting, either by the system user or the local heating contractor. The valve seat may become contaminated (see the valve manufacturer's instructions).

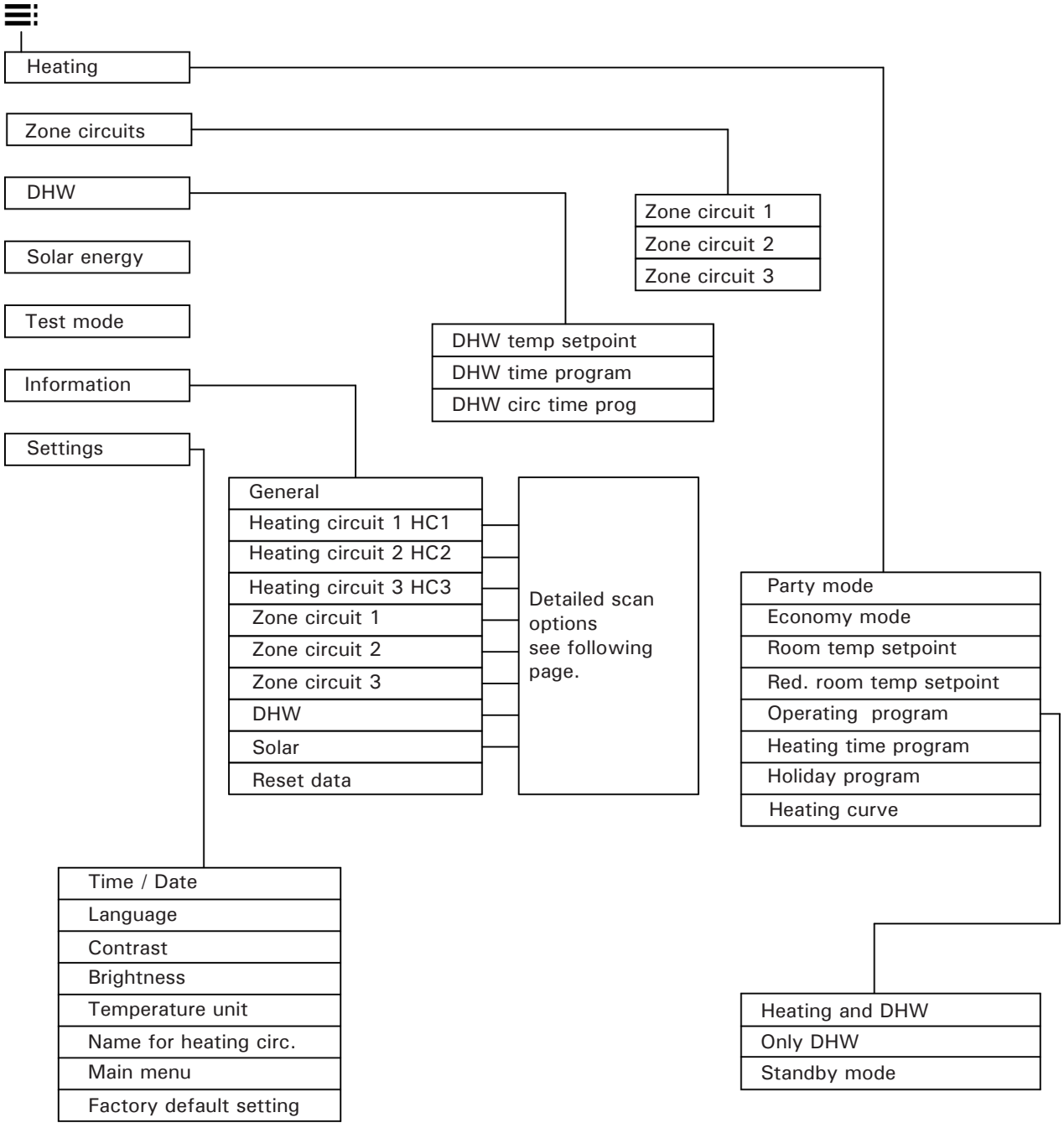
Potable water filter (if installed)

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.

Menu Overview

Extended menu



5461 885 - 06

Menu Overview *(continued)*

Scanning options in the extended menu

Note: Subject to the actual heating system equipment level, not all of the scans listed here may be available. You can view more details on the information marked with ▶.

General	
“Outside temp”	
“Boiler temperature”	
“Common flow temp” (common flow temperature)	
“Burner”	
“Hours run”	
“Burner stage 1”	
“Hours run”	
“Burner stage 2”	
“Hours run”	
“Fuel consumption”	
“Feed pump”	
“Central fault mess.”	
“Participant no.”	
“Input ext. EA1”	▶
“Time”	
“Date”	
“Radio clock signal”	

Heating circuit 1 (HC1)	
“Heating program”	▶
“Operating status:”	▶
“Time program”	▶
“Set room temperature”	
“Room temperature”	
“Set reduced room temp”	
“Set ext. room temp”	
“Set party temp”	
“Slope”	
“Level”	
“Heating circ pump”	
“Holiday program”	▶

Heating circuit 2, 3 (HC2, HC3)	
“Heating program”	▶
“Operating status:”	▶
“Time program”	▶
“Set room temperature”	
“Room temperature”	
“Set reduced room temp”	
“Set ext. room temp”	
“Set party temp”	
“Slope”	
“Level”	
“Heating circ pump”	
“Mixing valves”	
“Flow temperature”	
“Return temp”	
“Holiday program”	▶

DHW	
“DHW time prog”	▶
“DHW circ time prog”	▶
“DHW temperature”	
“DHW tank prim pump”	
“DHW circ pump”	
“Flow switch”	

Solar	
“Collector temp”	
“Solar DHW”	
“Solar circuit pump”	
“Solar energy history”	▶
“Solar energy”	
“Solar circuit pump”	
“Solar circ pump speed”	
“Heating suppr. DHW”	
“SM1 output 22”	
“SM1 output 22”	
“Sensor 7”	
“Sensor 10”	
“Heat suppr. heating”	

Terminology

Setback mode (reduced heating mode)

See “Reduced heating mode”.

Heating program

With the heating program you determine whether you heat your rooms and DHW, or only heat DHW or whether you shut down your heating system with frost protection monitoring.

You can select the following heating programs:

- **“Heating and DHW”**
  The rooms are heated and DHW is provided (winter mode).
- **“Only DHW”**
  DHW is provided but there is no central heating (summer mode).
- **“Standby mode”**
  Frost protection for the boiler and the DHW tank is enabled, no central heating, no DHW heating.

Note: No heating program is available for central heating without DHW heating. When you want central heating, hot water is generally also required (winter mode). If you do want just central heating, select the heating program “Heating and DHW” and set the DHW temperature to 50°F (10°C) (see page 19). This means that you will not heat DHW unnecessarily but the DHW tank is protected against frost.

Operating status

In the heating program “Heating and DHW”, the operating status changes from “Standard heating mode” (see page 41) to the operating status “Reduced heating mode” (see page 41) and vice versa. The times for the operating status change are defined when the time program is set.

Extension kit for heating circuit with mixing valve

Assembly (accessory) for controlling a heating circuit with mixing valves. See “Mixing valves”.

Mixing Valve

A mixing valve mixes the water heated in the boiler with the cooled water returning from the heating circuit. The water, heated to the right temperature in line with demand, is delivered to the heating circuit by the heating circuit pump. The control unit adjusts the heating circuit flow temperature via the mixing valve to the various conditions, e.g. different outside temperature.

Heating circuit pump

Circulation pump for the circulation of the heating water in the heating circuit.

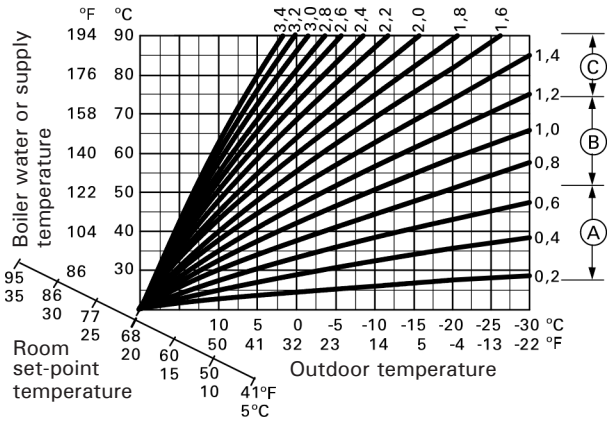
Heating curve

Heating curves illustrate the relationship between the outside temperature, room temperature (set value) and boiler water or (heating circuit) flow temperature.
The lower the outside temperature, the higher the boiler water or (heating circuit) flow temperature.
In order to guarantee sufficient heat and minimum fuel consumption at any outside temperature, the conditions of your building and your heating system must be taken into consideration. The heating curve is set by your heating contractor for this purpose.

Note: If your heating system includes heating circuits with mixing valves, then the flow temperature for the heating circuit without mixing valves is higher by a selected differential than the flow temperature for the heating circuits with mixing valves.

The illustrated heating curves apply with the following settings:

- Heating curve level = 0
- Standard room temperature (set value) = 68°F (20°C)



Example:

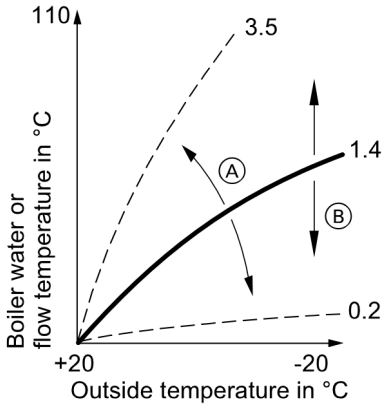
For outside temperature 7°F (-14°C):

Ⓐ Underfloor heating system, slope 0.2 to 0.8
Ⓑ Low temperature heating system, slope 0.8 to 1.6
Ⓒ Heating system with a boiler water temperature in excess of 167°F (75°C), slope 1.6 to 2.0

Heating circuit

A heating circuit is a sealed circuit between the boiler and radiators, in which the heating water circulates.
A heating system may comprise several heating circuits. For example, one heating circuit for the rooms occupied by you and one heating circuit for the rooms of a separate apartment.

Terminology *(continued)*



Factory settings: Slope = 1.4 and level = 0.

Ⓐ Changing the slope: The steepness of the heating curve changes
Ⓑ Changing the level: The heating curves are shifted in parallel in a vertical direction

Actual temperature

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

Night setback

See “Reduced heating mode”.

Standard heating mode

When you are in the house during the day, you can heat the rooms in standard heating mode. Set the periods using the time program for central heating. During these periods, the rooms are heated to the standard room temperature.

Standard room temperature

When you are in the house during the day, set the standard room temperature (see page 17).

Open flue operation

The combustion air is drawn from the room where the boiler is installed.

Balanced flue operation

The combustion air is drawn from outside the building.

Reduced heating mode

When you are out or during the night, you can heat the rooms in reduced heating mode (setback mode). Set the periods using the time program for central heating. During these periods, the rooms are heated to a reduced room temperature.

Reduced room temperature

When you are out or during the night, set the reduced room temperature (see page 17). See also “Reduced heating mode”.

Safety valve

A safety device that must be installed by your heating contractor in the cold water pipe. The safety valve opens automatically to prevent excess pressure in the DHW tank.

Solar circuit pump

In conjunction with solar thermal systems. The solar circuit pump delivers the cooled heat transfer medium from the DHW tank indirect coil to the collectors.

Set temperature

Default temperature that should be reached;
e.g. set DHW temperature.

Summer mode

Heating program “Only DHW”.
At warmer times of the year, i.e. when rooms do not have to be heated, you can disable heating mode.
The boiler remains enabled for DHW heating.

Tank primary pump

Circulation pump for heating the DHW in the DHW tank.

Drinking water filter

A device that removes solids from the water. The drinking water filter is installed in the cold water pipe upstream of the DHW tank or the instantaneous water heater.

Weather-compensated mode

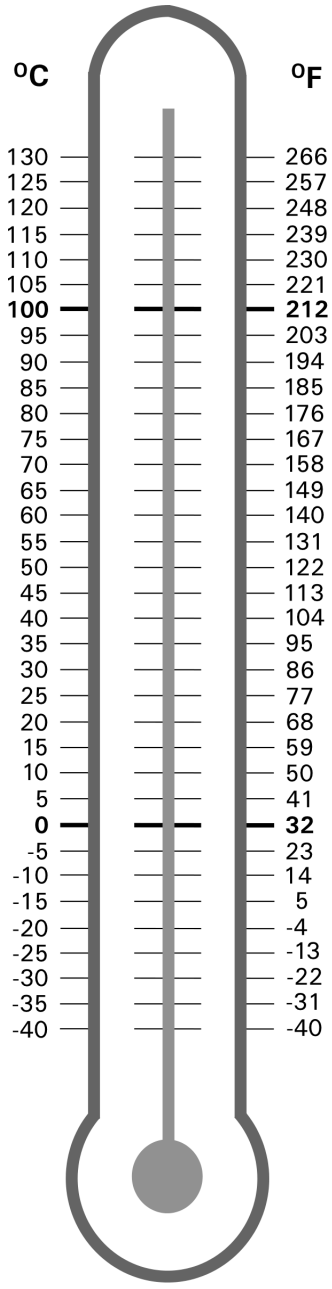
In weather-compensated mode, the heating flow temperature is controlled according to the outside temperature. This means that no unnecessary heat is generated in order to heat the rooms to the set room temperature you selected.
The outside temperature is captured and transmitted to the control unit by a sensor fitted outside the building.

DHW recirculation pump

The DHW recirculation pump transports the hot water around a circuit between the DHW tank and the draw-off points (e.g. hot tap). This makes hot water available quickly at the draw-off point.

Your contact

Contact your local contractor if you have any questions regarding the maintenance and repair of your system. You may, for example, find local contractors on the internet under www.viessmann.com.



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5461 885 - 06