

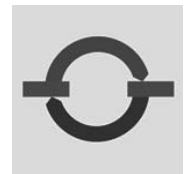
# Operating Instructions

for use by heating contractor

**VISSMANN**<sup>®</sup>

**Vitotronic 300-K, type MW2C**

Multi boiler system with weather-compensated cascade control



## VITOTRONIC 300-K



Vitotronic 300-K



Certified as a component  
part for Viessmann boilers

*Product may not be exactly as shown*

**IMPORTANT**

**Read and save these instructions  
for future reference.**

# 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".*



■ **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.

■ **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**


**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.

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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.

### ■ Flue gas smell

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

### ■ 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.

### ■ Dangerous conditions

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

### ■ Maintenance and cleaning

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

### ■ Technical Information

- Installation Instruction and Service Instructions
- Operating Instructions Vitotronic 300-K
- Operating Instructions Vitotronic 200

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 2034-2002, CSA 6.19-01) 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.

■ **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 death. 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.

If you notice fire coming from the appliance, 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.

**For your Safety** *(continued)***Frozen water pipe hazard****⚠ 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.

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.

**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 carried out 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 to the right 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

## Where to Find the Controls

Each boiler is equipped with its own control unit. These control units are regulated by a higher weather-compensated cascade control unit.

- Boiler control unit:  
Vitotronic 200



Vitotronic 200

- Higher weather-compensated cascade control unit:  
Vitotronic 300-K

You can change all settings for your heating system centrally at the control unit programming units. You may also make such changes at the remote control units, if your system is equipped with such units.



See the Remote Control Operating Instructions.

For use with multi boiler systems, the Vitotronic 200 is set up for operation with a constant boiler water temperature.



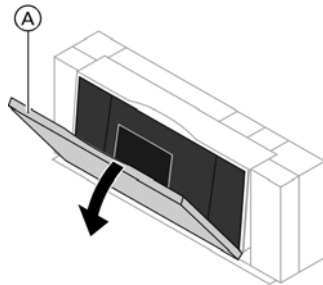
Refer to applicable boiler Operating Instructions.

As a result, display and settings on the Vitotronic 200 will only be accessible to a limited degree.



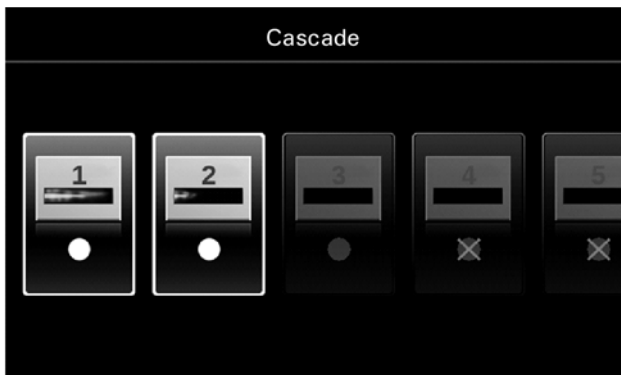
Refer to the Vitotronic 300-K MW2C Installation and Service Instructions.

## Opening the Vitotronic 300-K



The programming unit is located behind cover flap (A). To open, pull the top edge of the hinged cover forward.

## Cascade Control Programming Unit




A screensaver appears after opening the control unit, or if there has not been any operation for some time.

The programming unit is equipped with a touchscreen. To make adjustments and scan information, tap the on-screen buttons.

### Default display

In the default display, the number of boilers installed in the heating system is shown in a specific order (boiler sequence). You can change the boiler sequence (see page 21).

Call up the default display as follows:

- Screensaver is active:  
Tap the display anywhere, to begin.
- From anywhere in the menu tap .

**Cascade Control Programming Unit** *(continued)*



**Legend**

- (A) Header
- (B) Common supply temperature - Actual
- (C) Common supply temperature - Setpoint
- (D) Boiler number (arranged in order of boiler sequence)
- (E) Details on the boiler operating mode (see the following chapter)
- (F) Footer

**Boiler operating mode**

The flame symbol indicates the approximate current boiler heating output (in percent):

- Flame with 1/3 length  $\hat{=}$  1 to 33%
- Flame with 2/3 length  $\hat{=}$  34 to 66%
- Flame with full length  $\hat{=}$  66 to 100%

Circle symbol:

- Solid white:  
The boiler has been enabled by the cascade control unit and is operating (boiler 1 and 2 in this example).
- Solid grey:  
The boiler is available for generating heat but has not been called for by the cascade control unit (boiler 3 in this example).
- Crossed out:  
The boiler has been disabled for heat generation (boiler 4 and 5 in this example).

The value below the circle indicates the current output (in MBH or kw based on the selected measuring units, see page 23).

**Main menu**

In the main menu, you can change the boiler sequence and scan and change all settings for functions made available by the cascade control unit, such as heating defaults and time programs.

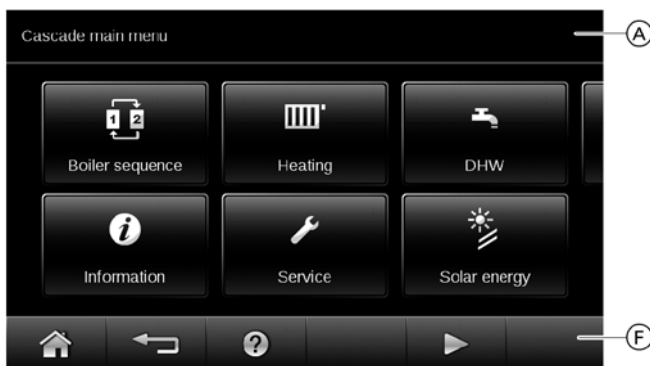
You can find the menu structure overview on page 31.

Call up the main menu as follows:

- If the screensaver is active:  
Tap the display anywhere on the screen and then tap "Menu".
- From any menu level:  
Tap and then tap "Menu".

Footer buttons:

- Returns you to the home screen.
- Takes you back one menu level or cancels a setting that has been started.
- Calls up the help text.
- Calls up fault or service messages.
- Scrolls through the menu if additional menu options are available



**Legend**

- (A) Header
- (F) Footer

## Switching on the Heating System



**Legend**

- (A) ON/OFF switch
- (B) Fuse
- (C) ON indicator (green)
- (D) Fault indicator (red)
- (E) Emissions test switch  
(only for service purposes)

Ask your heating contractor about the following:

- Boiler and relevant control unit type
- Required system operating pressure
- Location of the following components:
  - Pressure gauge
  - Gas shut-off valve
  - Vents



Refer to the applicable boiler Operating Instructions for gauge location and minimum operating pressure.

1. Check the heating system pressure at the pressure gauge (each boiler is equipped with a pressure gauge). If the pressure of the heating system is too low, top up the water or notify your heating contractor.
2. Open the gas shut-off valve on every boiler.
3. Switch ON the power supply, e.g. at a separate MCB/fuse or a mains isolator.
4. Switch ON the ON/OFF switch on every control unit. After a short delay, the home screen or the default display appear. The green ON indicator illuminates. Your heating system and, if installed, your remote controls are now ready for use.

## Shutting Down the Heating System

**With frost protection monitoring**

For each heating circuit select the “standby mode” operating program (see page 13).

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

**Pump exercise function**

Circulation pumps are started for 10 sec. once every 24 hours to prevent the pumps from seizing up. This function is active during all operating programs and during warm weather shutdown.

**Without frost protection monitoring (shutdown)**

1. Switch OFF the ON/OFF switch on every control unit.



Refer to the applicable boiler Operating Instructions

2. Close the gas shut-off valves.
3. Isolate the heating system from its main power supply, e.g. at the separate MCB/fuse or at a mains isolator.

**Note:** If outdoor temperatures of below 37°F (3°C) are expected, take appropriate measures to protect the heating system from frost.

If necessary, contact your heating contractor.




**Information on a prolonged shutdown**

- Circulation pumps may seize up as they are not being supplied with power.
- It may be necessary to reset the date and time the next time the system is switched on (see page 22).

## Operating Program

The operating program for the heating system can be set at the Vitotronic 300-K. There are 3 levels to the operating program as described on the right.

Each heating circuit can be assigned it's own operating program (depending on the heating systems requirements).

Symbol	Operating program	Function
	"Heating and DHW"	<ul style="list-style-type: none"> <li>■ The rooms of the selected heating circuit are heated in accordance with the room temperature and time program specified (see chapter "Central heating").</li> <li>■ DHW is heated in accordance with the DHW temperature and time program specified (see chapter "DHW heating").</li> </ul>
	"DHW only"	<ul style="list-style-type: none"> <li>■ DHW is heated in accordance with the DHW temperature and time program specified (see chapter "DHW heating").</li> <li>■ No central heating</li> <li>■ Frost protection for the boiler and the DHW tank is active.</li> </ul>
	"Standby mode"	<ul style="list-style-type: none"> <li>■ No central heating</li> <li>■ No DHW heating</li> <li>■ Frost protection for the boiler and the DHW tank is active.</li> </ul>

### Special operating programs

- "External hook-up"  
The operating program set at the control unit was changed by an external device, e.g. EA1 extension.
- "External program"  
The operating program set at the control unit was changed over by the Vitocom communication interface.
- "Holiday program"  
The holiday program you have created is active.  
See page 17.

**Note:** In the main menu, you can scan the set operating program under "Information".

# Time Program

The following explains how to input the settings for a time program. The special features of individual time programs are allotted to the relevant chapters.

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

- Central heating - separate for each circuit
- DHW heating
- DHW recirculation pump

The time program allows you to divide the day into sections. These are called time phases. It is for you to decide what functions are active and the time period that function is active, eg. whether the standard heating or the reduced room temperature is active.

- You can set the time program individually, to be the same, or different, for every day of the week.
- You can select up to 4 time phases per day.
- For each time phase you select the start and end points.
- For normal operation.
- In the main menu, you can scan the time programs under "Information" (see from page 32).

### Setting a time program using central heating Heating circuit 1 as an example

The settings described in the following apply equally for DHW heating and the DHW recirculation pump.

#### Setting time phases

Example:


- Time program for "Monday"
- Time phase 1: 05:30 to 09:00 h
- Time phase 2: 16:30 to 22:00 h



**Note:** The time display is relative to the clock settings 12 h or 24 h (see page 22).

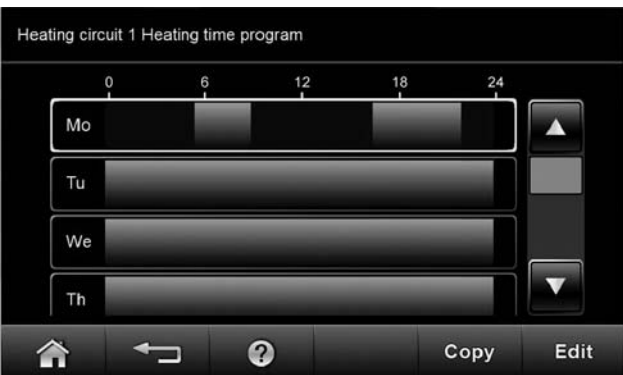
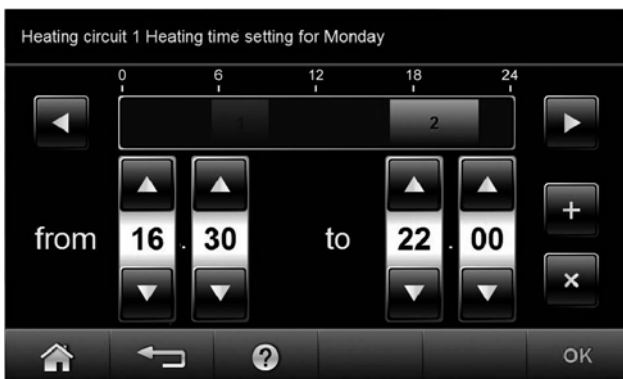
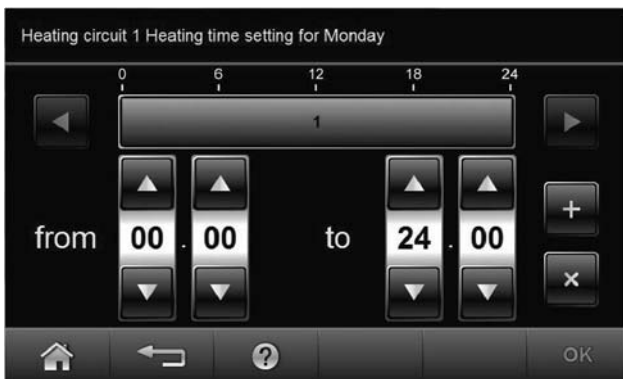
In between these time phases the system heats to a reduced temperature (this temperature can be adjusted, refer to page 13).

**From the home screen tap the following buttons:**

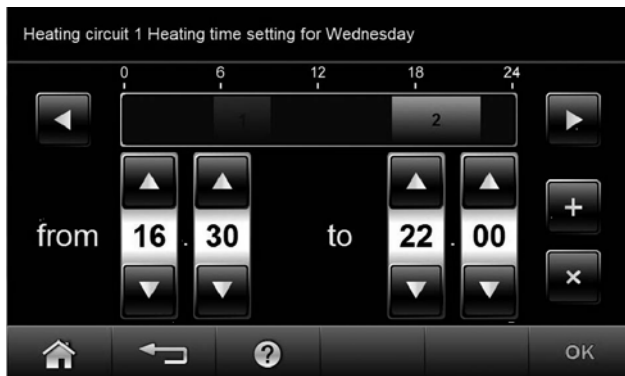
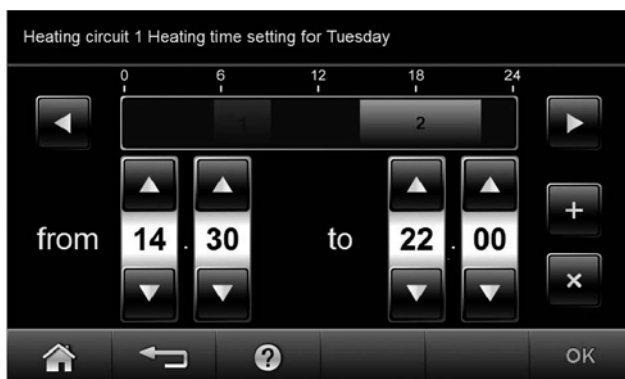
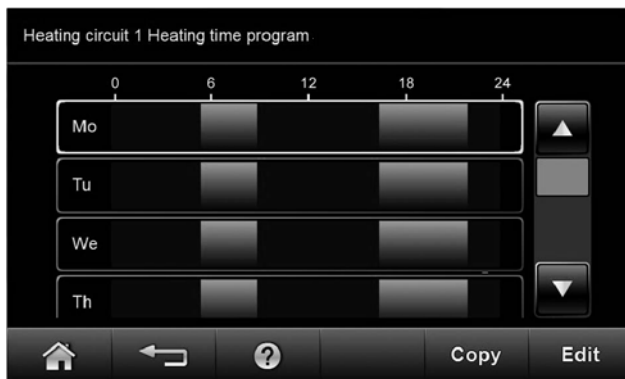
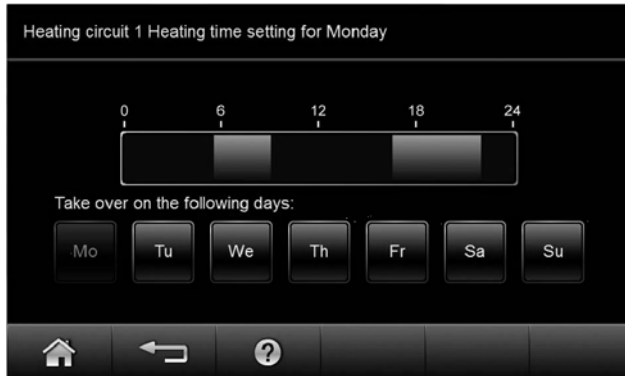
1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "Mo"
6. "Change"
7. ▲/▼ for the start and end point of time phase 1. The bar in the time diagram is adjusted.

Cancelling the adjust/change to time phase early Tap .

8. '+' to add an additional time phase.
9. ▲/▼ for the start and end point of time phase 2. The bar in the time diagram is adjusted.
10. Tap "OK" to confirm.
11.  to return to the home screen or  to return to the main menu.



**Time Program** *(continued)*



**Copying a time program**

You can copy a time program to other days of the week. For example if, you want to copy this time program for Monday to Tuesday to Friday.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "Mo"
6. "Copy"
7. "Tu", "We", "Th", "Fr"
8. Tap "OK" to confirm
9. to return to the home screen or to return to the main menu.

**Changing time phases**

For Tuesday you want to change the start point of time phase 2 to 14:30 h.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "Tu"
6. "Change"
7. for time phase 2
8. for the start point of time phase 2 on. The bar in the time diagram is adjusted.
9. Tap "OK" to confirm
10. to return to the home screen or to return to the main menu.

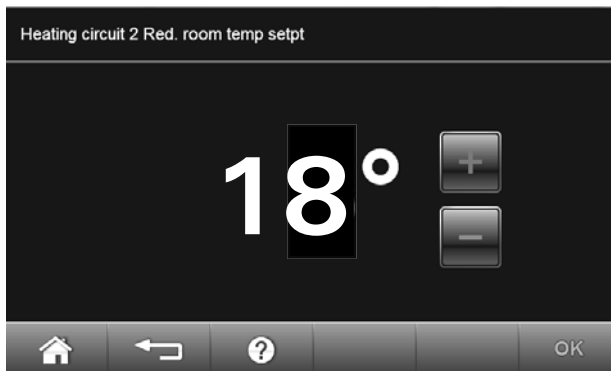
**Deleting time phases**

For Wednesday you want to delete time phase 2.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Heating"
3. "Heating circuit 1"
4. "Time program heating"
5. "We"
6. "Change"
7. for time phase 2
8. "x"
9. Tap "OK" to confirm
10. to return to the home screen or to return to the main menu.

## Room Temperature



**Note:** Further information can be found in chapter “Terminology” in the appendix.

### Setting standard room temperature for the selected heating circuit

Factory setting: 68°F (20°C)  
 Setting range: 37 to 99°F (3 to 37°C)

**From the home screen tap the following buttons:**

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “ Room temp set point”
5. for the desired value
6. Tap “OK” to confirm

### Setting the reduced room temperature

Factory setting: 64°F (18°C)  
 Setting range: 37 to 99°F (3 to 37°C)

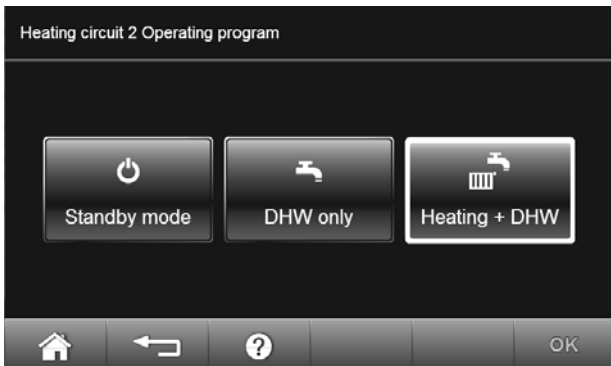
**From the home screen tap the following buttons:**

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Reduced room temp set point”
5. for the desired value
6. Tap “OK” to confirm

Central heating with this temperature, will occur

- Between the time phases for central heating with standard temperature
- During a holiday program (see page 16)

## Operating Program



**Note:** Further information can be found in chapter “Terminology” in the appendix.

### Setting the operating program

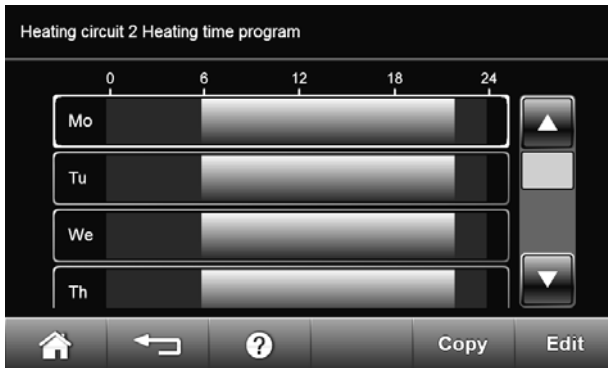
Factory setting: “Heating and DHW”

**From the home screen tap the following buttons:**

1. “Menu”
2. “Heating”
3. “Heating circuit 1”, “Heating circuit 2” or “Heating circuit 3” as the required heating circuit
4. “Operating program”
5. Tap “OK” to confirm

**Note:** For information on the operating programs, see page 17

## Time Program



**Note:** Further information can be found in chapter "Terminology" in the appendix.

### Setting the time program for central heating

Factory setting: One time phase from 00:00 to 24:00 h for every day of the week

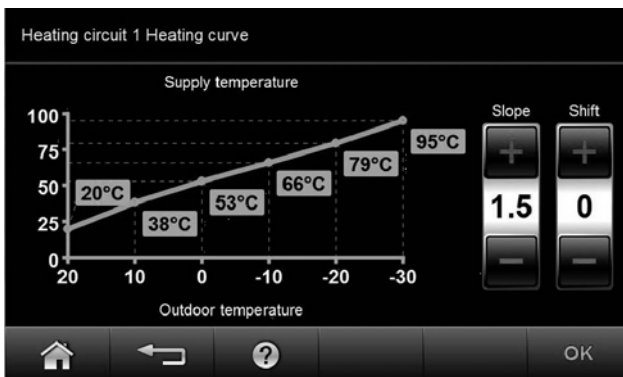
From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Time program heating"
5. Tap "OK" to confirm

Procedure for setting a time program, see page 11

**Note:** When adjusting the setting, bear in mind that your heating system requires some time to heat the rooms to the required temperature.

## Heating Curve



**Note:** Further information can be found in chapter "Terminology" in the appendix.

### Setting the heating curve

Factory setting:

- "Slope": 1.4
- "Shift" of the heating curve: 0

From the home screen tap the following buttons:

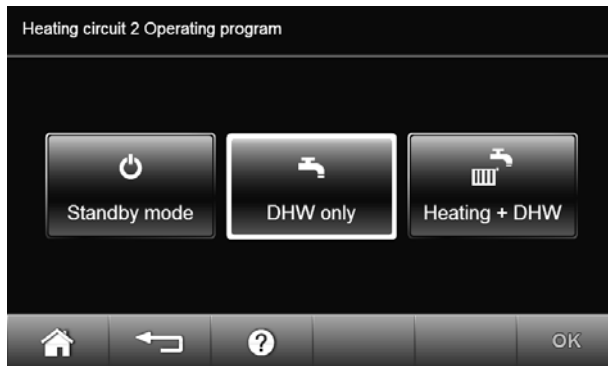
1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Heating curve"
5.  $\pm$  for the desired value for "Slope" and/or "Shift"
6. Tap "OK" to confirm

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

## Stopping Central Heating

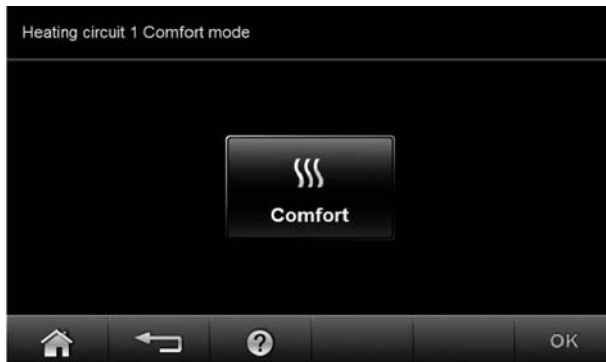


From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Operating program"
5. "DHW only" (no central heating)  
or  
"Standby mode" (frost protection for the boiler and the DHW tank is active)
6. Tap "OK" to confirm


**Note:** This process must be repeated for each heating circuit connected to the Vitotronic 300-K.

## Comfort Function "Comfort Mode"



### Setting "Comfort mode"

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Comfort mode"
5. "Comfort"
6. Tap OK to confirm
7.  for the required set room temperature in comfort mode
8. Tap "OK" to confirm
  - The rooms are heated to the set room temperature.
  - Provided your heating contractor has not altered the settings, DHW is heated to the set temperature first, before central heating begins.
  - The DHW recirculation pump is switched on (if installed).

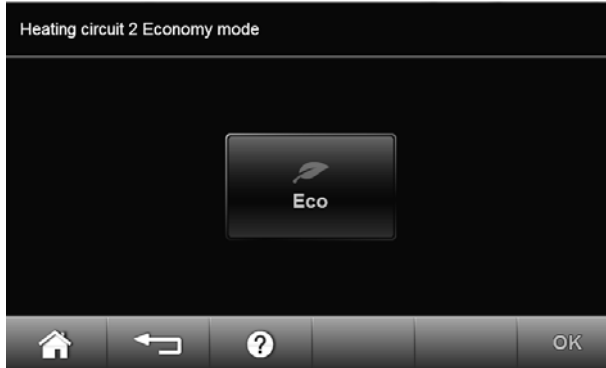
### Ending "Comfort mode"

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Comfort mode"
5. "Comfort" The white frame is reset.
6. Tap "OK" to confirm  
or  
Automatically when the system switches to standard heating mode in accordance with the time program  
or  
Automatically after 8 hours

**Note:** If you want to make changes to this, contact your local heating contractor.

## Energy Saving Function "Economy Mode"



### Setting "Economy mode"

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Economy mode"
5. "Eco"
6. Tap "OK" to confirm

**Note:** You can only enable this energy saving function when the heating system is in the standard heating mode.

### Ending "Economy mode"

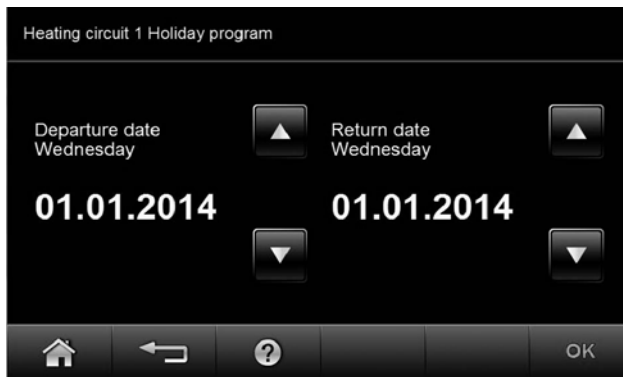
From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the,required heating circuit
4. "Economy mode"
5. "Eco" The white frame is reset.
6. Tap "OK" to confirm

or

Automatically when the system switches to reduced heating mode in accordance with the time program

## Energy Saving Function "Holiday Program"



### Setting "Holiday program"

**Note:** The holiday program affects all heating circuits. If you want to make changes to this, contact your local heating contractor.

The holiday program starts at 00:00 h (12:00 am) the day after the departure date. The holiday program ends at 00:00 h (12:00 am) on the return date. This means that the standard time program is active on the days of departure and return.

From the home screen tap the following buttons:

1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Holiday program"
5. ▲/▼ for "Departure date" and "Return date"
6. Tap "OK" to confirm

The holiday program has the following effect:

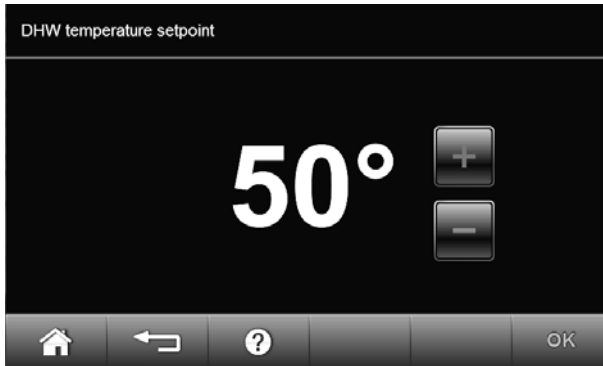
- Central heating:
  - For heating circuits with the operating program "Heating and DHW":  
The rooms are heated to the set reduced room temperature (see page 13).
  - For heating circuits in the operating program "DHW only":  
No central heating. Frost protection for the boiler and the DHW tank is active.
- DHW heating:  
No DHW heating. Frost protection for the DHW tank is active.

### Cancelling or deleting the "Holiday program"

From the home screen tap the following buttons:


1. "Menu"
2. "Heating"
3. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
4. "Holiday program"
5. ▼ for "Return date" the same date as for the "Departure date"
6. Tap "OK" to confirm

## DHW Temperature

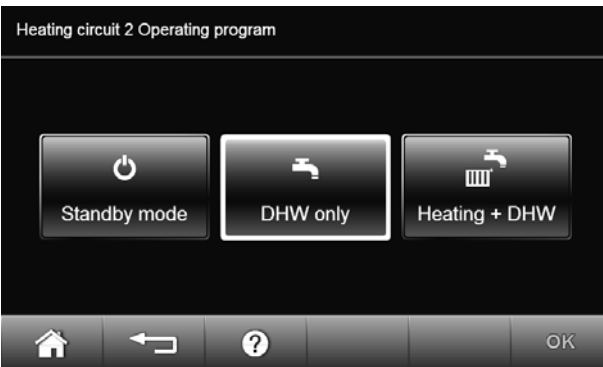


Factory setting: 122°F (50°C)  
Setting range: 80 to 140°F (10 to 60°C)

**From the home screen tap the following buttons:**

1. "Menu"
2. "DHW"
3. "DHW temperature"
4.  for the required value
5. Tap "OK" to confirm

## DHW Operating Program



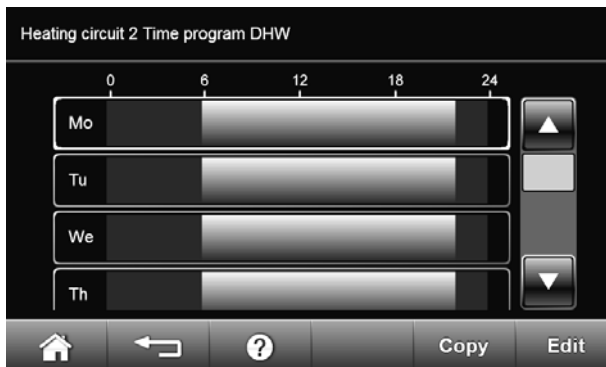
**Note:** Further information can be found in chapter "Terminology" in the appendix.

### Setting the operating program for DHW heating

Factory setting: "Heating and DHW" If no central heating is required, set "DHW only".

For information on the operating programs, see page 10.

## DHW Time Program



**Note:** Further information can be found in chapter “Terminology” in this manual.

### Setting the time program for DHW heating

Factory setting: “Automatic”

During operation with standard room temperature, DHW in the DHW tank is heated to the set DHW temperature. The time phase for DHW heating automatically starts half an hour earlier than the time phase for central heating with standard room temperature. DHW heating may start, for example, at 05:30 h if the start time for central heating is 06:00 h. This means hot water is already available when your system starts operating with standard room temperature.

You can change this time program individually in accordance with your requirements.

**From the home screen tap the following buttons:**

1. “Menu”
2. “DHW”
3. “Time program DHW”
4. “Individual”
5. Tap “OK” to confirm

For how to set a time program, see page 11.

**Note:** - The DHW is not heated between the time phases.  
Frost protection for the DHW tank is active.  
- When setting time programs, bear in mind that your heating system requires some time to heat the DHW tank to the desired temperature.

### DHW fourth phase heating (auxiliary function)

This function can be used to heat the water in the DHW tank to a higher set DHW temperature. Your heating contractor can enable this function by specifying a second set DHW temperature. Set time phase 4 for this. During this time, DHW will be heated to the second set DHW temperature value.

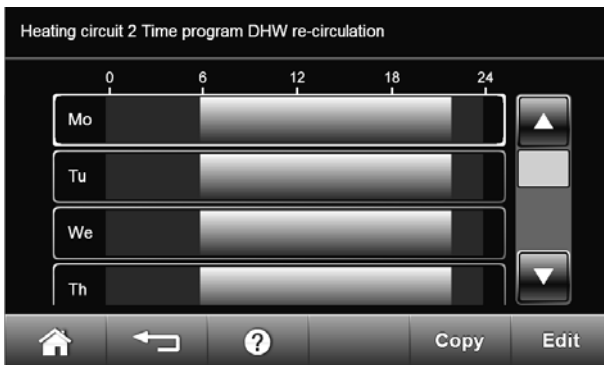
**Note:** A start and stop time must be set for the 2nd and 3rd time phase.

## Time Program *(continued)*

### DHW heating once, outside the time program

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

Enable "Comfort mode" (see page 26) and immediately disable it again. This prevents unintentional central heating with standard room temperature.



### Setting the time program for the DHW recirculation pump

Factory setting: "Automatic"

The DHW recirculation pump operates in parallel to the DHW heating time program. You can change this time program individually in accordance with your requirements.

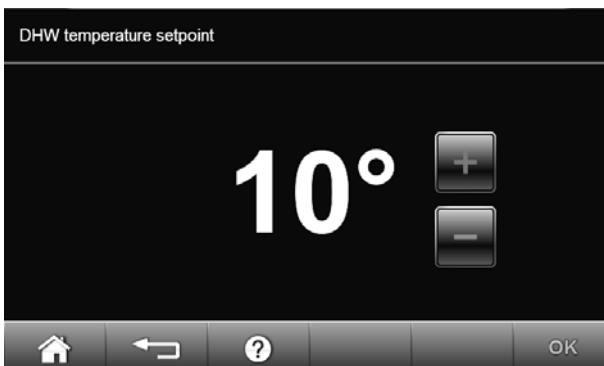
**From the home screen tap the following buttons:**

1. "Menu"
2. "DHW"
3. "DHW recirculation time program"
4. "Individual"
5. Tap "OK" to confirm

For how to set a time program, see page 11.


**Note:** Between the time phases the DHW recirculation pump remains off.

## Stopping DHW Heating

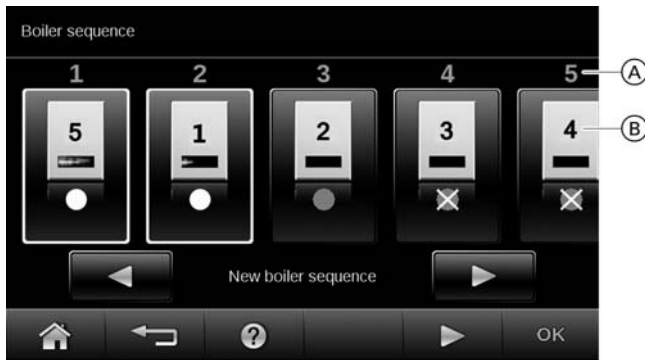


If you would like to terminate or prevent DHW heating during standard operating mode, reduce the DHW temperature setpoint to 50°F (10°C).

**From the home screen tap the following buttons:**

1. "Menu"
2. "DHW"
3. "DHW temperature"
4.  for 50°F (10°C)
5. Tap "OK" to confirm

## Setting the Boiler Sequence



Subject to the coding set and internal control calculations, the control unit offers various boiler sequences. This ensures that the boilers run equally.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Boiler sequence"
3. ◀▶ for "New boiler sequence"

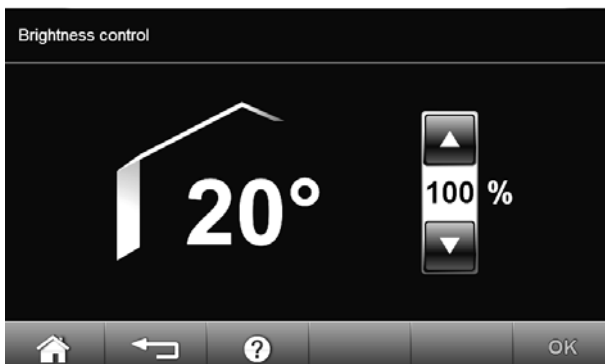
### Legend

- Ⓐ Sequence in which the boilers are started
- Ⓑ Number permanently assigned to the boiler

The diagram shows the following boiler sequence:

1. Boiler 5
2. Boiler 1
3. Boiler 2
4. Boiler 3
5. Boiler 4

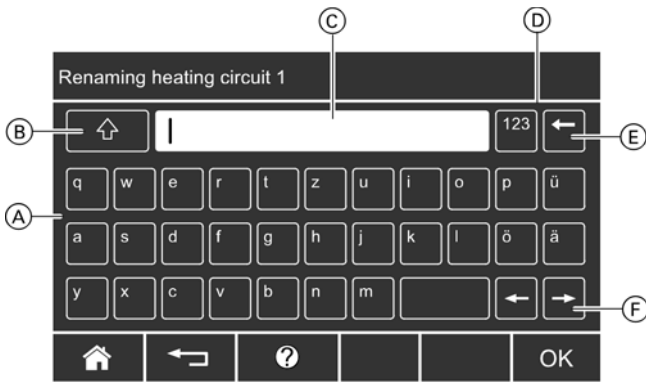
## Setting the Display Backlighting



**From the home screen tap the following buttons:**

1. "Menu"
2. "Settings"
3. "Screen"
4. "Brightness standby" or "Brightness control"
5. ▲/▼ for the required value
6. Tap "OK" to confirm

## Naming Heating Circuits

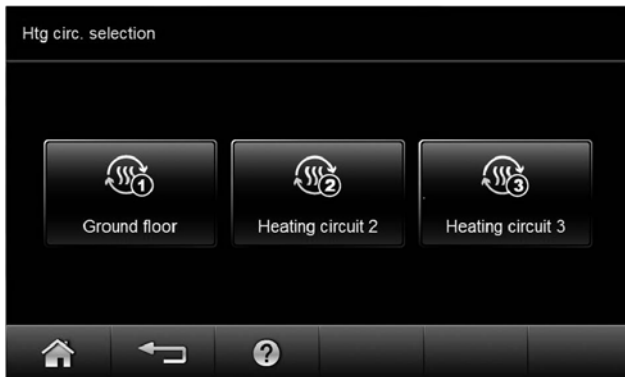


- (A) Keyboard
- (B) Changeover between upper and lower case letters
- (C) Text box (limit to 32 characters)
- (D) Changeover to the number keypad
- (E) Deleting an entry
- (F) Scrolling forwards and backwards in the text box

You can name all heating circuits individually.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Settings"
3. "Name for heating circuit"
4. Select "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" and enter the required name, such as "Ground floor".
5. Tap "OK" to confirm



The name assigned for each heating circuit appears in the main menu.

## Setting the Time and Date



The time and date are factory-set. If you wish to change the format or your heating system has been shut down for a prolonged period, you may need to reset the time and date.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Settings"
3. "Date / Time"
4. "Date" or "Time"
5. ▲/▼ for the required value
6. Tap "OK" to confirm

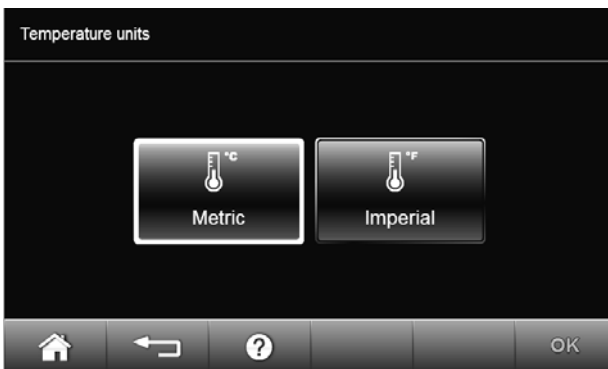
## Language Selection



From the home screen tap the following buttons:

1. "Menu"
2. "Settings"
3. "Language"
4. Required language
5. Tap "OK" to confirm

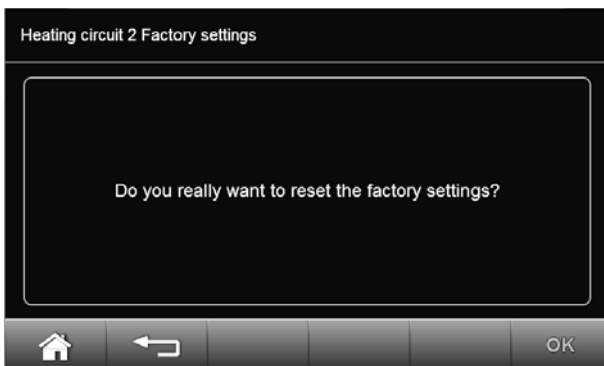
## Setting Measuring Units



From the home screen tap the following buttons:


1. "Menu"
2. "Settings"
3. "Measuring units"
4. "Metric" or "Imperial"
5. Tap "OK" to confirm

## Restoring Factory Settings



You can individually restore all modified values for each heating circuit to their factory setting.

From the home screen tap the following buttons:

1. "Menu"
2. "Settings"
3. "Factory settings"
4. "Heating circuit 1", "Heating circuit 2" or "Heating circuit 3" as the required heating circuit
5. Tap "OK" to confirm or  to cancel

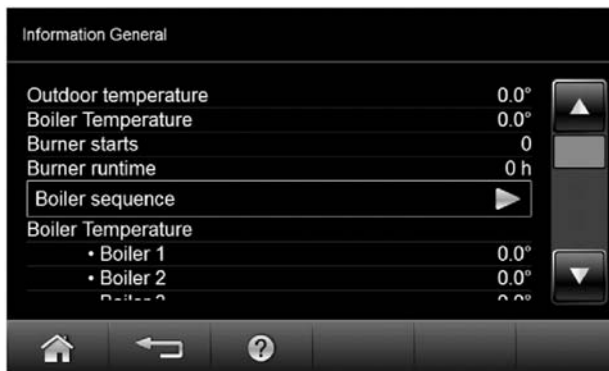
### System setting

"Heating circuit 1", "Heating circuit 2" or "Heating circuit 3"

### Settings and values that are reset

- Set room temperature
  - Set reduced room temperature
  - Operating program
  - Set DHW temperature
  - Time program for central heating
  - Time program for DHW heating
  - Time program for DHW circulation pump
  - Heating curve slope and shift
  - Comfort and energy saving functions are deleted.
- Note:** If heating circuits have been named (see chapter "Naming heating circuits") the assigned name is retained.

## Scanning Information



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

Information in the main menu is split into groups:

- "General"
- "Burner"
- "Heating circuit 1"
- "Heating circuit 2"
- "Heating circuit 3"
- "DHW"
- "Solar energy"
- "Reset data"
- "Service address"

**Note:** If heating circuits have been named (see chapter "Naming heating circuits") the assigned name is displayed.

For detailed scanning options on individual groups see chapter "Scanning options" (see page 32).

**From the home screen tap the following buttons:**

1. "Menu"
2. "Information"
3. Select the desired information group

### Scanning the solar energy yield in conjunction with solar thermal systems

Only in connection with solar control unit, type SM1.

There you can scan the solar energy yield in conjunction with a Vitosolic solar control unit.

From the home screen tap the following buttons:

1. "Menu"
2. "Solar energy"

The solar energy yield is shown in diagrammatic form.

If you want to display the values in numerical form, tap the respective day of the week.

**Note:** For further scanning options, e.g. for the solar circuit pump hours run, see the extended menu under "Information" in the "Solar" group.



## Scanning Information *(continued)*



### Service address

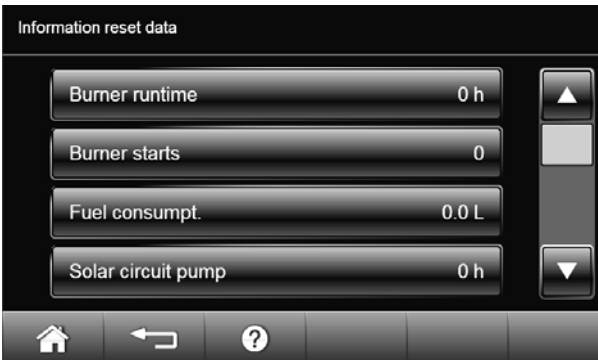
If your heating contractor has entered their details, you can scan these.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Information"
3. "Service contact details" Each text box is limited to 45 characters.

**Note:** If there are no details, tap the white field. The keyboard appears (see page 22).

## Resetting Data



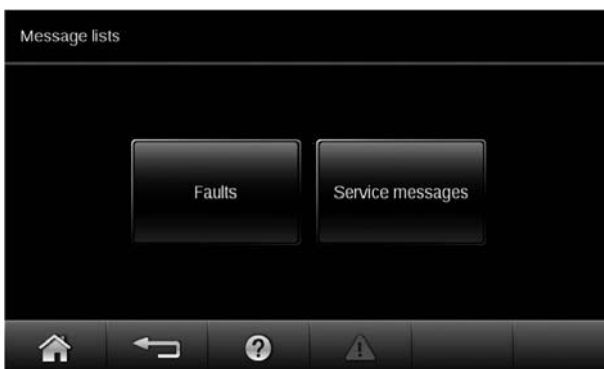
You can reset the following data:

- 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.

**From the home screen tap the following buttons:**

1. "Menu"
2. "Information"
3. "Reset data"
4. Select required data point or "All details".
5. Tap OK to confirm


## Scanning Service Messages




Your display can indicate if your heating system is due for a service.

**Note:** Your heating contractor can set service intervals (for burner hours run, for example).


A service message is generated when this value is reached or exceeded.

Tap "Confirm". The footer shows .

### Calling up a service message

1. Tap  in the footer. The service message appears in a list.
2. Notify your local heating contractor.


**Note:** If the service cannot be carried out until a later date, the service message will be displayed again the following Monday. This service message will continue to be displayed until your service contractor resets the service interval.

**Note:** After tapping  the following will be displayed if your heating system has several fault messages simultaneously:

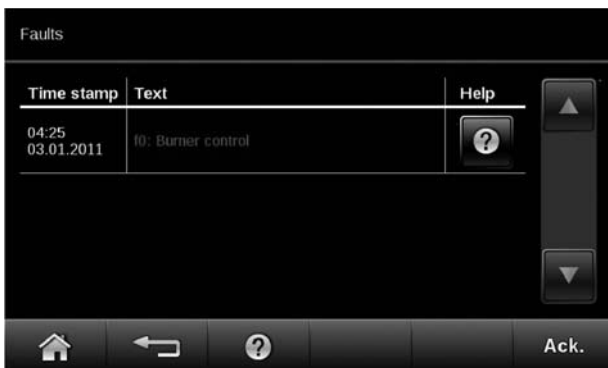
Tap "Service messages"  
Service messages appear in yellow.

# Scanning Fault Messages


Your display indicates if your heating system has developed faults. The red fault indicator flashes on the control unit enclosure (see chapter "Starting the heating system").

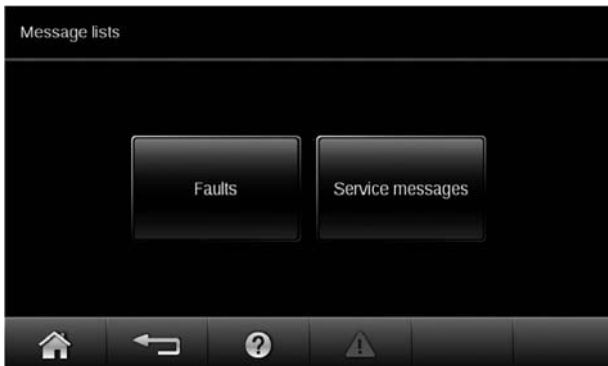
Tap "Close".  
The footer shows .


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




### Calling up a fault message

1. Tap  in the footer. The fault message appears in a list.
2. Tapping ? calls up information specific to that fault and provides tips on measures you can take yourself before notifying your heating contractor are displayed.
3. Make a note of the fault code and the cause for the fault. In this example: f0 "Combustion controller". This enables the heating contractor to be better prepared and may save you unnecessary travelling costs.
4. Tap "Acknowledge".
5. Notify your local heating contractor.



** WARNING**


**If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your heating contractor if a fault recurs. Your heating contractor will be able to analyze the cause and rectify the fault.**

**Note:** After tapping  the following will be displayed if your heating system has several service messages simultaneously:

Tap "Faults"  
Fault messages appear in red.

## Emissions Test Mode

Emissions test mode for testing the flue gas with briefly raised boiler water temperature. Emissions test mode should only be activated by your service technician during the annual inspection.

1. Set the emissions test switch on the Vitotronic 300-K (see chapter "Starting the heating system") to the  position.


The following functions are activated:

- The pumps are started.
  - The mixers remain set to the control function.
2. Enable the emissions test function at the control unit of the respective boiler.
    - The burner is switched ON.
    - The boiler circuit pump starts.



Refer to applicable boiler Operating Instructions


### Ending emissions test mode

1. Set the emissions test switch on the Vitotronic 300-K to the  position.  
or  
Close the cover flap.
2. Disable the emissions test function at each of the control unit of the respective boiler.





Refer to applicable boiler Operating Instructions


## Rooms are Too Cold

Cause	Remedy
The heating system is off	<ul style="list-style-type: none"> <li>- Switch ON the ON/OFF switch on the control units (see page 9).</li> <li>- Switch ON the mains isolator, if installed (outside the boiler room).</li> <li>- Set the MCB in the power distribution board (main domestic MCB).</li> </ul>
<ul style="list-style-type: none"> <li>■ Control unit incorrectly adjusted.</li> <li>■ The remote control (if installed) is set incorrectly.</li> </ul>  Separate operating instructions	Central heating must be enabled. Check the settings and correct if required: <ul style="list-style-type: none"> <li>- Operating program (see page 13)</li> <li>- Room temperature (see page 13)</li> <li>- Time (see page 22)</li> <li>- Time program, central heating (see page 14)</li> <li>- Heating curve (see page 14)</li> </ul>
Only when operating with DHW heating: 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 standard DHW temperature as required (see page 19).
No fuel.	With LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
"Burner fault" will be displayed.	Follow the display prompts. Reset the burner only once. <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>⚠ WARNING</b></p> <p><b>If faults are not rectified, they can have life threatening consequences. Do not acknowledge fault messages several times in quick succession. Notify your heating contractor if a fault recurs. Your heating contractor will be able to analyze the cause and rectify the fault.</b></p> </div>
"Fault" is displayed. The red fault indicator flashes.	Check what type of fault it is. Acknowledge the fault (see page 26). Notify your heating contractor if necessary.
The mixer motor is faulty.	Adjust the mixer manually.



## Rooms are Too Hot

Cause	Remedy
<ul style="list-style-type: none"> <li>■ Control unit incorrectly adjusted.</li> <li>■ The remote control (if installed) is set incorrectly.</li> </ul>  Separate operating instructions	Check the settings and correct if required: <ul style="list-style-type: none"> <li>■ Operating program (see page 13)</li> <li>■ Room temperature (see page 13)</li> <li>■ Time (see page 22)</li> <li>■ Time program, central heating (see page 14)</li> <li>■ Heating curve (see page 14)</li> </ul>
"Fault" is displayed. The red fault indicator flashes.	Check what type of fault it is. Acknowledge the fault (see page 26). Notify your heating contractor if necessary.
The mixer motor is faulty.	Adjust the mixer manually.
Emissions test switch is set to  .	Close the flap.

## There is No DHW

Cause	Remedy
The heating system is off.	<ul style="list-style-type: none"> <li>■ Switch ON the ON/OFF switch on the control units (see page 9).</li> <li>■ Switch ON the mains isolator, if installed (outside the boiler room).</li> <li>■ Set the MCB in the power distribution board (main domestic MCB).</li> </ul>
<ul style="list-style-type: none"> <li>■ Control unit incorrectly adjusted.</li> <li>■ The remote control (if installed) is set incorrectly.</li> </ul>  Separate operating instructions	DHW heating must be enabled. Check the settings and correct if required: <ul style="list-style-type: none"> <li>■ Operating program (see page 18)</li> <li>■ DHW temperature (see page 18)</li> <li>■ Time program DHW heating (see page 19)</li> <li>■ Time (see page 22)</li> </ul>
No fuel.	With LPG: Check the fuel reserves and re-order if required. With natural gas: Open the gas shut-off valve. If necessary, check with your gas supply utility.
"Fault" is displayed. The red fault indicator flashes.	Check what type of fault it is. Acknowledge the fault (see page 26). Notify your heating contractor if necessary.

## The DHW is Too Hot

Cause	Remedy
Control unit incorrectly adjusted.	Check and correct the DHW temperature, if required (see page 18).
The DHW is being heated by the solar thermal system.	Check the settings at the solar control unit and correct them if required.  Separate operating instructions
Emissions test switch is set to  .	Close the flap.

## “Fault” will be Displayed

Cause	Remedy
Heating system fault.	Proceed as described on page 26.

## “Service” will be Displayed

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

## Inspection and Maintenance

### Cleaning

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

### Inspection and maintenance

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

### Appliance

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

### DHW tank (if installed)

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

Only a qualified heating contractor should clean the inside of a DHW tank and the DHW connections. If any water treatment equipment (e.g. a sluice or injection system) is installed in the cold water supply of the DHW tank, ensure this is refilled in good time. In this connection, observe the manufacturer’s instructions.

In addition for Vitocell 100:

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

### Safety valve (DHW 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 contaminated.

Water may drip from the safety valve during a heat-up process. The outlet is open to the atmosphere and must not be closed off.

### Potable water filter (if installed)

To maintain high hygienic standards, proceed as follows:

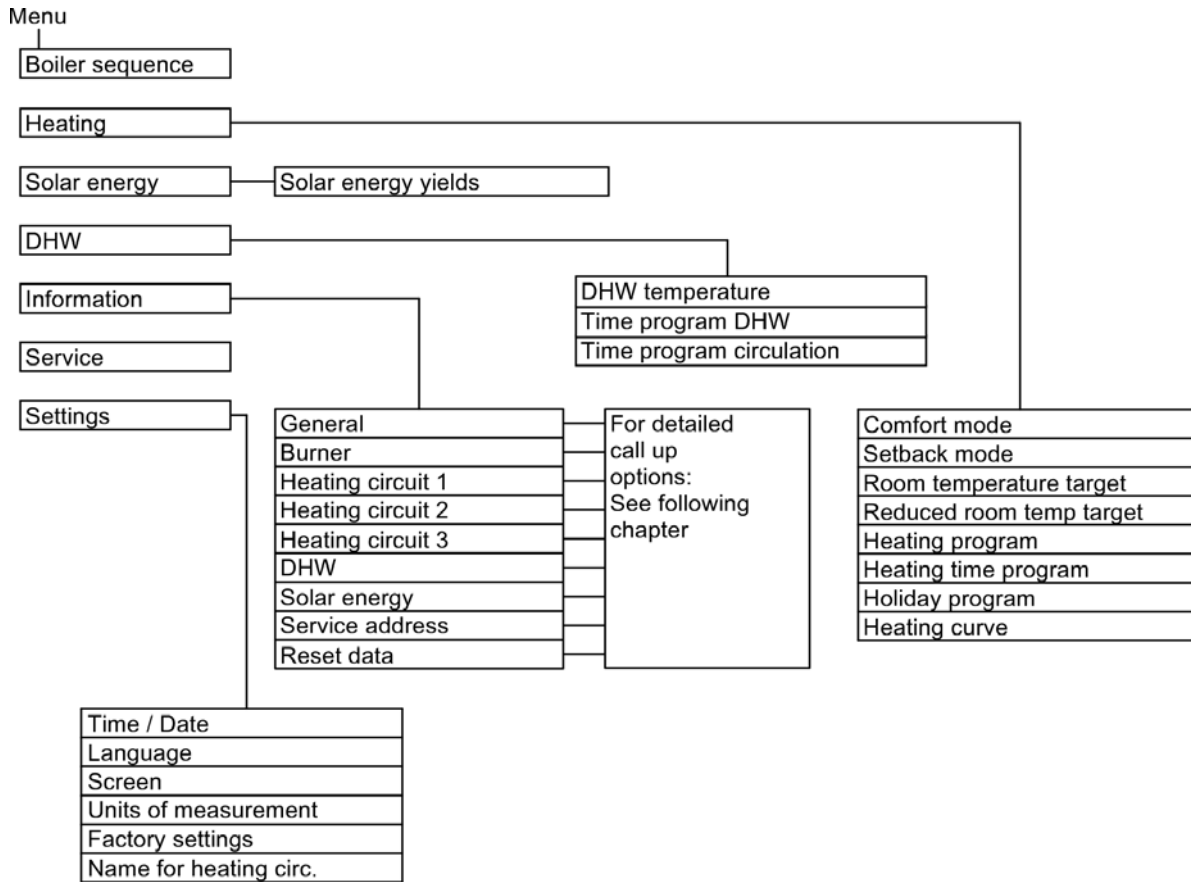
- Replace filter element on non-back flushing filters every six months (visual inspection every two months).
- On back flushing filters, back flush every two months.

### Damaged cables / lines

If there is damage to the connecting cables or lines of the appliance or externally installed accessories, these must be replaced with special cables or lines.

Only use Viessmann cables / lines as replacement. For this, notify your qualified contractor.

# Overview of Extended Menu



## Scanning Options under "Information"

**Note:** Subject to the actual heating system equipment level, not all of the scans listed here may be available.

You can scan more details on information marked with ►.

### General

"Outdoor temp"
"Boiler sequence" ►
"Boiler temperature" ►
"Sensor 17 A"
"Sensor 17 B"
"Common supply temp"/"Common demand temp."
"Sensor 9"
"Output 20"
"Output 29"
"Output 52"
"Feed pump"
"Central fault mess"
"Participant no."
"Integral"
"Input ext. EA1" ►
"Ext. hook-up 0...10V"
"Time"
"Date"

### Burner

"Burner hours"
"Burner starts"
"Max operational output"
"Gas type"
"Altitude"
"Max boiler temperature"
"Integral threshold controller"
"Runtime optimization"

### DHW

"DHW time prog" ►
"DHW circ time prog" ►
"DHW temperature"
or
In conjunction with 2 DHW tank temperature sensors:
"DHW temp top"
"DHW temp bottom"
"DHW circ pump"
"Tank primary pump"

### Heating circuit 1, 2, 3

"Heating program" ►
- "slab curing"
- "External hook-up"
- "Holiday program"
- "External program"
- "Comfort mode"
- "Economy mode"
- "Heating and DHW"
- "DHW only"
- "Standby mode"
"Operating status:" ►
- "Standard heating mode"
- "Reduced mode"
- "Standby mode"
"Time program" ►
"Room temperature"
"Room temp target"
"Reduced room temp target"
"Set ext. room temp"
"Comfort temp target"
"Slope"
"Shift"
"Heating circ pump"
"Mixer"
"Supply temperature / Supply temperature"
"Holiday program" ►

### Solar

"Solar energy history" ►
"Collector temp"
"Solar DHW"
"Solar circuit pump" (hours run)
"Solar energy"
"Solar circuit pump" (ON/OFF)
or
"Solar pump circ speed"
"Heating suppr. DHW"
"SM1 output 22" (ON/OFF)
"SM1 output 22" (hours run)
"Sensor 7"
"Sensor 10"
"Heat suppr. heating"

## Terminology

### Setback mode (reduced heating mode)

See "Reduced heating mode".

### Operating program

You define the following with the operating program:

- Central heating and DHW heating  
or
- Only DHW, no central heating  
or
- Only frost protection for the boiler and the DHW tank is active. No central heating, no DHW heating

**Note:** No operating program is available for central heating without DHW heating. When you want central heating, hot water is generally also required (winter mode).

### Operating status

In the operating program "Heating and DHW", the operating status changes from "Standard heating mode" to "Reduced heating mode" and vice versa. The times at which the operating status is changed over are defined by you when setting the time program.

### Extension kit for heating circuit with mixing valve

Assembly (accessory) for controlling a heating circuit with mixing valve. See "Mixing valve".

### Slab curing

This is an accessory heating program with a fixed time/temperature profile, that must be selected based on building materials used. The slab curing function affects heating circuits with mixing valve:

The slab curing function affects heating circuits with mixer:

- All rooms are heated according to the temperature/time profile. Your settings for central heating have no effect for the duration of slab curing (max. 32 days).
- DHW heating is carried out (but priority control is cancelled).

### Underfloor heating

Underfloor heating systems are slow, low temperature heating systems and only respond very slowly to short term temperature changes.

Therefore, heating to the reduced room temperature at night and enabling "Economy mode" during short absences do not result in significant energy savings.

### Standard heating mode

For periods when you will be at home during the day, heat your rooms to the standard room temperature.

Set the periods (time phases) using the time program for central heating.

### Reduced heating mode

For periods when you will be absent or during the night, heat your rooms to the reduced room temperature.

Set the periods using the time program for central heating. With underfloor heating systems, reduced heating mode only yields limited energy savings (see "Underfloor heating system").

### Room temperature-dependent heating mode

In room temperature-dependent mode, the supply temperature is controlled according to the room temperature.

More heat is made available at a lower room temperature than at a higher one. The room temperature is captured and transmitted to the control unit by a sensor.

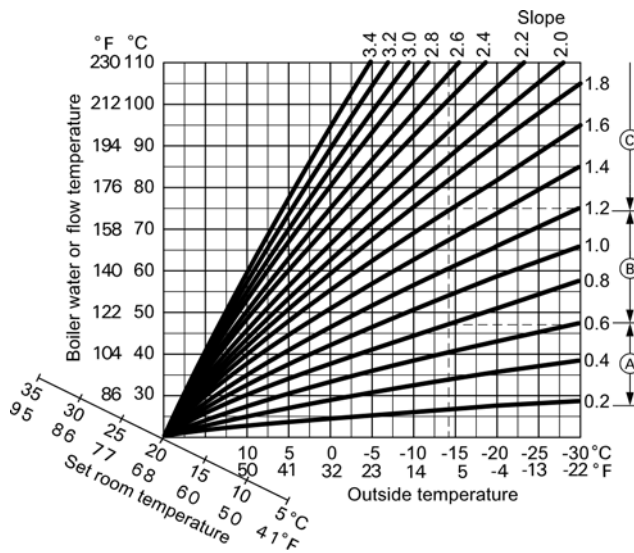
The sensor is fitted in the room. The supply temperature is regulated independently of the outdoor temperature.

### Weather-compensated heating mode

In weather-compensated mode, the supply temperature is controlled according to the outdoor temperature. More heat is made available at a lower outdoor temperature than at a higher one. The outdoor temperature is captured and transmitted to the control unit by a sensor.

The sensor is fitted to the exterior of the building.

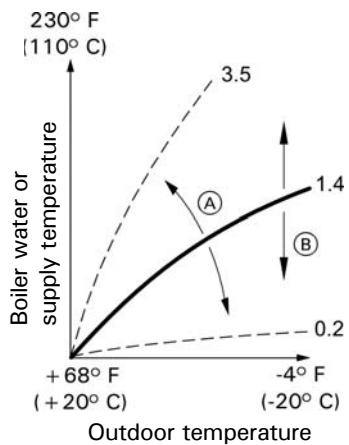
**Terminology** *(continued)*



For outdoor 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

Factory settings: Slope = 1.4 and shift = 0.



**Legend**

- Ⓐ Changing the slope:  
The gradient of the heating curves changes.
- Ⓑ Changing the shift:  
The heating curves are shifted in parallel in a vertical direction.
- Ⓒ Changing the standard room temperature (set value):  
The heating curves are offset along the "Set room temperature" axis.

**Heating curve**

Heating curves illustrate the relationship between the outdoor temperature, the set room temperature and the boiler water temperature or supply temperature. The lower the outdoor temperature, the higher the boiler water temperature or supply temperature. In order to guarantee sufficient heat and minimum fuel consumption at any outdoor 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. The illustrated heating curves apply with the following settings:

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

**Heating circuit**

A heating circuit is a sealed unvented 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.

**Heating circuit pump**

Circulation pump for circulating the heating water in the heating circuit

**Mixer**

Hot heating water from the boiler is mixed with cooled heating water from the heating circuit. The heating water, brought to the right temperature as required, is pumped to the heating circuit by the heating circuit pump. The control unit adjusts the supply temperature via the mixer to suit different conditions, e.g. changing outdoor temperatures.

**Night setback**

See "Reduced heating mode"

**Room air dependant operation**

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

**Direct vent operation**

The combustion air is drawn from outside the building.

**Room temperature**

- Standard room temperature:  
For periods when you will be at home during the day, select the standard room temperature.
- Reduced room temperature:  
For periods when you will be absent or during the night, set the reduced room temperature; see "Heating mode".

## **Terminology** *(continued)*

### **Safety valve**

A safety device that must be installed in the cold water pipe by your heating contractor.

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 indirect coil of the DHW tank to the solar collectors.

### **Set temperature**

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

### **Summer mode**

Operating program "DHW only". In warmer months, you can switch off heating mode. The boiler remains operational for DHW heating. Central heating is switched off.

### **Tank loading pump**

Circulation pump for heating the potable water inside 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**

See "Heating mode"

### **Time program**

In the time programs, you specify what your heating system should do at which time.

### **DHW recirculation pump**

The DHW recirculation pump transports the DHW around a ring pipeline between the DHW tank and the draw-off points (e.g. hot tap). This ensures that hot water is rapidly available at the draw-off point.



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