

# Operating instructions for the system user

**VIESSMANN**

Compact heat pump  
with electric drive, type BW/BWC and WW/WWC



## VITOCAL 300-G



## Safety instructions

### For your safety



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

#### Safety instructions explained



##### **Danger**

This symbol warns against the risk of injury.



##### **Please note**

This symbol warns against the risk of material losses and environmental pollution.

#### **Note**

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

#### **Target group**

These operating instructions are designed for system users. This appliance is **not** designed to be used by persons (including children) with limited physical, sensory or mental capacities, or lacking experience and/or knowledge, unless they are supervised by a person responsible for their safety, or have received instructions from such a person as to how to use the appliance.



##### **Please note**

Children should be supervised. Ensure that children never play with the unit.



##### **Danger**

Incorrect work on the system can lead to life-threatening accidents.

Work on electrical equipment must only be carried out by a qualified electrician.

#### **In case of fire**



##### **Danger**

With fire there is a risk of burning.

- Shut down the system.
- Use a tested fire extinguisher, class ABC.

#### **Installation room conditions**



##### **Please note**

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

- Ensure ambient temperatures above 0 °C and below 35 °C.
- Prevent air contamination by halogenated hydrocarbons (e.g. as contained in paints, solvents or cleaning fluids) and excessive dust (e.g. through grinding/polishing work).
- Avoid continuously high humidity levels (e.g. through frequent drying of washing).

## For your safety (cont.)

### Ancillary components, spare and wearing parts



#### **Please note**

Components that are not tested with the system may lead to system damage, or may affect its functions.

Installation or replacement work must only be carried out by qualified personnel.

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## Device description

Vitocal 300-G is a brine/water heat pump with electric drive for supplying heat to up to three heating circuits and one DHW cylinder.

With matching accessories, the heat pump can also be used to cool the building.

## Your system is preset at the factory

The control unit is preset at the factory. Your heating system is ready for use after selecting a specific operating mode (see from page 18):

- Central heating with standard room temperature (20 °C) **all day**.
- DHW is heated **all day** (50 °C). Any installed heating water buffer cylinder will be heated up. The DHW circulation pump is switched OFF.

- **Day and time** (CET) were set up in the factory.








**Winter/summertime changeover** will be implemented automatically.

You may change the standard settings preset at the factory in accordance with personal requirements.

### Note

*All data is saved in case of power failure.*

## Off-periods

				
51 °C	21 °C	22 °C	23 °C	21 °C
i C5 Power-OFF				
		THU 27.03.08 11:55 TYPE VX.XX		

During any power interruption by the power supply utility, the display shows the text in the screenshot.

The control unit restarts in accordance with the selected operating mode as soon as the power supply utility restores the power supply.

It is technically possible to provide central heating during power interruptions subject to the heating system being equipped with a heating water buffer cylinder. For this, consult your local heating contractor.

Where to find the controls

## Summary of controls and indicators

You can change all settings for your heating system centrally at the programming unit.

You can also make some adjustments at the remote control, if your system is equipped with one.



Remote control operating instructions

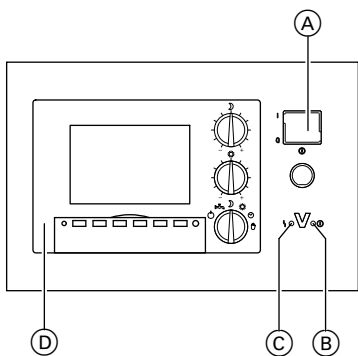
## Opening the control unit

Open the programming unit flap in the front panel by pressing on the flap.

## Functions

**Operating and display elements/indicators**

- Ⓒ Fault display (red)
- Ⓓ Programming unit

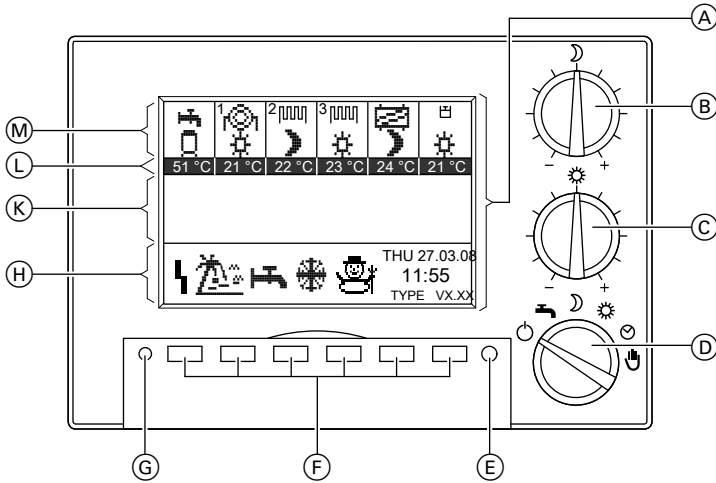


- Ⓐ ON/OFF switch
- Ⓑ ON indicator (green)



## Summary of controls and indicators (cont.)

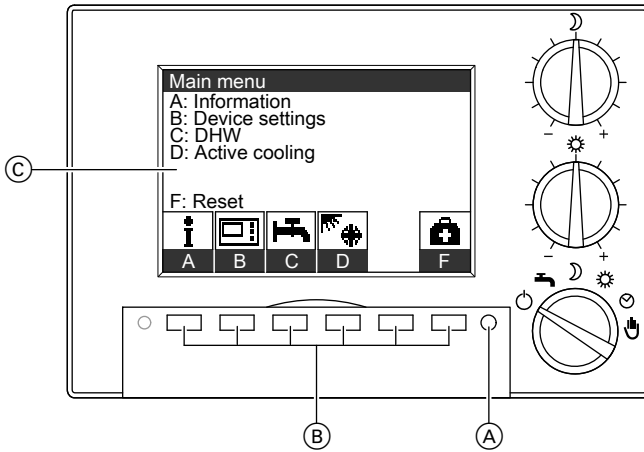
### Programming unit



- Ⓐ Standard display
- Ⓑ Rotary selector "reduced room temperature"
- Ⓒ Rotary selector "standard room temperature"
- Ⓓ Operating mode selector
- Ⓔ "Standard display" key
- Ⓕ Selection keys
- Ⓖ No function
- Ⓗ Display area for current operating conditions
- Ⓚ Message display area
- Ⓛ Set temperature display area
- Ⓜ Enabled system components display area

Where to find the controls

## Summary of controls and indicators (cont.)



- (A) Standard display key
- (B) Selection keys

- (C) Display with main menu

### Display layout

At any one time, the display shows seven lines of the selected menu. Use the selection keys (see (B) in diagram above) to select the relevant menu.

If more than seven menus are available, navigate to them with the selection key **"Further menu items"**.

### Symbols on the display


The symbols described below appear only on the standard display (see page 8). These symbols are not always displayed, but appear subject to the system version and the prevailing operating conditions. The respective symbols will move if the compressor or pumps are running.


Possible symbols in display area (M)  
(see page 8):


- DHW cylinder
- Heating circuit A1 (without mixer)
- Heating circuit M2/3 (with mixer)
- Separate cooling circuit
- Fault
- Warning

- Note
- Standby
- Swimming pool
- Reduced mode; heating circuit
- Standard mode; heating circuit
- Fixed value regulator; heating circuit
- DHW (total volume)

## Summary of controls and indicators (cont.)


 DHW (reduced volume)

 Heating up to set DHW temperature 2

Possible displays in area  (see page 8):


 Fault


 Holiday program enabled


 Party mode enabled


 DHW cylinder heating enabled


 Frost protection enabled

 Drying buildings enabled

 Winter mode enabled


 Cooling enabled

 Summer mode enabled

 Manual mode enabled

## Heating circuits



Your building may be heated by several independent heating circuits (e.g. under-floor heating circuits or radiator circuits).

- If several heating circuits are connected, any adjustments made at operating mode selector  (see page 9) affect **all** heating circuits.

If you want to make changes, contact your local heating contractor, who can set a fixed temperature value for individual heating circuits.

- If a remote control (e.g. Vitotrol 200) is connected to a heating circuit, the operating mode set at the remote control applies to this heating circuit.

### Note

*If the operating mode selector  (see page 9) is set to , this manual mode also applies to the heating circuits with remote control.*

## Control principles

- All operating steps start from "**Main menu**".
- If the menu items listed cannot be displayed in their entirety, use the key "**Further menu items**" to jump to further menu items.

Call display menus and system components by pressing the following keys:

- "**Standard display**" with change to "**Main menu**"
- "**Device settings**"
- "**Programming**"

Subject to system version, the options available can be found in the menu tree (see page 13).

## Summary of controls and indicators (cont.)

### Note

Use the **[>|<]** key to restore a highlighted and modified parameter to the delivered condition (see "Reset" on page 42).

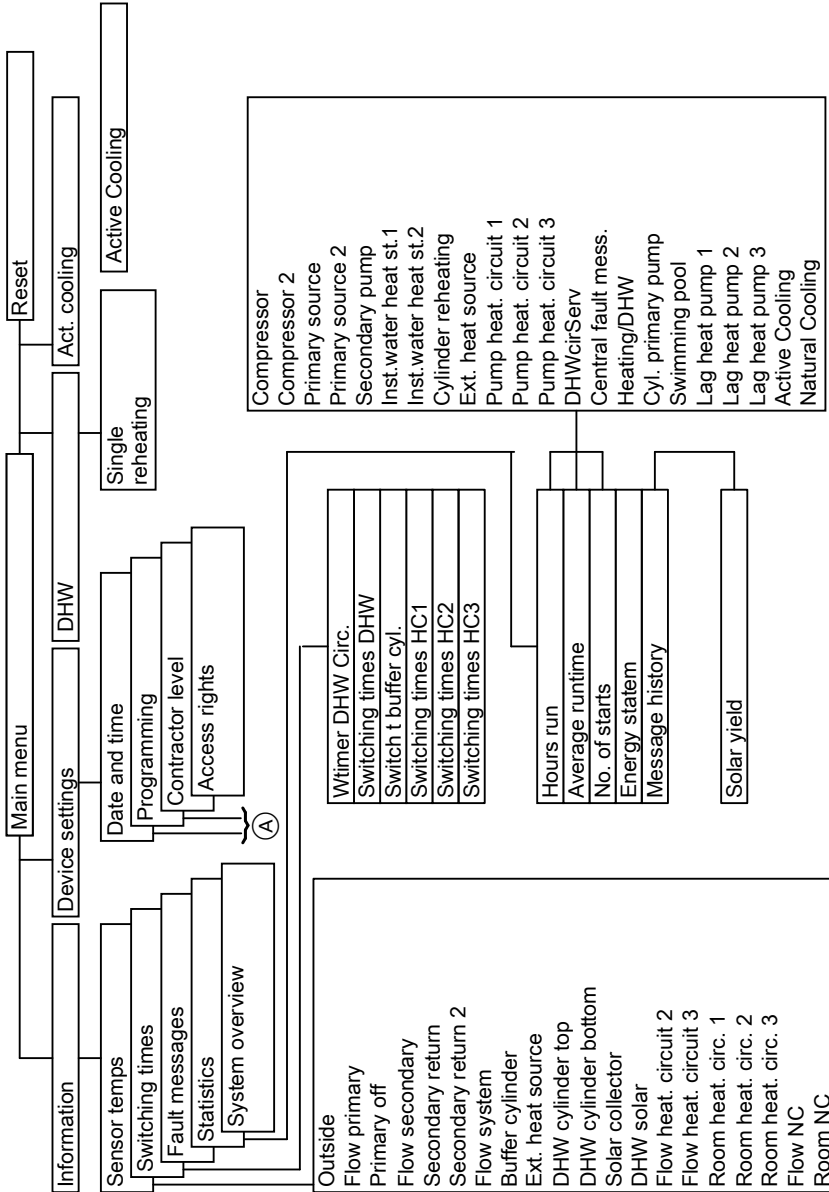
This is also possible by reselecting the relevant menu.

### Skipping messages

Press "**Standard display**"<sup>Ⓔ</sup> (see page 9) to display messages.

- You can skip messages and return to the main menu with "**BACK**".
- You can acknowledge messages with "**ALL**" (✓ appears next to the message) (see page 50) and return to the "**Main menu**" with "**BACK**".

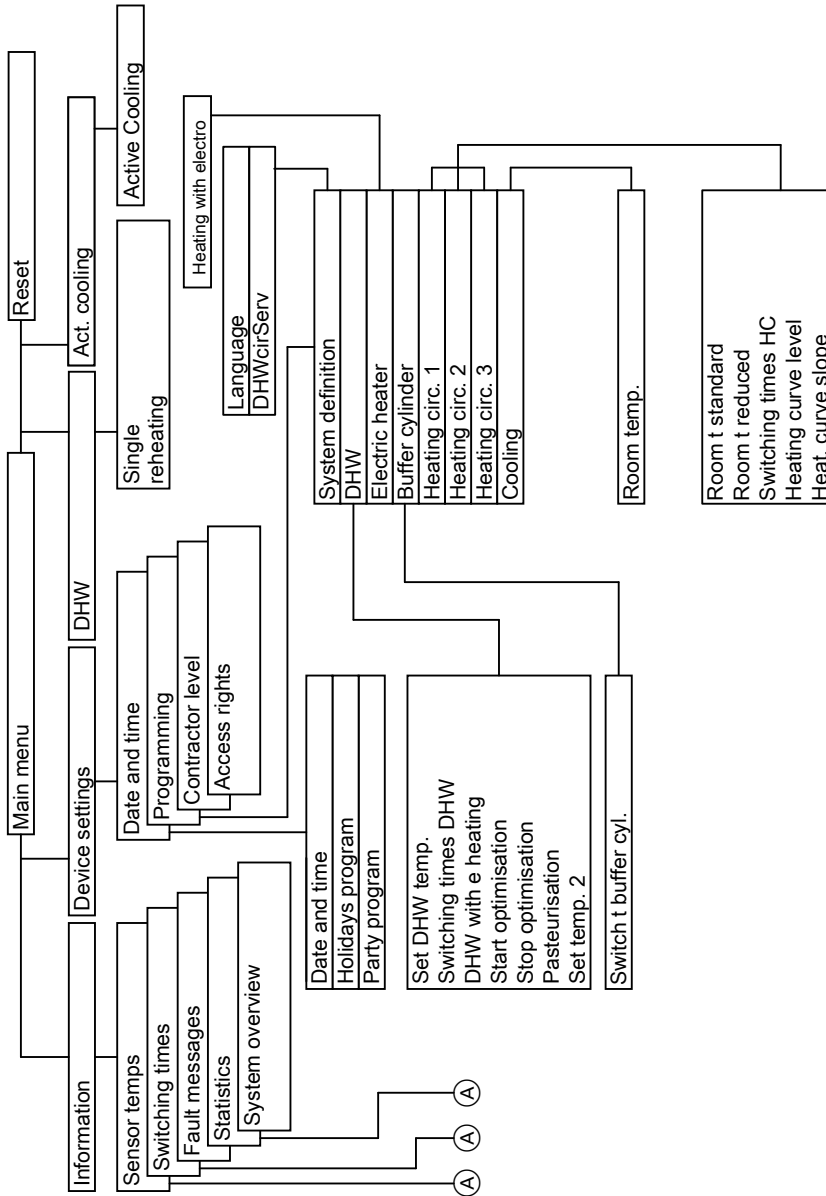
Menu tree overview



5592.568 GB

(A) See the following illustration

**Menu tree overview (cont.)**



(A) See the previous screen

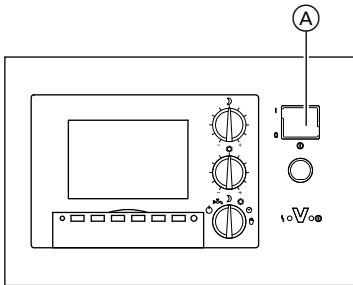
## Menu tree overview (cont.)

**Note**

*Subject to the system equipment level, not all menu items will be made available.*

## Starting the heat pump

The commissioning and adaptation of the control unit to local conditions and the structural characteristics of the building must be carried out by your heating contractor.



1. Check the system pressure at the pressure gauge: The system pressure is too low if the indicator points to the area below 1.2 bar. In such cases contact your local heating contractor.
2. Switch ON the power supply, e.g. at a separate MCB/fuse or a main isolator.
3. Turn the ON/OFF switch (A) ON. After a short while, the current operating conditions and selected set temperatures appear on the display. Your heat pump is now ready to operate.

## Stopping the heat pump

If you do not want to use your heat pump for a **short time**, e.g. during a holiday, enable the holiday program (see page 25) or switch the operating mode selector to standby  $\cup$  (see page 19). We also recommend you switch your heat pump to standby, if it will not be required for **longer periods** (several months).

If you do **not** want to use your heat pump, you can stop it at the ON/OFF switch.

- Frost protection is **no longer** enabled.
- All control unit settings remain intact.

- The frost protection of the system is ensured in standby mode; however, at temperatures below  $-20\text{ }^{\circ}\text{C}$ , only if an electric heater (instantaneous heating water heater in the heating flow, accessory) is installed.
- The circulation pumps are briefly started every 24 hours to prevent them from seizing up.

We recommend you contact your local heating contractor before and after shutting down your heat pump for longer periods.

Where necessary, your contractor can then take certain steps, e.g. protecting the system against frost.



## Switching on central heating / cooling and DHW heating

You want to heat your rooms and have DHW available, or cool your rooms at high outside temperatures.

### Note

*Central heating will only take place during the heating season. The heating season is calculated from the difference between the outside temperature and the default room temperature. The starting limit (heating temperature differential) that relates to the outside temperature can be set by your heating contractor.*

## Cooling function

### "Natural Cooling" (NC)

During the summer months the temperature level of the brine or water circuit can be used to cool the building "naturally".

The natural cooling (NC) function is a method of cooling buildings that saves a considerable amount of energy. All that is needed is a small amount of electricity for the circulation pumps to access the "cooling source" in the ground.

The capacity of the natural cooling function cannot generally be compared with that of air-conditioning systems. Natural cooling provides no dehumidification.

The refrigerating capacity depends on the temperature, which is subject to seasonal fluctuations. Experience has shown that the cooling capacity is higher at the beginning of summer than at the end.

Underfloor heating systems and concrete core tempering are available for cooling the building; radiator heating systems are unsuitable for this purpose.

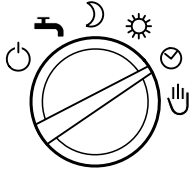
### "Active Cooling" (AC)

Together with the heat pump, the AC-Box (accessory) enables active cooling (AC mode) and natural cooling (NC mode). The AC-Box is linked directly to the heat pump and enables an external circulation reversal to actively cool living areas in summer. The following can, for example, be connected to the AC-Box: Fan convectors, cooling ceilings/sails and underfloor cooling. The active cooling function has a greater capacity than natural cooling.

- If the cooling function is integrated into a heating circuit, it is only activated when outside temperatures are high.
- The starting limit (cooling temperature differential) that relates to the outside temperature can be set by your heating contractor.
- The cooling function will be enabled via the room temperature if the natural cooling function is designed as a separate cooling circuit.

## Switching on central heating / cooling and DHW... (cont.)

### Central heating according to time program ☺

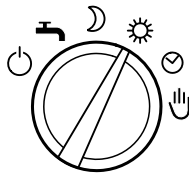


- Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
- Cooling via the heating circuit or separate cooling circuit (if installed).

Set the operating mode selector to ☺.

- Central heating during the heating season in accordance with the selected switching times and operating modes (see page 23)
- DHW heating in accordance with the selected switching times and operating modes (see page 30)

### Central heating with standard room temperature ☼

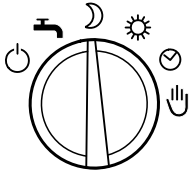


Set the operating mode selector to ☼.

- All-day central heating with the standard room temperature during the heating season (see page 21)
- DHW heating in accordance with the selected switching times and operating modes (see page 30)
- Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
- Cooling via the cooling functions AC and NC (if installed).

## Switching on central heating / cooling and DHW... (cont.)

### Central heating with reduced room temperature ☾

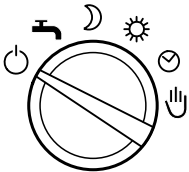


Set the operating mode selector to ☾.

- All-day central heating with the reduced room temperature during the heating season (see page 22)
- DHW heating in accordance with the selected switching times and operating modes (see page 30)
- Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
- Cooling via the cooling function only in separate cooling circuit (if installed)

### Switching off central heating / cooling and DHW heating (standby ⏻)

You do not wish to heat any rooms or make DHW available.



Set the operating mode selector to ⏻.

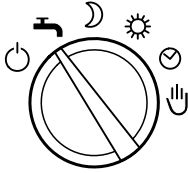
- Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
- **No** central heating
- **No** cooling by the NC or AC functions


### Starting DHW only 🚰

You do not wish to heat any rooms, but you want to make DHW available.

## Start-up/shutdown

### Starting DHW only (cont.)



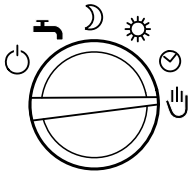
Set the operating mode selector to .



- DHW heating in accordance with the selected switching times and operating modes (see page 30)
- Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
- **No** central heating
- **Cooling via the NC or AC functions only** if a separate cooling circuit has been installed for this purpose
- **No** cooling by the NC or AC functions if integrated into a heating circuit

### Manual mode

#### Note

Use this operating mode **only** after checking with your local heating contractor.



Set the operating mode selector to .  
The display will then show symbol .

- **Unregulated** heating of the connected heating circuits with a set flow temperature of up to 45 °C
- DHW heating to the second set temperature (delivered condition 60 °C; see page 34)
- **No** cooling

## Setting a permanent room temperature

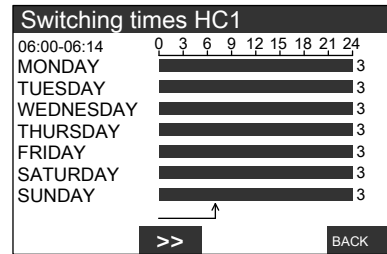
Observe the following points if you want to activate central heating:

1. ☀, 🌙 or ⌚ at the operating mode selector:
  - ☀ Central heating with standard room temperature
  - 🌙 Central heating with reduced room temperature
  - ⌚ Central heating according to time program
2. You can set the temperatures for standard room temperature (for day-time) and reduced room temperature (for night time) (see pages 21 and 22).

3. At what time central heating takes place according to the time program (⌚), with either standard or reduced room temperature, is subject to the selected switching times (see page 23).

Check:

- Press **"Information"**.
- Press **"Switching times"**.
- Press the key for the required switching time, e.g. **"HC1 switching times"**, and the set time phases appear on a time slot graphic.



Exit the menu with **"BACK"**.

For changing the time program, see page 23.

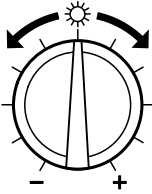
## Selecting a standard room temperature

In the delivered condition, the standard room temperature is set to 20 °C with the rotary selector ☀ set to its centre position. The preset temperature for the centre position of the rotary selector can be programmed separately for every heating circuit (see page 22).

You can adjust this temperature by  $\pm 5$  °C in 1 °C steps at the rotary selector ☀, without altering the programmed values.

## Adjusting the room temperature

### Setting a permanent room temperature (cont.)



Select the required temperature at the rotary selector ☀.

If several heating circuits are installed, this change will affect **all** heating circuits.

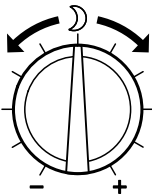
#### Note

*If a remote control (e.g. Vitotrol 200) is connected to a heating circuit, the room temperature set at the remote control applies to this heating circuit.*

### Selecting a reduced room temperature

In the delivered condition, the reduced room temperature is set to 16 °C with the rotary selector ☾ preset to its centre position. The preset temperature for the centre position of the rotary selector can be programmed separately for every heating circuit (see page 22).

You can adjust this temperature by  $\pm 5$  °C in 1 °C steps at the rotary selector ☾, without altering the programmed values (see page 22).



Select the required temperature at the rotary selector ☾.

If several heating circuits are installed, this change will affect **all** heating circuits.






### Altering programmed standard and reduced room temperatures

In this menu, you can alter the temperature when rotary selectors ☀ and ☾ are in their centre position.

## Setting a permanent room temperature (cont.)

Heating circ. 1		[°C]
Room t standard	:	20.0
Room t reduced	:	16.0
Switching times HC	:	→T
Heating curve level	:	0.0
Heat. curve slope	:	0.6
↓	-1.0	+1.0
	> <	Back

Press the following keys:

1. "Device settings"
2. "Programming"
3. "Heating circ. 1"  
or  
"Heating circ. 2", "Heating circ. 3"  
(if installed)
4.  /  for standard or reduced room temperature  
"Room t standard" or  
"Room t reduced"
5.  /  for the required temperature.  
 restores the selected temperature to its delivered condition.
6. "BACK" to confirm and exit the menu

### Note

*The reduced room temperature cannot be set higher than the standard room temperature.*

*The standard room temperature cannot be set lower than the reduced room temperature.*

## Setting switching times (time program ⌚)

For central heating, setting switching times effects a changeover between the operating modes "STANDBY" (see page 19), "REDUCED", "STANDARD", and "FIXED VALUE".

## Setting a permanent room temperature (cont.)

- At the factory, "**STANDARD**" is set for every day from 0:00 to 24:00 h, i.e. all rooms are heated all day to the standard room temperature.
- You can set switching times for every day or part of the week **individually**:
  - The same for every day: Monday to Sunday
  - For individual parts of the week: Monday to Friday, Saturday to Sunday, Monday to Saturday
  - For every day individually: Monday, Tuesday, etc.

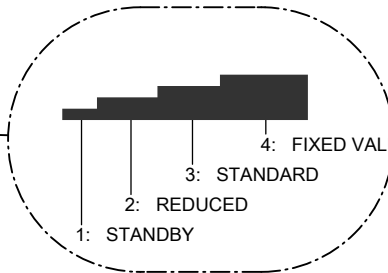
### Note

*From an energy point of view, continuous heating to the standard room temperature is advantageous for heat pumps. For that reason it is the factory default setting.*

*Consult your local heating contractor before making any modifications.*

When setting the switching times, take the response time of your heating system into consideration. Select correspondingly **earlier** start and stop times.

Switching times HC1	
20:00-20:14	0 3 6 9 12 15 18 21 24
MONDAY	3
TUESDAY	3
WEDNESDAY	3
THURSDAY	3
FRIDAY	3
SATURDAY	3
SUNDAY	3
STANDBY	↑
DAY	VALUE >> SET>> > < OK



The operating mode for the selected period (15 min block, top left) is displayed by bar height and number (1, 2, 3 or 4).

- For setting the standard and reduced room temperatures for "**REDUCED**" and "**STANDARD**" modes, see page 21.
- In "**FIXED VALUE**" mode, heating occurs at the maximum flow temperature "**Flow temp.**". This temperature can be set by your local heating contractor.

### Note





*The cooling function of the heating circuits is enabled only in stage three ("**STANDARD**" mode) and stage four ("**FIXED VALUE**" mode).*

Press the following keys:

1. "**Device settings**"
2. "**Programming**"
3. "**Heating circ. 1**"  
or  
"**Heating circ. 2**", "**Heating circ. 3**"  
(if installed)



### Setting a permanent room temperature (cont.)

- |  |  |
|--|--|
| <p>4.  /  for <b>"Switching times HC"</b></p> <p>5.  to open the <b>"Switching times HC"</b> menu</p> <p>6. <b>"DAY"</b> for the required day or part of the week</p> <p>7. <b>"VALUE"</b> for the required operating mode</p> <p>8.  for the time (time top left / position of arrow bottom) from which the operating mode should be changed.</p> | <p>9. <b>"SET"</b> for the required period (min. 15 min)</p> <p>10. Proceed as described in points 6 to 9 for the setting of further switching times.</p> <p>11. <b>"OK"</b> to confirm and exit the menu.</p> |
|--|--|

### Changing the room temperature for a few days only

The following energy saving options are available for times when you are not at home.

- You can switch OFF central heating completely (see page 19)  
or
- You can set central heating to minimum energy consumption (e.g. to prevent your houseplants from being damaged by frost). For this, select the **"Holiday program"**.
  - All-day central heating with the selected reduced room temperature
  - Frost protection for the heat pump, DHW cylinder and heating water buffer cylinder (if installed) is enabled
  - **No** DHW heating
  - **No** cooling

### Selecting the holiday program

The holiday program begins and ends at the set times (date and time).

## Changing the room temperature for a few days... (cont.)

### Note

If several heating circuits are installed, the holiday program will affect **all** heating circuits.

Selecting the holiday program			
Holidays begin:			
Monday	06.10.08	10:00	
Holidays end:			
Saturday	18.10.08	06:00	
<	>	-	+ Back OK

Press the following keys:

1. "Device settings"
2. "Date and time"






## Terminating the holiday program

The holiday program terminates automatically at the set holiday end time.

If you want to terminate the holiday program prematurely, press the following keys:

1. "Device settings"

### 3. "Holidays program"

4.  /  for the value to be set (beginning / end of holiday)
5.  /  for the required value (date and time for beginning / end of holiday)
6. "OK" to confirm and exit the menu  
The symbol  appears in the standard display when the holiday program is enabled (see page 9).

### 2. "Date and time"

### 3. "Holidays program"

4. "YES" to confirm that the holiday program has been terminated

## Changing the room temperature for a few hours only

The following function enables you to change the room temperature for a few hours, without permanently altering your control settings.

## Changing the room temperature for a few hours... (cont.)

### Selecting the party program

Select the party program if you want to heat spontaneously at the standard room temperature (e.g. if guests unexpectedly stay longer in the evening).

- Central heating with the set standard room temperature.
- The DHW will be boosted to the set temperature.
- The DHW circulation pump is switched ON.

#### Note

- *If several heating circuits are installed, the party program will affect **all** heating circuits.*
- *If a remote control (e.g. Vitotrol 200) is connected to a heating circuit where party mode is enabled, party mode applies only to this heating circuit.*

Party program			
Party starts at:			
Friday	20.05.08	20:00	
Party ends at:			
Saturday	21.05.08	04:00	
<	>	-	+   Back   OK

Press the following keys:


#### 1. "Device settings"

#### 2. "Date and time"

#### 3. "Party program"

4.  /  for the value to be set (beginning / end of party)

5.  /

6. "OK" to confirm and exit the menu  
The symbol  appears in the standard display when the party program is enabled (see page 9).

### Terminating the party program

Party mode ends automatically with the next changeover to central heating with standard room temperature, but no later than after 8 hours.

If you want to terminate party mode prematurely, press the following keys:

#### 1. "Device settings"

#### 2. "Date and time"

#### 3. "Party program"

Adjusting the room temperature

### Changing the room temperature for a few hours... (cont.)

4. **“YES”** to confirm that the party program has been terminated

## Selecting constant DHW heating

### Note

If several heating circuits are installed, DHW heating will affect **all** heating circuits.

Observe the following points if you want to adjust the DHW heating:

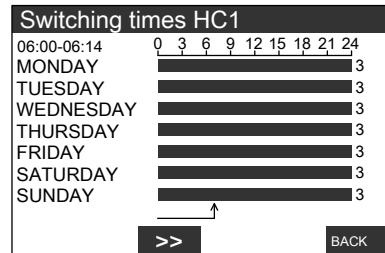
- ☞, ☀, ☾ or ⌚ must be selected at the operating mode selector:

  - ☞ DHW heating
  - ☀ Central heating with standard room temperature
  - ☾ Central heating with reduced room temperature
  - ⌚ Central heating according to time program
- You can select the set DHW temperature (see page 29).

- When DHW is heated according to the time program (⌚), and when the DHW circulation pump (if installed) will run depends on the settings of **both** switching times (see pages 30 and 31).

Check:

- Press "**Information**".
- Press "**Switching times**".
- Press the key for the required switching time, e.g. "**Switching times DHW**", and the set time phases appear on a time slot graphic.



Exit the menu with "**BACK**".

For changing the time program, see page 30.

## Selecting the DHW temperature

### Note






If the heat pump alone cannot achieve the set DHW temperature, the **instantaneous heating water heater** (if installed, accessory) is started.

DHW	[°C]
Set DHW temp.	: 50.0
Switching times DHW	: →T
DHW with e heating	: Ye
Start optimisation	: No
Stop optimisation	: No
Pasteurisation	: Ye
Set temp. 2	: 60.0
↓	-1.0 +1.0 >< Back

## Selecting DHW heating

### Selecting constant DHW heating (cont.)

Press the following keys:

1. "Device settings"
2. "Programming"
3. "DHW"
4.  /  for "Set DHW temp."
5.  /  for the required temperature  
 restores the temperature to the delivered condition.
6. "BACK" to confirm and exit the menu.

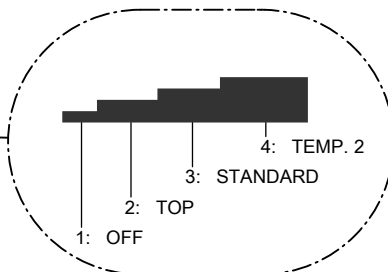
### Setting switching times (time program ☺)

For DHW heating, setting switching times effects a changeover between the operating modes "OFF", "TOP", "STANDARD" and "TEMP. 2".

- At the factory, "TOP" is set for every day from 0:00 to 24:00 h, i.e. DHW is heated all day to the "Set DHW temp." temperature.
- You can set switching times for every day or part of the week **individually**:
  - The same for every day: Monday to Sunday
  - For individual parts of the week: Monday to Friday, Saturday to Sunday, Monday to Saturday
  - For every day individually: Monday, Tuesday, etc.

When setting the switching times, take the response time of your heating system into consideration. Select start and stop times correspondingly **earlier** or utilise the "DHW heating start optimisation" function (see page 35) and the "Cylinder heating stop optimisation" function (see page 36).

Switching times DHW	
20:00-20:14	0 3 6 9 12 15 18 21 24
MONDAY	2
TUESDAY	2
WEDNESDAY	2
THURSDAY	2
FRIDAY	2
SATURDAY	2
SUNDAY	2
TOP	↑
DAY	VALUE >> SET>> > < OK



## Selecting constant DHW heating (cont.)

The operating mode for the selected time period (15 min block, top left) is displayed by bar height and number (1, 2, 3 or 4).

- In **"TOP"** operating mode, a **reduced** volume of DHW is made available. Only a part of the DHW cylinder is heated to the **"Set DHW temp."** temperature.
- In **"STANDARD"** operating mode, the **entire** DHW volume in the DHW cylinder is heated to the **"Set DHW temp."** temperature.
- In **"STANDARD"** and **"TEMP. 2"** operating modes, the lower cylinder temperature sensor is used as a shutdown criterion (if installed).
- In **"TEMP. 2"** operating mode, **"Set temp. 2"** is selected as the **constant** DHW temperature. The **"Set temp. 2"** is higher than the **"Set DHW temp."** temperature. This is connected to **"Pasteurisation"** (see page 34).

Press the following keys:

1. **"Device settings"**
2. **"Programming"**

3. **"DHW"**

4.  /  for **"Switching times DHW"**

5.  to open the **"Switching times DHW"** menu

6. **"DAY"** for the required day or part of the week

7. **"VALUE"** for the required operating mode

8.  for the time (time top left / position of arrow bottom) from which the operating mode should be changed.

9. **"SET"** for the required time period (min. 15 min)

10. Proceed as described in points 6 to 9 for the setting of further switching times.

11. **"OK"** to confirm and exit the menu

## Setting switching times of the auxiliary output (e.g. DHW circulation pump)

Your heating contractor can connect a DHW circulation pump to the auxiliary output on your control unit. Here, setting switching times effects a changeover between the operating modes **"OFF"**, **"30/5 CYCLE"**, **"15/5 CYCLE"** and **"ON"**.

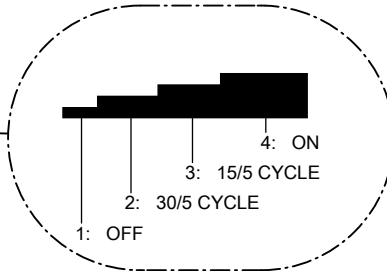
## Selecting constant DHW heating (cont.)

The DHW circulation pump transports hot water through a circuit between the DHW cylinder and the draw-off points to deliver DHW to the draw-off points as quickly as possible.

You can select when and how (constantly or cycling) the DHW circulation pump should run ("**DHWcirServ**").

- "**OFF**" is set at the factory for every day from 0:00 to 24:00 h.
- You can set switching times for every day or part of the week **individually**:
  - The same for every day: Monday to Sunday
  - For individual parts of the week: Monday to Friday, Saturday to Sunday, Monday to Saturday
  - For every day individually: Monday, Tuesday, etc.

DHWcirServ	
20:00-20:14	0 3 6 9 12 15 18 21 24
MONDAY	1
TUESDAY	1
WEDNESDAY	1
THURSDAY	1
FRIDAY	1
SATURDAY	1
SUNDAY	1
OFF	↑
DAY	VALUE >> SET>> > < OK



The operating mode for the selected time period (15 min block, top left) is displayed by bar height and number (1, 2, 3 or 4).

- In operating mode "**30/5 CYCLE**", the DHW circulation pump is started every 30 min for 5 min.
- In operating mode "**15/5 CYCLE**", the DHW circulation pump is started every 15 min for 5 min.

Press the following keys:

1. "**Device settings**"
2. "**Programming**"
3. "**System definition**"

4.  /  for "**DHWcirServ**"
5.  to open the "**DHWcirServ**" menu
6. "**DAY**" for the required day or part of the week
7. "**VALUE**" for the required operating mode
8.  for the time (time top left / position of arrow bottom) from which the operating mode should be changed.
9. "**SET**" for the required time period (min. 15 min)



## Selecting constant DHW heating (cont.)

10. Proceed as described in points 6 to 9 for the setting of further switching times.
11. **"OK"** to confirm and exit the menu

## Selecting DHW heating only once


Once-only DHW heating can be activated without permanently changing the control settings.

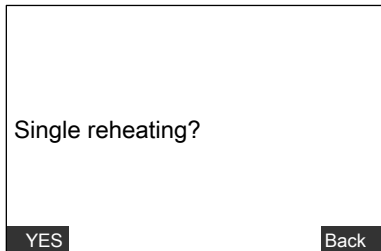
### Note

*The DHW cylinder will be heated to the "Set temp. 2" (see page 34) if only one temperature sensor is enabled and this function is activated.*

*The DHW cylinder will be heated to the selected DHW temperature "Set DHW temp." (see page 29) if two temperature sensors are installed.*

Press the following keys:

1. **"DHW"**
2. **"YES"** to confirm; the DHW will be heated up once.  
The symbol  appears on the standard display (see page 9).  
**or**
3. **"BACK"** if you do not want to activate once-only DHW heating.



## Terminating once-only DHW heating

DHW heating is terminated automatically when the set DHW temperature is reached (see page 29).

If you want to terminate DHW heating prematurely, press the following keys:

1. **"DHW"**
2. **"NO"** to confirm

## Selecting DHW heating

### Auxiliary function (DHW)

As additional protection against bacteria, you can select **"Pasteurisation"**.



The total cylinder content will be heated at the first cylinder heating every Monday to the **"Set temp. 2"** (see next chapter).





In order that bacteria are also killed in the DHW circulation line, the DHW circulation pump (if installed) is started in addition to the cylinder heating.

#### Note

*Temperatures above 60 °C can only be achieved with an instantaneous heating water heater in the heating flow or an electric immersion heater EHE in the DHW cylinder.*

Press the following keys:

1. **"Device settings"**
2. **"Programming"**
3. **"DHW"**
4.  /  for **"Pasteurisation"**
5. **"YES/NO"** to activate / deactivate the function
6. **"BACK"** to confirm and exit the menu

DHW		[1/0]
Set DHW temp.	:	50.0
Switching times DHW	:	→T
DHW with e heating	:	Ye
Start optimisation	:	No
Stop optimisation	:	No
Pasteurisation	:	Ye
Set temp. 2	:	60.0
		NO
		Back

### Set temperature 2 (DHW)

You can set the **"Set temp. 2"** for the **"Pasteurisation"** (for killing bacteria, see page 34) and for the **"TEMP. 2"** operating mode (see page 30). In the delivered condition, the **"Set temp. 2"** is set to 60 °C.

## Set temperature 2 (DHW) (cont.)

### Note

- The "Set temp. 2" for DHW cannot be set higher than the maximum DHW cylinder temperature.
- The second set temperature cannot be set higher than the max. DHW cylinder temperature.
- The maximum DHW cylinder temperature can only be changed by your heating contractor.
- Temperatures above 60 °C can only be achieved with an instantaneous heating water heater in the heating flow or an electric immersion heater EHE in the DHW cylinder.

Press the following keys:

1. "Device settings"

2. "Programming"

3. "DHW"

4.  /  for "Set temp. 2"

5.  /  for the selected value

6. "BACK" to confirm and exit the menu

DHW		[°C]
Set DHW temp.	:	50.0
Switching times DHW	:	→T
DHW with e heating	:	Ye
Start optimisation	:	No
Stop optimisation	:	No
Pasteurisation	:	Ye
Set temp. 2	:	60.0
<input type="button" value="↑"/>	-1.0	<input type="button" value="&gt; &lt;"/> Back

## Start optimisation for cylinder heating

The start optimisation ensures that DHW is available at the required temperature at the beginning of standard mode.

### Note

*This function is only enabled if switching times have been set for the DHW cylinder (see page 30).*

DHW		[1/0]
Set DHW temp.	:	50.0
Switching times DHW	:	→T
DHW with e heating	:	Ye
Start optimisation	:	No
Stop optimisation	:	No
Pasteurisation	:	Ye
Set temp. 2	:	60.0
<input type="button" value="↓"/>	<input type="button" value="↑"/>	YES > < Back

## Selecting DHW heating

### Start optimisation for cylinder heating (cont.)

Press the following keys:

1. "Device settings"
2. "Programming"
3. "DHW"
4. / for "Start optimisation"
5. "YES/NO" to activate / deactivate the function
6. "BACK" to confirm and exit the menu

### Stop optimisation for cylinder heating

The stop optimisation ensures that the DHW cylinder is fully heated until the end of operation in standard mode.

#### Note

*This function is only enabled if switching times have been set for the DHW cylinder (see page 30).*

DHW	[1/0]
Set DHW temp.	: 50.0
Switching times DHW	: →T
DHW with e heating	: Ye
Start optimisation	: No
Stop optimisation	: No
Pasteurisation	: Ye
Set temp. 2	: 60.0
<input type="button" value="↓"/>	<input type="button" value="↑"/>
YES	> < Back

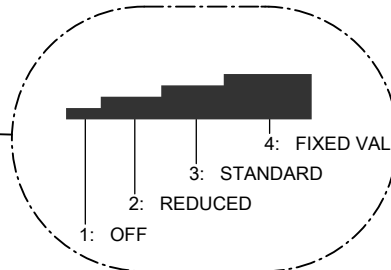
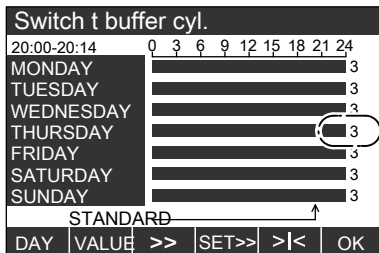
Press the following keys:

1. "Device settings"
2. "Programming"
3. "DHW"
4. / for "Stop optimisation"
5. "YES/NO" to activate / deactivate the function
6. "BACK" to confirm and exit the menu

## Switching times for the heating water buffer cylinder

For the heating water buffer cylinder, setting the switching times effects a changeover between the operating modes "OFF", "REDUCED", "STANDARD", and "FIXED VALUE"

- At the factory, "STANDARD" is set for every day from 0:00 to 24:00 h, i.e. all rooms are heated all day to the standard room temperature.
- You can set switching times for every day or part of the week **individually**:
  - The same for every day: Monday to Sunday
  - For individual parts of the week: Monday to Friday, Saturday to Sunday, Monday to Saturday
  - For every day individually: Monday, Tuesday, etc.



The operating mode for the selected period (15 min block, top left) is displayed by bar height and number (1, 2, 3 or 4).

- In "REDUCED" mode, a smaller volume of heating water is available than in "STANDARD" mode.
- In "STANDARD" mode, the heating water buffer cylinder is heated to the flow temperature selected for the heating circuit.

- In "FIXED VALUE" mode, the heating water buffer cylinder is heated to a fixed default temperature (50 °C in the delivered condition). You can utilise this operating mode, for example to heat up the heating water buffer cylinder with economy power.

**Note**

*The heating circuit flow temperature and the temperature for "FIXED VALUE" are set by your heating contractor.*

Further adjustments



## Switching times for the heating water buffer... (cont.)


Press the following keys:

1. "Device settings"

2. "Programming"


3. "Buffer cylinder"

4.  /  for "Switch t buffer cyl."

5.  to open the "Switch t buffer cyl." menu

6. "DAY" for the required day or part of the week

7. "VALUE" for the required operating mode

8.  for the time (time top left / position of arrow bottom) from which the operating mode should be changed.

9. "SET" for the required period (min. 15 min)

10. Proceed as described in points 6 to 9 for the setting of further switching times.


11. "OK" to confirm and exit the menu

## Modifying the heat pump characteristics

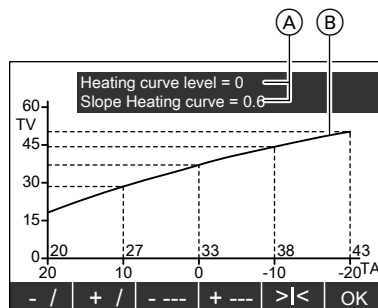
You can alter the heating characteristics if the room temperature does not meet your requirements for any prolonged period of time.

You alter the characteristics by changing the slope and level of the heating curve. Set the heating circuit flow temperature characteristics relative to the outside temperature.

Observe the modified heating characteristics over several days (if possible, await a significant change in the weather) before making further adjustments.

Make short-term adjustments to the room temperature using rotary selector  (see page 21).

For assistance, use the table on page 39.



(A) Values for slope and level  
(B) Heating curve

**Modifying the heat pump characteristics (cont.)**

TV Flow temperature  
TA Outside temperature

5. **>>>** to open the selected menu

Press the following keys:

6. **+/-** for the required slope

1. **"Device settings"**

7. **+---/----** for the required level

2. **"Programming"**

3. **"Heating circ. 1"**  
**"Heating circ. 2", "Heating circ. 3"**  
(if installed)

**Note**  
The values for slope and level (A) as well as for the heating curve (B) change with the axis designation (value range for TV, TA).

4. **↓/↑** for **"Heating curve level"**  
or  
**"Heat. curve slope"**

8. **"OK"** to confirm and exit the menu

Problem	Measure	Example (relative to the delivered condition)
The living space is <b>too cold during the heating season</b>	Adjust the heating curve <b>slope</b> to the <b>next higher</b> value (e.g. 0.7)	HEATING CURVE LEVEL = 0 HEATING CURVE SLOPE = 0.7
The living space is <b>too hot during the heating season</b>	Adjust the heating curve <b>slope</b> to the <b>next lower</b> value (e.g. 0.5)	HEATING CURVE LEVEL = 0 HEATING CURVE SLOPE = 0.5
The living space is <b>too cold during spring/autumn</b> and during the <b>heating season</b>	Adjust the heating curve <b>level</b> to the <b>next higher</b> value (e.g. 1)	HEATING CURVE LEVEL = 1 HEATING CURVE SLOPE = 0.6
The living space is <b>too hot during spring/autumn</b> and during the <b>heating season</b>	Adjust the heating curve <b>level</b> to the <b>next lower</b> value (e.g. -1)	HEATING CURVE LEVEL = -1 HEATING CURVE SLOPE = 0.6



Further adjustments

## Modifying the heat pump characteristics (cont.)

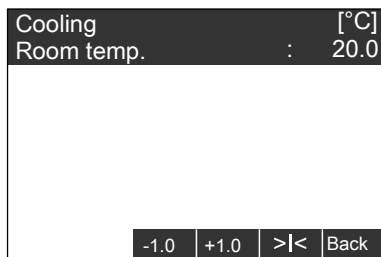
Problem	Measure	Example (relative to the delivered condition)
The living space is <b>too cold during spring/autumn</b> , but warm enough during the heating season	Adjust the heating curve <b>slope</b> to the <b>next lower</b> value (e.g. 0.5) and the <b>level</b> to a <b>higher</b> value (e.g. 1)	HEATING CURVE LEVEL = 1 HEATING CURVE SLOPE = 0.5
The living space is <b>too hot during spring/autumn</b> , but warm enough during the heating season	Adjust the heating curve <b>slope</b> to the <b>next higher</b> value (e.g. 0.7) and the <b>level</b> to a <b>lower</b> value (e.g. -1)	HEATING CURVE LEVEL = -1 HEATING CURVE SLOPE = 0.7

## Cooling with a separate cooling circuit

If a **separate** cooling circuit (e.g. for cooling a wine cellar) has been installed in your system, you can adjust the room temperature and the cooling characteristics. The cooling circuit is regulated via a room temperature sensor. We recommend the use of an NC or AC-Box (accessories).

### Setting the room temperature

Here, you can select the temperature, to which the room should be cooled.



2. "Programming"

3. "Cooling"

4. / for the required "Room temp."

5. "BACK" to confirm and exit the menu.

Press the following keys:

1. "Device settings"



## Cooling with a separate cooling circuit (cont.)

### Changing the cooling characteristics of the separate cooling circuit

Your heating contractor can alter the cooling characteristics if they do not meet your requirements over a **prolonged** period.

### Cooling with active cooling

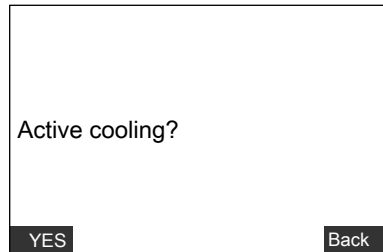
For cooling with "**Active Cooling**" (if installed), the heat pump is started for active support in addition to cooling with brine from the ground hole (natural cooling).

#### Note

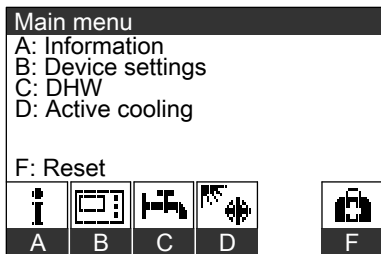
- We recommend the use of an AC-Box (accessory).
- The cooling output with this system is considerably greater than with **natural cooling**.
- The "**Active Cooling**" function can be manually selected or deselected at any time.
- Whether the "**Active Cooling**" function is installed in a heating circuit or a separate cooling circuit is not relevant.

Press the following keys:

#### 1. "Act. cooling"



#### 2. "YES/NO" to activate / deactivate "Active Cooling"

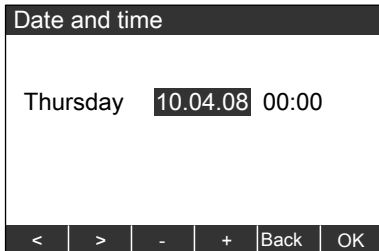


## Date and time

Date and time are factory-set and can be changed manually.

## Further adjustments

### Date and time (cont.)



Press the following keys:

#### 1. "Device settings"

#### 2. "Date and time"

#### 3. "Date and time"

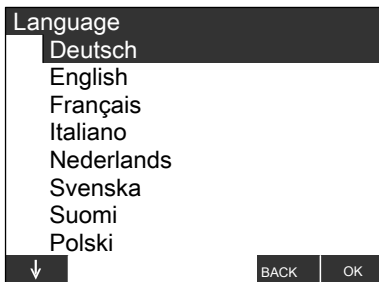
4.  /  for the value to be adjusted (date, time)

5.  /  for the required value (date, hour, minute)

6. "OK" to confirm and exit the menu

### Language selection

The required language can be freely selected at any time from the available languages.



Press the following keys:

#### 1. "Device settings"

#### 2. "Programming"

#### 3. "System definition"

4.  to open the "Language" menu

5.  /  for the required language

6. "OK" to confirm and exit the menu.

### Restoring the delivered condition ("Reset")

All settings of **one** selected function group can be restored to their factory settings (delivered condition). You can restore the values individually or simultaneously.

## Restoring the delivered condition ("Reset") (cont.)

### Restoring values individually

In the menus, any selected value can be reset to its delivered condition with



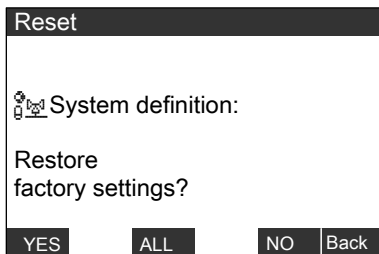
### Restoring all values simultaneously

#### Note

A reset at the user level will only restore the settings at the user level to the delivered condition. Contact your heating engineer regarding resetting **all** parameters.

Parameter groups at the user level:

- "System definition"
- "DHW" (if installed)
- "Electric heater" (if installed)
- "Buffer cylinder" (if installed)
- "Heating circ. 1"
- "Heating circ. 2" (if installed)
- "Heating circ. 3" (if installed)
- "Cooling" (if installed)



Press the following keys:

1. "Reset" "System definition" appears

2. "ALL" if you want to simultaneously reset the parameters of all function groups including time programs.

#### Note

There is no further security scan

or

3. "YES" if you want to reset the parameters of the function group (e.g. "System definition"), the scan for the next function group (e.g. "DHW") appears

or

4. "NO" if you do not want to reset the parameters of the function group (e.g. "System definition"), the next function group (e.g. "DHW") appears.

## Scanning options

### Scanning temperatures

You can scan temperatures at the internally and externally connected temperature sensors.



Sensor temps.	[°C]
Outside	: -10.2
Flow primary	: 5.9
Primary off	: 35.3
Flow secondary	: 28.9
Secondary return	: 45.2
Flow system	: 35.7
Buffer cylinder bottom	: 50.0
DHW cylinder top	: 50.0

↓      BACK

Press the following keys:

#### 1. "Information"

#### 2. "Sensor temps"

3.  /  for the temperature to be scanned

4. "BACK" to exit the menu

#### Note

*If the sensors are faulty, they will be displayed as "--". A temperature display is not possible in this case.*

### Scanning switching times

You can **scan** but not change the heating circuit switching times for different function groups.

#### Note

*Should the switching times be **changed**, proceed as described on page 23, 30, 31 or 37.*

Possible scans for the following switching times (if components installed):

- "DHWcirServ"  
(e.g. DHW circulation pump)
- "Switching times DHW"  
(DHW)
- "Switch t buffer cyl."  
(Heating water buffer cylinder)
- "Switching times HC"  
(also for heating circuits 2 and 3 if installed)

Switching times HC1	
06:00-06:14	0 3 6 9 12 15 18 21 24
MONDAY	3
TUESDAY	3
WEDNESDAY	3
THURSDAY	3
FRIDAY	3
SATURDAY	3
SUNDAY	3


↑      >>      BACK

Press the following keys:

#### 1. "Information"

#### 2. "Switching times"

## Scanning switching times (cont.)

3. **"Switching times HC1"**  
(Further options, see page 44).
4.  to run graphic displays.  
Time is displayed in the top l.h. corner; the selected operating mode to the right of the graphic (for an explanation of the IDs, see pages 23, 30, 31 and 37).
5. **"BACK"** to exit the menu.

## Scanning statistics

Here, you can scan the following statistical values of internally connected components:

- "Hours run"
- "Average runtime"
- "No. of starts"

These internally connected components are:

- "Compressor"
- "Compressor 2"
- "Primary source"
- "Primary source 2"
- "Secondary pump"
- "Secondary pump 2"
- "Inst.water heat st.1"
- "Inst.water heat st.2"
- "Cylinder reheating"
- "Ext. heat source"
- "Pump heat. circuit 1"
- "Pump heat. circuit 2"
- "Pump heat. circuit 3"
- "DHWcirServ"(e.g. for DHW circulation pump)
- "Central fault mess."
- "Heating/DHW"
- "Heating/DHW 2"
- "Cyl. primary pump"

- "Swimming pool"
- "Lag heat pump 1"
- "Lag heat pump 2"
- "Lag heat pump 3"
- "Active Cooling"
- "Natural Cooling"

Press the following keys:

1. "Information"
2. "Statistics"
3. "Hours run"  
or  
"Average runtime"  
or  
"No. of starts"

4. / for the required scan



Scanning options

## Scanning statistics (cont.)

5. "BACK" to exit the menu

## Scanning the "Energy statement"

Here, you can scan the energy statement of your solar heating system.

The energy fed into the system from the time of commissioning is displayed in kWh (this value cannot be deleted).

2. "Statistics"

3. "Energy statement"

Press the following keys:

4. "Solar yield"

1. "Information"

5. "BACK" to exit the menu

## Scanning the "Message history"

Here, you can scan the message history of your solar heating system:

See scanning saved fault messages from page 52.

## Operating conditions in system overview

In the system overview, you can read off the temperature and component switching conditions for your system. The respective symbols will be animated if the compressor or pumps are running.

Individual function groups (vertical columns) are only displayed if these components are part of your system.

## Operating conditions in system overview (cont.)

### Explanations regarding the displayed system diagram

- The respective symbols will be animated if the compressor or pumps are running.
- The aperture position is shown in percent above the mixers and diverter valves that run constantly. Open paths are dark; closed paths are light.
- The dark parts of the mixers are filled.
- Only temperatures of connected sensors are displayed.
- When there is a message, the message symbol "!" flashes in the bottom r.h. display area.

Press the following keys:

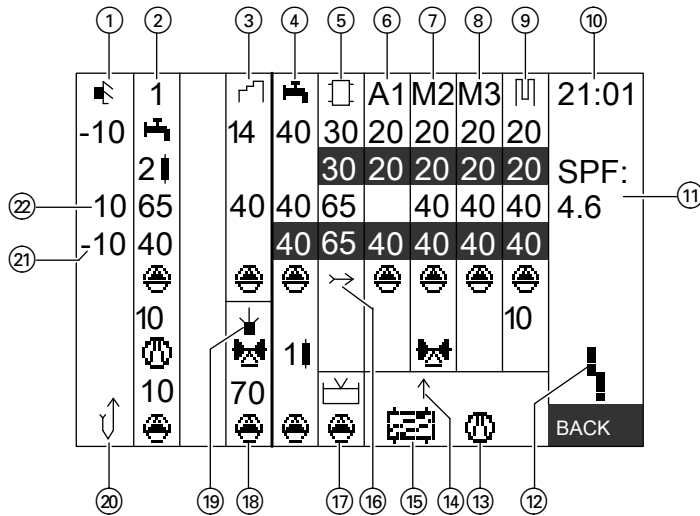
1. **"Information"**
2. **"System overview"**
3. **"BACK"** to exit the menu.

#### **Annual performance factor (SPF)**

*The annual performance factor (see ⑪ on page 48) is the ratio of the annually available heat output of the heat pump system (central and DHW heating) to the overall annual power drawn by the heat pump system (power consumption, e.g. for pumps).*

**Operating conditions in system overview (cont.)**

**System overview (function groups)**



**Note**

Actual value: **Dark** number on a light background.

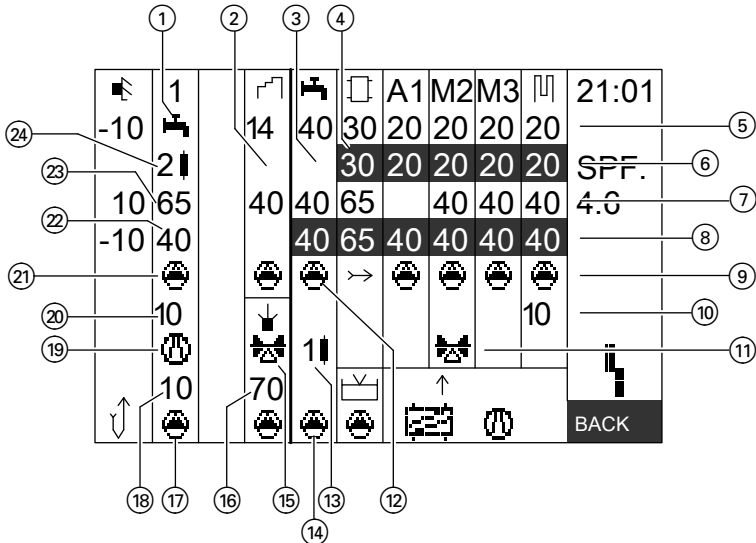
Set value: Light number on a **dark** background.

- ① Outside temperature sensor
- ② Compressor stage 1
- ③ Solar heating circuit
- ④ DHW
- ⑤ Heating water buffer cylinder
- ⑥ Heating circuit A1 (without mixer)
- ⑦ Heating circuit M2 (with mixer)
- ⑧ Heating circuit M3 (with mixer)
- ⑨ Separate cooling circuit
- ⑩ Current time
- ⑪ Annual performance factor (SPF = "seasonal performance factor")
- ⑫ Message symbol (flashes when a message is available)
- ⑬ Active Cooling function (AC)
- ⑭ Cooling directly affects the next heating circuit / separate cooling circuit
- ⑮ Natural Cooling function (NC)
- ⑯ System flow
- ⑰ Swimming pool
- ⑱ Cylinder reheating through external heat source
- ⑲ External heat source demand (active if point in the symbol flashes)
- ⑳ Geothermal probe
- ㉑ Primary return temperature
- ㉒ Primary flow temperature



## Operating conditions in system overview (cont.)

### System overview (values/operation of system components)



#### Note

- Actual value: **Dark** number on a light background.
- Set value: **Light** number on a **dark** background.

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>① DHW valve enabled: DHW heating</li> <li>② Collector flow/return temperature; solar circulation pump</li> <li>③ DHW temperature top/bottom</li> <li>④ Heating water buffer cylinder temperature</li> <li>⑤ Heating water buffer cylinder temperature/room temperature (actual value)</li> <li>⑥ Heating water buffer cylinder temperature/room temperature (set value)</li> <li>⑦ Actual flow temperature</li> <li>⑧ Flow temperature (set value)</li> <li>⑨ Heating circuit pumps</li> <li>⑩ Cooling (0 to 100)</li> </ul> | <ul style="list-style-type: none"> <li>⑪ Mixer</li> <li>⑫ Circulation pump for cylinder heating</li> <li>⑬ Electric immersion heater EHE (number adjacent: in stages 1 to 3 in operation; integral to DHW cylinder)</li> <li>⑭ DHW circulation pump</li> <li>⑮ Mixer external heat source</li> <li>⑯ Medium temperature of external heat source</li> <li>⑰ Primary pump</li> <li>⑱ Evaporator temperature of primary pumps</li> <li>⑲ Compressor</li> <li>⑳ Hot gas temperature</li> </ul> |
|---|--|



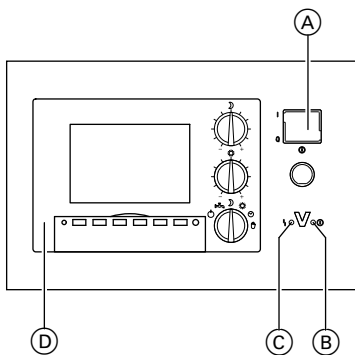
## Scanning options

### Operating conditions in system overview (cont.)

- ⑳ Secondary circuit pump
- ㉑ Secondary circuit return
- ㉒ Secondary circuit flow
- ㉓ Instantaneous heating water heater  
(number adjacent: in stages 1 to 3 in  
operation; integral to DHW cylinder)

### Scanning messages

Faults, warnings and information are captured, displayed and saved by the appliance.



- Ⓒ Fault display (red)
- Ⓓ Programming unit

- Ⓐ ON/OFF switch
- Ⓑ ON indicator (green)

### Dealing with messages

If the system has a message, the relevant symbol flashes on the display (see l.h. side of area Ⓗ on page 8). For faults (Ⓙ), the fault display Ⓒ also flashes.

- Ⓙ Fault
- ! Warning
- i Note

## Scanning messages (cont.)

### Note

Also notify your heating contractor if a fault develops.

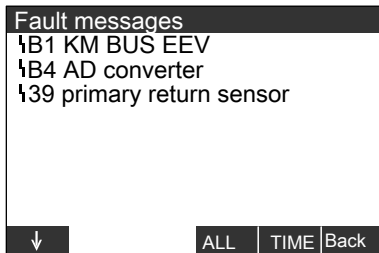
Note the following details and pass them on to your heating contractor:

- **Fault type** (e.g.: "**A9: Heat pump**")
- **Date of fault**
- **Time of fault**

This allows the heating contractor to better prepare for the service call and may save additional travelling costs.

## Displaying messages

Control unit settings can be made, and scanning can take place without acknowledging messages.



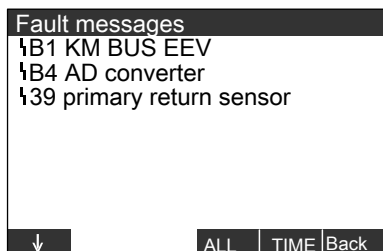
Press the following keys:

1. **"Standard display"** for the list of messages
2. **"BACK"** for **"Main menu"**  
You can now make adjustments and scans.

## Acknowledging messages

All active messages are displayed by pressing the **"Standard display"** key on the programming unit display.

## Scanning messages (cont.)



Press the following keys:

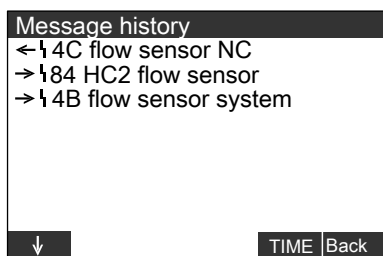
1. "Standard display"
2. / for further messages if there are more than eight (faults, information, warnings)
3. "ALL" to acknowledge all messages  
or

4. "TIME" for the time when the message occurred.  
Return to the message display with "MESSAGE".
5. "BACK" to exit the menu

### Note

- If the reason for a message is not resolved, the message is redisplayed at 07:00 h the following day.
- The red fault indicator (A) flashes until the fault has been rectified.
- If the message "**1A9: Heat pump**" is acknowledged, the system will be heated in accordance with the selected operating mode (e.g. standard mode) by the electric heater (with a correspondingly **high power consumption**). Therefore use this function **only** to bridge the time until your heating engineer arrives.

## Recalling acknowledged messages



Press the following keys:

1. "Information"
2. "Statistics"

3. "Message history"
4. "TIME" for the time at which the message occurred.  
Return to the message display with "MESSAGE".
5. "BACK" to exit the menu.

### Note

- The messages cannot be acknowledged in the message history.
- The messages are listed in order of occurrence with the most recent first.

### No display

Cause	Remedy
Power failure/fault in the power supply	The equipment starts automatically, as soon as power is restored or the fault is removed
Fuse dropped out/blown	Notify your local contractor
The appliance was switched OFF at the system ON/OFF switch	Starting the appliance (see page 16)

### "i C5 power-OFF" appears on the display

Cause	Remedy
This is not a fault. This text is displayed during a power interruption by your power supply utility (see also page 7)	The heat pump restarts automatically in accordance with the selected operating mode as soon as the power supply utility restores the power supply.

### A message symbol flashes on the display: "!", "i" or "!"

Cause	Remedy
Messages on the heating system	Scan the type of message (see page 50) and notify your local heating contractor

## Maintenance

### Cleaning

All equipment can be cleaned with a commercially available domestic cleaning agent (non-scouring).

Water must not be allowed to enter the heat pump.

### Inspection and maintenance

The inspection and maintenance of a heating system is specified by the Energy Saving Order [EnEV - Germany] and the DIN 4755, DIN 1988-8 and EN 806 standards.

Regular maintenance ensures trouble-free, energy-efficient and environmentally responsible heating. For this, we strongly advise you to arrange an inspection and maintenance contract with your local heating contractor.

### DHW cylinder (if installed)

The DIN 1988-8 and EN 806 specify that maintenance and cleaning should be carried out no later than two years after commissioning and thereafter as required.

Only a qualified heating contractor should clean the inside of a DHW cylinder and the DHW connections.

Refill any water treatment equipment (e.g. a lock or injection system) in good time, if such equipment is installed in the cold water supply of the DHW cylinder. In this connection, observe the manufacturer's instructions.

Additionally for a Vitocell 100:

We recommend that the correct function of the sacrificial anode is checked annually by your heating contractor.

The anode function can be checked without interrupting the system operation.

The heating contractor will check the earth current with an anode tester.

### Safety valve (DHW cylinder)

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

## Inspection and maintenance (cont.)

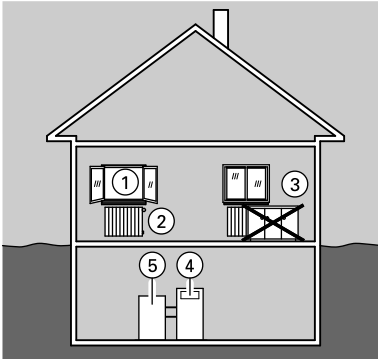
### Potable water filter (if installed)

To maintain high hygiene 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.

## Energy saving tips

With the following steps, you can save additional energy:



- Provide proper ventilation:  
Briefly open windows (1) fully and at the same time close thermostatic radiator valves (2).
- Do not overheat:  
Endeavour to achieve a room temperature of 20 °C; every degree of room temperature reduction saves up to 6% of your heating bills.
- Close roller shutters (where installed) on the windows at dusk.
- Ensure that the thermostatic valves (2) are properly set.
- Never cover radiators (3) or thermostatic valves (2).
- Set the DHW temperature of the DHW cylinder (5) at the control unit only to the required temperature (4).
- Only activate the DHW circulation pump (via switching times at the control unit) when DHW is actually required.
- Check your hot water consumption. A shower generally uses less energy than a full bath.
- If a cooling function is available, you save in summer by allowing a higher room temperature (your local contractor can set this up).
- If an active cooling function ("Active Cooling") is available, use only when required.



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## Your contact

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

Viessmann Werke GmbH&Co KG  
D-35107 Allendorf  
Telephone: +49 6452 70-0  
Fax: +49 6452 70-2780  
[www.viessmann.com](http://www.viessmann.com)

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

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