Operating Instructions

for the system user

Vitodens 100-W
B1HE Series and B1KE Combi Series
Wall mounted gas-fired condensing boiler with 3.5 inch black/white display
On demand domestic Hot Water with Combi Boilers
For operation with natural gas or liquid propane gas

Heating Input: 8.5 to 199 MBH
2.5 to 58.3 kW

VITODENS 100-W

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 boiler.

WHAT TO DO IF YOU SMELL GAS

- **Do not try to light any boilers.**
- **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.

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Energy Verified

Product may not be exactly as shown

IMPORTANT

Read and save these instructions for future reference.

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

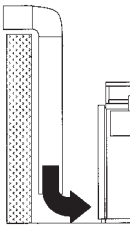
It is recommended that all product documentation such as parts lists, operating and service instructions be handed over to the system user for storage. Documentation is to be stored near boiler in a readily accessible location for reference by service personnel.

- **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.

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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 100-W. 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 100-W
- Technical Data Manual
- Installation and Service Instructions
- Operating Instructions and User's Information Manual

Additional applicable literature:
- Accessory manuals

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 boiler.

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 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.

⚠ WARNING

If you notice fire coming from the boiler, call the fire department immediately! Do not attempt to extinguish the fire unless qualified to do so.

⚠ WARNING

Fire causes a risk of burns and explosion!
- ☐ **Shut down the boiler**
- ☐ **Close fuel shut-off valves**
- ☐ **Use a tested fire extinguisher, class ABC.**

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 95°F (35°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

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Intended Use

The boiler is only intended to be installed and operated in sealed unvented heating systems with due attention paid to the associated installation, service and operating instructions. It is only designed for the heating of 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.
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 boiler (e.g. the boiler being opened by the system user) is prohibited and results 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 control unit is a boiler and heating circuit control unit for the following operating modes:
- Weather-compensated operation
- Constant (continuous) operation

Your heating contractor will configure the operating mode during commissioning in accordance with your heating system. These instructions describe both operating modes.

Weather-compensated operation
In weather-compensated operation, the supply water temperature is controlled according to the outside temperature.
The lower the outside temperature, the higher the supply temperature. This means that more heat is provided for central heating on cold days than on warmer days.

Constant operation
In constant operation the boiler provides heating water with a constant supply temperature regardless of the outside temperature.

Operation
The control unit is integrated into the boiler and controls all functions of your system. The control unit is operated via a 3.5 inch black/white screen.
A wireless (WiFi) module is integrated into the control unit.
This means the system can also be operated remotely via the internet using the “ViCare” app.

Software Licences

This product contains third party software, including open source software. You are authorized to use this third party software in compliance with the relevant licensing terms.

- Licences for the integrated wireless module: See page 23.
- Licences for the programming unit: See page 23.

Commissioning

The commissioning and matching of the boiler 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.

Your System is Preset

Your heating system is preset at the factory and is therefore ready for operation following commissioning by your contractor:

Note: The following paragraph “DHW heating” is not valid for operation with a DHW tank with temperature switch (such as an Aquastat).

DHW tank heating

- DHW is heated to 122°F (50°C) “Set DHW temperature”. Any installed DHW recirculation pump is switched on.

DHW comfort function

- Only for Vitodens 100-W B1KE boilers. Your heating contractor can activate the DHW comfort function. This makes DHW available faster.

Frost protection

- Your boiler and DHW tank (if installed) are protected against frost.

Wintertime/summertime changeover

- This changeover is automatic.

Date and time

- The date and time were set by your heating contractor. You can change these settings at any time to suit your individual requirements.

Power failure

All settings are saved if there is a power failure.

Energy Saving Tips

Saving energy when using central heating

- Do not overheat your home. Every degree of room temperature reduction saves up to 6% on your heating bills.
  Weather-compensated operation:
  Do not set your standard room temperature (temperature level “Standard”) higher than 68°F (20°C)
- Heat your home to the reduced temperature at night or during regular absences:
  – Weather-compensated operation:
  Reduced room temperature
  – Constant operation:
  Reduced supply temperature

Saving energy on DHW heating

- At night or during regular absences, heat the DHW to a lower temperature. To do so, adjust the time program for DHW heating: See page 13.
- Switch on DHW recirculation only for those times in which you regularly use hot water. For additional energy saving functions, please contact your contractor.

Tips for Greater Comfort

Sufficient DHW heating for your needs

- Adjust the time program for DHW heating so that there is always sufficient hot water in accordance with your habitual routines: See page 13.
  Example: You need more DHW in the morning than in the daytime.
- If you need a higher DHW temperature for a short while, select “One-off heating DHW”: See page 17.

Operating Principles

Display
You can adjust any setting on your system centrally at the control unit.
The control unit is equipped with a black/white screen.
For settings and to call up information, tap the on screen buttons.

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 your room temperature controller.


Operating instructions for room temperature controller

Status display with Lightguide
A red illuminated strip (Lightguide) is displayed at the lower or upper edge of the control unit during operation.
Meaning of the display:
- Lightguide pulsates slowly:
  Display is in standby mode.
- Lightguide is illuminated constantly:
  You are operating the control unit. Every input operation is confirmed by a brief flashing.
- Lightguide flashes quickly:
  There is a fault in the system.

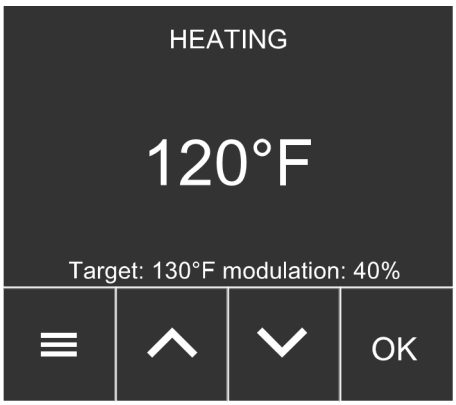
Note: You can switch off the Lightguide. See page 19.

Screen Displays

Standby
The display backlighting is switched off after approximately 2 minutes.

Home screen
After starting or activating the control unit the home screen is shown.
The home screen shows information about the DHW.
Call up the home screen as follows:
- Standby is active: Tap any button.
- From anywhere in the menu:
  Tap ☰ repeatedly, until the home screen is displayed.

Buttons



Special key combinations:
- Direct to system overview from a menu:
  ☰ press and hold for approx. 4 sec.
- Establishing internet connection:
  In the home screen, press and hold OK for approx. 4 sec.
- Switching WiFi on and off:
  ⌄ + **OK**: Press and hold simultaneously for approx. 4 sec.
- Calling up burner status:
  ⌃ + ⌄: Press and hold simultaneously for approx. 4 sec.

☰ ■ Calls up the main menu.
■ Takes you one step back.
⌃⌄ To select a menu or adjust values.
OK Confirms your selection or saves the setting made.

System Overview

Depending on the system equipment level, you can check the most important information in the system overview:
- Heating
- DHW (home screen)

Note: Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).

- Network
- Outside temperature (for weather-compensated operation)
- Date and time (for constant operation)

Tap the following buttons:
1. Call up the home screen.
2. ∧∨ for the required information

Calling up further information: See page 23.

Overview of the “Main menu”

In the main menu, you can check and adjust all of the settings for the boiler’s range of functions. You can find the menu overview on page 32.

Available menus:
- Active messages (if available)
- Turn on/off
- DHW
- Network
- Energy metering
- Information
- Settings

Tap the following buttons:
1. Call up the home screen.
2. ≡
3. ∧∨ for the required menu
4. **OK** to confirm

Procedure for Setting a Time Program

The following explains how to input the settings for a time program. The specifics of the individual time programs can be found in the relevant chapters.

Time programs and time phases
Not valid for operation with a DHW tank with temperature switch (such as an Aquastat).
In the time programs you determine what your heating system should do at what time. To do so, divide the day into sections. These are called time phases.
Different temperature levels are active within and outside these time phases.

You can set up a time program for the following functions:

Function	Temperature level	
	Within the time phase	Outside the time phase
Central heating	A time program for central heating can be set at the room temperature controller (field supplied).  Operating instructions for room temperature controller	
DHW heating	DHW heating is switched on. The water in the DHW tank is heated to the target DHW temperature.	DHW heating is switched off.

The time programs can be set individually to be the same, or different, for every day of the week.

Setting time phases
Not valid for operation with a DHW tank with temperature switch (such as an Aquastat).
You can set up to 4 time phases in each time program.
For each time phase, you select the start and end points.

Note:
- DHW is not heated between the time phases. Frost protection for the DHW tank is active if no DHW tank with temperature switch is active.
- When setting time programs, bear in mind that your system needs some time to heat the DHW tank to the required temperature.

Note: With a "Combi boiler", the "DHW comfort function" is active during the set time phases (plate heat exchanger is kept at temperature).
The time phases need to be deleted to switch off the comfort function.

Example:
Time program for "Monday" for DHW
- Time phase 1: 06:30 to 12:00
- Time phase 2: 15:00 to 21:00

Procedure for Setting a Time Program *(continued)*

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “Time programs”
6. OK to confirm
7. ∧∨ for “DHW”
8. OK to confirm
9. ∧∨ for “DHW”
10. OK to confirm
11. ∧∨ for “Monday” (required day of the week)
12. OK to confirm
13. ∧∨ for the time phase “06:00 - 22:00” (required time phase that needs to be changed)
14. OK to confirm
15. ∧∨ for “Edit”
16. OK to confirm
17. ∧∨ for the start time “06” (hour)
18. OK to confirm
19. ∧∨ for the start time “30” (minutes)
20. OK to confirm
21. ∧∨ for the end time “12” (hour)
22. OK to twice confirm
23. ∧∨ for the end time “00” (minutes)
24. OK to confirm
25. ∧∨ for “Add” (further time phase)
26. OK to confirm
27. ∧∨ for the start time “15” (hour)
28. OK to confirm
29. ∧∨ for the start time “00” (minutes)
30. OK to confirm
31. ∧∨ for the end time “21” (hour)
32. OK to confirm
33. ∧∨ for the end time “00” (minutes)
34. OK twice to confirm
35. ☰ for approx. 4 sec, to exit the menu.

Setting a time program for the DHW recirculation pump
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “Time programs”
6. OK to confirm
7. ∧∨ for “DHW circulation pump”
8. OK to confirm

For further steps, see above, from step 8.

Copying the time program to other days of the week
Explanation of the procedure for DHW.
Example:
You want to copy the time program for “Monday” over to “Thursday” and “Friday”.
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “Time programs”
6. OK to confirm
7. ∧∨ for “DHW”
8. OK to confirm
9. ∧∨ for “DHW”
10. OK to confirm
11. ∧∨ for “Monday” (required days to which the time program is to be copied)
12. OK to confirm
13. ∧∨ for “Copy”
14. OK to confirm
15. ∧∨ for “Thursday” (required days to which the time program is to be applied)
16. Place a tick next to Thursday with OK
17. ∧∨ for “Friday” (required days to which the time program is to be applied)
18. Place a tick next to Friday with OK
19. ∧∨ for “Copy to”
20. OK to confirm
21. OK to acknowledge the information
22. ☰ for approx. 4 sec, to exit the menu.

Additional time programs can be copied and applied correspondingly:
You can simultaneously transfer time programs for DHW heating to the DHW recirculation pump or vice versa. Copy “DHW” or “DHW circulation pump” for this.

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Procedure for Setting a Time Program *(continued)*

Changing time phases

Explanation of the procedure using DHW as an example.

Example:

For “Monday”, you want to change the end time for time phase 2 to 19:00.

Tap the following buttons:

1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “Time programs”
6. OK to confirm
7. ∧∨ for “DHW”
8. OK to confirm
9. ∧∨ for “DHW”
10. OK to confirm
11. ∧∨ for “Monday” (required day of the week)
12. OK to confirm
13. ∧∨ for the time phase “15:00 - 21:00” (required time phase that needs to be changed)
14. OK to confirm
15. ∧∨ for “Edit”
16. OK to confirm
17. OK twice to confirm the unchanged start time (hour and minutes)
18. ∧∨ for the end time “19” (hour)
19. OK to confirm the new end time (hour)
20. OK to confirm the unchanged entries for the end time (minutes)
21. OK to acknowledge the information
22. ☰ for approx. 4 sec, to exit the menu

Deleting time phases

Explanation of the procedure using DHW as an example.

Example:

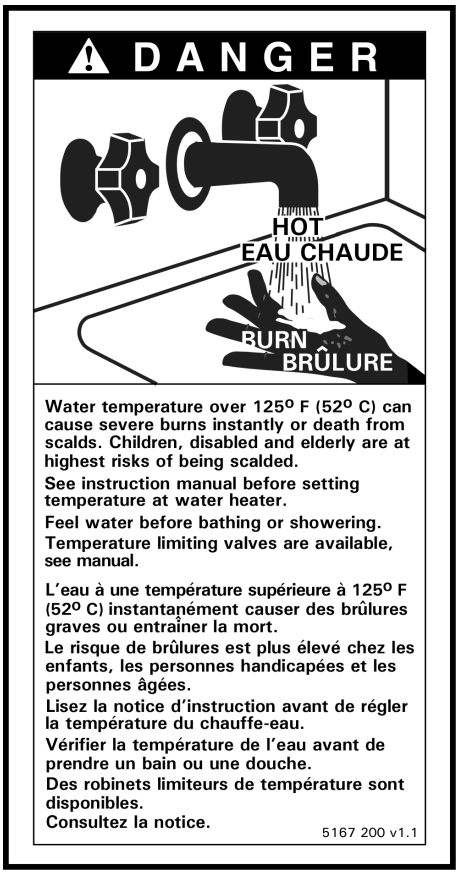
For “Monday”, you want to delete time phase 2.

Tap the following buttons:

1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “Time programs”
6. OK to confirm
7. ∧∨ for “DHW”
8. OK to confirm
9. ∧∨ for “DHW”
10. OK to confirm
11. ∧∨ for “Monday” (required day of the week)
12. OK to confirm
13. ∧∨ for the time phase “15:00 - 19:00” (required time phase that needs to be deleted)
14. OK to confirm
15. ∧∨ for “Delete”
16. OK to confirm
17. OK to acknowledge the information
18. ☰ for approx. 4 sec, to exit the menu

DHW Temperature

For the Vitodens 100-W B1KE with instantaneous DHW a scalding label is placed on the side of the boiler.



Note: When operating with a DHW tank with temperature switch (such as an Aquastat), the maximum target value of the boiler applies (depending on the boiler) and cannot be changed.

WARNING

Hot water can cause serious injuries.
Do not touch hot water.

Note: For reasons of good hygiene, you should not set the DHW temperature lower than 122°F (50°C).

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for "DHW"
4. OK to confirm
5. ∧∨ for "Temperature level"
6. OK to confirm
7. ∧∨ for "Standard"
8. OK to confirm
9. Set the target value
10. OK to confirm
11. OK to acknowledge the information
12. ☰ for approx. 4 sec, to exit the menu.

Operating Programs for DHW Heating

Note: Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).

Operating program	Function
DHW heating	
"DHW" "ON"	DHW is heated in accordance with the DHW temperature and time program specified (see chapter "DHW heating").
"DHW" "OFF"	■ No DHW heating ■ Frost protection for the DHW tank is active.

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Switching DHW Heating On or Off

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Turn on/off”
4. OK to confirm
5. ∧∨ for “DHW”
6. OK twice to confirm
7. ∧∨ for “ON” or “OFF”
8. OK to confirm
9. OK to acknowledge the information
10. ☰ for approx. 4 sec, to exit the menu.

Note: To set a time program, see page 13.

One-off DHW Heating Outside the Time Program

Note: Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).

If you require hot water outside the set time phases, switch on “One-off heating DHW”. The DHW tank is heated once to the set DHW temperature.
This function has a higher priority than other functions, such as the time program for example.

Switching on “One-off heating DHW”

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “One-off heating”
6. OK to confirm
7. ∧∨ to activate
8. OK to confirm
9. OK to acknowledge the information

Switching off “One-off heating DHW”

“One-off heating DHW” ends as soon as the target DHW temperature has been reached.
To terminate “One-off heating DHW” early, tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “DHW”
4. OK to confirm
5. ∧∨ for “One-off heating” (active)
6. OK to confirm
7. ∧∨ for “Stop”
8. OK to confirm
9. OK to acknowledge the information

Increased DHW Hygiene

⚠ WARNING

High DHW temperatures can cause scalding, e.g. if the DHW temperature is above 140°F (60°C). Mix with cold water at the draw-off points.

You can heat the water in the DHW tank to above 140°F (60°C) once a week or for an hour every day. This function is regularly carried out at the specified time.
Note: Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).

Switching on the "Hygiene program"
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for "DHW"
4. OK to confirm
5. ∧∨ for "Time program"
6. OK to confirm
7. ∧∨ for "DHW"
8. OK to confirm
9. ∧∨ for "DHW"
10. OK to confirm
11. ∧∨ for "Hygiene Program"
12. OK to confirm
13. ∧∨ for the required day or everyday
14. OK to confirm
15. ∧∨ for required time (hour)
16. OK to confirm
17. ∧∨ for required time (minutes)
18. Press ✓ twice to confirm
19. ☰ for approx. 4 sec, to exit the menu.

Switching off the "Hygiene program"
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for "DHW"
4. OK to confirm
5. ∧∨ for "Time program"
6. OK to confirm
7. ∧∨ for "DHW"
8. OK to confirm
9. ∧∨ for "DHW"
10. OK to confirm
11. ∧∨ for "Hygiene program"
12. OK to confirm
13. ∧∨ for "Stop"
14. OK to confirm
15. OK to acknowledge the information.

Switching DHW scald protection on/off
Note: Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for "DHW"
4. OK to confirm
5. ∧∨ for "Temperature level"
6. OK to confirm
7. ∧∨ for "Scald protection"
8. OK to confirm
9. ∧∨ for "On" or "Off"
10. OK twice to confirm

Note: With scald protection switched off, a target DHW temperature of over 140°F (60°C) can be set, depending on the boiler. There is an increased risk of scalding!

Setting the Display Brightness

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Display brightness”
6. OK to confirm
7. ∧ ∨ for “Display”
8. OK to confirm
9. ∧ ∨ for the selected value
10. OK to confirm
11. ☰ for approx. 4 sec, to exit the menu.

Switching the “Lightguide” On and Off

Depending on the type of boiler, a red illuminated strip (Lightguide) is displayed at the lower or upper edge of the control unit during operation.
In the delivered condition, the Lightguide is switched on.
You can switch off the Lightguide.
Meaning of the display:
- Lightguide pulsates slowly:
  Display is in standby mode.
- Lightguide is illuminated constantly:
  You are operating the control unit. Every input operation is confirmed by a brief flashing.
- Lightguide flashes quickly:
  There is a fault in the system.

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Display brightness”
6. OK to confirm
7. ∧ ∨ for “Lightguide”
8. OK to confirm
9. ∧ ∨ for “ON” or “OFF”
10. OK to confirm
11. ☰ for approx. 4 sec, to exit the menu.

Note: Faults are shown by flashing lights even if the Lightguide is switched off.

Setting the “Time” and “Date”

The “Time” and “Date” are set at the factory. If your system has been shut down for a prolonged period, you may need to reset the “Time” and “Date”.

Set time

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Date and time”
6. OK to confirm
7. ∧ ∨ for “Time”
8. OK to confirm
9. ∧ ∨ for “Time”
10. OK to confirm
11. ∧ ∨ for the hour
12. OK to confirm
13. ∧ ∨ for the minute
14. OK to confirm
15. ☰ for approx. 4 sec, to exit the menu.

Setting the format for the time

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Date and time”
6. OK to confirm
7. ∧ ∨ for “Time”
8. OK to confirm
9. ∧ ∨ for “Format”
10. OK to confirm
11. ∧ ∨ for the required format:
    - “12 h”
    - “24 h”
12. OK to confirm
13. ☰ for approx. 4 sec, to exit the menu.

Set the date

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Date and time”
6. OK to confirm
7. ∧ ∨ for “Date”
8. OK to confirm
9. ∧ ∨ for “Date”
10. OK to confirm
11. ∧ ∨ for the year
12. OK to confirm
13. ∧ ∨ for the month
14. OK to confirm
15. ∧ ∨ for the day
16. OK to confirm
17. ☰ for approx. 4 sec, to exit the menu.

Setting the format for the date

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧ ∨ for “Settings”
4. OK to confirm
5. ∧ ∨ for “Date and time”
6. OK to confirm
7. ∧ ∨ for “Date”
8. OK to confirm
9. ∧ ∨ for “Format”
10. OK to confirm
11. ∧ ∨ for the required format:
    - “DD.MM.YY”
    - “MM/DD/YY”
    - “YY-MM-DD”
12. OK to confirm
13. ☰ for approx. 4 sec, to exit the menu.

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Summertime/Wintertime Automatic Changeover

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Settings”
4. OK to confirm
5. ∧∨ for “Date and time”
6. OK to confirm
7. ∧∨ for “Time”
8. OK to confirm
9. ∧∨ for “Time changeover”
10. OK to confirm
11. ∧∨ for “ON” or “OFF”
12. OK to confirm
13. ☰ for approx. 4 sec, to exit the menu.

Setting the “Language”

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Settings”
4. OK to confirm
5. ∧∨ for “Language”
6. OK to confirm
7. ∧∨ for the required language
8. OK to confirm
9. ☰ for approx. 4 sec, to exit the menu.

Setting “Units”

You can adjust all available units, e.g. for temperature, etc.
Note: The format for date and time can be set in the “Date and time” menu.

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Settings”
4. OK to confirm
5. ∧∨ for “Units”
6. OK to confirm
7. ∧∨ for the required unit, e.g. “Temp./length”
8. OK to confirm
9. ∧∨ for the required setting
10. OK to confirm
11. ☰ (for approx. 4 sec, to exit the menu).

Switching Internet Access On or Off

You can control your system remotely via the internet using an app. To do this, establish an internet connection via WiFi: See the following chapter.

The required credentials for internet access to the control unit via app can be found on the adjacent label:

Attach the WiFi label here

Establishing a WiFi connection

Tap the following buttons:

1. Call up the home screen.
2. ☰
3. Press and hold OK for approx. 4 sec. Information is displayed.
4. Follow the instructions in the app.

Fault while establishing the connection

"E10" Could not connect to local network.

Note: If "E10" appears on the display, check the connection to the router and whether the network password is correct.

"E12" Connection to the server cannot be established.

Note: If "E12" appears on the display, re-establish the connection at a later time.

5. At the end, OK to confirm
6. OK to acknowledge the information
7. ☰ for approx. 4 sec, to exit the menu.

Switching WiFi on and off

Tap the following buttons:

1. Call up the home screen.
2. ∨ + OK: Press and hold simultaneously for approximately 4 sec.

Energy Metering Settings

You can set the values for the correction factor and calorific value to determine consumption arithmetically. To call up the values: See page 26.

Tap the following buttons:

1. ☰
2. ∧∨ for "Energy metering"
3. OK to confirm
4. ∧∨ for "Consumption"
5. OK to confirm
6. ∧∨ for "Settings"
7. OK to confirm
8. ∧∨ for "Correction factor" or "Calorific value"
9. OK to confirm
10. ∧∨ to enter values.
11. OK to acknowledge the information

Restoring Factory Settings

You can reset all entries and values to their factory settings. Settings and values that are reset with all operating modes:

- Room temperature or supply temperature
- Operating program
- DHW temperature
- Time program for DHW heating

Tap the following buttons:

1. Call up the home screen.
2. ☰
3. ∧∨ for "Settings"
4. OK to confirm
5. ∧∨ for "Factory settings"
6. OK to confirm
7. OK to acknowledge the information

Calling Up Help Messages

You can call up help messages relating to some of the displays and functions.
Tap the following buttons:
1. ∧∨ within the menu if necessary for “Help”
2. OK to confirm
3. ☰ to exit the screen

Checking Information

Depending on the system equipment level and the settings made, you can call up current system data, e.g. temperatures.
Note: Detailed options for checking the individual groups can be found in chapter “Menu overview”.
Note: Here you will find information about the temperature controller and heating circuit pump.

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Information”
4. OK to confirm
5. ∧∨ for the required group
6. OK to confirm
7. ∧∨ for the required information
8. ☰ for approx. 4 sec, to exit the menu.

Checking the Energy Metering

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Energy metering”
4. OK to confirm
5. ∧∨ for “Consumption”
6. OK to confirm
7. ∧∨ to select the current month or last month.
8. OK to confirm
9. read off the value.

Note: The value shown is calculated and may differ from the actual consumption level.
Not suitable for billing purposes.

10. ☰ for approx. 4 sec, to exit the menu.

Calling Up Licences for the Programming Unit

Calls up the licence for the programming unit.
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Information”
4. OK to confirm
5. ∧∨ for “Open source licences”
6. OK to confirm
7. ☰ for approx. 4 sec, to exit the menu.

Calling Up Licences for the Integrated Wireless Module

Switch on the WiFi to call up online legal information, such as open source licences:
In the home screen, press and hold OK for approx. 4 sec.

Calling up open source licences
1. Call up the WiFi settings of your smartphone or PC.
2. Connect your smartphone or PC to the WiFi “Viessmann-<xxxx>”.
   You will be asked to enter a password.
3. Enter the WiFi password.
   Note: The credentials can be found on the label: See chapter “Switching internet access ON or OFF”.
4. With your connected mobile device, open http://192.168.0.1 in your internet browser
5. Follow the link “Open Source Components Licences”.

Calling Up Licences for the Integrated Wireless Module *(continued)*

Third party software

Overview
This product contains third party software, including open source software. You are entitled to use this third party software in compliance with the respective licence conditions as provided under the link below.
A list of the third party software components used and of licence texts can be accessed by connecting your boiler, as explained in the instruction manual.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Acknowledgements
Linux® is the registered trademark of Linus Torvalds in the U.S. and other countries. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/).
This product includes cryptographic software written by Eric Young (eay@cryptsoft.com) and software written by Tim Hudson (tjh@cryptsoft.com).

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Checking Service Messages

Your contractor can set service intervals. "Active messages" is displayed if these service intervals are exceeded.

Tap the following buttons:
1. OK to confirm
2. ☰
3. ∧∨ for "Active messages"
4. OK to confirm
5. ∧∨ for "Maintenance"
6. OK to confirm
7. ∧∨ for the required message
8. OK to confirm
   Further information regarding the message is displayed.
9. Make a note of the service message number. For example: P.1 "Interval until the next service".
   This enables the contractor to be better prepared and may save you unnecessary travelling costs.
10. Please notify your contractor.

Note: If the service cannot be carried out until a later date, the service message will be displayed again the following Monday.

11. ☰ for approx. 4 sec, to exit the menu.

Checking Fault Messages

⚠ WARNING

If faults are not rectified, they may have life threatening consequences.
Do not reset the burner several times in quick succession.
Immediately notify your contractor if a burner fault occurs. Your contractor will be able to analyze the cause and rectify the fault.

If your system has developed faults, “Burner fault” or “Active messages” are displayed. The Lightguide is flashing: See chapter “Switching the Lightguide on and off”.

Note: If troubleshooting cannot be carried out until a later date, the fault message will be displayed again the following day at 07:00. The message facility is switched on again.

Burner fault
Indication on the display:
“The burner control unit is locked out”

Tap the following buttons:
1. ∧∨ for “Ignore”
2. OK to confirm
   The burner remains locked out.
3. OK twice to acknowledge the information
4. ☰
5. ∧∨ for “Active messages”
6. OK to confirm
7. ∧∨ for “Faults”
8. OK to confirm
9. ∧∨ for the required message
10. OK to confirm
    Further information regarding the message is displayed.
11. Make a note of the fault number.
    This enables the contractor to be better prepared and may save you unnecessary travelling costs.
12. Please notify your contractor.
13. ☰ for approx. 4 sec, to exit the menu..

Faults without burner fault
Tap the following buttons:
1. OK to confirm
2. ☰ press and hold for approx. 4 sec.
3. OK
4. ∧∨ for “Error message”
5. OK to confirm
6. ∧∨ for the required message
7. OK to confirm
   Further information regarding the message is displayed.
8. Make a note of the fault number. For example: F.14 “Short circuit, outside temperature sensor”.
   This enables the contractor to be better prepared and may save you unnecessary travelling costs.
9. ☰ to go back a step in the menu
10. ∧∨ for further messages
11. ☰ to go back a step in the menu
12. ∧∨ for “Contractor”
    The contact details of your heating contractor are displayed (if your contractor has entered them, via a software tool).
13. Please notify your contractor.
14. ☰ for approx. 4 sec, to exit the menu.

Resetting the burner after a burner fault
If the burner is locked due to a fault, you can reset the burner.
Reset via home screen:

Tap the following buttons:
1. ∧∨ for “Unlock”
2. OK twice to confirm

Reset via submenu:
Tap the following buttons:
1. ☰
2. ∧∨ for “Active messages”
3. OK to confirm
4. ∧∨ for “Burner fault”
5. OK to confirm
6. ∧∨ for “Unlock”
7. OK to confirm
8. OK to acknowledge the information
9. ☰ for approx. 4 sec, to exit the menu.

Acknowledging Messages

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Active messages”
4. OK to confirm
5. ∧∨ for “Acknowledge”
6. OK to confirm
7. OK to acknowledge the information
   All pending messages are acknowledged.

Checking Messages

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Active messages”
4. OK to confirm
5. ∧∨ for the required type of message
   If there are any corresponding messages:
   - “Burner faults”
   - “Faults”
   - “Warnings”
   - “Maintenance”
   - “Status”
   - “Information”
6. OK to confirm
   The messages are shown listed.
7. ∧∨ for the required message
8. OK to confirm
   Further information regarding the message is displayed.
9. ☰ for approx. 4 sec, to exit the menu.

Calling Up the Message History

You want to call up the history of all past messages (faults, warnings, notes, etc.).
Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for “Information”
4. OK to confirm
5. ∧∨ for “System information”
6. OK to confirm
7. ∧∨ for “Message history”
8. OK to confirm
9. ∧∨ to select a message group from fault, warning, note, status or information.
10. OK to confirm
11. ∧∨ to select the message
12. OK to view the message.
13. ☰ for approx. 4 sec, to exit the menu.

Emissions Test Mode

Emissions test mode for testing flue gas must only be activated by your certified contractor.
If possible, have the emissions test carried out during the heating season.
Emissions test mode is activated via the service menu.
Tap the following buttons to access the service menu:

1. Call up the home screen.
2. ☰
3. ∧∨ for “Settings”
4. OK to confirm
5. ∧∨ for “Service”
6. OK to confirm
7. ∧∨ for “Test mode”
8. Selet “Yes”
9. OK to confirm
10. ∧∨ for “Test mode”
11. OK to confirm
12. Select “Start”
13. OK to confirm

Note: The settings and functions in the service section can be found in the installation and service instructions.

Vitodens 100-W installation and service instructions

High Limit Safety Cut-Out Test

Tap the following buttons:

1. Call up the home screen.
2. ☰
3. ∧∨ for “Settings”
4. OK to confirm
5. ∧∨ for “Service”
6. OK to confirm
7. ∧∨ for “Yes”
8. OK to confirm
9. ∧∨ for “Test high limit safety cutout”
10. OK to confirm
11. ∧∨ for “Yes”
12. OK to confirm

Switching Off the Boiler Without Frost Protection Monitoring

- No central heating
- No DHW heating
- Frost protection for the boiler and the DHW tank is not active.

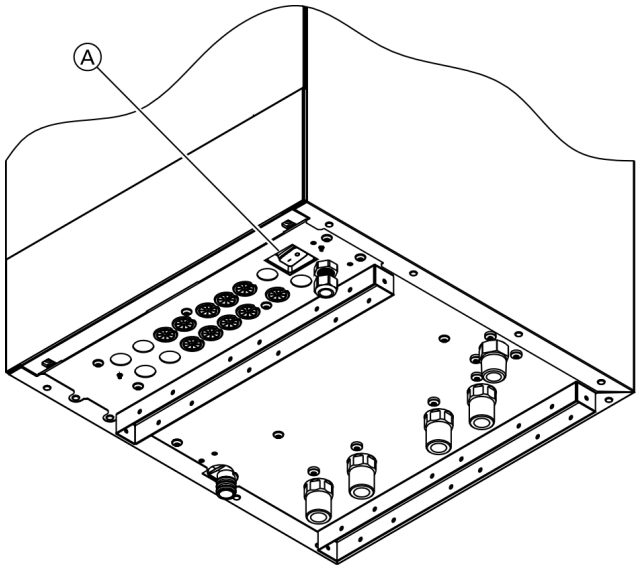
1. Turn off the ON/OFF switch.
2. Close the gas shut-off valve and safeguard against unauthorized reopening.

IMPORTANT

If outside temperatures of below 37°F (3°C) are expected, take appropriate measures to protect the system from frost. If necessary, contact your contractor.

Note:
- As they are not being supplied with power, the circulation pumps and diverter valves may seize up.
- If your system has been shut down for a prolonged period, you may need to reset the "Time" and "Date": See page 19.

Switching On the Boiler



Ⓐ **ON/OFF switch**

Ask your contractor about the following:
- Required system pressure
- Position of ventilation apertures in the installation room, if applicable

1. Open the gas shut-off valve.
2. Check whether the power supply to your system is switched on, e.g. at a separate MCB/fuse.

Note: The power supply to the system was switched on by your heating contractor during commissioning. If possible, do not interrupt the power supply, even when the system is in standby mode.

3. Turn on the ON/OFF switch Ⓐ.

- After a short while, the home screen is shown on the display.
- The Lightguide is illuminated constantly. Your system and, if installed, your remote controls are ready for operation.

4. Check the system pressure at the pressure gauge. If the displayed pressure is below 12 psi (0.8 bar), top up the water or notify your heating contractor.

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Rooms are too Cold

Cause	Remedy
The boiler is switched off.	■ Turn on the ON/OFF switch: See page 28. ■ Switch on the power supply to your system, e.g. at a separate MCB/fuse or mains isolator.
■ Incorrect control unit settings.	Central heating must be enabled. Check the settings and correct if necessary: ■ Operating program: See page 16. ■ Supply temperature ■ Time: See page 19.
The DHW tank is being heated.	Wait until the DHW tank has been heated up. Reduce the DHW draw-off rate or temporarily reduce the set DHW temperature as required.
No fuel.	Open the gas shut-off valve. If necessary, check with your gas supply utility.
"Burner fault" is displayed.	Reset the burner: See page 25. **⚠ WARNING** **If faults are not rectified, they may have life threatening consequences.** **Do not reset the burner several times in quick succession.** **Immediately notify your contractor if a burner fault occurs.** **Your contractor will be able to analyze the cause and rectify the fault.**
"Error message" is displayed.	Check what type of fault it is. Make a note of the fault message and acknowledge the fault: See page 25. If necessary, notify your contractor.

Rooms are too Hot

Cause	Remedy
Incorrect control unit settings.	Check the settings and correct if necessary: ■ Operating program: See page 16. ■ Supply temperature ■ Time: See page 19.
"Error message" is displayed.	Check what type of fault it is. Make a note of the fault message and acknowledge the fault: See page 25. If necessary, notify your contractor.

There is no Hot Water

Cause	Remedy
The boiler is switched off.	■ Turn on the ON/OFF switch ■ Switch on the power supply to your system, e.g. at a separate MCB/fuse or mains isolator.
Incorrect control unit settings.	Central heating must be enabled. Check the settings and correct if necessary: ■ Operating program: See page 16. ■ DHW temperature: See page 16. ■ Time: See page 19. ■ Time program for DHW heating: See page 13.
No fuel.	Open the gas shut-off valve. If necessary, check with your gas supply utility.
"Error message" is displayed.	Check what type of fault it is. Make a note of the fault message and acknowledge the fault: See page 25. If necessary, notify your contractor.

The DHW is too Hot

Cause	Remedy
Incorrect control unit settings.	Check and correct the set DHW temperature if necessary: See page 16.
The hygiene function is switched on.	Wait until the hygiene function has been completed.

"Burner fault" is Displayed

Cause	Remedy
Burner fault	Proceed as described on page 25.

"Active messages" is Displayed

Cause	Remedy
The time for a service as specified by your contractor has arrived. or System fault	Proceed as described on page 25.

"Trade fair mode" is Displayed

Cause	Remedy
Trade fair mode is active. No heating, no DHW heating.	Notify your contractor.

Cleaning

The boilers can be cleaned with a commercially available domestic cleaning agent (non-scouring).
Clean the surface of the operating unit with a microfiber cloth.

Inspection and Maintenance

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

DHW tank
Maintenance or cleaning should be carried out no later than 2 years after commissioning and thereafter as required.

Only a qualified contractor should clean the inside of the DHW tank and the DHW connections.
If any water treatment equipment is installed in the cold water supply of the DHW tank, ensure this is refilled in good time.
For this, observe the manufacturer's instructions.

Temperature and pressure relief valve (DHW tank)
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 soiled.
Water may drip from the safety valve during a heat-up process. The outlet is open to the atmosphere.

CAUTION

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.

Overview of “Main menu”

Note: Depending on the features of your system, not all of the displays and checks listed may be available under ☰.

Tap the following buttons:
1. Call up the home screen.
2. ∧∨ for the required information.

Heating	
	■ Set supply temperature ■ Actual supply temperature ■ Burner modulation
	Operating program: ■ Standby ■ Summer mode ■ Frost protection

Only for weather-compensated operation:
Outside temperature

Only for constant operation:
Date and time

WiFi	
	Connection status
	SSID
	Signal strength

DHW **Note:** Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).	
	On/Off
	One-off heating
	Current target temperature

Overview of "Main menu" *(continued)*

Note: Depending on the features of your system, not all of the displays and checks listed may be available.

Tap the following buttons:
1. Call up the home screen.
2. ☰
3. ∧∨ for the required menu.

Trade fair mode active		
	If the boiler has been set by the contractor to "demonstration" mode, e.g. for exhibitions. No central heating, hot water or frost protection available!	
Active messages (if there are any current messages)		
	Acknowledge (if there are faults or service messages)	
	Burner fault	
	Faults	
	Warnings	
	Maintenance	
	Status	
	Information	
	Contractor	
Turn on/off **Note:** Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).		
	DHW	
DHW **Note:** Not valid for systems with a DHW tank with temperature switch (such as an Aquastat).		
	Time program	
		DHW
		Hygiene program
		DHW recirculation pump
	One-off heating	
	Temperatures	
		Standard
		Scald protection
Network		
	SSID	
	Signal strength	
	Status	
Energy metering		
	Consumption	

Overview of "Main menu" *(continued)*

Information		
	Boiler information	
		Burner Status
		Boiler serial number
		Device serial number
		Software version
		Burner hours run
		Thermostat function
		Heating circuit pump
		Type of heating
		Slope
		Level
		Altitude at the installation site
		DHW temperature
	Contractor	
	System information	
		Active messages
		Message history
	Open source licences	
Settings		
	Date and time	
		Date
		Time
	Display brightness	
		Display
		Lightguide
	Language	
	Units	
		Temp./length
	Factory settings	
	Service menu	

Terminology

Standby mode
Boiler is switched off. Only frost protection of boiler and DHW tank is active. No central heating, no DHW heating

System version
The system version describes the components of your system.
Some examples:
- Boiler
- Heating circuit pump
- Mixing valve
- Valves
- Electronics module
- Radiator

Every system is individually configured and adapted to the local conditions by your heating contractor.

Operating program
The operating program enables you to define the following, for example:
- How you heat your rooms
- Whether you heat DHW

Operating status
See “Time program”.

Operating mode
See “Heating operation”.

Infloor heating
Infloor heating systems are slow, low temperature heating systems that respond only very slowly to short term temperature changes.
Heating with reduced room temperature at night therefore does not result in any significant energy savings.

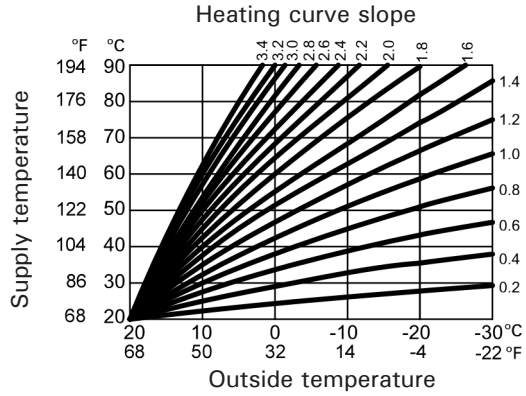
Heating operation

Operating modes
To heat your home, the boiler provides heat as specified by the set supply temperature. The operating mode determines whether the supply temperature is specified with a fixed value or whether it is automatically calculated and adjusted subject to several ancillary conditions.
Your contractor can configure the following operating modes during commissioning:
- Weather-compensated operation
- Constant operation

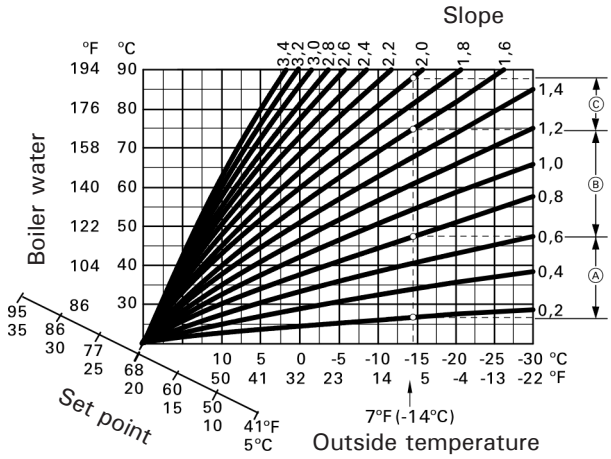
Constant operation
In constant operation the boiler provides heating water with a constant supply temperature regardless of the outside temperature.

Weather-compensated heating operation
In weather-compensated operation, the supply temperature is controlled subject to outside temperature. More heat is made available at lower outside temperatures than at a higher ones.
The outside temperature is captured and transmitted to the control unit by a sensor fitted outside the building.

Terminology *(continued)*



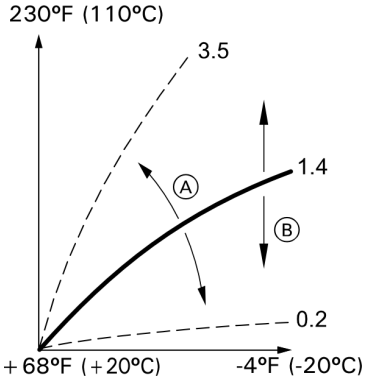
Heating curve
Heating curves illustrate the relationship between the outside temperature, the target room temperature and the supply temperature. The lower the outside temperature, the higher the supply temperature.
In order to guarantee sufficient heat with minimum fuel consumption at any outside temperature,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



Setting the slope and shift, taking the heating curve as an example
Factory settings:
- Slope = 1.4
- Shift = 0

The illustrated heating curves apply with the following settings:
- Heating curve shift = 0
- Standard room temperature (target room temperature) = 68°F (20°C)

For outside temperature 7°F (−14°C):
Ⓐ Infloor heating system: Slope 0.2 to 0.8
Ⓑ Low temperature heating system: Slope 0.8 to 1.6
Ⓒ System with a supply temperature in excess of 167°F (75°C), slope 1.6 to 2.0



Note: Setting the slope or shift too high or too low will not cause any damage to your heating system. Both settings affect the level of the supply temperature, which may then be too low or unnecessarily high.

Ⓐ If you change the slope:
The steepness of the heating curves changes.
Ⓑ If you change the shift:
The heating curves are shifted in parallel in a vertical direction.
Ⓑ If you change the standard room temperature (target room temperature):
The heating curves are offset along the “Target room temperature” axis.

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Terminology *(continued)*

Heating circuit pump
Circulation pump for circulating the heating water in the heating circuit

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

Direct vent operation
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 relief 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 tank. The heating circuits are also equipped with safety valves.

Temperature target
See “Target temperature”.

Target temperature
Specified temperature that should be reached, e.g. target DHW temperature.

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

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

Weather-compensated operation
See “Heating operation”

Time program
In the time programs you determine what your heating system should do at what time.

Operating status
The operating status indicates how a component of your heating system is being operated.
For example, the operating statuses for DHW heating have different temperature levels.
The times for the operating status changeover are defined when the time program is set.

Lighting and Operating Instructions

FOR YOUR SAFETY READ BEFORE OPERATING

W A R N I N G: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This boiler does not have a pilot. It is equipped with an ignition device which automatically lights the burner. Do Not try to light the burner by hand.

B. BEFORE OPERATING smell all around the boiler area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

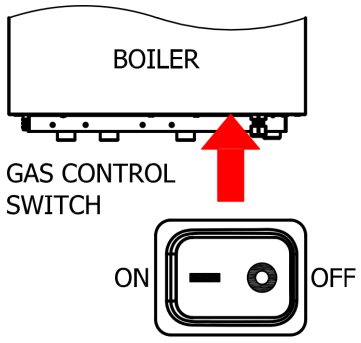
WHAT TO DO IF YOU SMELL GAS
- Do not try to light any boiler.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to push the main gas supply switch. Never use tools. If the main gas supply switch will operate by hand, don't try to repair it, call a qualified service technician.
Force or attempted repair may result in a fire or explosion.

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

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above.
2. Set thermostat or other operating control to lowest setting.
3. Turn off all electric power to the boiler.



4. This boiler is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Close main gas shut-off valve.
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you don't smell gas, go to the next step.
7. Open main gas shut-off valve.
8. Turn on all electric power to the boiler.
9. Set thermostat or other operating control to desired setting.
10. If the boiler will not operate, follow the instructions "To Turn Off Gas To Boiler" and call your service technician or gas supplier.

TO TURN OFF GAS TO BOILER

1. Set thermostat or other operating control to lowest setting.
2. Turn off all electric power to the boiler if service is to be performed.
3. Turn off the control gas switch.

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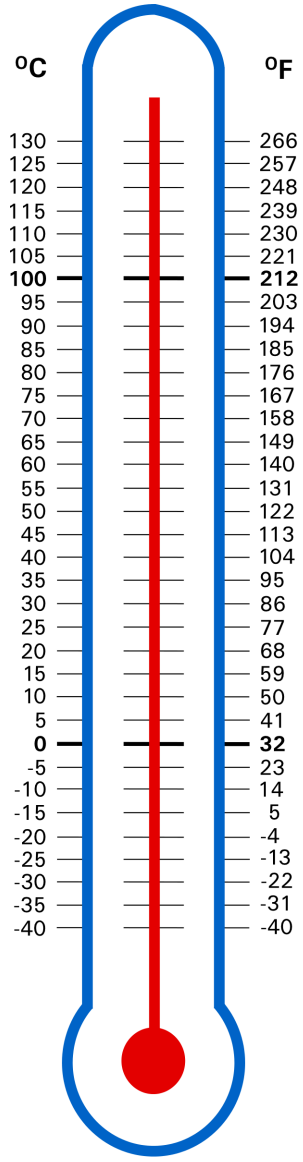

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