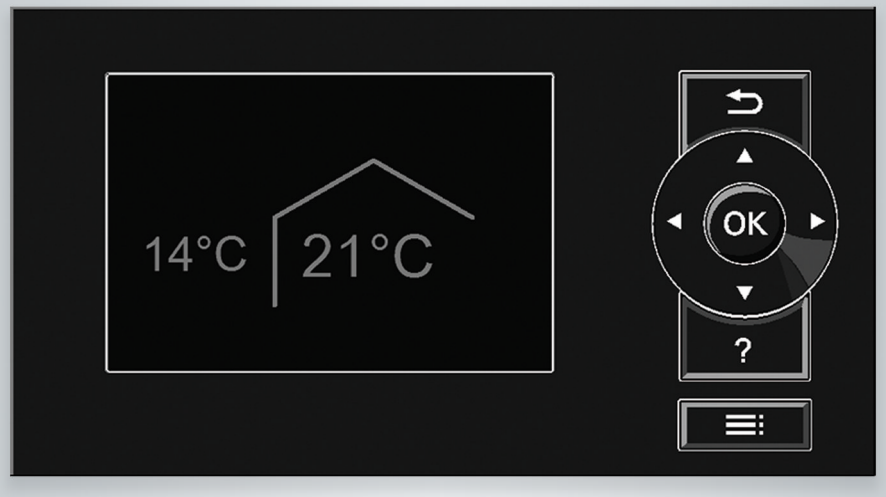
Operating instructions

for the system user

Heating system and mechanical ventilation system with heat pump control unit
Vitotronic 200, type WO1C

VITOTRONIC 200



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Please keep safe.

For your safety

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

Safety instructions explained

Danger
This symbol warns against the risk of injury.

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

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

Target group

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

Please note
Supervise children in the proximity of the appliance.
- Never permit children to play with the appliance.
- Cleaning and maintenance must not be carried out by unsupervised children.

Appliance connection

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

Danger
Incorrectly executed work on the system can lead to life-threatening accidents.
Work on electrical equipment must only be carried out by a qualified electrician.

Work on the appliance

- All settings and work on the appliance must be carried out as specified in these operating instructions. Further work on the appliance may only be carried out by authorised contractors.
- Never open the appliance.
- Never remove casings.
- Never change or remove attachments or fitted accessories.
- Never open or retighten pipe connections.

Danger
Hot surfaces can cause burns.
- Never open the appliance.
- Never touch the hot surfaces of uninsulated pipes and fittings.

In case of fire

Danger
Fires create a risk of burns.
- Switch the system OFF.
- Use a tested fire extinguisher, class ABC.

For your safety (cont.)

Conditions for siting

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

! **Please note**
Unsuitable ambient conditions can lead to system damage and can put safe operation at risk.
- Maintain the permissible ambient temperatures as detailed in the operating instructions.
- **Appliance for indoor installation:**
  - Avoid air contamination through halogenated hydrocarbons (e.g. as in paints, solvents and cleaning agents).
  - Avoid continuously high humidity levels (e.g. through continuous drying of washing).

Auxiliary components, spare and wearing parts

! **Please note**
Components that were not tested with the system may cause system damage, or may affect its functions.
Have all installation or replacement work carried out by qualified contractors.

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Symbols

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

Appliance types

Symbol	Meaning
	Content only applies to brine/water heat pumps.
	Content only applies to air/water heat pumps.
	Content only applies to air/water heat pumps with separate indoor/outdoor units.

Terminology

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

Intended use

The appliance is only intended to be installed and operated in sealed unvented heating systems that comply with EN 12828, with due attention paid to the associated installation, service and operating instructions.

Depending on the version, the appliance can only be used for the following purposes:
- Central heating
- Central cooling
- DHW heating

The range of functions can be extended with additional components and accessories.

Intended use (cont.)

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

Commercial or industrial usage for a purpose other than central heating/cooling or DHW heating shall be deemed inappropriate.

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

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

Product information

Heat pump control unit

The Vitotronic 200 heat pump control unit, type WO1C controls all functions of your heating system with heat pump and mechanical ventilation.

The heat pump control unit may be installed in different locations depending on the type of heat pump: See page 15.
- At the front of the heat pump
- At the top of the heat pump
- In a separate enclosure on the wall

Heat pump types

Air/water heat pumps

Air/water heat pumps utilise energy from the ambient air to generate heat. To achieve this, a fan draws the ambient air through a heat exchanger (evaporator). In the evaporator, the thermal energy from this ambient air is transferred to the refrigerant circuit. Here, the temperatures necessary for central heating and DHW heating are generated. The refrigerant circuit is driven by the compressor.

To provide central cooling, the refrigerant circuit operates in reverse mode. Heat is extracted from your rooms and transferred to the ambient air via the evaporator.

Note
Air/water heat pumps can have two stages. Two-stage air/water heat pumps have 2 compressors which can be activated individually or simultaneously subject to the requested heating output.

Air/water heat pumps are available in the following casing/installation versions:

Heat pump for indoor installation
- All of the heat pump components, including the heat pump control unit, are housed in a casing and installed inside the building. The outdoor air is brought to the heat pump and returned to the outside via an air duct system.

Heat pump for outdoor installation
- All of the heat pump components, except for the heat pump control unit, are housed in a casing that is installed outside the building. The heat pump control unit is mounted inside the building. The heat pump is hydraulically connected to the heating system of the building.

Air/water heat pumps with separate indoor/outdoor units

The outdoor unit is installed outside the building or fitted to the outside of the building. Heat is obtained from the ambient air in the outdoor unit.
The indoor unit, including the heat pump control unit, is installed inside the building and transfers the heat to the heating system.
The indoor and outdoor units are connected to each other hydraulically and electrically.

Product information (cont.)

Brine/water heat pumps

Brine/water heat pumps utilise geothermal energy to generate heat. The geothermal energy is transferred to the refrigerant circuit using a heat transfer medium (brine). Here, the temperatures necessary for central heating and DHW heating are generated. Here too, a compressor drives the refrigerant circuit.

To provide central cooling, the heat pump extracts heat from your rooms and transfers it to the ground.

Brine/water heat pumps are installed inside the building.

Note
Brine/water heat pumps can have two stages. Two-stage brine/water heat pumps have 2 compressors which can be activated individually or simultaneously subject to the requested heating output.
Depending on heat pump type, the two compressors can be installed in a single casing or in 2 adjacent casing units. Both compressors are controlled by one shared heat pump control unit.

Water/water heat pumps

Water/water heat pumps utilise e.g. groundwater to generate heat, following the same principle as brine/water heat pumps. The energy from the groundwater reaches the refrigerant circuit via a heat transfer medium.

With auxiliary components, a brine/water heat pump can be used as a water/water heat pump.
Water/water heat pumps are installed inside the building.

Equipment and functions

The heat pump types differ in their equipment levels:
- DHW cylinder
- Electric booster heater (instantaneous heating water heater)
- High efficiency circulation pumps
- …

The heat pump types differ in the available functions:
- Number of heating circuits
- Solar DHW heating
- Central cooling
- Noise reduction
- Output control
- Utilisation of power generated on site
- Utilisation of excess power from the grid (Smart Grid)
- …

Your contractor will have listed the equipment and functions of your heating system in the form on page 102.

Mechanical ventilation systems

Mechanical ventilation systems provide controlled ventilation of detached houses or apartments.
If your Viessmann system includes mechanical ventilation, the central ventilation unit can be controlled and operated by the heat pump control unit.
Ventilation operation adapts automatically to your requirements via a time program. **"Economy mode"** and the **"Holiday program"** help you to save energy.
With **"Intensive operation"**, you increase the air changes in the building and quickly expel odours and moisture to the outside.
The following central ventilation units are supported:

Vitovent 200-C

Vitovent 200-C is suitable for detached houses or apartments with up to 120 m^2 of living space.
Vitovent 200-C meets the requirements for passive house use.

The ventilation unit can either be mounted on a wall or installed on the ceiling.

As well as being controlled by the heat pump control unit, ventilation can also be activated by a switch or button (bathroom switch) connected to the ventilation unit, e.g. if you need the highest ventilation level for a short period.

Vitovent 200-W

Vitovent 200-W is suitable for detached houses or apartments with up to 230 m^2 of living space.

This ventilation unit is mounted on a wall.

To prevent moisture damage to the building, the ventilation unit adjusts the air changes automatically, depending on the relative humidity in your rooms (accessories required).

Vitovent 300-C

Vitovent 300-C is suitable for detached houses or apartments with up to 90 m^2 of living space.

Product information (cont.)

Vitovent 300-C meets the requirements for passive house use.

The ventilation unit can either be mounted on a wall or installed on the ceiling.

To ensure good air quality in your building, the ventilation unit adjusts the air changes automatically, depending on the relative humidity and/or carbon dioxide concentration in your rooms (accessories required).

Vitovent 300-F

Vitovent 300-F is suitable for detached houses or apartments with up to 180 m^2 of living space.
Vitovent 300-F meets the requirements for passive house use.

This ventilation unit is installed near the heat pump control unit.

To ensure good air quality in your building, the ventilation unit adjusts the air changes automatically, depending on the relative humidity and/or carbon dioxide concentration in your rooms (accessories required).

In addition to actual mechanical ventilation, your rooms can also be supplied with heat from the heat pump via the ventilation system. This method of heating the supply air can be used as the sole heat source in buildings with very good thermal insulation. For supply air heating, your contractor will have connected the ventilation unit to heating circuit HC1 of your heat pump. This means heating circuit HC1 is then a ventilation heating circuit.

Vitovent 300-W

Vitovent 300-W is suitable for detached houses or apartments with up to 370 m^2 of living space.
Vitovent 300-W meets the requirements for passive house use.

This ventilation unit is mounted on a wall.

To ensure good air quality in your building, the ventilation unit adjusts the air changes automatically, depending on the relative humidity and/or carbon dioxide concentration in your rooms (accessories required).

Permissible ambient temperatures in the installation room

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

Appliance	Ambient temperature	
	Min.	Max.
Heat pumps installed inside the building		
▪ Brine/water and water/water heat pumps including heat pump control unit	0 °C	35 °C
▪ Vitocal 200-A air/water heat pump including heat pump control unit	5 °C	30 °C
▪ Indoor units of air/water heat pumps with separate indoor/outdoor units	0 °C	35 °C
▪ All other air/water heat pumps including heat pump control unit	0 °C	35 °C
Heat pump control units fitted inside the building		
▪ Separate heat pump control units of air/water heat pumps for outdoor installation	0 °C	35 °C
Central ventilation units		
▪ All types	2 °C	35 °C

Product information (cont.)

Outside temperature limits for air/water heat pumps /

Air/water heat pumps utilise outdoor air as the heat source. They only operate efficiently within certain outside temperature limits, e.g. between –20 °C and +35 °C. If the temperature rises above the upper limit or falls below the lower limit, these heat pumps temporarily shut down. You will see a message about this on the heat pump control unit.
In order to meet the heat demand for central heating and DHW heating outside the temperature limits, the heat pump control unit automatically switches on the available auxiliary heaters as required, e.g. electric booster heater.

Note
You must enable electric booster heaters for heat generation: See page 39.

Once the outside temperature is back within the temperature limits, the heat pump is automatically ready for operation again.

Temperature limits for brine/water heat pumps and water/water heat pumps

With brine/water heat pumps and water/water heat pumps, the heat is transferred to the heat pump via the heat transfer medium (brine). As heat sources, the ground and groundwater remain at an almost constant temperature level throughout the year. It is therefore extremely unlikely that the permissible temperature limits for brine entry into the heat pump will be exceeded or undershot.

If your brine/water heat pump or water/water heat pump shuts down due to excessively high or low brine inlet temperatures, there may be a fault. You will see a message about this on the heat pump control unit. In such cases, inform your local contractor.

Commissioning

The commissioning and matching up of the heat pump control unit to local conditions and to the structural characteristics of the building, plus the instruction of the user in operating the system, must be carried out by your heating contractor.

Note
These operating instructions also describe functions that are only available on some heat pump models or only with accessories. These functions are not specifically identified.
Your contractor will have listed the equipment and functions of your heating system in the form on page 102.
For questions relating to the scope of and accessories for your heat pump and your heating system, contact your contractor.

Your system is preset at the factory

Your heating system is preset at the factory and is therefore ready for operation:

Central heating/central cooling
- Your home will be heated to 20 °C from **00:00 to 24:00 h "Set room temperature"** (standard room temperature).
- If a buffer cylinder is installed, this buffer cylinder will be heated.
- Active cooling mode is blocked: See page 40.

DHW heating
- The DHW is heated every day from **00:00 to 24:00 h** to 50 °C **"Set DHW temperature"**.
- Any installed DHW circulation pump is switched off.
- The electric booster heater, if installed, is enabled: See page 39.

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Your system is preset at the factory (cont.)

Frost protection

- Frost protection is ensured for your heat pump, DHW cylinder and any buffer cylinder that may be installed.
  Note
  In the following cases, frost protection is only guaranteed with a booster heater (on site):
  - *Air/water heat pumps:*
    At temperatures below −15 °C
  - *When there is a heat pump fault*

  Auxiliary heaters may include instantaneous heating water heaters or oil/gas boilers.

Mechanical ventilation with Viessmann ventilation unit

- From **00:00 to 24:00 h**: Mechanical ventilation in the **"Standard"** operating status

Wintertime/summertime changeover

- This changeover is automatic.

Date and time

- The date and time were set by your contractor.

You can change the settings at any time to suit your individual requirements.

Power failure

All settings are saved if there is a power failure.

Tips for saving energy

Saving energy on central heating/central cooling

- Do not overheat your home. Every degree of room temperature reduction saves up to 6 % on your heating bills.
  Do not set your individual preferred temperature too high, e.g. not above 20 °C: See page 26
- Heat your home to the reduced temperature at night or during regular absences (not applicable to underfloor heating). To do so, adjust the time program for central heating: See page 27.
- Adjust the heating or cooling curves so that your home is heated or cooled to your individual preferred temperature all year round: See page 30.
- To switch off functions that are not required (e.g. central heating in summer), set the **"Only DHW"** and **"Standby mode"** operating programs: See pages 35 and 61.
- To reduce room temperature during a short period of absence (except for underfloor heating), set **"Economy mode"**: See page 32.
- If you are going away, set the **"Holiday program"**: See page 33.
  During the period that you are away, the room temperature will be reduced and DHW heating switched off.

Saving energy on DHW heating

- At night or during regular absences, heat the DHW to a lower temperature. To do so, adjust the time program for DHW heating: See page 35.
- Switch on DHW circulation only for those times in which you regularly use hot water. To do so, adjust the time program for the DHW circulation pump: See page 37.

Saving energy on mechanical ventilation (in conjunction with a ventilation unit)

- If you are absent for a short period, select **"Economy mode"** or the **"Standard operation"** operating program. During this period, the ventilation level will be reduced: See page 43 and 46.
- If you are going away, set the **"Holiday program"**: See page 46.
  During your absence, the ventilation level is reduced.

Utilisation of power generated on site (in conjunction with a photovoltaic system)

- Use the power generated by your photovoltaic system for your heating system: See page 48.

Utilising excess power (Smart Grid)

- Utilise free or cheap excess power from the power supply utility for your heating system: See page 49.

For additional energy saving functions of the heat pump control unit, please contact your contractor.

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Tips for greater comfort

More comfort in your home

- Set your individual preferred temperature: See page 18.
- Set the time program for your heating/cooling circuits such that your individual preferred temperature is automatically reached when you are present: See page 27.
- Adjust the heating or cooling curves so that your home is heated or cooled to your individual preferred temperature all year round: See page 30.
- Set the time program for the buffer cylinder (if installed) such that there is always sufficient heating water or coolant available for your heating/cooling circuits: See page 27.
- Enable the electric booster heater for central heating. If large quantities of heat are required rapidly, this booster heater will be switched on in addition to the heat pump: See page 39.
- Enable active cooling mode. This will provide high cooling capacity if required: See page 40.
- If you need a higher room temperature quickly, set **"Party mode"**: See page 31.
  Example:
  Late in the evening, the reduced room temperature is set by the time program. Your guests stay longer.

Sufficient DHW heating for your needs

- Set the time program for DHW heating such that there is always sufficient hot water for your habitual routine: See pages 35 and 37.
  Example:
  You need more DHW in the morning than in the daytime.
- Optimise the time program for the DHW cylinder. Use the start optimisation and stop optimisation functions: See pages 36 and 36.
- Set the time program for the circulation pump such that at times when hot water is run more frequently, DHW is available immediately from the taps: See page 37.
- Enable the electric booster heater for DHW heating. If large quantities of hot water are required rapidly, this booster heater will be switched on in addition to the heat pump: See page 39.
- If you need a higher temperature in your hot water for a short while, set **"1x DHW heating"**: See page 37.

Sufficient mechanical ventilation for your needs (in conjunction with a ventilation unit)

- If the air humidity is especially high or you are dealing with strong odours, e.g. from cooking, increase the rate of air exchange in your home. Set **"Intensive operation"**: See page 45.
- During the heating season, the humidity of the ventilation air can fall substantially. To prevent the air in your home from getting too dry, reduce the ventilation level. To do so, adjust the time program: See page 44 (not necessary for ventilation units with enthalpy heat exchangers).

Quieter operation of air/water heat pumps

- Reduce the noise level of your air/water heat pump, at night for instance. To do so, adjust the time program for quieter operation: See page 41.

Opening the heat pump control unit

The heat pump control unit may look different depending on the type of heat pump.

Heat pump control unit at the front of the appliance

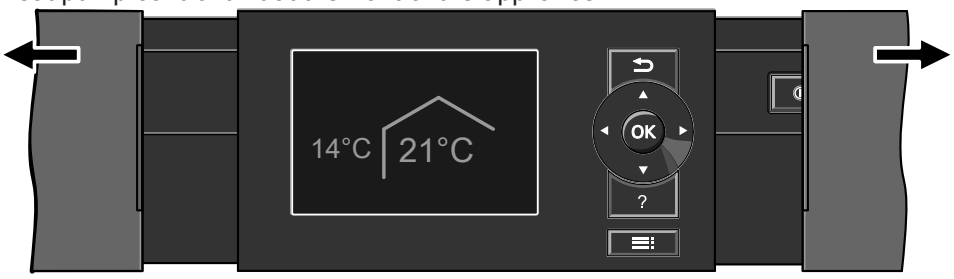

Fig. 1

Heat pump control unit on the top of the appliance

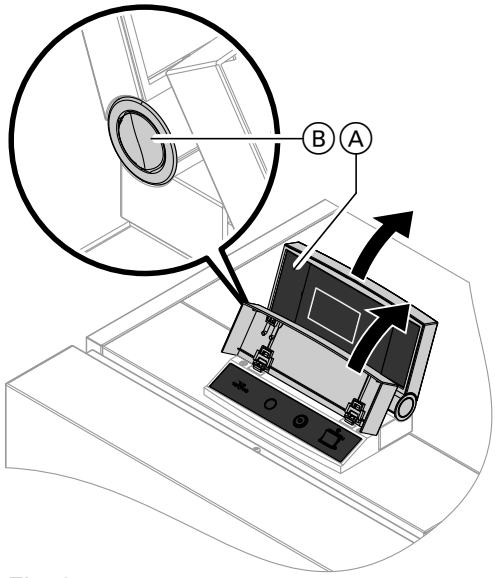

Fig. 2

Ⓐ Top part of control unit with programming unit
Ⓑ Pushbutton for changing the angle

Heat pump control unit in a separate enclosure on the wall

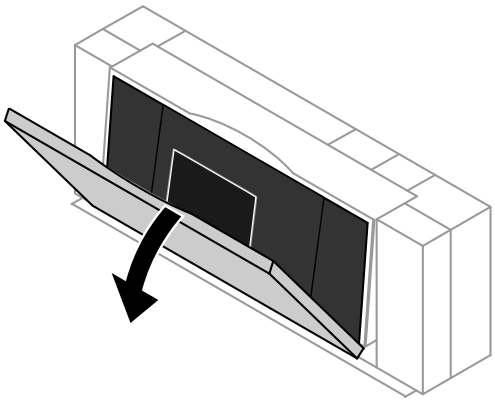

Fig. 3

Note

- *For air/water heat pumps installed outside the building.*
- *Brief operating instructions can be found on the back of the flap. To open, pull the **top** edge of the flap forward.*

Operating the heat pump control unit

You can change all heat pump control unit settings centrally at the programming unit.
If remote controls are installed in your rooms, you can also adjust the settings at these remote controls.

Remote control operating instructions

Operating the heat pump control unit (cont.)

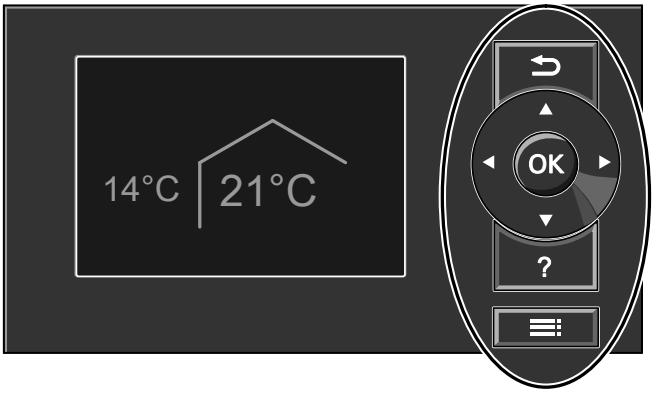

Fig. 4

- ⮌ To take one step back in the menu.
  or
  To terminate an adjustment in progress.
- ⌖ Cursor keys
  Scrolls through the menu or adjusts values.
- **OK** Confirms your selection or saves the setting made.
- **?** Calls up **"Operating info"** (see following chapter) or additional information on the selected menu.
- ☰ Calls up the extended menu.

2 **control levels** are available:
- The standard menu: See page 17.
- The extended menu: See page 18.

Note
*The **screensaver** is activated if you have not made any adjustments on the programming unit for a few minutes: See page 19.*

Calling up general Operating info

The display shows brief instructions on how to operate the appliance.

How to call up **"Operating info"**:
- Screensaver is active; see page 19:
  Press **?**.
- From anywhere in the menu:
  Press ⮌ repeatedly until the standard menu is shown: See page 17.
  Press **?**.

Symbols on the display

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

Displays:
- ❄ Frost protection is active.
- ☀ Central heating to standard room temperature
- ☽ Central heating with reduced room temperature
- 🍸 Party mode is active for central heating.
- 🐷 Economy mode is active for central heating.
- ☀ In conjunction with a solar thermal system:
  Solar circuit pump is running.
- Ⓒ Compressor is running.
- ⊛ For brine/water and water/water heat pumps:
  Primary pump is running.
- ⊛ For air/water heat pumps:
  Fan is running.
- ϟ Instantaneous heating water heater is switched on (electric booster heater).
- ❄ In conjunction with a cooling circuit:
  Cooling mode is active.
- ☀ In conjunction with a photovoltaic system:
  Utilisation of power generated on site is active.
- SG Ready In conjunction with a special connection to the power supply utility (Smart Grid):
  Power-OFF or utilisation of excess power is active.
  The heat pump start characteristics are influenced by the power supply utility.

Heating/cooling circuits:
- HC... Heating circuit ...
  or
  Heating/cooling circuit ...
- SKK Separate cooling circuit

Operating programs:
- Operating programs for heating, cooling, DHW:
  ⏻, 🚿, ▥, ❄:
  Explanation of symbols: See page 21.
- Operating programs for ventilation:
  Ventilation levels 1 0 to 1 4, depending on the selected operating program: See page 22.

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Operating the heat pump control unit (cont.)

Ventilation levels (in conjunction with a ventilation unit):

- No ventilation
- Minimum air flow rate
- Reduced air flow rate
- Standard air flow rate
- Maximum air flow rate
- Frost protection for the ventilation unit is active. Symbol using ventilation level 2 as an example
- Preheating coil for the ventilation unit, if installed, is switched on. Symbol using ventilation level 2 as an example
- The ventilation unit has been switched off at the system ON/OFF switch.
  or
  The power supply plug has been pulled out.

Messages: See page 56.

- Fault
- Warning
- Note

Standard menu: Displays and settings

In the standard menu, you can make and check the following settings for the preferred heating/cooling circuit Ⓔ:

- Standard room temperature (your individual preferred temperature)
- Operating program

Call up the standard menu as follows:

- Screensaver is active; see page 19:
  Press **OK**.
- If you are in the extended menu, see page 18:
  Press ⮌ repeatedly until the standard menu appears.

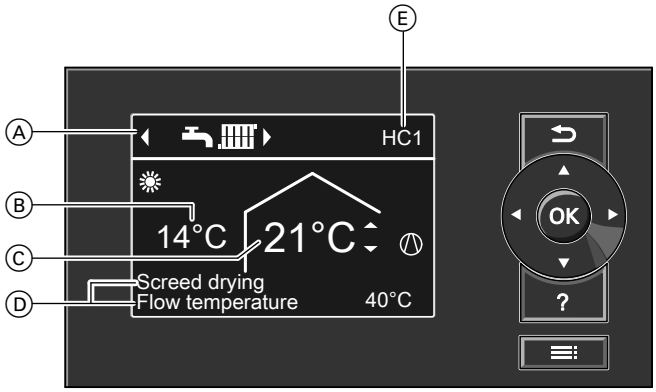

Fig. 5

Ⓐ Operating program for the preferred heating/cooling circuit (Ⓔ)
Ⓑ Current outside temperature
Ⓒ Set room temperature for the preferred heating/cooling circuit (Ⓔ)
Ⓓ Information bars
Ⓔ Preferred heating/cooling circuit: See page 51.
Not shown if only **one** heating/cooling circuit is installed.

Note

- *In the case of special system versions, the standard menu may differ from the display shown here: See chapter "Special system versions" on page 59.*
- *The settings for the preferred heating/cooling circuit can also be adjusted in the **extended menu**: See page 18.*
- *The settings for any other connected heating/cooling circuits can **only** be adjusted in the extended menu.*
- *The settings for ventilation (if installed) can **only** be adjusted in the extended menu.*
- *Your contractor can block operation for the standard menu. In such cases, you will not be able to make adjustments in either the standard menu or the extended menu. **"Controls locked out"** is displayed.*

Information bars Ⓓ

The **upper** information bar displays special operating programs: See page 22.

- **"Screed drying"**
- **"External hook-up"**
- **"External program"**

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Standard menu: Displays and settings (cont.)

The **lower** information bar shows the following information, depending on what you have installed on your system:

- **"Flow temperature"**:
  Temperature of the heating water or coolant at the heat pump outlet:
  This information is displayed if your system has a heating water buffer cylinder or has no buffer cylinder at all.
- **"Buffer cyl.: Central heating"**
  Your system has a heating water/coolant buffer cylinder for central heating **and** central cooling: See page 27.
  For this buffer cylinder, you have switched central heating on.
- **"Buffer cyl.: Central cooling"**
  Your system has a heating water/coolant buffer cylinder for central heating **and** central cooling: See page 27.
  For this buffer cylinder, you have switched central cooling on.

Setting the standard temperature for the preferred heating/cooling circuit

Press the following keys:

1. ▲/▼ for the required value
2. **OK** to confirm

Setting the operating program for the preferred heating/cooling circuit

Press the following keys:

1. ◀/▶ for the required operating program
2. **OK** to confirm

Extended menu: Displays and settings

In the extended menu, you can adjust and call up **all** the settings from the heat pump control unit range of functions, e.g. holiday program and time programs. You can find the menu overview from page 81.

Call up the extended menu as follows:

- If the screensaver is active:
  Press **OK** and then ☰.
- From anywhere in the menu:
  Press ☰.

Note

*Your contractor can block operation for the extended menu. In this case, you can **only** call up messages (see page 53) and start manual mode (see page 58). Use manual mode **only** after consulting your contractor.*

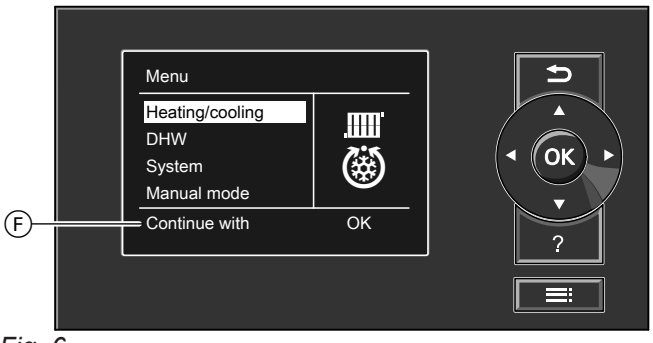

Fig. 6

Ⓕ Dialogue line

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Screensaver

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

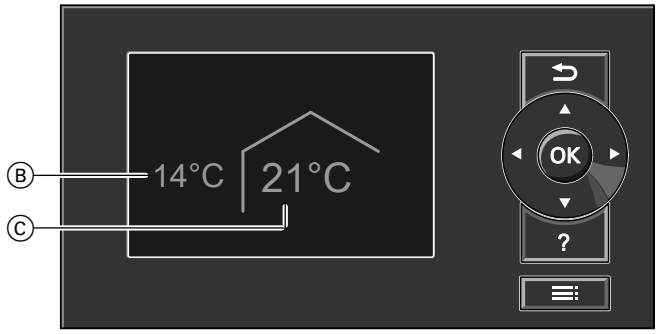

Fig. 7

Ⓑ Current outside temperature
Ⓒ Set room temperature

1. Press **OK**.
   This takes you to the standard menu: See page 17.

2. Press ☰.
   The selected menu point is highlighted in white.
   This takes you to the extended menu: See page 18.
   Instructions on what to do are provided in dialogue line Ⓕ: See diagram 6 on page 18.

Control system

You can input the central heating/central cooling settings for **every** heating/cooling circuit. It is therefore necessary to select the required heating/cooling circuit **prior** to inputting the settings (e.g. room temperature).

The following diagram shows how to input settings, using the set room temperature setting as an example. The diagram shows the setting with and without selecting the heating circuit, as well as various dialogue lines.

Control system (cont.)

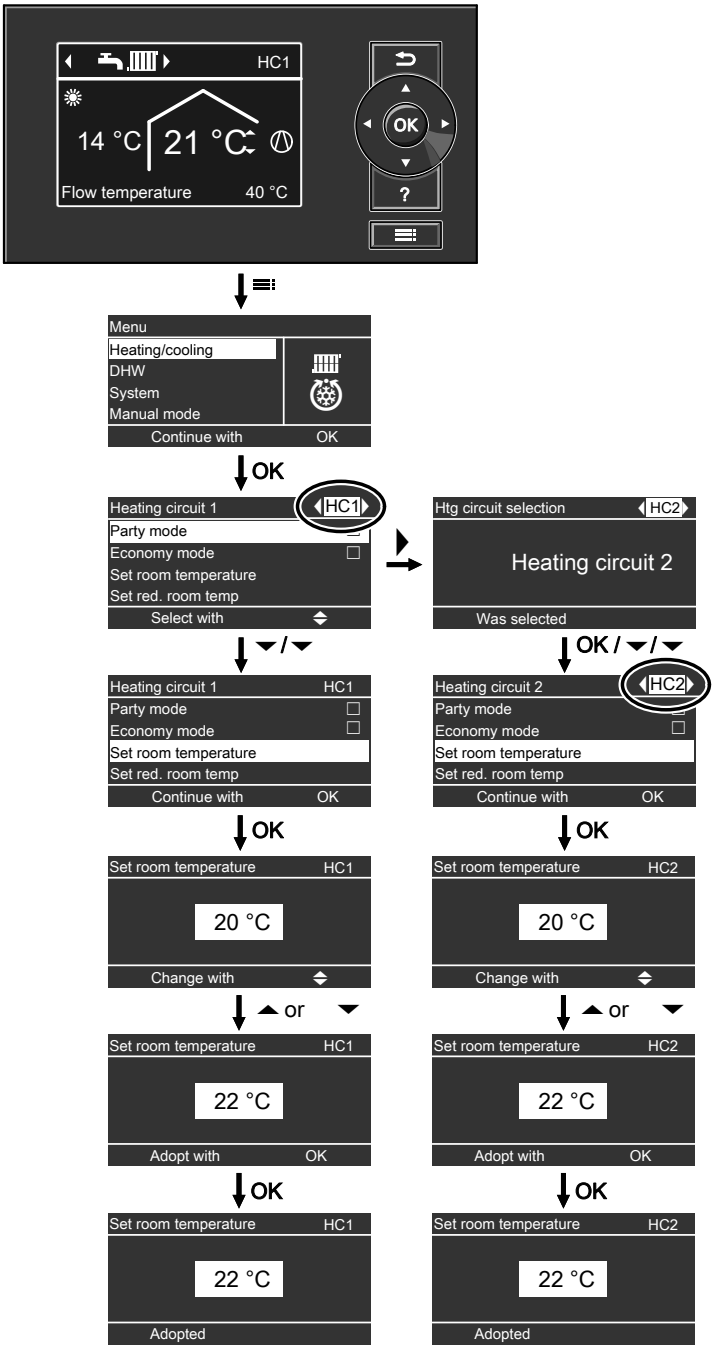

Fig. 8

Operating program information

Using the **"Operating program"**, you set the functions that you want on your system, e.g. whether you want rooms heated, or DHW heating only.

If multiple heating circuits are present in your heating system, set the **"Operating program"** separately for each heating circuit.

Operating program information (cont.)

Operating programs for heating, cooling, DHW, frost protection

Only central heating

Heat/cooling circ	System version with DHW heating		System version without DHW heating	
	Symbol	Operating program	Symbol	Operating program
Heating circuit **"HC1"**, **"HC2"**, **"HC3"**		**"Standby mode"**		**"Standby mode"**
		"Only DHW"	—	—
		"Heating and DHW" (Factory setting)		**"Htg"**

Central heating and central cooling

Heat/cooling circ	System version with DHW heating		System version without DHW heating	
	Symbol	Operating program	Symbol	Operating program
Heating/cooling circuit **"HC1"**, **"HC2"**, **"HC3"**		**"Standby mode"**		**"Standby mode"**
		"Only DHW"	—	—
		"Heating/cooling and DHW" (Factory setting)		**"Heating/cooling"**
Separate cooling circuit **"SKK"**		**"Standby mode"**		**"Standby mode"**
		"Only DHW"	—	—
		"Cooling and DHW" (Factory setting)		**"Cooling"**

Functions of the operating programs

Central heating/central cooling and DHW heating

Symbol	Operating program	Function
	"Heating and DHW"	▪ The rooms of the selected heating circuit are heated in accordance with the room temperature and time program specified: see chapter "Central heating/central cooling". ▪ DHW is heated in accordance with the DHW temperature and time program specified: see chapter "DHW heating".
	"Heating/cooling and DHW"	▪ The rooms of the selected heating/cooling circuit are heated/cooled in accordance with the room temperature and time program specified: see chapter "Central heating/central cooling" ▪ DHW is heated in accordance with the DHW temperature and time program specified: see chapter "DHW heating".
	"Cooling and DHW"	▪ The rooms in the separate cooling circuit are cooled constantly. You cannot set a time program. ▪ DHW is heated in accordance with the DHW temperature and time program specified: see chapter "DHW heating".

DHW heating

Symbol	Operating program	Function
	"Only DHW"	▪ DHW is heated in accordance with the DHW temperature and time program specified: see chapter "DHW heating". ▪ No central heating/central cooling ▪ Frost protection for a buffer cylinder (if installed) is active.

Operating program information (cont.)

Central heating/central cooling

Symbol	Operating program	Function
	"Htg"	▪ The rooms of the selected heating circuit are heated in accordance with the room temperature and time program specified: see chapter "Central heating/central cooling".
	"Heating/cooling"	▪ The rooms of the selected heating/cooling circuit are heated/cooled in accordance with the room temperature and time program specified: see chapter "Central heating/central cooling".
	"Cooling"	▪ The rooms in the separate cooling circuit are cooled constantly. You cannot set a time program.

Frost protection

Symbol	Operating program	Function
	"Standby mode"	▪ No central heating/central cooling ▪ No DHW heating ▪ Frost protection for the heat pump, DHW cylinder, heating/cooling circuits and a buffer cylinder (if installed) is active.

Operating programs for ventilation

Operating program	Operating status	Air flow rate	Ventilation stage
"Standby mode"	—	No ventilation	0
"Standard operation"	—	Minimum air flow rate	1
"Ventilation program"	**"Reduced"**	Reduced air flow rate	2
	"Standard"	Standard air flow rate	3
	"Intensive"	Maximum air flow rate	4

Special operating programs

Special operating programs are available according to system equipment.

Display in the standard menu

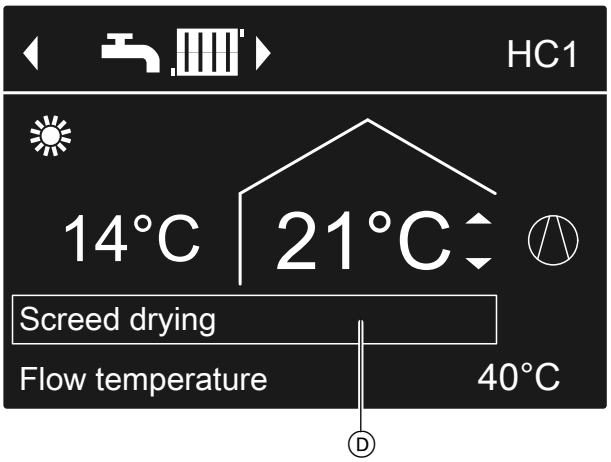

Fig. 9

Ⓓ Special operating programs in the upper information bar

Note
*In the extended menu, you can call up the set operating program under **"Information"**: See page 53.*

Screed drying

This function is enabled by your contractor. Your screed is dried in line with a set time program suitable for the relevant building materials (temperature/time profile). Your settings for central heating/central cooling have no effect for the duration of screed drying (max. 30 days). This function can be altered or switched off by your contractor.

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Operating program information (cont.)

External hook-up

- Your contractor has connected external switching contacts to your heat pump control unit and set their functions. With these switching contacts, the heat pump or particular system components such as a mixer can be switched on or off.
  or
- Your contractor has integrated the heat pump into a building management system. This system switches particular functions, system components or operating programs on or off, regardless of your settings.

Note
*While **"External hook-up"** is active, you **cannot** change the set operating program on the heat pump control unit. Once **"External hook-up"** has ended, the heat pump control unit continues using the previously set operating program.*

External program

Your contractor has connected the heat pump control unit to the internet, e.g. via the Vitoconnect internet interface.
The operating program and other functions are switched on or off via a Viessmann app.

Note
*While **"External program"** is active, you can change the set operating program on the heat pump control unit **after responding to a prompt**. Once **"External program"** has ended, the heat pump control unit continues using the previously set operating program.*

Holiday program

See page 33.

Procedure for setting a time program

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

You can set up a time program for the following functions:
- Central heating/central cooling: See page 27.
- Heating a buffer cylinder: See page 28.
- Cooling a buffer cylinder: See page 29.
- DHW heating: See page 35.
- DHW circulation pump: See page 37.
- Electric booster heater: See page 39.
- Quieter operation of air/water heat pumps: See page 41.
- Mechanical ventilation (in conjunction with ventilation unit): See page 44.

The time program allows you to divide the day into sections. These are called **time phases**. It is for you to decide what happens in these time phases, e.g. whether your rooms should be heated to the standard room temperature. For this, set an **operating status** for each time phase.

The available operating statuses differ, e.g. through different temperature levels.
- You can set the time program **individually**, to be the same, or different, for every day of the week.
- You can select up to 8 time phases per day.
- The time phases are numbered.
- For each time phase you set the start and end points.
  The selected time phase is illustrated by a white bar on the time chart. The length of the bar reflects the length of time.
- The individual operating status is indicated on the time chart by bars of different heights.
  Where several time phases overlap, the operating status with the highest bar takes priority.
- In the extended menu, you can call up the time programs under **"Information"**: See page 53.

Setting a time program using central heating/central cooling as an example

1. **Extended menu:**
   ☰
2. **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit.
4. **"Time proghtg/cooling"**
5. Select part of the week or a day.
6. Select a time phase 1 to 8. The selected time phase is illustrated by a white bar on the time chart.
7. Set the start and end points for the relevant time phase. The length of the white bar on the time chart is adjusted accordingly.

Procedure for setting a time program (cont.)

8. Select the required operating status **"Reduced"**, **"Standard"** or **"Fixd value"**. The individual operating status is indicated on the time chart by bars of different heights.

9. Press ⮌ to exit the menu.

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

Example of operating status and time phases in the time program for central heating

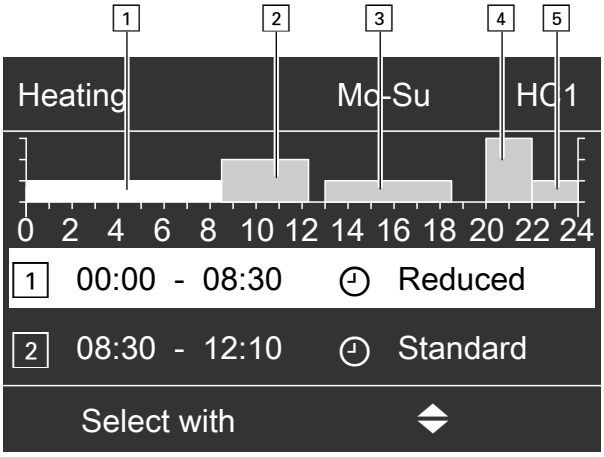

Fig. 10

- Time program for part of the week: **"Monday–Sunday"** (**"Mo-Su"**)
- Time phase 1:
  00:00 to 08:30 h: **"Reduced"**
- Time phase 2:
  08:30 to 12:10 h: **"Standard"**
- Time phase 3:
  13:00 to 18:30 h: **"Reduced"**
- Time phase 4:
  20:00 to 22:00 h: **"Fixd value"**
- Time phase 5:
  22:00 to 24:00 h: **"Reduced"**

Between the time phases, the **"Standby"** operating status is active; in the example shown from 12:10 to 13:00 h and from 18:30 to 20:00 h.

Procedure for setting a time program (cont.)

Setting the time program effectively

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

1. Select the period **"Monday–Sunday"** and set the time program.

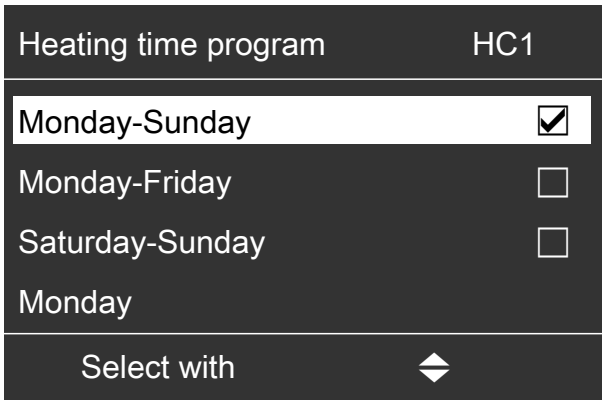

Fig. 11

Note
The tick is always set at the sections of the week with identical time phases.
*Factory setting: same for all days of the week, therefore **"Monday–Sunday"** is ticked.*

2. Then select **"Monday"** and adjust the time program for that day.

Note
*The selected time phases for **"Monday–Sunday"** remain active for **"Tuesday"** to **"Friday"**.*
***"Saturday–Sunday"** is ticked because this is now the only part of the week where the set time phases match the days shown.*

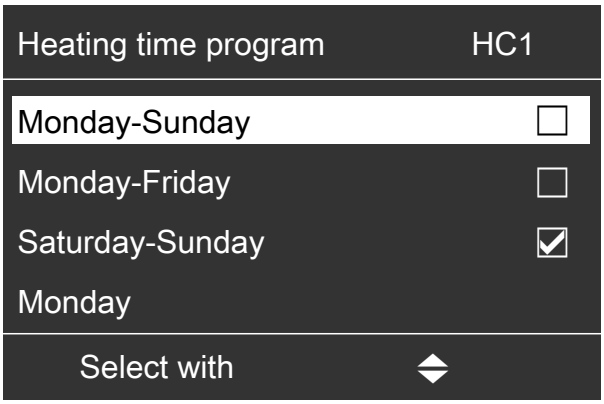

Fig. 12

Deleting time phases

- Set the time for the end point to the same time that was set for the start point.
  or
- For the start point, select a time prior to 00:00 h.

The display shows the selected time phase as "**- - : - -**".

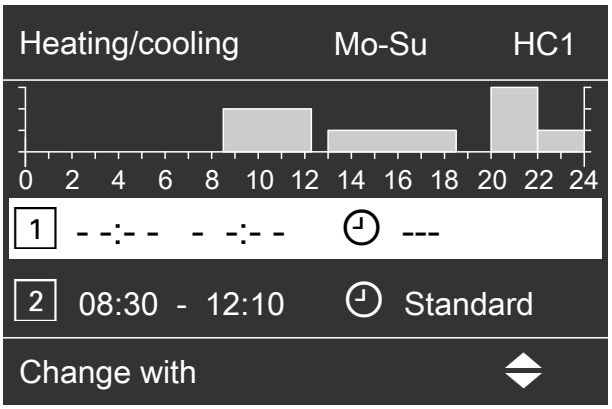

Fig. 13

Setting the standard room temperature for central heating/central cooling

The standard room temperature is the temperature at which you feel comfortable. Your home is always heated or cooled to this temperature when a time phase with the operating status **"Standard"** is active in the time program.
Setting the time program for central heating/central cooling: See page 27.

Factory setting: 20 °C

For the preferred heating/cooling circuit

1. **Standard menu:**
   ▲/▼ for the required value
2. **OK** to confirm

For all heating/cooling circuits

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◀/▶ to select the required heating/cooling circuit
4. **"Set room temperature"**
5. Set the required value.

Information for operation with a ventilation unit
Set the room temperature for ventilation approx. 2 °C higher than the standard room temperature for central heating/central cooling: See page 43.
This setting will ensure that the bypass functions correctly.

Setting the reduced room temperature for central heating

You can set the room temperature for those time periods during which you require less heat.

This room temperature applies to the following time periods:
- In the time phases for which you set the operating status to **"Reduced"** in the **"Time program"**: See page 27
- In the holiday program: See page 33.

Factory setting: 16 °C

Note
No set reduced room temperature can be set for a separate cooling circuit.

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◀/▶ to select the required heating/cooling circuit
4. **"Set red. room temp"**
5. Set the required value.

Setting the operating program for central heating/central cooling

In the **"Operating program"** for central heating you set whether the central heating is enabled or not.
For an overview of the operating programs, see page 21.

For the preferred heating/cooling circuit

Standard menu:

1. ◀/▶ for the operating program:
   E.g. **"Heating and DHW"**
2. **OK** to confirm

For all heating/cooling circuits

Extended menu:

1. ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◀/▶ to select the required heating/cooling circuit
4. **"Operating program"**
5. Select the required operating program, e.g. **"Heating and DHW"**

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Setting the time program for central heating/central cooling

In the time programs for central heating and central cooling you set the time phrases during which your home is heated or cooled and to what temperature. To do so, select an operating status for each time phase: See chapter "Operating status for central heating/central cooling".

Factory setting: **one** time phase from 00:00 to 24:00 h for every day of the week with the **"Standard"** operating status.

Note
- *The factory setting is suitable for operation with underfloor heating systems.*
- ***No** time program can be set for a separate cooling circuit.*

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Time program heating"** or **"Time proghtg/cooling"**
5. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
- *Between the time phases, rooms are neither heated nor cooled. Only the heat pump frost protection is active (**"Standby"** operating status).*
- *When making settings, please bear in mind that your heating system requires some time to heat or cool the rooms to the required temperature.*

Operating status for central heating/central cooling

"Standard"
- Central heating/central cooling takes place to the standard room temperature **"Set room temperature"**: See page 26.

"Reduced"
- Central heating/central cooling takes place to the reduced room temperature **"Set red. room temp"**: See page 26.
  Note
  *In the **"Reduced"** operating status, a heating/cooling circuit is **not** cooled.*

"Fixd value"
- Central **heating** takes place with the max. permissible flow temperature of the respective heating circuit, irrespective of the outside temperature.
- Central **cooling** takes place with the min. flow temperature of the respective heating circuit, irrespective of the outside temperature.
- Factory settings: Your contractor may have adjusted these values.
  - Max. heating flow temperature: 40 °C
  - Min. cooling flow temperature: 20 °C

Central heating/central cooling with buffer cylinder

Note
Further information regarding the different buffer cylinders can be found in chapter "Terminology" in the Appendix: See page 92.

Switching on central heating/central cooling with buffer cylinder

System with heating water buffer cylinder

For central heating, the heating water buffer cylinder supplies your heating/cooling circuits with heat. The heat pump heats the heating water buffer cylinder **automatically**, as soon as the outside temperature falls below the heating limit. This heating limit has been set by your contractor.

For central cooling (if installed), the heat pump supplies the cooling circuit directly, **not** via the heating water buffer cylinder. Central cooling is **automatically** switched on if the outside temperature rises above the cooling limit. The cooling limit has also been set by your contractor.

Central heating/central cooling with buffer… (cont.)

System with heating water/coolant buffer cylinder

A heating water/coolant buffer cylinder can either heat **or** cool your heating/cooling circuits.
To heat your home, you must switch on central heating via the heating water/coolant buffer cylinder. To cool your home, you must switch on central cooling via the heating water/coolant buffer cylinder.

Note
- *Simultaneous central heating and central cooling is **not** possible.*
- *Central cooling via a separate cooling circuit is not possible.*

Switching on central heating for heating water/ coolant buffer cylinder

1. **Extended menu:**
   ☰
2. **"System"**
3. **"Buffer cyl operating mode"**
4. **"Heating mode"**

Switching on central cooling for heating water/ coolant buffer cylinder

1. **Extended menu:**
   ☰
2. **"System"**
3. **"Buffer cyl operating mode"**
4. **"Cooling mode"**

Setting the time program for central heating with buffer cylinder

In the time program for central heating with buffer cylinder, you set the time phases in which your buffer cylinder is heated and to what temperatures. In addition, you specify whether the entire volume of the buffer cylinder or just the top section is heated.
When setting the time program, you select an operating status for each time phase: See chapter "Operating status for heating the buffer cylinder".

Note
This time program applies either to a heating water buffer cylinder or to a heating water/coolant buffer cylinder in heating mode.

Factory setting: **One** time phase from 00:00 to 24:00 h for every day of the week with the **"Standard"** operating status
- The time phases for heating the buffer cylinder must cover **all** time phases for central heating (for all heating circuits).
- If you switch off heating of the heating water buffer cylinder with the time program (all time phases are deleted **"- - : - -"**), your rooms will not be heated.
- We recommend that the buffer cylinder should be heated continuously.

1. **Extended menu:**
   ☰
2. **"System"**
3. **"Time prog buffer cyl"**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
- *The buffer cylinder is not heated between the time phases. Only frost protection for the buffer cylinder is active.*
- *When setting the time program, please bear in mind that your heat pump requires some time to heat the buffer cylinder to the required temperature.*

Operating status for heating the buffer cylinder

"Standard"
- The entire volume in the buffer cylinder is heated to the highest set flow temperature for all connected heating/cooling circuits.
- The set flow temperature of a heating/cooling circuit results from the heating curve, the outside temperature and the required room temperature.

"Reduced"
- The top section of the buffer cylinder is heated to the highest set flow temperature for all connected heating/cooling circuits.
- The set flow temperature of a heating/cooling circuit results from the heating curve, the outside temperature and the required room temperature.

"Fixd value"
- The entire volume in the buffer cylinder is heated to a fixed temperature.
  Factory setting: 50 °C
  Your contractor may have adjusted this value.
- You can utilise the **"Fixd value"** operating status, e.g. to heat the buffer cylinder to a higher temperature with economical night tariff power.

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Central heating/central cooling with buffer… (cont.)

Note
*Above a specified outside temperature, the buffer cylinder will no longer be heated, even in the **"Fixd value"** operating status. Your contractor can adjust this temperature limit.*

Setting the time program for central cooling with buffer cylinder

In the time program for central cooling with buffer cylinder, you set the time phases in which your buffer cylinder is cooled and to what temperatures. In addition, you specify whether the entire volume of the buffer cylinder or just the top section is cooled.
When setting the time program, you select an operating status for each time phase: See chapter "Operating status for cooling the buffer cylinder".

Note
This time program applies only to a heating water/coolant buffer cylinder in cooling mode.

Factory setting: **One** time phase from 00:00 to 24:00 h for every day of the week with the **"Standard"** operating status
- The time phases for cooling the buffer cylinder must cover **all** time phases for central cooling (for all heating/cooling circuits).
- If you switch off heating of the heating water buffer cylinder with the time program (all time phases are deleted **"- - : - -"**), your rooms will not be heated.
- We recommend that the buffer cylinder should be cooled continuously.

1. **Extended menu:**
   ☰
2. **"System"**
3. **"Time prog. coolnt buff cyl."**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
- *The buffer cylinder is not cooled between the time phases. Only frost protection for the buffer cylinder is active.*
- *When setting the time program, please bear in mind that your heat pump requires some time to cool the buffer cylinder to the required temperature.*

Operating status for cooling the buffer cylinder

"Standard"
- The entire volume in the buffer cylinder is cooled to the lowest set flow temperature for all connected heating/cooling circuits.
- The set flow temperature of a heating/cooling circuit results from the cooling curve, the outside temperature and the required room temperature.

"Reduced"
- The top section of the buffer cylinder is cooled to the lowest set flow temperature for all connected heating/cooling circuits.
- The set flow temperature of a heating/cooling circuit results from the cooling curve, the outside temperature and the required room temperature.

"Fixd value"
- The entire volume in the buffer cylinder is cooled to a fixed temperature.
  Factory setting: 20 °C
  Your contractor may have adjusted this value.
- You can utilise the **"Fixd value"** operating status, e.g. to cool the buffer cylinder to a lower temperature with economical night tariff power.

Setting the heating curve/cooling curve

So that your rooms are heated or cooled optimally at all outside temperatures, you can adjust the **"Level"** and **"Slope"** of the **"Heating curve"** or the **"Cooling curve"**. This allows you to influence the flow temperature provided by the heat pump.

Note
*Further information on setting the **"Heating curve"** or **"Cooling curve"** can be found in chapter "Terminology" in the Appendix: See page 92.*

Setting the heating curve/cooling curve (cont.)

Setting curves for central heating/central cooling

Factory settings

	"Slope"	"Level"
Heating curve	0.6	0
Cooling curve	1.2	0

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Heating curve"** or **"Cooling curve"**
5. **"Slope"** or **"Level"**
6. Set the required value.

   Note
   You will be provided with tips on when and how to change the heating curve slope and level. Press **?**.

Example: changing the heating curve slope to 1.1

A graph clearly shows the change in the heating curve as soon as you alter the value for the slope or level.

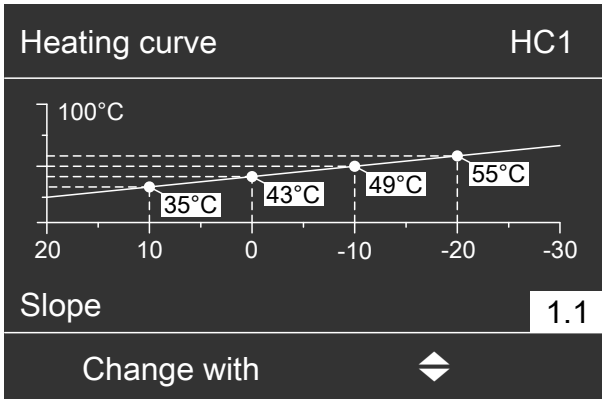

Fig. 14

Set flow temperatures are assigned to the different outside temperatures. Outside temperatures are shown on the horizontal axis. Set flow temperatures for the heating circuit are highlighted in white.

Tips for setting the "Heating curve"

Heating characteristics	Adjustments to the "Heating curve"
The home is too cold during the winter.	Set the **"Slope"** to the next level up.
The home is too warm during the winter.	Set the **"Slope"** to the next level down.
The home is too cold during the spring/autumn and winter.	Set the **"Level"** to a higher value.
The home is too warm during the spring/autumn and winter.	Set the **"Level"** to a lower level.
The home is too cold during the spring/autumn but warm enough during the winter.	Set the **"Slope"** to the next level down and **"Level"** to a higher value.
The home is too warm during the spring/autumn but warm enough during the winter.	Set the **"Slope"** to the next level up and **"Level"** to a lower value.

Tips for setting the "Cooling curve"

Cooling characteristics	Adjustments to the "Cooling curve"
The home is too warm during the summer.	Set the **"Slope"** to the next level up.
The home is too cold during the summer.	Set the **"Slope"** to the next level down.
The home is too warm during the spring/autumn and summer.	Set the **"Level"** to a higher value.
The home is too cold during the spring/autumn and summer.	Set the **"Level"** to a lower level.
The home is too warm during the spring/autumn but cold enough during the summer.	Set the **"Slope"** to the next level down and **"Level"** to a higher value.
The home is too cold during the spring/autumn but cold enough during the summer.	Set the **"Slope"** to the next level up and **"Level"** to a lower value.

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Stopping central heating/central cooling

To switch off central heating for a heating/cooling circuit, select the **"Only DHW"** or **"Standby mode"** operating program.

For the preferred heating/cooling circuit

1. **Standard menu:**
   ◄/► for the operating program:
   - **"Only DHW"** (no central heating/cooling)
     or
   - **"Standby mode"** (frost protection active)
2. **OK** to confirm

For all heating/cooling circuits

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Operating program"**
5. - **"Only DHW"** (no central heating/cooling)
     or
   - **"Standby mode"** (frost protection active)

For information on the operating programs, see page 21.

Temporarily adjusting the room temperature

If you wish to adjust the room temperature temporarily, select **"Party mode"**. **"Party mode"** is **independent** of the time program for central heating/central cooling.

- For central heating, the home is heated to the temperature set for **"Party mode"**.
- For central cooling, the home is cooled to the temperature set for **"Party mode"**.
- If your contractor has not made alternative adjustments, DHW is heated to the selected DHW temperature **first**, before central heating/central cooling commences.
- The DHW circulation pump is switched on (if installed).

Setting Party mode for central heating/central cooling

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit

   Note
   ***"Party mode" cannot** be set for a separate cooling circuit.*
4. **"Party mode"**
5. Set the required room temperature for **"Party mode"**.

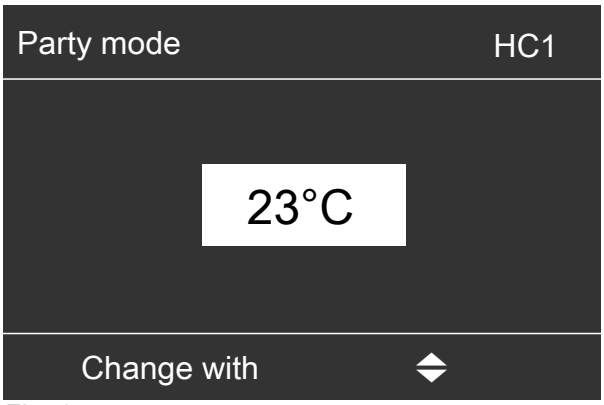

Fig. 15

Note
In conjunction with a ventilation unit:
*Set the room temperature for ventilation max. 4 °C lower than for **"Party mode"**. This setting will ensure that the bypass functions correctly.*

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Temporarily adjusting the room temperature (cont.)

Display in the standard menu: For the preferred heating/cooling circuit

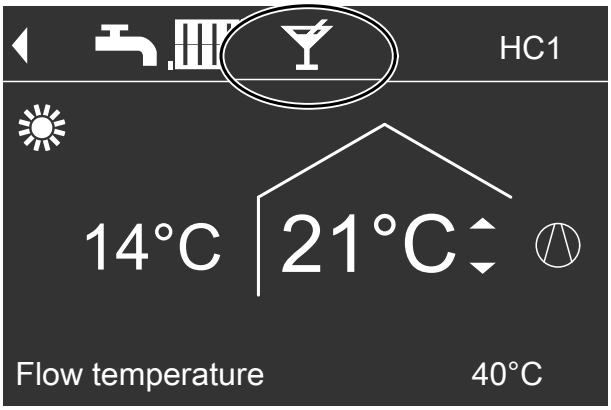

Fig. 16

Note
The display of the set room temperature in the standard menu does not change.

Ending "Party mode"

- **"Party mode"** ends automatically after 8 hours.
  or
- **"Party mode"** ends automatically if the time program changes to the **"Standard"** or **"Fixd value"** operating status.
  or
- Set **"Party mode"** to **"OFF"**.

Saving energy during short periods of absence

To save energy, select **"Economy mode"** when you leave home.

- The room temperature for central heating will be reduced, regardless of the **"Time program"**.
- In **"Economy mode"**, cooling via a heating/cooling circuit is switched **OFF**.
- **"Economy mode" cannot** be set for a separate cooling circuit.

Note
*You can select **"Economy mode"** only in the **"Heating and DHW"** or **"Htg"** operating program.*

Setting Economy mode for heating

1. **Extended menu:**

2. **"Heating"** or **"Heating/cooling"**

3. If applicable, use ◄/► to select the required heating/cooling circuit

4. **"Economy mode"**

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Saving energy during short periods of absence (cont.)

Display in the standard menu: For the preferred heating circuit

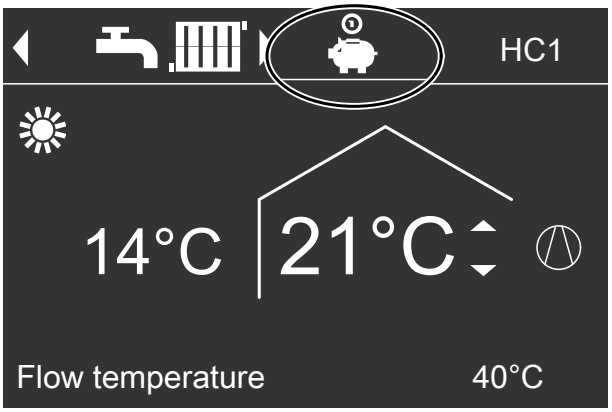

Fig. 17

Note
The display of the set room temperature in the standard menu does not change.

Ending "Economy mode"

- **"Economy mode"** ends automatically if the time program changes to the **"Reduced"** or **"Standby"** operating status.
  or
- Set **"Economy mode"** to **"OFF"**.

Saving energy during long periods of absence

To save energy during long periods of absence, select **"Holiday program"**.

The holiday program has the following effects:

- **Central heating**:
  - For heating/cooling circuits in the **"Heating and DHW"** or **"Heating/cooling and DHW"** operating program:
    The rooms are heated to the set reduced room temperature (**"Set red. room temp"**): See page 26.
  - For heating/cooling circuits in the **"Only DHW"** operating program:
    No central heating; frost protection for the heat pump and buffer cylinder (if installed) is active.
- **Central cooling**:
  No cooling via a heating/cooling circuit; a separate cooling circuit continues to be cooled.
- **DHW heating**:
  No DHW heating; frost protection for the DHW cylinder is active.
- **Mechanical ventilation** (in conjunction with a ventilation unit):
  Mechanical ventilation with minimum air flow rate ()

Note
*The holiday program affects **all** heating/cooling circuits. Your contractor can change this factory setting.*

Setting the Holiday program for central heating/central cooling, ventilation

1. **Extended menu:**
   
2. **"Heating"** or **"Heating/cooling"**
3. **"Holiday program"**
4. Set the required departure and return dates.

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Saving energy during long periods of absence (cont.)

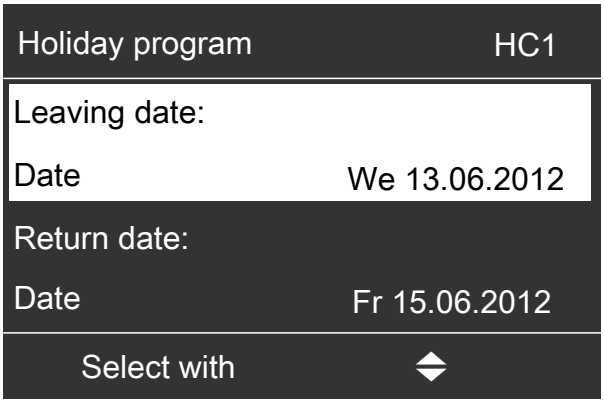

Fig. 18

The holiday program starts at 00:00 h on the day following your departure and ends at 00:00 h on the day of your return. This means that on the days of departure and return the set time program is active: See page 27.

Display in the standard menu

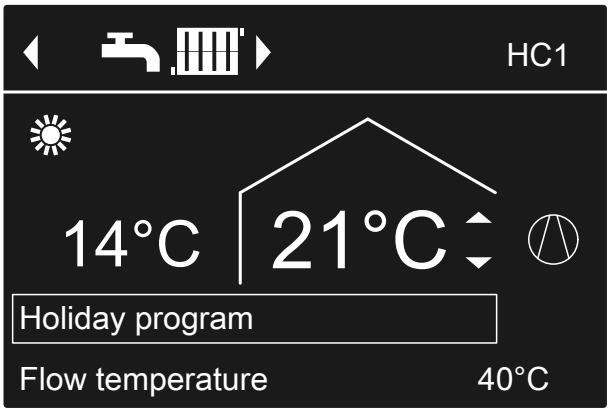

Fig. 19

Display in the extended menu

In the extended menu, you can call up the set holiday program under **"Information"**: See page 53.

Changing "Holiday program"

1. **Extended menu:**
2. **"Heating"** or **"Heating/cooling"**
3. **"Holiday program"**
4. **"Change program"**
5. Set the required departure and return dates.

Cancelling or deleting the "Holiday program"

1. **Extended menu:**
2. **"Heating"** or **"Heating/cooling"**
3. **"Holiday program"**
4. **"Delete program"**

Setting the standard DHW temperature

Your DHW is always heated to this temperature when a time phase with the operating status **"Standard"** is active in the time program.
Setting the time program for DHW heating: See page 35.

Factory setting: 50 °C

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Set DHW temperature"**
4. Set the required value.

Setting the higher DHW temperature

The DHW will be heated to the higher DHW temperature under the following circumstances:
- In the time program for DHW heating, a time phase for the **"Temp. 2"** operating status is enabled: See page 36.
- You have selected once-only DHW heating: See page 37.
- You have selected manual mode: See page 58.

Factory setting: 60 °C

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Set DHW temperature 2"**
4. Set the required value.

Note
Where necessary, enable the electric booster heater in order to achieve the required DHW temperature: See page 39.

Setting the operating program for DHW heating

In the for DHW heating operating program you set whether DHW heating is enabled or not.
For an overview of the operating programs, see page 21.

For the preferred heating/cooling circuit

1. **Standard menu:**
   ◄/► for the operating program:
   e.g. **"Only DHW"**
2. **OK** to confirm

For all heating/cooling circuits

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Operating program"**
5. E.g. **"Only DHW"**.

Setting the time program for DHW heating

In the time program for DHW heating, you set the time phases in which your DHW is heated and to what temperatures.
To do so, select an operating status for each time phase: See chapter "Operating status for DHW heating".

Factory setting: **one** time phase from 00:00 to 24:00 h for every day of the week with the **"Top"** operating status

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Time program DHW"**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Setting the time program for DHW heating (cont.)

Note
- *The DHW is not heated between the time phases. Only frost protection for the DHW cylinder is active.*
- *When setting time programs, bear in mind that your heating system requires some time to heat the DHW cylinder to the required temperature. Select a correspondingly earlier start time. Use the **"Start optimisation"** and **"Stop optimisation"** functions: See pages 36 and 36.*
- *Your rooms will not be heated whilst the DHW cylinder is being heated.*

Operating status for DHW heating

The operating statuses for DHW heating differ as follows depending on the type of DHW cylinder you have installed:

DHW cylinder with one temperature sensor at the top

"Top"
- The top section of the DHW cylinder is heated to the **"Set DHW temperature"**, e.g. when there is little DHW demand: See page 35.

"Standard"
- The top section of the DHW cylinder is heated to the **"Set DHW temperature"**: See page 35.

"Temp. 2"
- The top section of the DHW cylinder is heated to the **"Set DHW temperature 2"**: See page 35.

DHW cylinder with two temperature sensors

Applies to the following versions:
- DHW cylinder with **temperature sensors at the top and bottom**
- Heat pump with **integral DHW cylinder**

"Top"
- The top section of the DHW cylinder is heated to the **"Set DHW temperature"**, e.g. when there is little DHW demand: See page 35.

"Standard"
- The entire volume of the DHW cylinder is heated to the **"Set DHW temperature"**: See page 35.

"Temp. 2"
- The entire volume of the DHW cylinder is heated to the **"Set DHW temperature 2"**: See page 35.

Note
Your contractor will have listed the equipment and functions of your heating system in the form on page 102.
For questions relating to the scope of and accessories for your heat pump and your heating system, contact your contractor.

Setting start optimisation

Start optimisation ensures that DHW is available at the set temperature at the beginning of a time phase in the time program.

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Start optimisation"**

Example:
From 06:00 h, hot water for showering is required. Set the start of the time phase in the time program to 06:00 h. With start optimisation, DHW heating starts automatically earlier than this.
This makes DHW available at the set temperature at 06:00 h.

Setting stop optimisation

The stop optimisation ensures that the DHW cylinder is always fully heated at the end of the time phase in accordance with the time program.

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Stop optimisation"**

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Setting a time program for the DHW circulation pump

In the time program for the DHW circulation pump, you set the time phases in which the circulation pump runs constantly or at intervals.
To do so, select an operating status for each time phase: See chapter "Operating status for the DHW circulation pump".

No time phases are factory set for the DHW circulation pump, i.e. the DHW circulation pump is switched off.

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"Time prog DHW circ"**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
Between the time phases the DHW circulation pump remains off.

Operating status for the DHW circulation pump

"5/25cycls"
- The DHW circulation pump starts every 30 minutes for 5 minutes (pause duration 10 minutes).

"5/10cycls"
- The DHW circulation pump starts every 15 minutes for 5 minutes (pause duration 10 minutes).

"ON"
- The DHW circulation pump runs constantly.

Increasing DHW temperature temporarily

If there is an increased demand for domestic hot water, you can temporarily increase the DHW temperature.
To do so, switch on **"1x DHW heating"**.

DHW is heated to the higher DHW temperature (**"Set DHW temperature 2"**): See page 35.

Starting 1x DHW heating

Note
*One of the following operating programs **must** be set for at least one heating/cooling circuit:*
- ***"Heating and DHW"***
- ***"Heating/cooling and DHW"***
- ***"Cooling and DHW"***
- ***"Only DHW"***

1. **Extended menu:**
   ☰
2. **"DHW"**
3. **"1x DHW heating"**

Note
*This function terminates automatically as soon as **"Set DHW temperature 2"** has been reached.*

Stopping DHW heating

You do not want to heat DHW, nor heat or cool the rooms:

For this purpose, switch on **"Standby mode"**.

For the preferred heating/cooling circuit

1. **Standard menu:**
   ◄/► for the **"Standby mode"** operating program (frost protection)
2. **OK** to confirm

For all heating/cooling circuits

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Operating program"**
5. **"Standby mode"** (frost protection)

Stopping DHW heating (cont.)

You do not want to heat DHW, but do want to provide central heating:

For this purpose, set the standard DHW temperature to its lowest value.

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Operating program"**
5. Depending on the selected heating/cooling circuit: E.g. **"Heating and DHW"**
6. ⮌ until the menu appears
7. **"DHW"**
8. **"Set DHW temperature"**
9. Set 10 °C.

Enabling or blocking the electric booster heater for central heating

If there is a high heat demand for the central heating, the instantaneous heating water heater is switched on in addition to the heat pump.

Note
Since frequent use of an electric booster heater increases power consumption, you will have to enable this booster heater for central heating.

Factory setting: Blocked

1. **Extended menu:**
   
2. **"System"**
3. **"Electric heating"**

Enabling or blocking the electric booster heater for DHW heating

If there is a high heat demand for DHW heating, the instantaneous heating water heater is switched on in addition to the heat pump.

Note
Since frequent use of an electric booster heater increases power consumption, you will have to enable this booster heater for DHW heating.

Factory setting: Enabled

1. **Extended menu:**
   
2. **"DHW"**
3. **"DHW with electr.heating"**

Setting the time program for the electric booster heater

In the time program for the electric booster heater, set the time phases in which this booster heater is allowed to be switched on and at what output stage.
To do so, select an operating status for each time phase: See chapter "Operating status for electric booster heater".
Factory setting: **one** time phase from 00:00 to 24:00 h for every day of the week with the **"Stage3"** operating status

1. **Extended menu:**
   
2. **"System"**
3. **"Time prog elec heater"**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
Outside the set time phases the electric booster heater is blocked.

Operating status for the electric booster heater

"Stage1"
- Only the lowest output stage may be started.

"Stage2"
- The lowest and middle output stages may be started.

"Stage3"
- All output stages may be started.

Enabling and blocking active cooling mode

In active cooling mode, the heat pump is in operation. The available cooling capacity is comparable to the heating output of the heat pump.

Note

- *The cooling function must be set by your contractor.*
- *Since frequent use of active cooling mode increases power consumption, you will have to enable this function.*

System without buffer cylinder or with heating water buffer cylinder

1. **Extended menu:**
   ☰
2. **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Active cooling mod."**

System with heating water/coolant buffer cylinder

1. **Extended menu:**
   ☰
2. **"System"**
3. **"Active cooling mod."**

Setting the time program for quieter operation

In the time program for quieter operation, set the time phases in which the speed of the fan and, if required, of the compressor are limited.
To do so, select an operating status for each time phase: See chapter "Operating status for quieter operation".
Factory setting: **no** time phase from 00:00 to 24:00 h for every day of the week. The fan speed is not limited.

1. **Extended menu:**

2. **"System"**

3. **"Time prog. noise red."**

4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
- *The fan speed is not limited between the set time phases.*
- *If the setting for noise reduced mode is blocked,* ***"Cannot be changed"*** *is shown for 4 s. Your contractor can lift this block. You can call up a time program set by the contractor under* ***"Information"****.*

Operating status for quieter operation

"Stage1"
- The max. fan speed and, if necessary, that of the compressor, are reduced by a small amount.

"Stage2"
- Air/water heat pumps with separate indoor/outdoor units and 2-stage air/water heat pumps:
  As per stage 1
- All other air/water heat pumps:
  The max. fan speed and, if necessary, that of the compressor, are reduced by a significant amount.

"Stop"
- The heat pump does not operate. Central heating and DHW heating are provided by the auxiliary heater, e.g. electric booster heater.
  Note
  Available auxiliary heaters must be enabled, e.g. electric booster heater: See page 39.
  If no booster heater is available, your rooms will not be heated and DHW heating will not take place.

Starting ventilation

- Your contractor commissions the ventilation unit.
- To switch on mechanical ventilation, select the **"Standard operation"** or **"Ventilation program"** operating program: See page 43.

Note
*In order to remove naturally occurring humidity from rooms, the ventilation unit must **always** be operated using at least the lowest ventilation level (1).*

Display in the standard menu

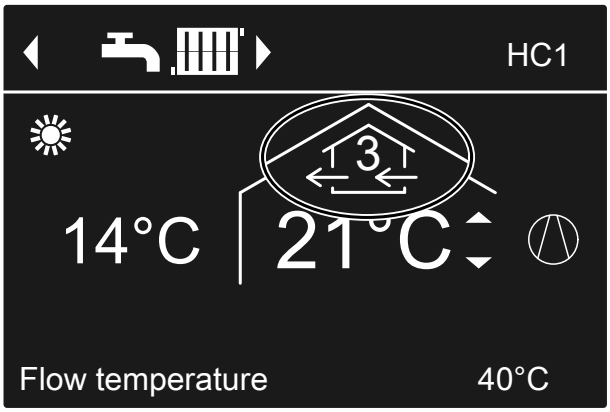

*Fig. 20 Example for ventilation in the operating program **"Ventilation program"** operating status **"Standard"***

Stopping ventilation

To switch off mechanical ventilation, select the **"Standby mode"** operating program: See the following chapter "Switching on standby mode".

! **Please note**
There is a risk of moisture damage to the building if the ventilation unit is permanently switched off.
- Only switch **"Standby mode"** on for short periods of time.
- Operate the ventilation unit at least at the minimum ventilation level (1), e.g. in **"Economy mode"** or **"Holiday program"**.

Switching on Standby mode

1. **Extended menu:**
2. **"Ventilation"**
3. **"Operating program"**
4. **"Standby mode"**

- No mechanical ventilation, for example if you wish to air your home by opening the windows.
- In conjunction with a ventilation heating circuit: No supply air heating via heating circuit HC1

Display in the standard menu

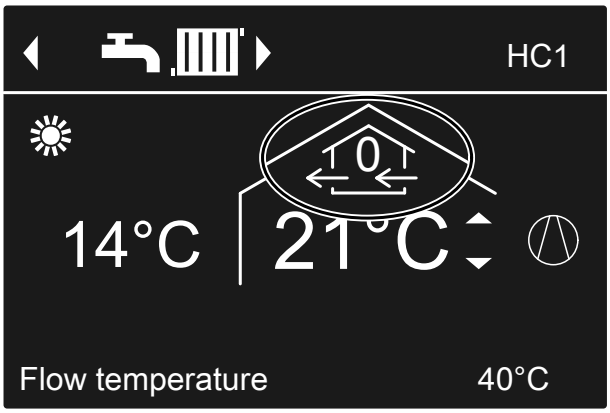

Fig. 21

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Stopping ventilation (cont.)

Ending "Standby mode"

Select a different operating program for ventilation, or a comfort or energy saving function.

Stopping ventilation to change the filters

To change the filter, open the ventilation unit.

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit. These dust deposits can result in malfunctions. Switch off the ventilation unit **before** opening it, as described below.

- **Vitovent 200-C**, **Vitovent 200-W**, **Vitovent 300-C** and **Vitovent 300-W**:
  Pull the power supply plug of the ventilation unit from its socket: See page 69 onwards.
- **Vitovent 300-F**:
  Turn off the ventilation unit at the ON/OFF switch: See page 75.

Displays
- After switching off the ventilation unit, the symbol will be displayed on the heat pump control unit.
- The message **"EF Modbus subscriber"** may appear on the display. This message will disappear once you restart the ventilation unit.

Setting the operating program for ventilation

In the operating program for ventilation you set whether mechanical ventilation is enabled or not. For an overview of the operating programs, see page 22.

1. **Extended menu:**
2. **"Ventilation"**
3. **"Operating program"**
4. E.g. **"Ventilation program"**

Ventilation without heat recovery

For ventilation without heat recovery, the bypass on the ventilation unit is active. Fresh outdoor air is supplied directly to the home **without** passing through the heat exchanger.

This allows your home to be passively heated or cooled by the supply air, depending on the temperatures inside and outside the building.
Conditions for switching on passive heating and passive cooling: See page 95.

Setting the room temperature for ventilation

As soon as the room temperature exceeds the set value specified here, ventilation without heat recovery can take place.

Ventilation without heat recovery (cont.)

Note
To ensure the bypass works correctly, set the room temperature for ventilation as follows:
- *Vitovent 200-C:*
  *Set the value approx. 2 °C **higher** than the standard temperature for central heating/central cooling and **"Party mode"**.*
- *All other ventilation units:*
  *Set the value no more than 4 °C **higher** or **lower** than the standard temperature for central heating/central cooling and **"Party mode"**.*
  We recommend setting the value to at least 1 °C higher.

Standard room temperature for central heating/central cooling and **"Party mode"**: See pages 26 and 31.

1. **Extended menu:**
   ☰
2. **"Ventilation"**
3. **"Set room temperature"**
4. Set the required value.

Note
This menu is not available if your heating circuit HC1 is a ventilation heating circuit.

Setting the minimum temperature for ventilation

Applies to **Vitovent 200-C** and **Vitovent 300-F** only.
Factory setting: 16 °C
As soon as the outdoor air temperature at the inlet to the ventilation unit exceeds the minimum temperature set here, ventilation without heat recovery can take place.

Note
The lower the setting for this temperature, the higher the risk of condensate build-up on the outside of the ductwork. This condensate build-up can cause damage to the building.

1. **Extended menu:**
   ☰
2. **"Ventilation"**
3. **"Min supply air t. byp"**
4. Set the required value.

Setting a time program for ventilation

In the time program for ventilation you set the time phrases during which your home is ventilated and at what air flow rate.
To do so, select an operating status for each time phase: See chapter "Operating status for ventilation".

Factory setting: **one** time phase from 00:00 to 24:00 h for every day of the week with the **"Standard"** operating status

Note
- *We recommend maintaining the factory setting, particularly if your heating circuit HC1 is a ventilation heating circuit.*
- *The time program for ventilation is only active in the **"Ventilation program"** operating program.*

1. **Extended menu:**
   ☰
2. **"Ventilation"**
3. **"Time prog ventilation"**
4. Set the required time phases and operating status.

To see how to set a time program: See page 23.

Note
Between the set time phases, mechanical ventilation takes place with the minimum air flow rate (1).

Operating status for ventilation

"Reduced" (2)
- Reduced air flow rate:
  Approx. 70 % of the standard flow rate: see **"Standard"**.

"Standard" (3)
- Standard air flow rate

"Intensive" (4)
- Maximum air flow rate:
  Approx. 125 % of the standard flow rate: see **"Standard"**.

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Setting a time program for ventilation (cont.)

Note

- *The air flow rates for **"Reduced"**, **"Standard"** and **"Intensive"** mode are set by your contractor.*
- *To ensure consistently good air quality, the air flow rates can be automatically increased or decreased during operation in the **"Reduced"** or **"Standard"** operating statuses:*
  - *If a CO_2/humidity sensor (accessories) is installed in one of your rooms, the air flow rate is adjusted subject to the humidity and/or carbon dioxide concentration (CO_2) of **this room**.*
  - *If a humidity sensor (accessories) is installed in the central extract air duct, the air flow rate is adjusted subject to the humidity of the air extracted from **all rooms**.*

Increasing the ventilation level temporarily

If you wish to increase the ventilation level temporarily, select **"Intensive operation"**.
Mechanical ventilation then runs at the maximum air flow rate (ventilation level 4).

"Intensive operation" is **independent** of the time program for ventilation.

Setting "Intensive operation" for ventilation

1. **Extended menu:**
   ☰
2. **"Ventilation"**
3. **"Intensive operation"**

Mechanical ventilation with maximum air flow rate (4)

Display in the standard menu

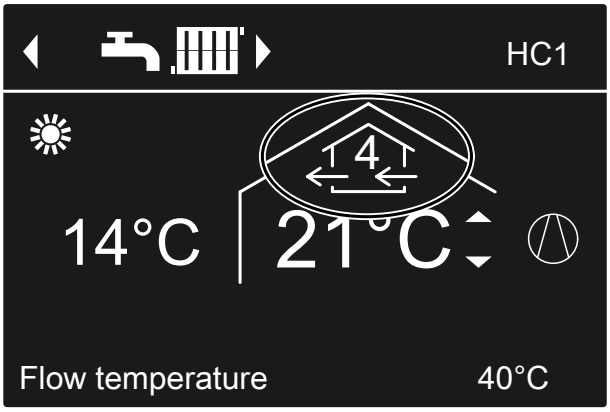

Fig. 22

Ending "Intensive operation"

You have switched on **"Intensive operation"** at the heat pump control unit:

- **"Intensive operation"** ends automatically after 2 hours. Your contractor can adjust this duration.
  or
- Set **"Intensive operation"** to **"OFF"**.

You have switched on **"Intensive operation"** using an external switch/button (bathroom switch):

- **"Intensive operation"** ends automatically after 30 minutes. Your contractor can adjust this duration.
  or
- Set **"Standby mode"** for ventilation: See chapter "Switching on standby mode".

Note

*If **"Intensive operation"** ends automatically, operation continues in the operating program that was active before **"Intensive operation"** began.*

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Saving energy during short periods of absence

To save energy, select **"Economy mode"** when you leave home.
Mechanical ventilation then runs at the minimum air flow rate (ventilation level).

"Economy mode" is **independent** of the time program for ventilation.

Switching on Economy mode for ventilation

1. **Extended menu:**

2. **"Ventilation"**
3. **"Economy mode"**

Display in the standard menu

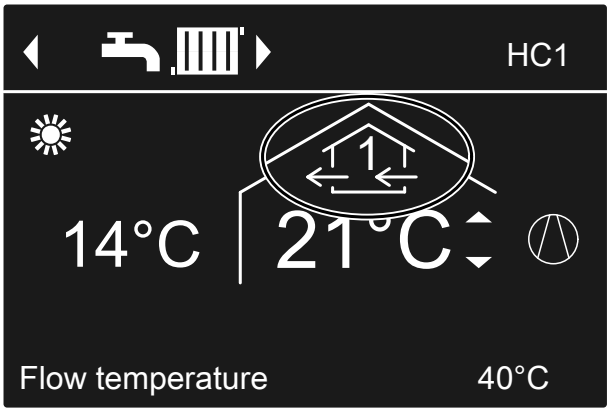

Fig. 23

Ending "Economy mode"

- **"Economy mode"** ends automatically if mechanical ventilation with the minimum air flow rate ( ) is started in the time program, i.e. between the set time phases.
  or
- Set **"Economy mode"** to **"OFF"**.

Saving energy during long periods of absence

To save energy during long periods of absence, select **"Holiday program"**.

Note
The holiday program applies to both mechanical ventilation and central heating/central cooling in all heating/cooling circuits: See page 33.
Your contractor can change this factory setting.

The holiday program has the following effects:
- Mechanical ventilation then runs at the minimum air flow rate (ventilation level)
- Central heating/central cooling and DHW heating: See page 33.

Setting "Holiday program" for ventilation, central heating/central cooling

1. **Extended menu:**

2. **"Ventilation"**
3. **"Holiday program"**

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Saving energy during long periods of absence (cont.)

4. Set the required departure and return dates.

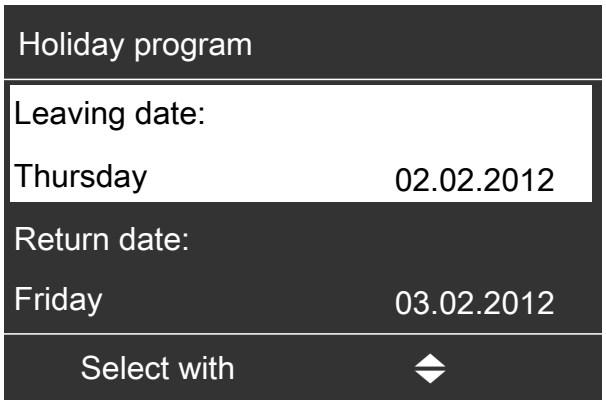

Fig. 24

The holiday program starts at 00:00 h on the day following your departure and ends at 00:00 h on the day of your return. This means that on the departure and return dates, the time program specified for those days is active: See page 44.

Display in the standard menu

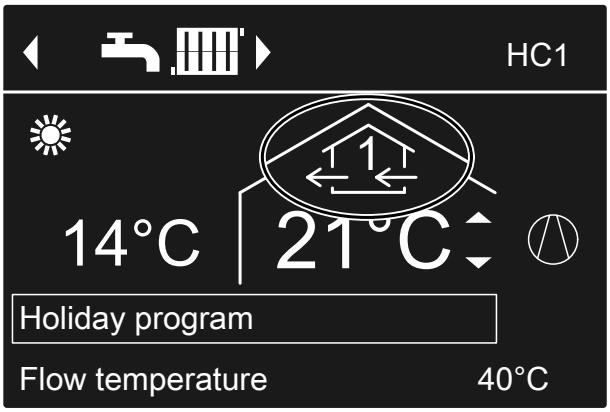

Fig. 25

Display in the extended menu

In the extended menu, you can call up the set holiday program under **"Information"**: See page 53.

Changing "Holiday program"

1. **Extended menu:**
2. **"Ventilation"**
3. **"Holiday program"**
4. **"Change program"**
5. Set the required departure and return dates.

Cancelling or deleting the "Holiday program"

1. **Extended menu:**
2. **"Ventilation"**
3. **"Holiday program"**
4. **"Delete program"**

Utilising power from a photovoltaic system (power generated on site)

You can use the power from your photovoltaic system (power generated on site) to operate the heat pump. For this, you enable one or more functions.
To utilise power generated on site, select the appropriate operating program for central heating, central cooling or DHW heating, e.g. **"Heating and DHW"**: See page 20.

To increase the utilisation of power generated on site, you can raise the set temperature for the following functions or lower it for cooling:

Function	Set temperature	
	Increase	Setback
Standard DHW temperature		
"DHW cylinder heating"	**"Set DHW cyl. increase"**	—
Higher DHW temperature		
"Set DHW temperature 2"	—	—
Buffer cylinder heating		
"Heating htg water buff cyl"	**"Set htg water buffer increase"**	—
Central heating		
"Raise room temperature"	**"Set room temp. increase"**	—
Central cooling		
"Room temperature cooling"	—	**"Set room temp. reduction"**
Cooling the heating water/coolant buffer cylinder		
"Coolant buffer cyl cooling"	—	**"Set cooling water buffer red"**

1. **Extended menu:**
   ☰
2. **"PV ctrl strategy"**
3. Select the required function, e.g. **"DHW cylinder heating"**
4. Set the required temperature increase or temperature reduction. E.g. 10 Kelvin (10 K) for **"Set DHW cyl. increase"** to increase the set temperature for the standard DHW temperature from 50 °C to 60 °C.

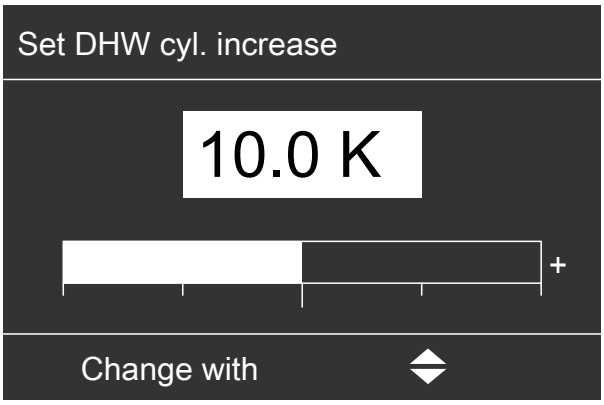

Fig. 26

5. If required, repeat steps 3 and 4 for further functions.

Note

- *If you enable several functions for the utilisation of power generated on site, the functions for DHW heating will have priority over the functions for central heating/central cooling.*
- *Activating **"Set DHW temperature 2"** is only appropriate if you have not set a time phase for the **"Temp. 2"** operating status in the time program for DHW heating: See page 35.*
  *If you still have the **"Temp. 2"** operating status set in the time program, your DHW cylinder may be heated with electricity from the grid in these time phases.*
- *In parallel to the utilisation of power generated on site, a percentage of power can be drawn from the grid for operating the heat pump. Your contractor can enable this function.*
- *Only for air/water heat pumps with output control:*
  To raise and lower the set temperatures, your contractor can implement a setting that will automatically match the compressor output to the amount of power generated by the photovoltaic system. This optimises the utilisation of power generated on site.

Utilisation of power generated on site and utilisation of excess power from the grid (Smart Grid) are both enabled

*If the utilisation of power generated on site **and** Smart Grid are enabled and active **simultaneously**, the function with the largest temperature increase or reduction is used: See page 49.*

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Utilising excess power

If your contractor has connected and selected Smart Grid, operation of the heat pump will be matched to the available amount of power in the grid (grid utilisation).

Not a lot of power in the grid (grid overload)

Your power supply utility can block your heat pump. During this power-OFF period, central heating is provided by the buffer cylinder. If no buffer cylinder is installed or its temperature is too low, the rooms are heated using the available auxiliary heaters, e.g. oil boiler, electric booster heater.
DHW can only be heated during the power-OFF period using the auxiliary heaters.

Large amount of excess power (power is free)

Your power supply utility switches your heat pump on directly.
DHW, the buffer cylinder and the heating circuits are automatically heated to the max. possible temperatures.

Small amount of excess power (power is cheap)

The heat pump runs in standard operation with modified set temperatures.

You can increase these set temperatures for the following functions or reduce them for cooling:

Function	Set temperature	
	Increase	Setback
DHW heating		
"DHW cylinder heating"	**"Set DHW cyl. increase"**	—
Heating the heating water buffer cylinder		
"Heating htg water buff cyl"	**"Set htg water buffer increase"**	—
Central heating		
"Raise room temperature"	**"Set room temp. increase"**	—
Central cooling		
"Room temperature cooling"	—	**"Set room temp. reduction"**

1. **Extended menu:**

2. **"Smart Grid"**

3. Select the required function, e.g. **"DHW cylinder heating"**

4. Set the required temperature increase or temperature reduction. E.g. 10 Kelvin (10 K) for **"Set DHW cyl. increase"** to increase the set temperature for the standard DHW temperature from 50 °C to 60 °C.

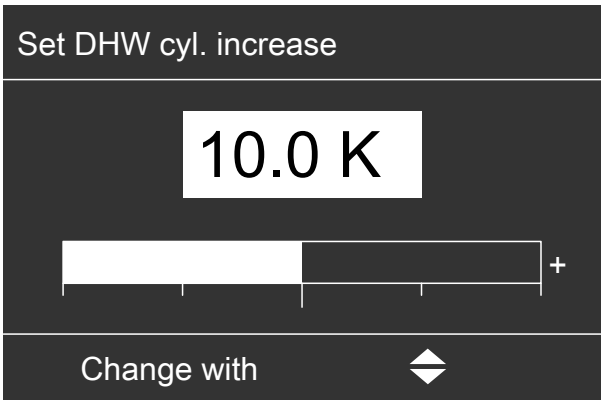

Fig. 27

5. If required, repeat steps 3 to 4 for further functions.

Note
If you enable several functions for the utilisation of excess power, the functions for DHW heating will have priority over the functions for central heating.

Utilisation of power generated on site and utilisation of excess power from the grid (Smart Grid) are both enabled
*If the utilisation of power generated on site **and** Smart Grid are enabled and active **simultaneously**, the function with the largest temperature increase or reduction is used:* *See page 48.*

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Setting the display contrast

You can make the menu texts easier to read. To do so, adjust the contrast of the display to suit the lighting conditions in the room.

1. **Extended menu:**
   ☰
2. **"Settings"**
3. **"Contrast"**
4. Set the required contrast.

Setting the display brightness

You would like to be able to read the text in the menu better. Change the brightness level of the **"Control"** display.
You can also alter the **"Screen saver"** brightness.

1. **Extended menu:**
   ☰
2. **"Settings"**
3. **"Brightness"**
4. **"Control"** or **"Screen saver"**
5. Set the required brightness.

Setting names for heating/cooling circuits

You can designate all heating/cooling circuits individually. The abbreviations **"HC1"**, **"HC2"**, **"HC3"** and **"SKK"** are retained.

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

   Note
   *You can delete the name entered with **"Reset?"**.*

Example:
Name for **"Heating circuit 2"**: Apartment

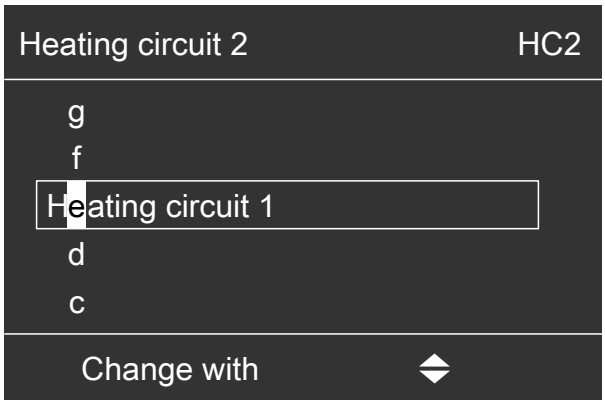

Fig. 28

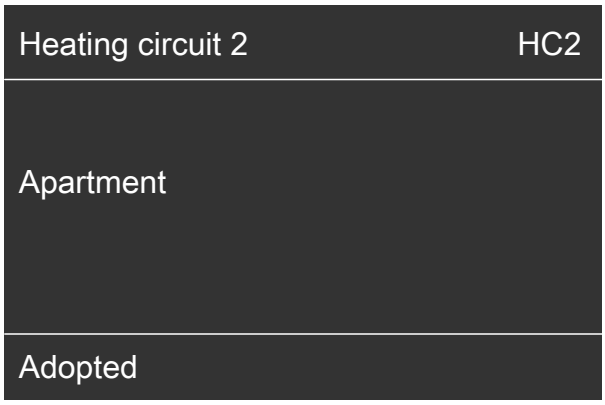

Fig. 29

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Setting names for heating/cooling circuits (cont.)

The menu shows "Apartment" for **"Heating circuit 2"**.

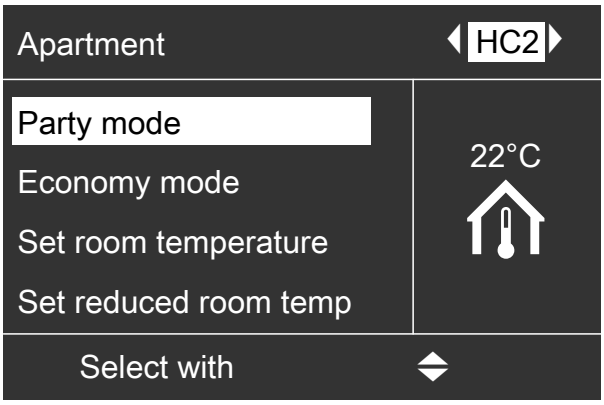

Fig. 30

Setting the preferred heating/cooling circuit for the standard menu

If your system has more than one heating/cooling circuit, any operation on the standard menu always relates to the preferred heating/cooling circuit.
Select the preferred heating/cooling circuit from this menu.

1. **Extended menu:**
2. **"Settings"**
3. **"Standard menu"**
4. Select the heating/cooling circuit:
   - **"Heating circuit 1"**
     "HC1" is displayed
   - **"Heating circuit 2"**
     "HC2" is displayed
   - **"Heating circuit 3"**
     "HC3" is displayed
   - **"Cooling circuit SKK"** (for the separate cooling circuit)
     "SKK" is displayed

Setting the time and date

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

1. **Extended menu:**
2. **"Settings"**
3. **"Time/Date"**
4. Set the time and date.

Setting menu language

1. **Extended menu:**
2. **"Settings"**
3. **"Language"**
4. Select the required language.

Setting the temperature unit (°C/°F)

Factory setting: °C

1. **Extended menu:**

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Setting the temperature unit (°C/°F) (cont.)

2. **"Settings"**
3. **"Temperature unit"**
4. Select the temperature unit **"°C"** or **"°F"**.

Restoring factory settings

You can restore the factory settings of all modified values for every heating/cooling circuit, DHW heating and other system settings separately.

1. **Extended menu:**
   ☰
2. **"Settings"**
3. **"Standard setting"**
4. Select the required system setting, e.g. **"DHW"**.

System setting	Settings and values that are reset
"System"	▪ Time program for central heating with buffer cylinder ▪ Time program for central cooling with buffer cylinder ▪ Electric booster heater is blocked for central heating. ▪ Time program for electric booster heater ▪ Time program for reduced noise operation
"DHW"	▪ Standard DHW temperature ▪ Higher DHW temperature ▪ Time program for DHW heating ▪ Time program for DHW circulation pump ▪ Electric booster heater is enabled for DHW heating. ▪ Start and stop optimisation are switched off.
"Electr booster heater"	▪ Electric booster heater is blocked for central heating. ▪ Time program for electric booster heater
"Heating circuit 1" **"Heating circuit 2"** **"Heating circuit 3"**	▪ Standard room temperature ▪ Reduced room temperature ▪ Time program for central heating ▪ Heating curve slope and level ▪ Comfort and energy saving functions (**"Party mode"**, **"Economy mode"** and **"Holiday program"**) are stopped. ***Note*** *If names have been given to the heating/cooling circuits, these are retained: see chapter "Setting names for heating/cooling circuits".*
"Cooling"	▪ Standard room temperature ▪ Cooling curve slope and level ▪ Active cooling mode is blocked.
"Ventilation"	▪ Time program for ventilation ▪ Comfort and energy saving functions (**"Intensive operation"**, **"Economy mode"** and **"Holiday program"**) are stopped.
"Photovoltaics"	▪ Utilisation of power generated on site is switched off for all components.
"Smart Grid"	▪ No function is enabled for utilising excess power.

Calling up information

You can call up current temperatures, set values, time programs and operating states.

In the extended menu, information is split into groups:
- **"System"**
- **"Heating circuit 1"**
- **"Heating circuit 2"**
- **"Heating circuit 3"**
- **"Cooling circuit SKK"**
- **"DHW"**
- **"Ventilation"**
- **"Solar"**
- **"Heat pump"**
- **"Energy statement"**: See page 53.
- **"Daily log"**: See page 54.

Detailed call-up options for the individual groups can be found in chapter "Overview of extended menu" on page 81.

Note
If names have been given to the heating/cooling circuits, these are shown: see chapter "Setting names for heating/cooling circuits".

1. **Extended menu:**
   ☰
2. **"Information"**
3. Select the group.
4. Select the information you wish to call up.

Checking the solar energy yield

You see an overview showing how much heat your solar thermal system has fed into your heating system in the last 7 days.

1. **Extended menu:**
   ☰
2. **"Solar energy"**
3. To show the heat amount for a certain day, select the day using ◄/► (shown in kWh).

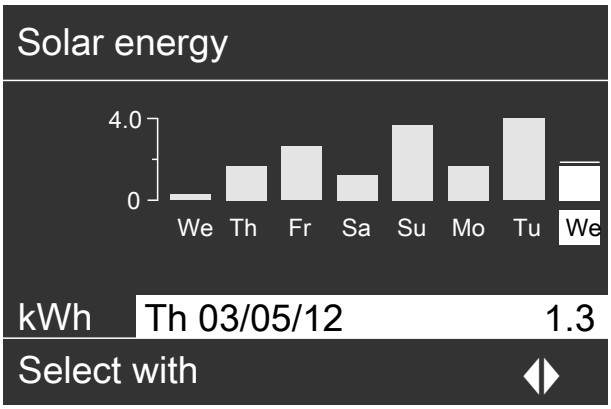

Fig. 31 The flashing line on the graph indicates that the current day is not yet over.

Calling up energy statement

Your contractor can enable the display of energy statements if required. The display is not possible with all heat pumps.

Every energy statement shows a bar chart depicting the energy amounts for the last 52 weeks.

1. **Extended menu:**
   ☰
2. **"Information"**
3. **"Energy statement"**
4. Select the required energy statement, e.g. **"PV energy statemt"**
5. To show the energy amounts for a certain week, select the week using ◄/► (shown in kWh).

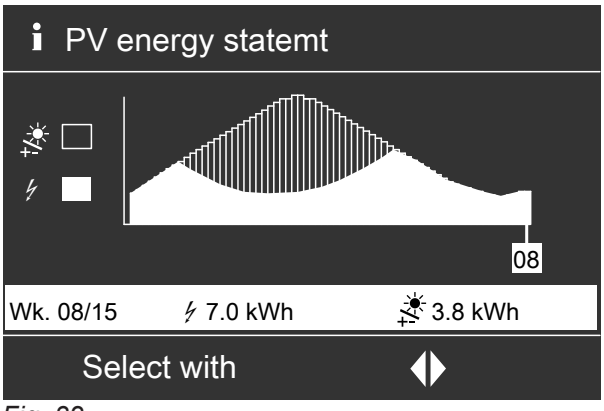

Fig. 32

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Calling up information (cont.)

The following energy statements can be called up:

Energy statement	Meaning of symbols in the chart	
"Energy statemnt heating" (**"Energy statement htg 1"**, **"Energy statement htg 2"** with a 2-stage heat pump)	↯	Electrical energy used for operating the heat pump in heating mode.
		Heating energy transferred into the heating system
"Energy statement DHW" (**"Energy statement DHW 1"**, **"Energy statement DHW 2"** with a 2-stage heat pump)	↯	Electrical energy used for operating the heat pump for DHW heating.
		Heating energy transferred for DHW heating
"Energy statem. cooling" (**"Energy statem. cooling 1"**, **"Energy statem. cooling 2"** with a 2-stage heat pump)	↯	Electrical energy used for operating the heat pump in cooling mode.
		Heating energy drawn from the heating system for cooling
"PV energy statemt"	↯	Electrical energy generated by the PV system used for operating the heat pump (utilisation of power generated on site).
		Total power generated by the PV system

Note
*Some heat pumps only show part of the curve, e.g. with **"Energy statemnt heating"**, only the heating energy transferred is shown, but not the electrical energy used.*

Daily log

The daily log lists the following information for each calendar week (**"CW"**) in tabular form:

Column	Meaning
"T.in"	Minimum air or brine temperature on entering the heat pump
"T.out"	Average air or brine temperature on exiting the heat pump
"HP1"	Hours run, heat pump stage 1
"HP2"	Hours run, heat pump stage 2
"AC"	▪ Brine/water heat pumps: Hours run in "active cooling" mode ▪ Air/water heat pumps / : Total hours run in "active cooling" mode plus hours run for defrosting the evaporator.
"NC"	Hours run with the "natural cooling" function

Note
This information is retained permanently, even if the heat pump control unit is faulty.

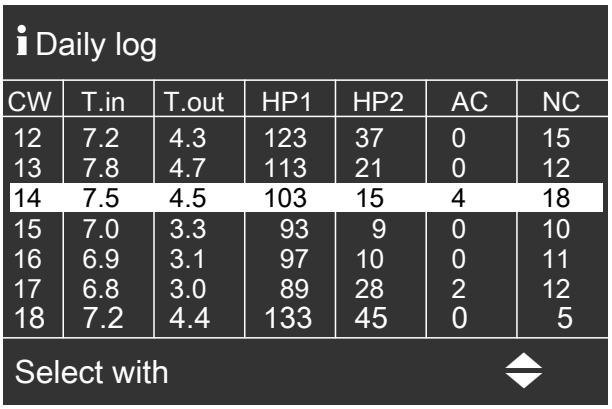

Fig. 33

1. **Extended menu:**
2. **"Information"**
3. **"Daily log"**

Screed drying

For screed drying, e.g. in a new building, your contractor can activate the **"Screed drying"** function. The screed will be dried in line with a set time program suitable for the building material (temperature:time profile).

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Calling up information (cont.)

- Central heating for all heating/cooling circuits takes place according to a set time program. Your settings for central heating/central cooling have no effect for the duration of screed drying.
- DHW heating is active.
- In conjunction with a ventilation unit:
  The maximum air flow rate is set for mechanical ventilation (4).

Display in the standard menu

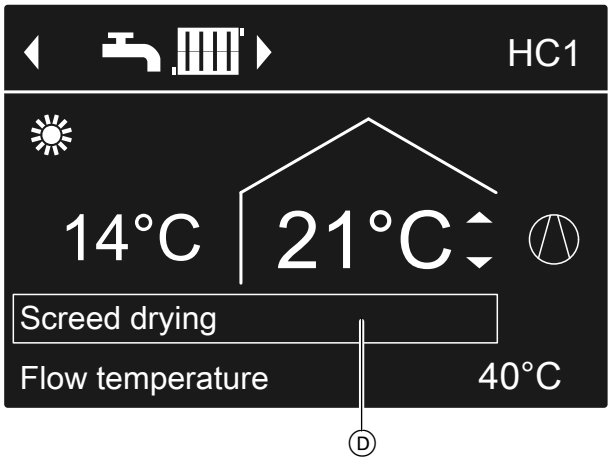

Fig. 34

Ⓓ Upper information bar

Calling up screed drying for all heating/cooling circuits

1. **Extended menu:**
2. **"Information"**
3. **"Heating circuit 1"**, **"Heating circuit 2"**, **"Heating circuit 3"** or **"Cooling circuit SKK"**
4. **"Operating program"**

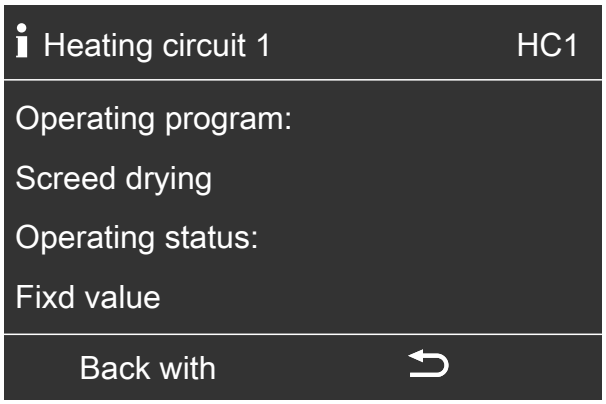

Fig. 35

Remaining screed drying time

Screed drying lasts up to 32 days. The value displayed for **"Screed drying days"** is the number of days remaining.

1. **Extended menu:**
2. **"Information"**
3. **"System"**

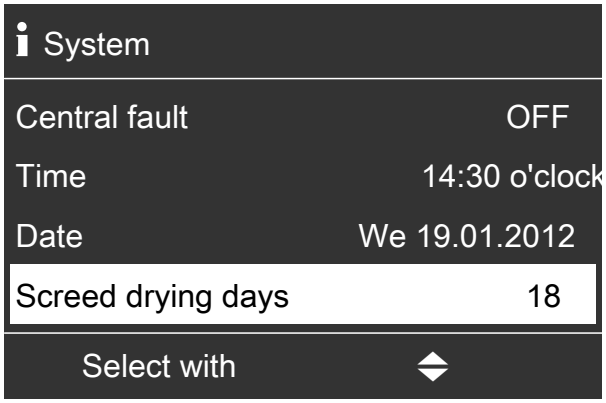

Fig. 36

Calling up messages

In the case of special events or operating states in connection with your heat pump or heating system, the heat pump control unit displays notes, warnings or fault messages.

Alongside the plain text message, the associated symbol flashes on the display.

- **"Note"**
- **"Warning"**
- **"Fault"**
  In addition, the fault indicator (red) flashes on the heat pump control unit. An alarm for issuing fault messages (e.g. a buzzer), if installed, is switched on.

Example of a fault:

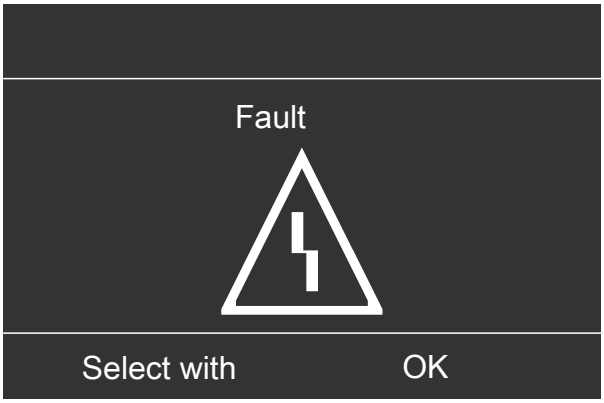

Fig. 37

1. Pressing **OK** provides you with additional information regarding the displayed message.

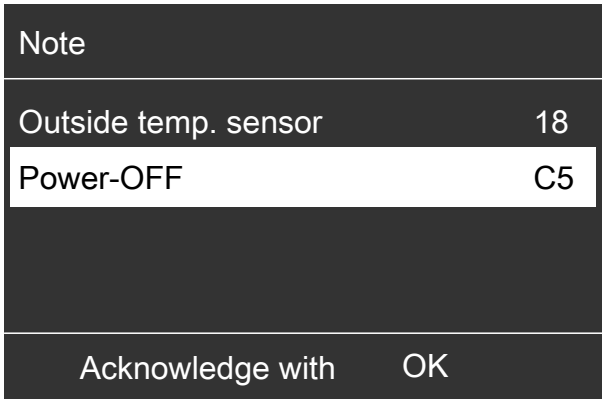

Fig. 38

2. You can scroll through the list of messages. The header of each message shows whether it is a note, warning or fault message.

   Pressing **?** provides you with the following information regarding the selected message:
   - Date and time when the message occurred for the first time.
   - Information about the characteristics of the heat pump and heating system
   - Tips on steps you can take yourself **before** notifying your contractor.

3. In the case of warning or fault messages (△, ⚠) note the message text and the adjacent message code. In the example: **"Fault"**, **"Outside temp. sensor 18"**.
   This enables the contractor to be better prepared and may save you unnecessary travelling costs.
   It is **not** necessary to notify your contractor about information messages (◉). In the example: **"Note"**, **"Power-OFF C5"**: See page 64.

4. Acknowledge **all** messages. For this, follow the instructions in the menu.
   The message will be adopted into the **"Fault"**, **"Warning"** or **"Note"** menu.

Display in the standard menu

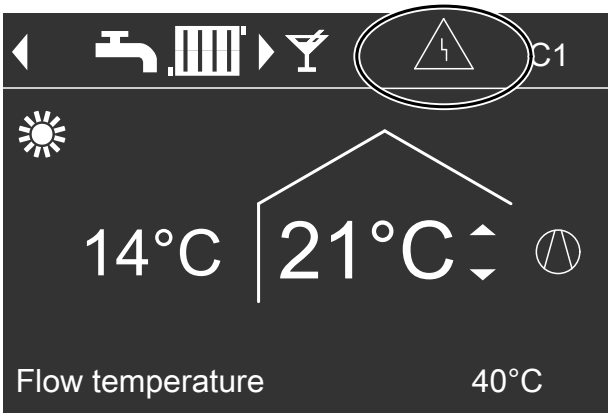

Fig. 39

Calling up messages (cont.)

Display in the extended menu

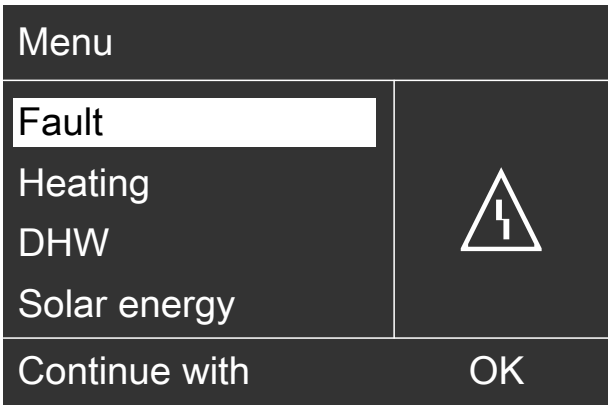

Fig. 40

Note

- *If you have connected an alarm to alert you to fault messages (e.g. a buzzer), this is deactivated when the fault message is acknowledged.*
- *If the fault cannot be rectified until later, the fault message will reappear at 7:00 h the following day. The alarm is switched on again (if installed).*
- *If you acknowledge fault message **"Heat pump A9"**, both heating and DHW heating are provided entirely by the available auxiliary heaters, e.g. instantaneous heating water heater (if installed and enabled). As this may be associated with high electricity costs, we recommend having the heat pump checked by your contractor **immediately**.*

Calling up acknowledged messages

1. **Extended menu:**

2. **"Fault"**, **"Warning"** or **"Note"**

Manual mode

In manual mode, central heating and DHW heating operate independently of the time programs:
- **Uncontrolled** heating with a set flow temperature of 45 °C
- DHW heating with **"Set DHW temperature 2"**: See page 35.
- No central cooling
- The buffer cylinder will be heated to the **"Fixd value"** temperature.
- Ventilation operates in the **"Standard"** operating status.

Note
*Use manual mode **only** after consulting your contractor.*

1. **Extended menu:**
   ☰
2. **"Manual mode"**

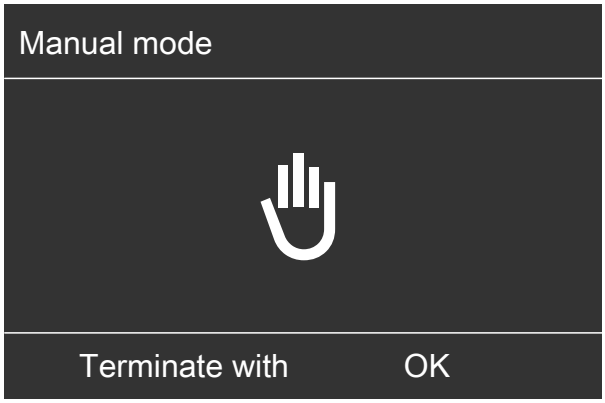

Fig. 41

Note
*Key ☰ returns you to the extended menu. You can call up any information and adjust all settings. These settings become active **after** manual mode ends.*

Special system versions

The displays in the standard menu and the extended menu differ depending on the system version.
At both control levels, only those functions that are relevant for your system version are available to you.

Standard menu for the DHW system version

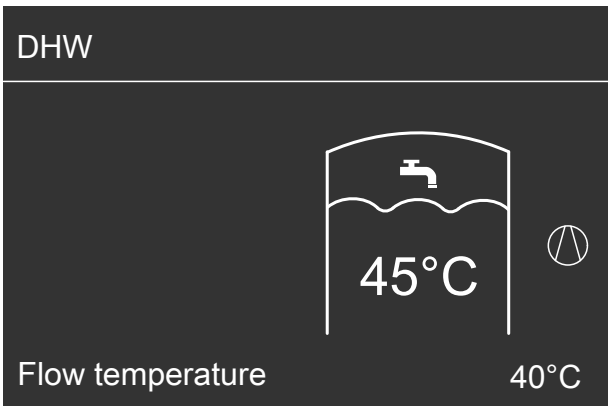

Fig. 42

Standard menu with "External control"

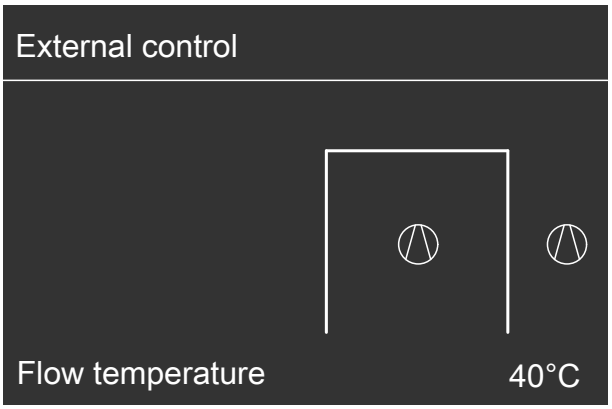

Fig. 43

Heat pump control unit controls

The heat pump control unit may look different depending on the type of heat pump.

Control unit at the front of the heat pump

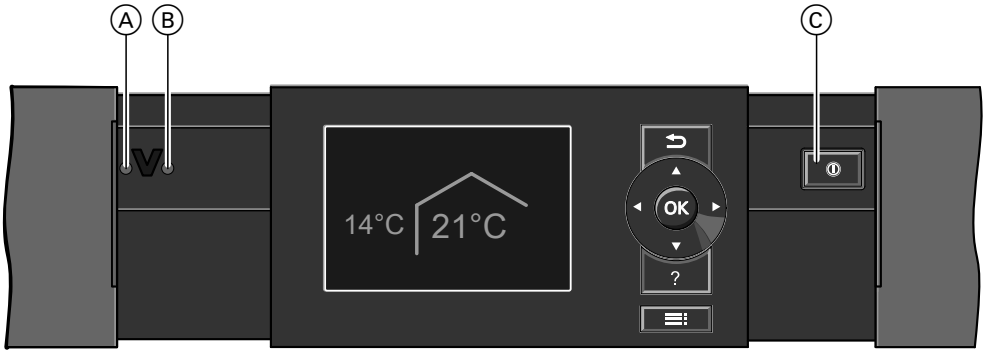

Fig. 44

Ⓐ Fault indicator (red)
Ⓑ ON indicator (green)
Ⓒ ON/OFF switch

At the top of the heat pump

Fig. 45

Ⓐ Fault indicator (red)
Ⓑ ON indicator (green)
Ⓒ ON/OFF switch

Control unit in a separate enclosure on the wall

Fig. 46

Ⓐ Fault indicator (red)
Ⓑ ON indicator (green)
Ⓒ ON/OFF switch

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Shutting down the heat pump

With frost protection monitoring

For **every** heating/cooling circuit, select the operating program **"Standby mode"**.

For the preferred heating/cooling circuit

1. **Standard menu:**
   ◄/► for the operating program **"Standby mode"** (frost protection)
2. **OK** to confirm

For all heating/cooling circuits

1. **Extended menu:**
   ☰
2. **"Heating"** or **"Heating/cooling"**
3. If applicable, use ◄/► to select the required heating/cooling circuit
4. **"Operating program"**
5. **"Standby mode"** (frost protection)

- The circulation pumps are briefly started every 24 hours to prevent them from seizing up.
- If a ventilation unit is connected to your heat pump control unit, the ventilation unit continues to run in the selected operating program (e.g. **"Ventilation program"**).

Note
In the following cases, frost protection is only guaranteed with a booster heater (on site):
- *Air/water heat pumps:*
  At temperatures below −15 °C
- *When there is a heat pump fault*

Auxiliary heaters may include instantaneous heating water heaters (electric booster heaters) or oil/gas boilers (fossil fuel booster heaters).

Without frost protection monitoring (shutting down the system)

1. Switch the ON/OFF switch OFF.
2. Isolate the system from the power supply, e.g. at a separate MCB/fuse or a mains isolator.

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

Note
If a ventilation unit is connected to your heat pump control unit, this ventilation unit runs with the minimum air flow rate (↩1↪).

Information on shutting down for longer periods
- *Circulation pumps may seize up when they are not supplied with power.*
- *It may be necessary to reset the date and time: see chapter "Setting the time and date".*

Starting the heat pump

1. Switch ON the power supply, e.g. at a separate MCB/fuse or a mains isolator.
2. Switch ON/OFF switch ON.
   After a short time, the standard menu is displayed:
   See page 17.
   The green ON indicator illuminates. Your heat pump and remote control units (if available) are now ready for operation.

Rooms are too cold

Cause	Remedy
The heat pump is off.	▪ Turn on the ON/OFF switch: See diagrams on page 60 onwards. ▪ Switch ON the mains isolator (if installed, outside the boiler room). ▪ Set the MCB in the power distribution board (main domestic MCB).
Settings made at the heat pump control unit have been changed or are incorrect.	Central heating/central cooling must be enabled. Check the following settings and correct if required: ▪ Operating program: See page 26. ▪ Room temperature: See page 26. ▪ Time: See page 51. ▪ Time program for central heating/central cooling: See page 27. ▪ Central heating time program for buffer cylinder: See page 28. ▪ Heating curve/cooling curve: See page 29. ▪ If necessary, select central heating for the buffer cylinder: See page 27. ▪ If necessary, enable the electric booster heater for central heating (if installed): See page 39.
The DHW cylinder is being heated.	▪ Wait until the DHW cylinder has been heated up. ▪ Reduce the DHW draw-off rate or temporarily reduce the standard DHW temperature as required.
"Note", **"Warning"** or **"Fault"** is shown.	▪ Check what type of message it is. Acknowledge the message: See page 56. ▪ If necessary, notify your contractor.
"Screed drying" is selected.	▪ No action required ▪ As soon as the period for screed drying has expired, the heat pump continues in the selected operating program: See page 26.
In conjunction with a ventilation unit: ▪ Bypass does not close. ▪ Preheating coil faulty ▪ Supply air/extract air fan faulty	Notify your contractor.

Rooms are too hot

Cause	Remedy
Settings made at the heat pump control unit have been changed or are incorrect.	Central heating/central cooling must be enabled. Check the following settings and correct if required: ▪ Operating program: See page 26. ▪ Room temperature: See page 26. ▪ Time: See page 51. ▪ Time program for central heating/central cooling: See page 27. ▪ Central cooling time program for buffer cylinder: See page 29. ▪ Heating curve/cooling curve: See page 29. ▪ If necessary, select central cooling for the buffer cylinder: See page 27. ▪ Enable "Active cooling mode" if required: See page 40.
"Note", **"Warning"** or **"Fault"** is shown.	▪ Check what type of message it is. Acknowledge the message: See page 56. ▪ If necessary, notify your contractor.
In conjunction with a ventilation unit: The bypass does not open.	Check the following settings and correct if required: ▪ Room temperature for ventilation **"Set room temperature"**: See page 26. ▪ Minimum temperature for ventilation **"Min supply air t. byp"**: See page 44. If necessary, notify your contractor.

There is no hot water

Cause	Remedy
The heat pump is off.	▪ Turn on the ON/OFF switch: See diagrams on page 60 onwards. ▪ Switch ON the mains isolator (if installed, outside the boiler room). ▪ Set the MCB in the power distribution board (main domestic MCB).
Settings made at the heat pump control unit have been changed or are incorrect.	DHW heating must be enabled. Check the following settings and correct if required: ▪ Operating program: See page 26. ▪ DHW temperature: See page 35. ▪ Time program DHW heating: See page 35. ▪ Time: See page 51. ▪ If necessary, enable the electric booster heater for DHW heating (if installed): See page 39.
"Note", **"Warning"** or **"Fault"** is shown.	▪ Check what type of message it is. Acknowledge the message: See page 56. ▪ If necessary, notify your contractor.

The DHW is too hot

Cause	Remedy
Settings made at the heat pump control unit have been changed or are incorrect.	Check and if necessary correct the standard DHW temperature: See page 35.

"◉" is flashing and "Note" is displayed

Cause	Remedy
Reference to a particular event or operating state of the heat pump, heating system or connected ventilation unit	Proceed as described on page 56.

"△" is flashing and "Warning" is displayed

Cause	Remedy
Warning due to a particular event or operating state of the heat pump, heating system or connected ventilation unit	Proceed as described on page 56.

"⚠" is flashing and "Fault" is displayed

Cause	Remedy
Fault at the heat pump, heating system or connected ventilation unit	Proceed as described on page 56.

"Power-OFF C5" is displayed

Cause	Remedy
This message is displayed whilst the power supply is blocked by the power supply utility.	▪ No action required ▪ The heat pump restarts automatically with the selected operating program as soon as the power supply utility restores the power supply.

"External hook-up" is displayed

Cause	Remedy
The operating program set at the heat pump control unit has been switched over by an external device, e.g. EA1 extension.	No action required

"External program" is displayed

Cause	Remedy
The Vitocom communication interface has changed the operating program set at the heat pump control unit.	You can change the operating program.

"Controls locked out" is displayed

Cause	Remedy
Control of the heat pump is blocked.	Your contractor can lift this block.

"A0 Vent.: check filter(s)" is displayed

Cause	Remedy
▪ The filters in your ventilation unit and/or in your extract air vents are severely contaminated. ▪ The time interval for changing the filters has expired.	Clean or replace the filters: See page 67 onwards.

Doors/windows can only be opened with difficulty

Cause	Remedy
In highly airtight buildings, e.g. a passive house: The air flow rates for supply and extract air in your ventilation unit are out of balance.	Notify your contractor.

Doors/windows bang when opened

Cause	Remedy
In highly airtight buildings, e.g. a passive house: The air flow rates for supply and extract air in your ventilation unit are out of balance.	Notify your contractor.

Cleaning the heating system

Brine/water or water/water heat pumps

You can clean the appliance surfaces with a commercially available domestic cleaning agent. Never use scouring agents.

Air/water heat pumps

! **Please note**
Commercially available domestic cleaning agents and special cleaning agents for the heat exchanger (evaporator) can damage the heat pump.
- Clean the appliance surfaces only with a damp cloth.
- If necessary, clean the heat exchanger fins (evaporator) only with a dustpan brush with long bristles.

Air/water heat pumps with a plastic surface

! **Please note**
Commercially available cleaning agents can damage the surface of the external casing.
- Use only mild water-based domestic cleaning agents.
- Do **not** use substances containing acids or solvents, such as vinegar-based cleaners, nitro or synthetic resin solutions, nail varnish remover, ethyl alcohol, etc.

! **Please note**
Mechanical influence will scratch the surface of the external casing.
- Only wipe the surface with a soft damp cloth.
- Do **not** use substances that contain abrasive particles such as polishes, scouring agents, dirt erasers or scouring pads.
- Do **not** clean the external casing with a pressure washer.

Programming unit of the heat pump control unit

Clean the surface of the programming unit with the microfibre cloth provided.

Heating system inspection and maintenance

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

Regular maintenance ensures trouble-free, energy efficient and environmentally responsible heating and cooling operation. For this, it is best to arrange an inspection and maintenance contract with your local contractor.

DHW cylinder (if installed)

Standards DIN 1988-8 and EN 806 specify that maintenance and cleaning should be carried out no later than 2 years after commissioning and as required thereafter.
Only a qualified heating contractor should clean the inside of a DHW cylinder and the DHW connections.

If any water treatment equipment (e.g. a sluice or injection system) is installed in the cold water supply of the DHW cylinder, ensure this is refilled in good time. In this connection, observe the manufacturer's instructions.
In addition for Vitocell 100:
We recommend that the correct function of the sacrificial anode is checked annually by your heating contractor.

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Heating system inspection and maintenance (cont.)

The function of the sacrificial anode can be checked without interrupting the system operation. The heating contractor will check the earth current with an anode tester.

Safety valve (DHW cylinder)

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

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

Potable water filter (if installed)

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

Damaged cables / lines

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

Cleaning the mechanical ventilation system

- The casing of the ventilation unit can be cleaned with a commercially available domestic cleaning agent. Do not use scouring agents.
- Clean or replace the outdoor air and extract air filters in the ventilation unit as well as the filters in the extract air vents regularly. Replace the filters at least **once** a year.

  ! **Please note**
  Dust deposits in the appliance can result in malfunctions
  Never start the appliance without outdoor air and extract air filters.
- We recommend that the ventilation unit and the ductwork are serviced and, if necessary, cleaned at least annually by your contractor.
- We recommend entering into a maintenance contract with your contractor.
  Failure to carry out maintenance represents a risk factor. Regular cleaning and maintenance ensure that the operation remains hygienic, environmentally sound and energy efficient.

Cleaning the supply air/extract air vents

Light contamination

Wipe the outside of the supply/extract air vents with a damp cloth.

Cleaning the mechanical ventilation system (cont.)

Heavy contamination

! **Please note**
Dust will settle inside the ductwork if the mechanical ventilation system is operated without filters. This increases the air pressure drop. Switch the ventilation unit off **before** removing the extract air vents: see chapter "Stopping ventilation to change the filters".

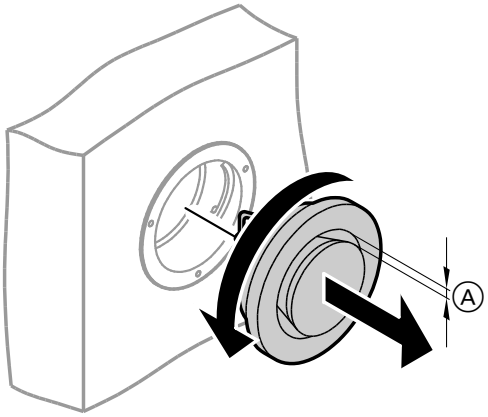

Fig. 47

Ⓐ Annular gap

1. Undo the supply air/extract air vents (bayonet fitting).
2. Clean the vents with a damp cloth.
3. Refit the vents.

Note
- ***Never** alter the setting of annular gap Ⓐ.*
- *If the filters in the extract air vents are dirty, replace them: see chapter "Replacing the filters in the extract air vents".*

Cleaning the kitchen extract air vent

! **Please note**
Dust will settle inside the ductwork if the mechanical ventilation system is operated without filters. This increases the air pressure drop. Switch the ventilation unit off **before** removing the filter from the kitchen extract air vent: see chapter "Stopping ventilation to change the filters".

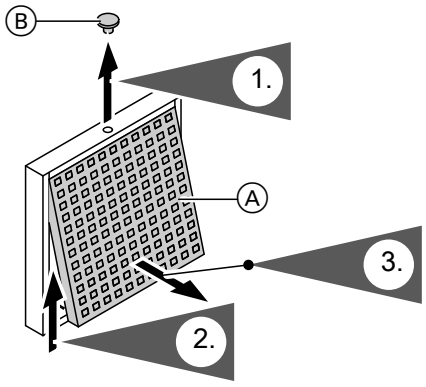

Fig. 48

Ⓐ Grease filter
Ⓑ Locking plug

4. Remove the grease filter. Clean the kitchen extract air vent with a damp cloth.
5. Clean grease filter Ⓐ with water and detergent or in the dishwasher. Dry grease filter Ⓐ.
6. Refit the grease filter. Close the kitchen extract air vent. Secure the kitchen extract air vent with safety plug Ⓑ.

Cleaning or replacing filters

If the programming unit display shows **"A0 Vent.: check filter(s)"**, the filters inside the ventilation unit are contaminated or the interval for changing the filters has expired.

Note
Also check the filters in the extract air vents. Replace these filters if necessary: see chapter "Replacing the filters in the extract air vents".

Vitovent 200-C and Vitovent 300-F

- Do not clean the filters. Replace the filters.

Dispose of contaminated filters through household waste.

Note
*The number of days remaining to the next filter change can be called up from the **"Information"** menu: see chapter "Calling up information".*

Vitovent 200-W, Vitovent 300-C and Vitovent 300-W

In the case of **light** contamination, clean filters inside the ventilation unit with the aid of a vacuum cleaner.

Note
Cleaning the filters may impair their effectiveness.

If **one** of the following conditions applies, replace the filters:
- The filters are **heavily** contaminated.
- Filters have already been cleaned several times.
- The last filter change was more than 1 year ago.

Dispose of contaminated filters through household waste.

Note
*The number of days remaining to the next filter check can be called up from the **"Information"** menu: see chapter "Calling up information".*

Filters in the Vitovent 200-C ventilation unit

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit. These dust deposits can result in malfunctions. Pull the mains plug from its socket **before** opening the ventilation unit.

Cleaning or replacing filters (cont.)

Replacing the filters with ceiling installation

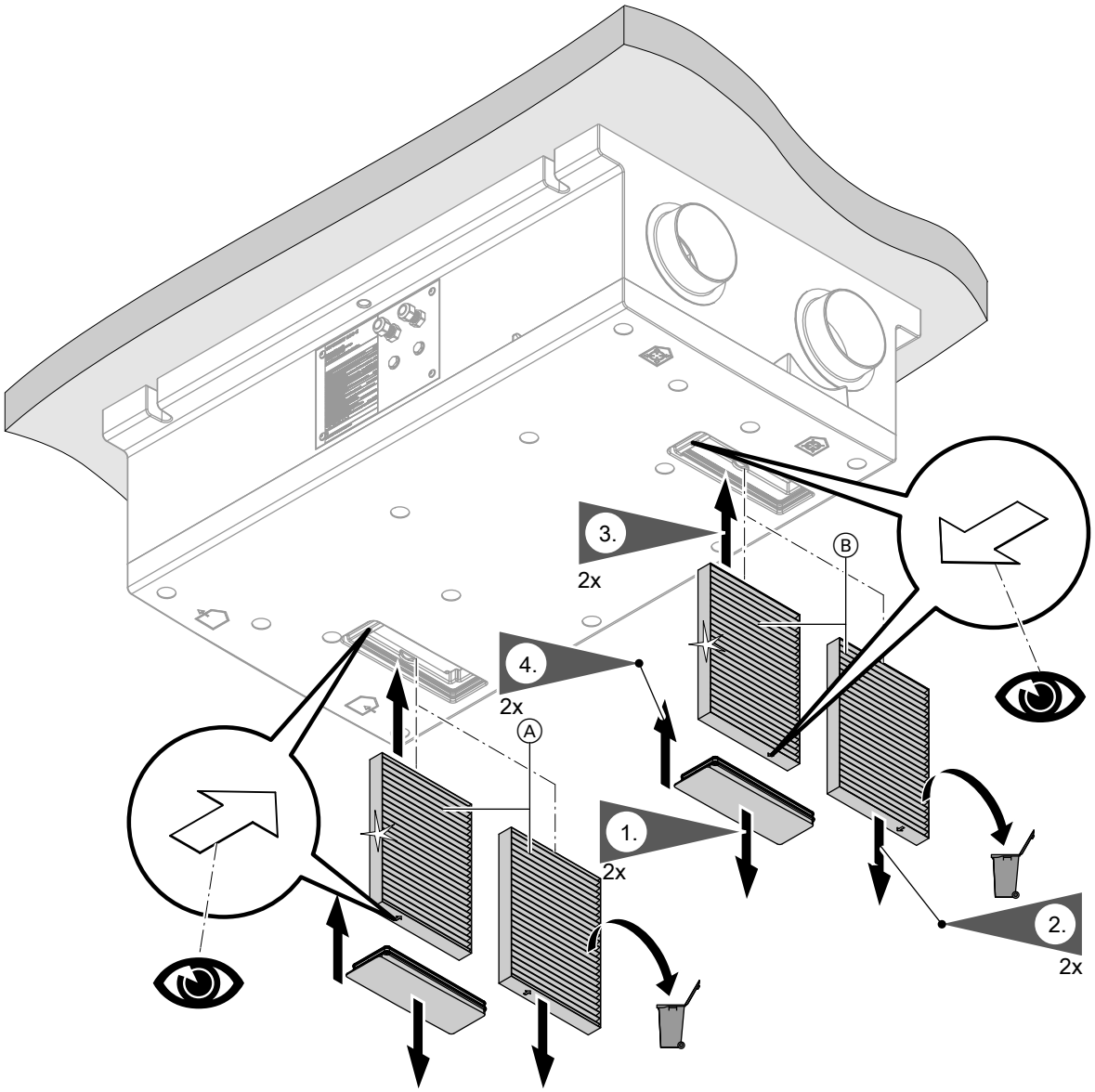

Fig. 49

Ⓐ Outdoor air filter
Ⓑ Extract air filter

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Cleaning or replacing filters (cont.)

Replacing the filters with wall mounting

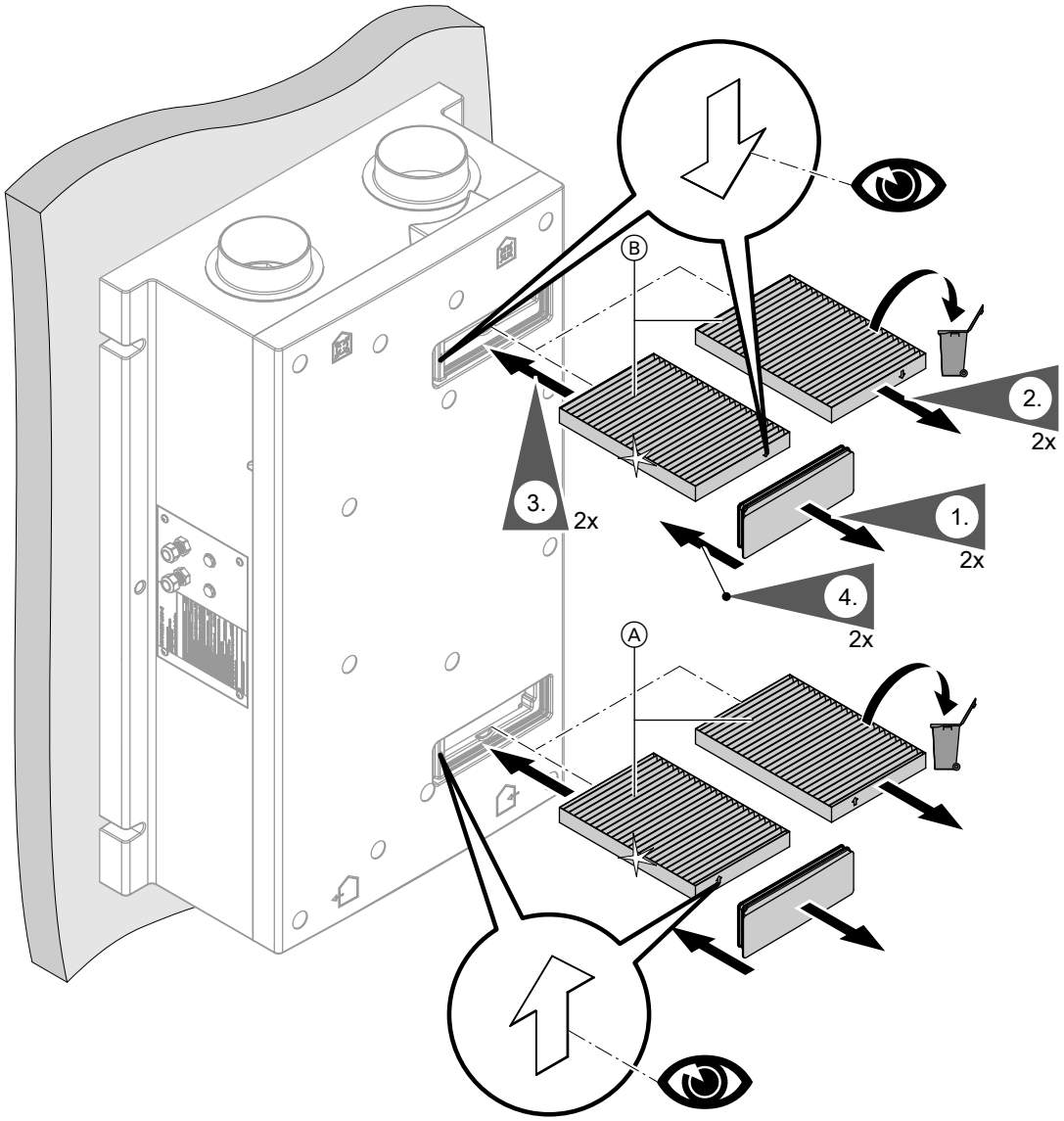

Fig. 50

Ⓐ Outdoor air filter
Ⓑ Extract air filter

Filters in the Vitovent 200-W ventilation unit

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit. These dust deposits can result in malfunctions. Pull the mains plug from its socket **before** opening the ventilation unit.

Cleaning or replacing filters (cont.)

Opening the ventilation unit

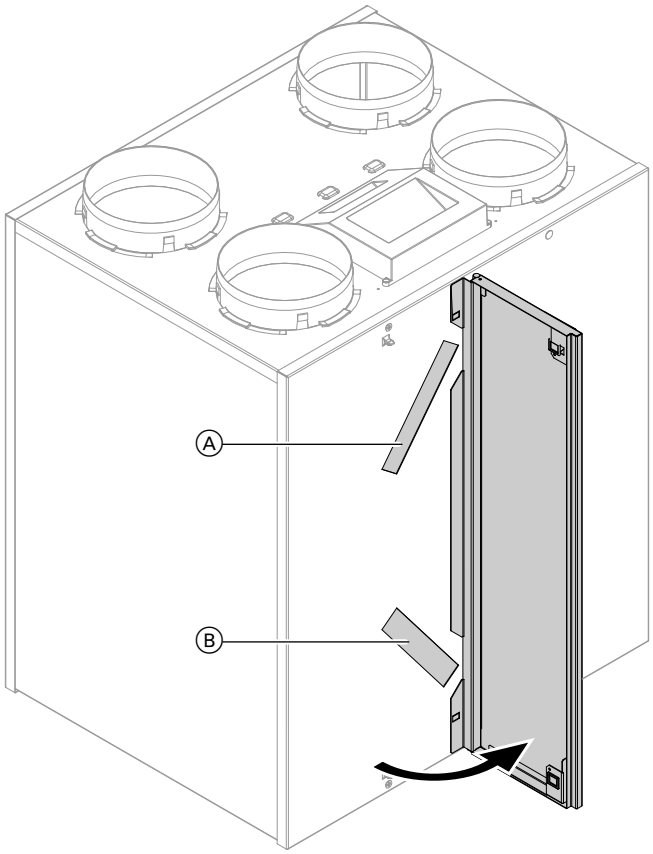

Fig. 51

Ⓐ Extract air filter
Ⓑ Outdoor air filter

Cleaning or replacing filters (cont.)

Cleaning the filters and replacing if required

Note
Prior *to removing filters, note their installation position.*
If necessary, mark positions with a pen.

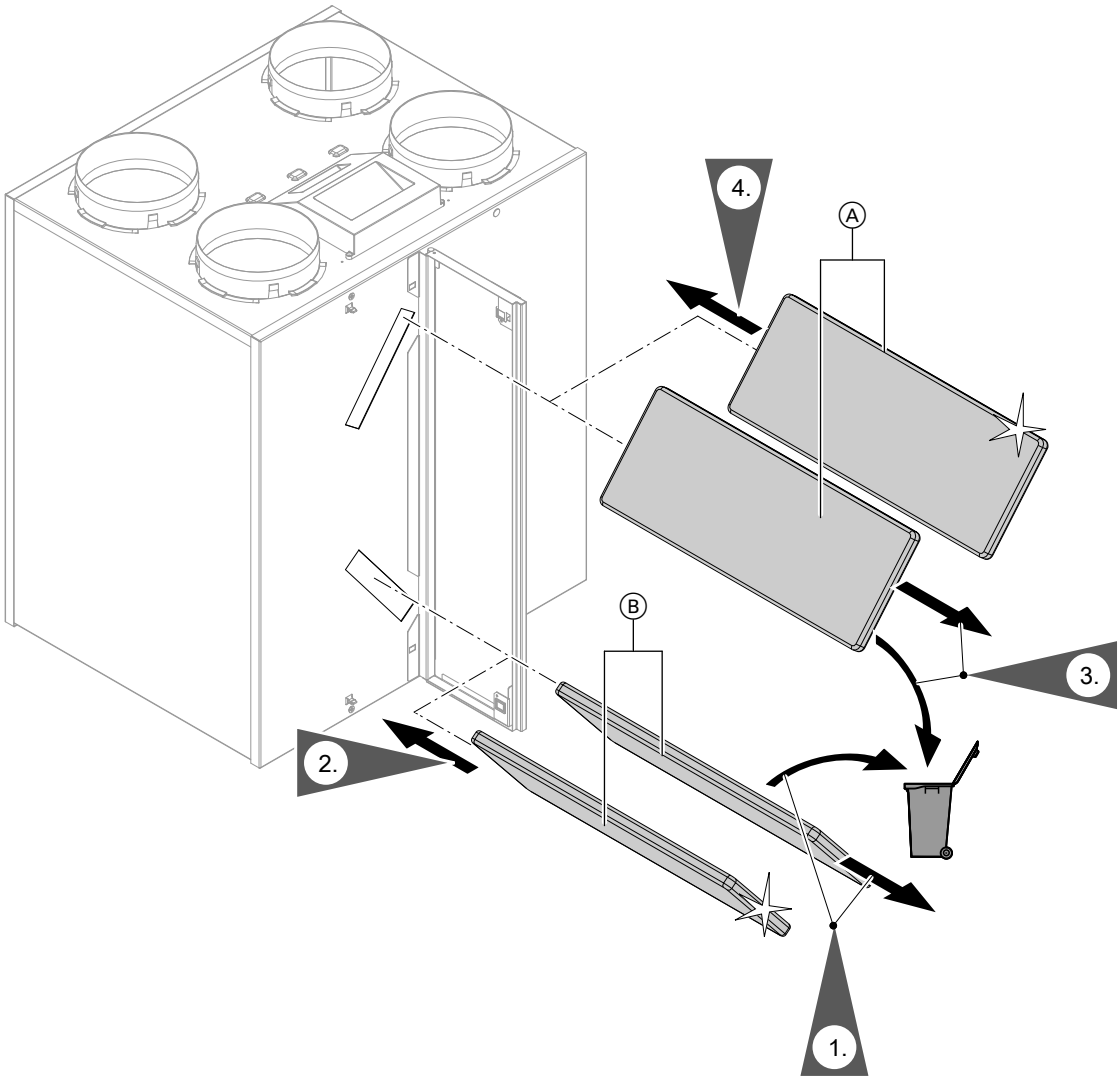

Fig. 52

Ⓐ Extract air filter
Ⓑ Outdoor air filter

Filters in the Vitovent 300-C ventilation unit

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit.
These dust deposits can result in malfunctions.
Pull the mains plug from its socket **before** opening the ventilation unit.

Cleaning or replacing filters (cont.)

Removing the filter boxes from the unit

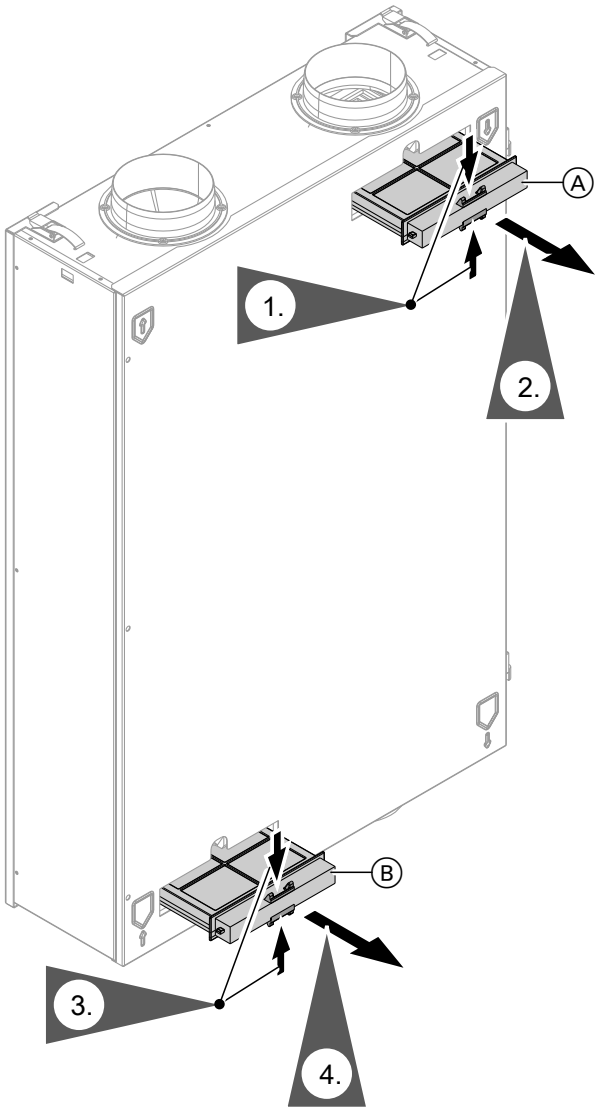

Fig. 53

Ⓐ Extract air filter box
Ⓑ Outdoor air filter box

Cleaning the filters and replacing if required

Note
*If you use a fine filter: **before** removing the filter from the filter box, make a note of which is the top and which is the bottom. If necessary, mark the position on the filter box with a pen.*

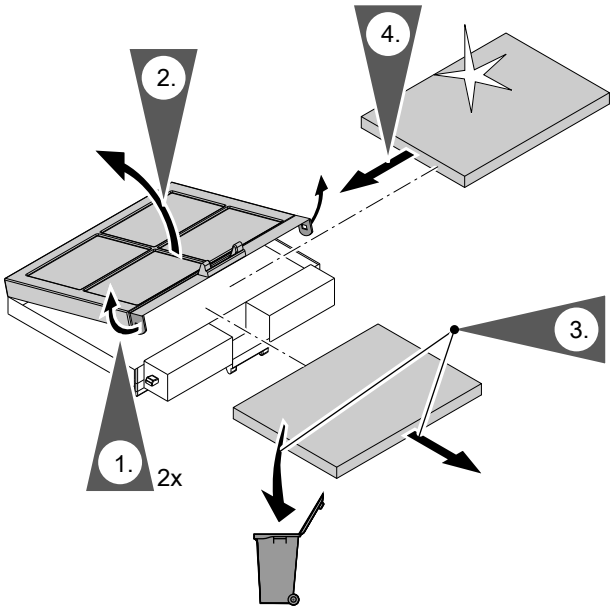

Fig. 54

Inserting the filter boxes into the unit

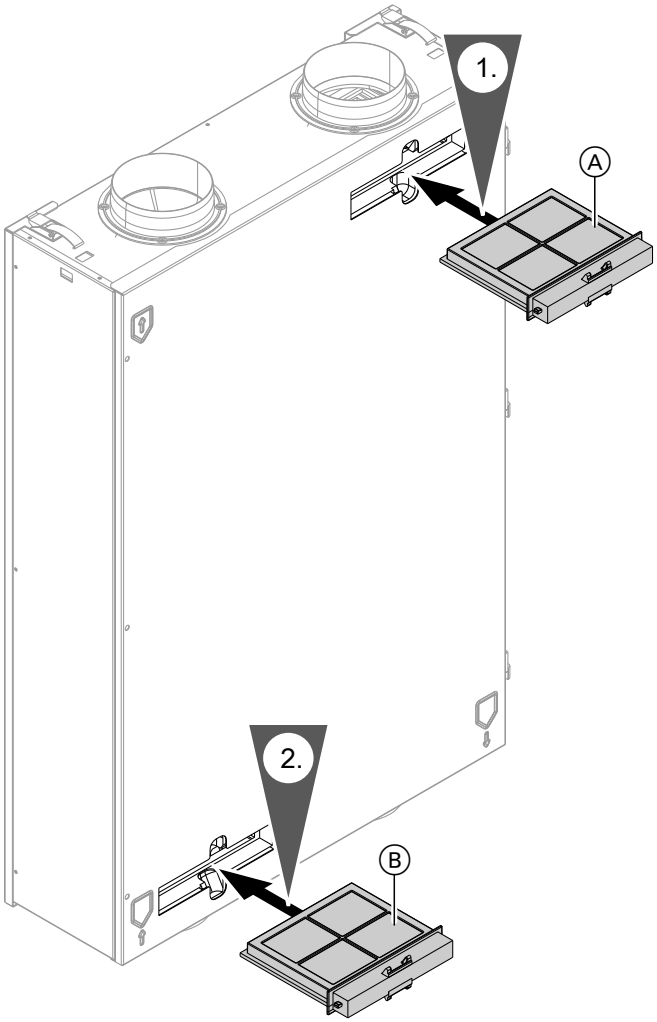

Fig. 55

Ⓐ Extract air filter
Ⓑ Outdoor air filter

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Cleaning or replacing filters (cont.)

Filters in the Vitovent 300-F ventilation unit

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit. These dust deposits can result in malfunctions.
Before opening the ventilation unit, turn off the ON/OFF switch.

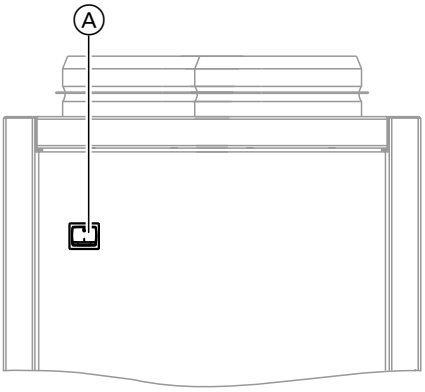

Fig. 56

Ⓐ ON/OFF switch on the back of the appliance

Opening the ventilation unit

Remove the left or right side panel

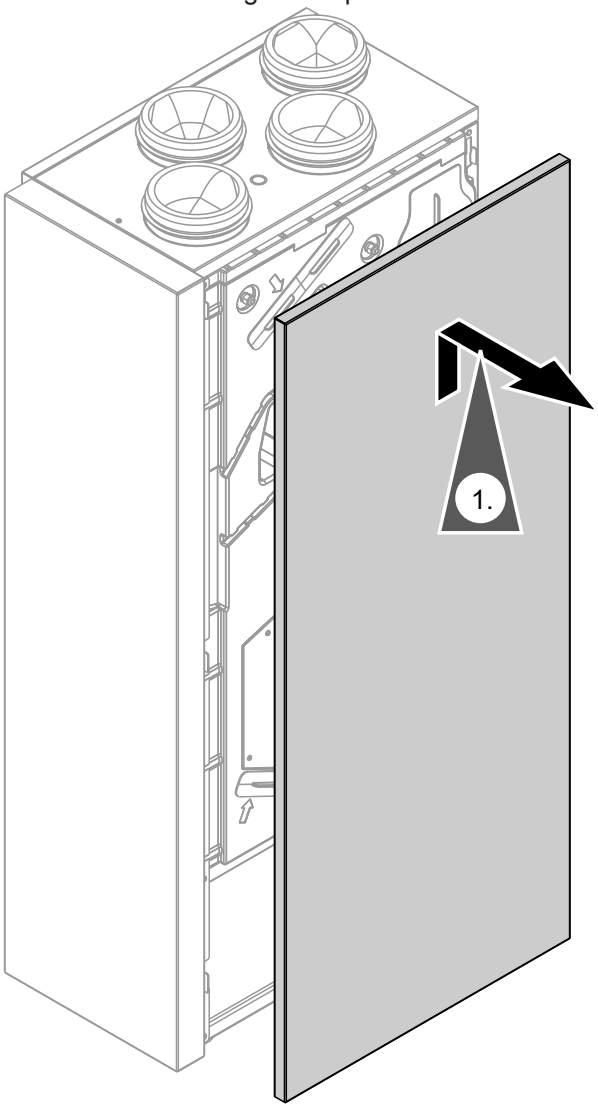

Fig. 57

Cleaning or replacing filters (cont.)

Replacing the filters

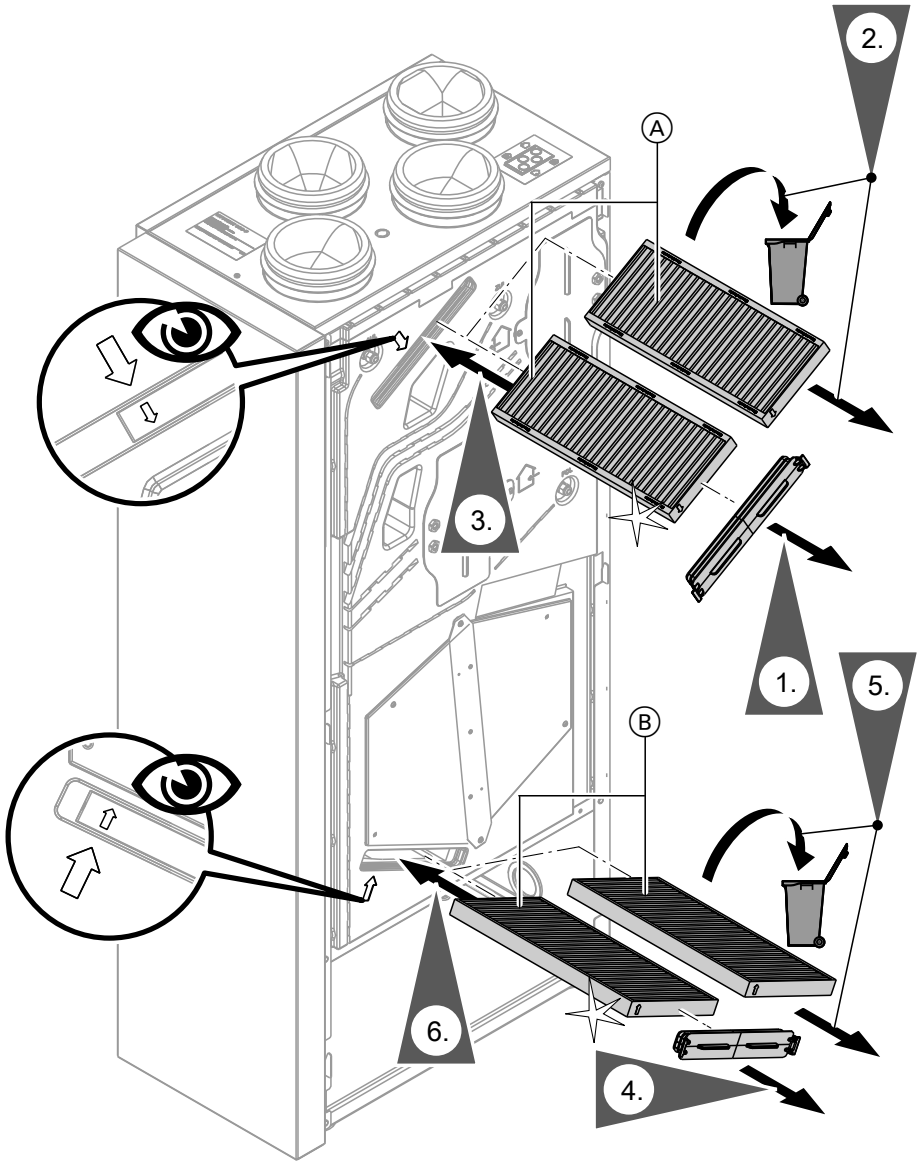

Fig. 58

Ⓐ Extract air filter
Ⓑ Outdoor air filter

Filters in the Vitovent 300-W ventilation unit

! **Please note**
Operating the open ventilation unit without filters will lead to dust being deposited in the unit. These dust deposits can result in malfunctions. Pull the mains plug from its socket **before** opening the ventilation unit.

Cleaning or replacing filters (cont.)

Opening the ventilation unit

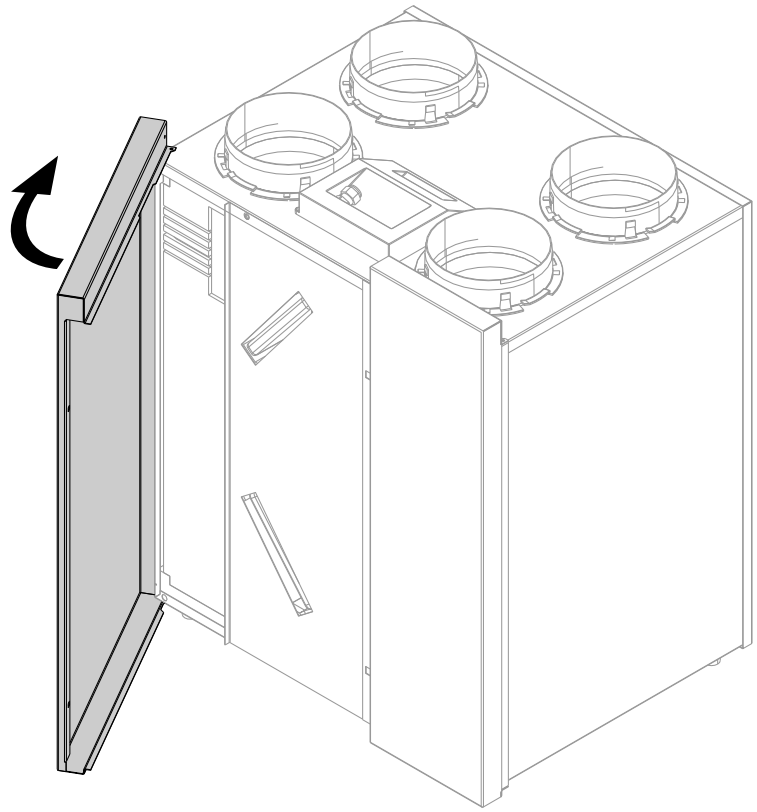

Fig. 59

Cleaning or replacing filters (cont.)

Cleaning the coarse filters and replacing if required

Note
***Prior** to removing filters, note their installation position.*
If necessary, mark positions with a pen.

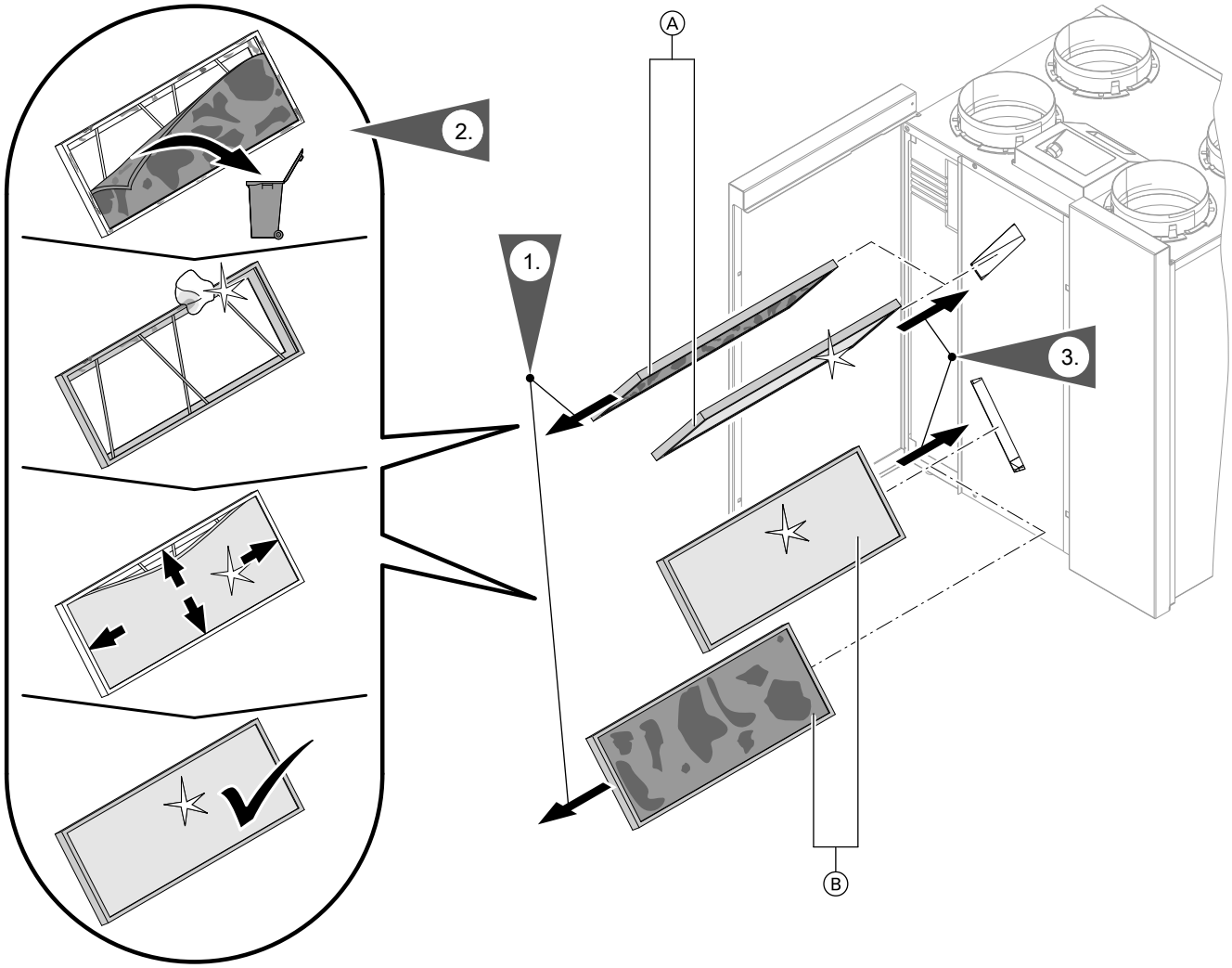

Fig. 60

Ⓐ Extract air filter
Ⓑ Outdoor air filter

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Cleaning or replacing filters (cont.)

Cleaning the filters and replacing if required

Note
***Prior** to removing filters, note their installation position.*
If necessary, mark positions with a pen.

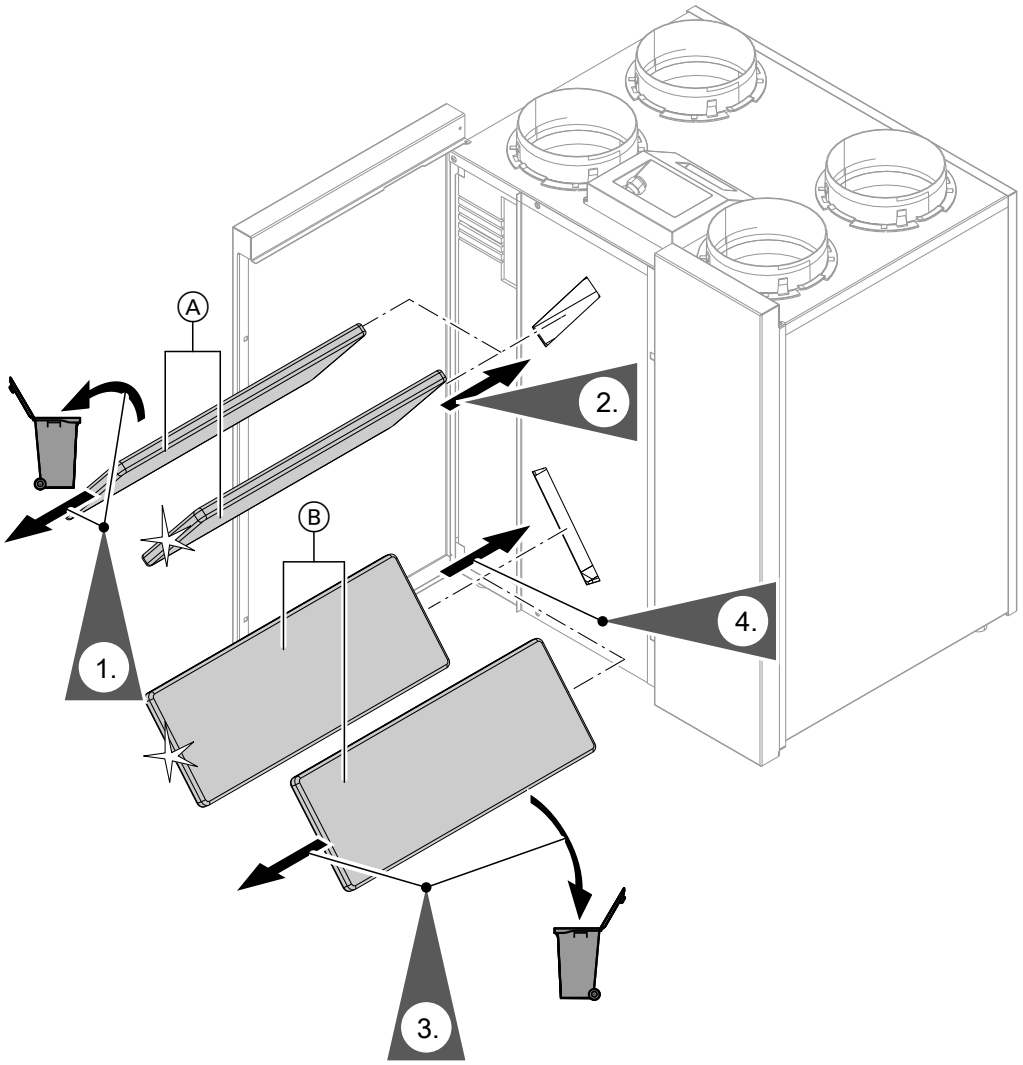

Fig. 61

Ⓐ Extract air filter
Ⓑ Outdoor air filter

Replacing filters in the extract air valves

! **Please note**
Dust will settle inside the ductwork if the mechanical ventilation system is operated without filters. This increases the air pressure drop. Turn the ON/OFF switch of the ventilation unit OFF **before** undoing the extract air valves.

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Cleaning or replacing filters (cont.)

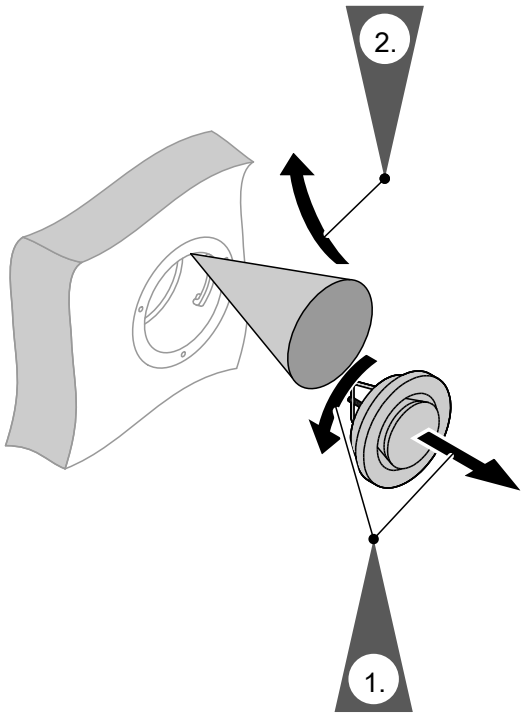

Fig. 62

Resetting the filter change service indicator

1. Start the ventilation unit after changing the filters.

   Please note
   Dust deposits in the appliance can result in malfunctions
   Never start the appliance without supply air and extract air filters.

2. Manually reset the service display for filter changes at the heat pump control unit.
3. **Extended menu:**
4. **"Ventilation"**
5. **"Filter change"**
6. **"Yes"**
7. **"OK"** to confirm

Refrigerant

The appliance contains fluorinated hydrocarbons (refrigerant) included in the Kyoto Protocol.
The type plate indicates the type of refrigerant used in the appliance.
The global warming potential (GWP) of the refrigerant is expressed as a multiple of the GWP of carbon dioxide (CO_2). The GWP of CO_2 is 1.

Refrigerant	Global warming potential
R134a	1430
R404A	3920

Refrigerant	Global warming potential
R410A	2088
R407C	1774
R417A	2350

Overview of extended menu

Note
Subject to the features of your heating system, not all of the menu entries shown may be available under ☰.

Extended menu ☰

Heating, Heating/cooling or Cooling HC1/HC2/HC3/SKK	
"Party mode"	
"Economy mode"	
"Set room temperature"	
"Set red. room temp"	
"Operating program"	
	"Heating and DHW" or **"Heating/cooling and DHW"** or **"Htg"** or **"Cooling"** or **"Cooling and DHW"**
	"Only DHW"
	"Standby mode"
"Time program heating" or **"Time proghtg/cooling"**	
"Holiday program"	
"Heating curve"	
Active cooling mod.	
"Cooling curve"	

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Overview of extended menu (cont.)

- **"DHW"**
  - **"Set DHW temperature"**
  - **"Operating program"**
    - **"Time program"**
    - **"Standby mode"**
  - **"1x DHW heating"**
  - **"Time program DHW"**
  - **"Time prog DHW circ"**
  - **"DHW with electr.heating"**
  - **"Start optimisation"**
  - **"Stop optimisation"**
  - **"Set DHW temperature 2"**

- **"Ventilation"**
  - **"Intensive operation"**
  - **"Economy mode"**
  - **"Set room temperature"**
  - **"Min supply air t. byp"**
  - **"Operating program"**
    - **"Ventilation program"**
    - **"Standard operation"**
    - **"Standby mode"**
  - **"Time prog ventilation"**
  - **"Holiday program"**
  - **"Filter change"**

- **"System"**
  - Buffer cyl operating mode
  - Active cooling mod.
  - **"Time prog buffer cyl"**
  - Time prog. coolnt buff cyl.
  - **"Time prog. noise red."**
  - **"Electric heating"**
  - **"Time prog elec heater"**

- **Solar energy**

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Overview of extended menu (cont.)

"PV ctrl strategy"
"Set DHW temperature 2"
"DHW cylinder heating"
"Heating htg water buff cyl"
"Raise room temperature"
"Room temp. cooling"
Coolant buffer cyl cooling

"Smart Grid"
"DHW cylinder heating"
"Heating htg water buff cyl"
"Raise room temperature"
"Room temp. cooling"

Note
*Subject to the features of your heating system, not all of the call-up options may be available under **"Information"**.*
Further details can be called up for any information marked with ►.

Overview of extended menu (cont.)

"Information"		
	"System"	
		"Outside temperature"
		"Common flow temp"
		Operating status system ▶
		"Time prog. noise red."
		"Heating season"
		"Cooling period"
		"Buffer cylinder"
		Buffer cyl operating mode ▶
		"Op. status buffer cylinder"
		Time prog buffer cyl ▶
		Coolant buffer op. status
		Time prog. coolnt buff cyl.
		Valve heating/cooling ▶
		Coolant buffer temp.
		Coolant buffer t. set
		Cooling w coolant buff.
		Coolant buffer flow t
		Coolant buff set flow t
		Coolant buffer mixer ▶
		Coolant buffer pump
		Active cooling
		Natural cooling
		External heat source ▶
		Time prog elec heater ▶
		"Central fault"
		Op. status swimming pool ▶
		"Sw. pool heat demand"
		"Swimming pool heating"
		"Lag heat pump 1"
		"Lag heat pump 2"
		"Lag heat pump 3"
		"Lag heat pump 4"
		"Subscriber no."
		"Ext. hook-up 0..10V"
		"Time"
		"Date"
		"Radio clock signal"
		"Screed drying days"

Overview of extended menu (cont.)

"Information"		
	Heating circuit HC1, HC2, HC3	
		"Operating program"
		"Operating status"
		Time program heating ► or Time proghtg/cooling ►
		"Set room temp."
		"Room temperature"
		"Set red. room temp"
		"Set party temperature"
		Heating curve ►
		"Heating circuit pump"
		Holiday program ►
		"Mixer"
		Flow temperature
		Set flow temperature
		Cooling curve ►
		"Active cooling"
		"Natural cooling"
		"Mixer cooling"
		"Flow temp. cooling"
		Heating season
		Cooling period
		Demand htg mode
		Demand cool mode
	Cooling circuit SKK	
		Operating program
		"Operating status"
		"Set room temp."
		"Room temperature"
		"Mixer"
		"Flow temperature"
		"Cooling curve"
		"Active cooling"
		"Natural cooling"

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Overview of extended menu (cont.)

"Information"		
	"DHW"	
		Operating program ►
		Operating status ►
		Time program DHW ►
		Time prog DHW circ ►
		DHW temperature ►
		"Cylinder primary pump"
		"DHW circulation pump"
		"1x DHW heating"
		"Cylinder reheating"
		"Cylinder reheating" (h)
	"Ventilation"	
		Operating program ►
		Operating status ►
		Time prog ventilation ►
		"Set room temp."
		"Min supply air t. byp"
		"Humidity"
		"El. preheater bank"
		"Days to filter change"
	"Solar"	
		"Collector temperature"
		"DHW temp. solar"
		"Return temp. solar"
		"Solar circuit pump" (h)
		"Solar energy bar chart"
		"Solar energy" (kWh)
		"Solar circuit pump"
		"Reheat suppression"
		"SM1 output 22"
		"Solar sensor 7"
		"Solar sensor 10"

Overview of extended menu (cont.)

- **"Information"**
  - **"Heat pump"**
    - **"Compressor"** or **"Compressor 1"**
    - **"Primary pump/Fan"** or **"Primary pump/Fan 1"**
    - **"Alternative source"**
    - **"Secondary pump"** or **"Secondary pump 1"**
    - **"Valve heating/DHW"** or **"Valve heating/DHW 1"**
    - **"Hours run compressor"** or **"Hours run compressor 1"**
    - **"No. of starts comprssr"** or **"No. of starts comprssr 1"**
    - **"Compressor 2"**
    - **"Primary pump/Fan 2"**
    - **"Secondary pump 2"**
    - **"Valve heating/DHW 2"**
    - **"Hours run comprssr2"**
    - **"No.of starts cmprssr2"**
    - **"Inst.water heater st.1"**
    - **"Inst.water heater st.1"** (h)
    - **"Inst.water heater st.2"**
    - **"Inst.water heater st.2"** (h)
    - **"SPF heating"**
    - **"SPF DHW"**
    - **"SPF overall"**
    - **"SPF cooling"**
  - **"Energy statement"**
    - **"Energy statement htg 1"**
    - **"Energy statement DHW 1"**
    - **"Energy statem. cooling 1"**
    - **"Energy statement htg 2"**
    - **"Energy statement DHW 2"**
    - **"Energy statem. cooling 2"**
    - **"PV energy statemt"**
  - **"Daily log"**

Overview of extended menu (cont.)

- **"Settings"**
  - **"Time / Date"**
  - **"Language"**
  - **"Contrast"**
  - **"Brightness"**
    - **"Control"**
    - **"Screen saver"**
  - **"Temperature unit"**
  - **"Name for heating circuit"**
  - **"Standard menu"**
  - **"Standard setting"**
    - **"System"**
    - **"Compressor 1"**
    - **"Compressor 2"**
    - **"Heat management"**
    - **"DHW"**
    - **"Solar"**
    - **"Electr booster heater"**
    - **"Internal hydraulics"**
    - **"Buffer cylinder"**
    - **"Heating circuit 1"**
    - **"Heating circuit 2"**
    - **"Heating circuit 3"**
    - **"Cooling"**
    - **"Ventilation"**
    - **"Photovoltaics"**
    - **"Smart Grid"**
    - **"Primary source"**
    - **"Primary source 2"**
    - **"Time"**
    - **"Communication"**
    - **"Control"**
- **Manual mode**
- **Test mode**

Terminology

Defrosting

Ice can form on the evaporator during the operation of air/water heat pumps.
To remove this ice, the evaporator is automatically defrosted.

During defrosting, the heat pump is not available for central heating or central cooling.
Water vapour can rise from the heat pump during defrosting.

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Terminology (cont.)

As in active cooling mode, defrosting involves reverse operation of the heat pump. This is why the hours run for defrosting are logged with the **"AC"** hours run in the daily log.

Active cooling mode ("Active cooling")

Active cooling mode: see "Cooling functions".

System version

The system version describes the components of your heating system, such as a heat pump, heating circuit pump, mixer, valves, control unit, radiators, etc.
Your contractor will adjust the heating system to the local conditions and customise the system to suit your requirements.

Your contractor will have listed the equipment and functions of your heating system in the form on page 102.

Operating program

The operating program enables you to define the following:
- How you heat or cool your rooms
- Whether you heat DHW
- Which ventilation stage is active for your mechanical ventilation

Operating status

See "Time program".

Pressure imbalance

A pressure imbalance can occur in rooms in conjunction with controlled mechanical ventilation if the air flow rate settings are not balanced.

In this context, a pressure imbalance occurs when the air flow rate on the supply air side is different to that on the extract air side. In the case of highly airtight buildings, this creates either negative or positive pressure in the interior. With negative pressure, windows and doors bang open; in the case of positive pressure, windows and doors easily fall shut.

Utilisation of power generated on site

When utilising power generated on site, the power generated by the photovoltaic system is used to operate the heat pump and other heating system components.
Your contractor has connected an electricity meter (energy meter) to the heat pump control unit for the utilisation of power generated on site. It supplies the heat pump control unit with information about whether and how much power is available from the PV system.

Display on electricity meter

Energy supplied by the grid (power supply utility):
- The electricity meter shows the output with a minus sign in front of it:

Fig. 63

Note
Up to 3 fault bars are displayed on the electricity meter. This does not affect the function of the heat pump control unit.

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Terminology (cont.)

Energy fed into the grid (power supply utility):
- The electricity meter shows the output without a plus/minus sign in front of it.

Functions for the utilisation of power generated on site

Enable one or more functions for the utilisation of power generated on site. The functions that can be utilised depend on the appliance type.
If you enable several functions for the utilisation of power generated on site, the functions for DHW heating will have priority over the functions for central heating.
To utilise the power generated on site, you can raise the set temperature for some functions or lower it for cooling.

Possible functions for the utilisation of power generated on site:
- DHW heating
- Heating the heating water buffer cylinder
- Central heating
- Central cooling

It is a condition for the utilisation of power generated on site that the relevant operating program for central heating, central cooling or DHW heating is set. E.g. the operating program **"Heating and DHW"** or **"Only DHW"** must be set for DHW heating.

Example: utilisation of power generated on site for DHW heating

If sufficient power from the photovoltaic system is available, the heat pump will be operated for DHW heating using this power.

In the time program you have set the time phases during which DHW heating is enabled. In order to use as much of the power generated by the PV system as possible, DHW heating may also be switched on outside the set time phases.
In order to make more effective use of power generated on site, set an increase for the DHW temperature.
- Standard DHW temperature:
  50 °C
- Increase the DHW temperature when utilising power generated on site:
  10 K (10 Kelvin)

The DHW is heated to 60 °C. If DHW consumption is the same, the next DHW heating period using power from the grid is postponed until later.

Note
- *In parallel to the utilisation of power generated on site, a percentage of power can be drawn from the grid for operating the heat pump: e.g. if the amount of power generated on site is insufficient to drive the circulation pump. Your contractor can set the level of this percentage.*
- *Only for air/water heat pumps (not all types):*
  To raise and lower the set temperatures, your contractor can implement a setting that will automatically match the compressor output to the amount of power generated by the photovoltaic system. This prevents power for operating the heat pump being drawn from the grid.

Utilisation of power generated on site and utilisation of excess power from the grid (Smart Grid)
*If the utilisation of power generated on site **and** Smart Grid are enabled and active, the function with the largest temperature increase or reduction applies.*

Electric booster heater

If the required room temperature or DHW temperature cannot be achieved with the heat pump alone, an electric booster heater (if installed) can be activated.

Examples of electric booster heaters:
- Instantaneous heating water heater:
  - For central heating and/or DHW heating
  - Integrated into the heat pump or into the flow of your heating system
- Immersion heater:
  - For DHW heating
  - Integrated into the DHW cylinder

Note
- *Constant operation of an electric booster heater results in high electricity consumption.*
- *You can set a time program for the electric booster heater.*

Enthalpy heat exchanger

In ventilation units with heat recovery, the cooler supply air is preheated with the heat from the extract air in the integral heat exchanger. For this, neither air stream comes into direct contact with the other.

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Terminology (cont.)

The enthalpy heat exchanger is able to obtain not only heat from the extract air, but also a large proportion of the moisture it contains. This enables the humidity heat exchanger to create a more pleasant indoor ambience, particularly during colder times of year, as it prevents the indoor air becoming too dry.

Power-OFF

At times of high demand for electricity, your power supply utility can block the power supply to your appliance [Germany]. During this power-OFF period, the message **"Power-OFF"** is shown on the display.
The appliance restarts automatically with the selected operating program as soon as the power supply utility enables the power supply again.

During power-OFF, central heating is provided by the heating water buffer cylinder. If no heating water buffer cylinder is installed or its temperature is too low, the rooms are heated using the available auxiliary heaters, e.g. oil boiler, electric booster heater.
DHW can only be heated during the power-OFF period using the auxiliary heaters.

Underfloor heating

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

Therefore, heating to the reduced room temperature at night or switching on **"Economy mode"** during short absences does not result in significant energy savings.

Reduced noise operation

Air/water heat pumps have an integrated fan. The speed of this fan can be reduced with this time program. This reduces the noise caused by the fan, e.g. at night.

Note
The reduced fan speed results in a reduced available heating output. With air/water heat pumps with output control, this can be compensated by increasing the compressor output if required. This will slightly reduce the seasonal performance factor.

Heating mode/cooling mode

Standard heating mode/cooling mode

For periods when you are at home during the day, you heat or cool your rooms to the standard room temperature. Set the periods (time phases) using the time program for central heating/cooling.

Reduced heating mode

For periods when you will be absent or during the night, you heat your rooms to the reduced room temperature. Set the periods using the time program for central heating/cooling. With underfloor heating systems, reduced heating mode only yields limited energy savings (see "Underfloor heating system").

Note
In reduced heating mode, cooling is disabled.

Room temperature-dependent heating/cooling mode

With room temperature-dependent operation, a room will be heated or cooled until the selected room temperature has been reached. For this, a separate temperature sensor must be installed in the room.
The heating output/cooling capacity is regulated independently of the outside temperature.

Weather-compensated heating/cooling mode

In weather-compensated mode, the flow temperature is controlled according to the outside temperature. This means that only the necessary amount of heating or cooling is provided to heat or cool the rooms to the room temperature you have selected.
The outside temperature is recorded and transferred to the heat pump control unit by a sensor fitted outside the building.

Terminology (cont.)

Heating curve/cooling curve

The heating/cooling characteristics of your heat pump are affected by the slope and level of the selected **heating curve**/**cooling curve**.
Heating and cooling curves represent the relationship between the outside temperature, room temperature (set room temperature) and (heating circuit) flow temperature.

- **Heating curve:**
  The **lower** the outside temperature, the **higher** the flow temperature in the heating circuit.
- **Cooling curve:**
  The **higher** the outside temperature, the **lower** the flow temperature in the cooling circuit.

In order to guarantee sufficient heat at any outside temperature, the conditions of your building and your heating system must be taken into consideration. For this, you can adjust the heating curve.
You can also adjust the cooling curve for cooling mode.

Cooling curve

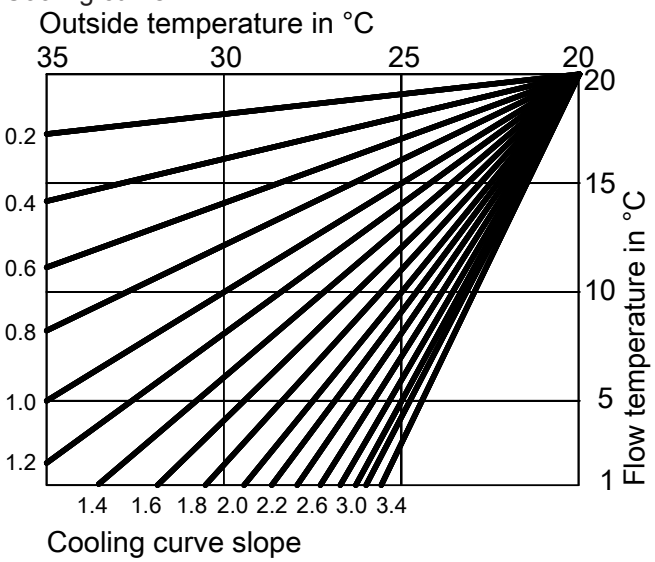

Fig. 65

Heating curve

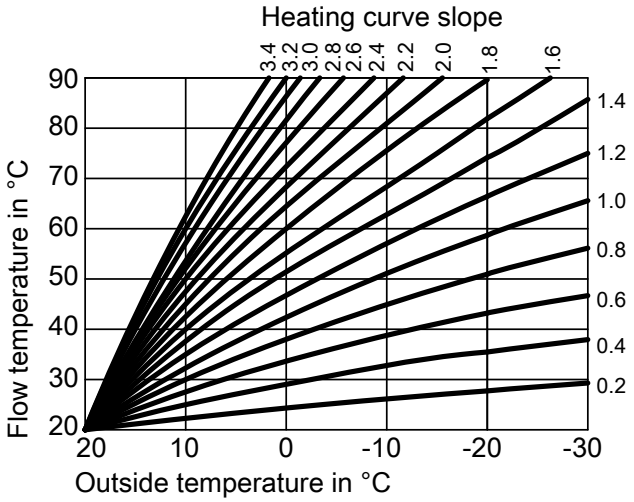

Fig. 64

Setting the slope and level, taking the heating curve as an example

Factory settings:
- Slope = 0.6
- Level = 0

The heating curves shown apply with the following settings:
- Heating curve level = 0
- Standard room temperature (set room temperature) = 20 °C

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Terminology (cont.)

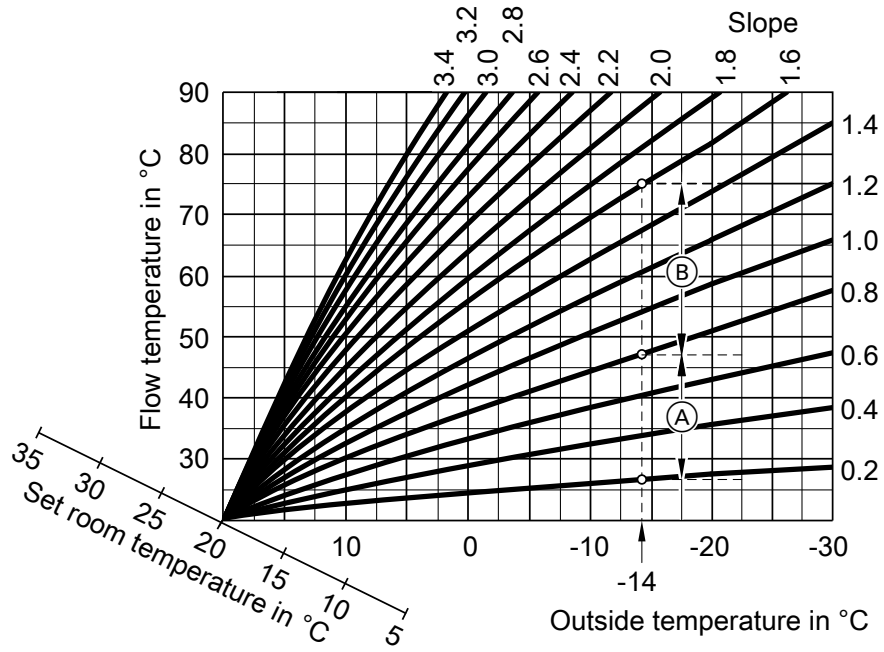

Fig. 66

For outside temperature **−14 °C**:
Ⓐ Underfloor heating system: slope 0.2 to 0.8
Ⓑ Low temperature heating system: slope 0.8 to 1.6

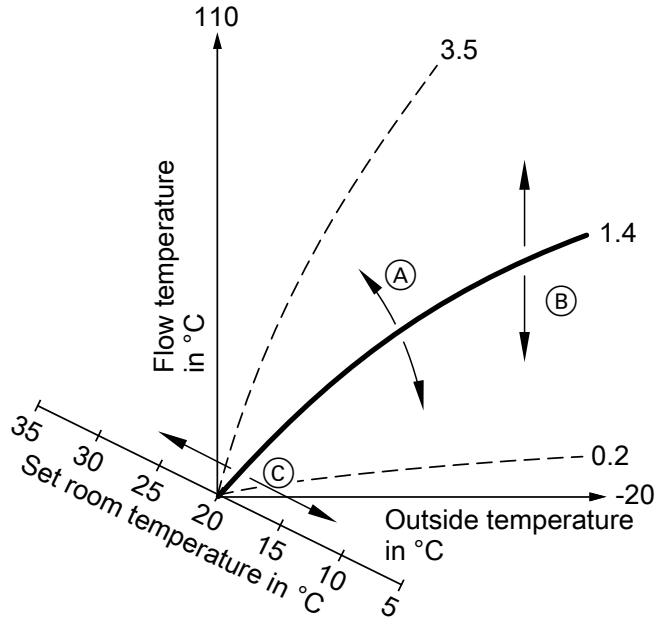

Fig. 67

Ⓐ If you change the slope:
The steepness of the heating curves changes.
Ⓑ If you change the level:
The heating curves are shifted in parallel in a vertical direction.
Ⓒ If you change the standard room temperature (set room temperature):
The heating curves are moved along the "set room temperature" axis.

Note
Setting the slope or level too high or too low will not result in damage to your heat pump or your heating system.
Both settings affect the level of the flow temperature, which may then be too low or unnecessarily high.
*You will be provided with tips on when and how to change the heating curve slope and level. For this, press **?**.*

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Terminology (cont.)

Heating/cooling circuits

A heating or cooling circuit is a sealed unvented circuit between the heat pump and the consumers (e.g. radiators), in which the heating water or coolant circulates.
A separate cooling circuit is a separate sealed unvented circuit that supplies a cooling appliance, such as a fan convector or a chilled ceiling. Cooling via a separate cooling circuit is independent of the outside temperature.
Heating and cooling of the entire interior can, if required, be split over **several** heating circuits and **one** cooling circuit.
Up to **3 heating circuits** are possible (**"Heating circuit 1"**, **"Heating circuit 2"**, **"Heating circuit 3"**), e.g. one heating circuit for the rooms occupied by yourself and one heating circuit for the rooms of a separate flat.

Only **one cooling circuit** is possible:
- **Heating/cooling circuit**
  Cooling operation via a heating circuit (**"Heating circuit 1"**, **"Heating circuit 2"**, **"Heating circuit 3"**), e.g. a room with underfloor heating. This room can be cooled in summer and heated in winter.
  Cooling via the heating circuit only takes place when the outside temperature has exceeded the cooling limit. Heating via the heating circuit only takes place when the outside temperature has fallen below the heating limit. The cooling limit and the heating limit is set by your qualified contractor.
  or
- **Separate cooling circuit**
  The separate cooling circuit (**"Cooling circuit SKK"**) can be connected to the heat pump control unit in addition to the max. 3 heating circuits.
  A separate cooling circuit cannot be used to provide heating.

In these operating instructions, the heating circuits, the heating/cooling circuit and the separate cooling circuit are generally referred to as the **heating/cooling circuits**. A differentiation between the heating circuit, heating/cooling circuit and separate cooling circuit is only made in individual cases.

Example:
- **"Heating circuit 1"** is the heating circuit for the rooms occupied by you.
- **"Heating circuit 2"** is the heating circuit for the rooms of a separate apartment.
- **"Cooling circuit SKK"** is a separate cooling circuit with fan convector for a storage room.

The heating/cooling circuits are designated at the factory as **"Heating circuit 1"**, **"Heating circuit 2"**, **"Heating circuit 3"**, **"Cooling circuit SKK"**.
If you or your qualified contractor have renamed the heating/cooling circuits, e.g. as "Apartment", that designation will be displayed instead of **"Heating circuit..."**/**"Cooling circuit SKK"**.

Heating circuit pump

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

Instantaneous heating water heater

See "Electric booster heater".

Heating water/coolant buffer cylinder

A heating water/coolant buffer cylinder stores either thermal energy for central heating or cooling energy for central cooling.
To ensure that no condensation forms during central cooling, heating water/coolant buffer cylinders have a special type of thermal insulation.
All heating/cooling circuits are supplied either with thermal energy **or** with cooling energy via the heating water/coolant buffer cylinder.

You can switch between central heating and central cooling via the extended menu.
For further information on buffer cylinders, see "Buffer cylinders".

Terminology (cont.)

Heating water buffer cylinder

A heating water buffer cylinder stores thermal energy for central heating. All heating/cooling circuits are supplied from this buffer cylinder.
Central cooling is possible only over one cooling circuit. A hydraulic bypass circuit prevents coolant from entering the heating water buffer cylinder.

For further information on buffer cylinders, see "Buffer cylinders".

Cascade

See "Heat pump cascade".

Controlled mechanical ventilation

A mechanical ventilation system provides continuous ventilation of your interior.
The mechanical ventilation system comprises a ventilation unit, the ductwork, as well as supply air and extract air vents.
An outdoor air filter installed in the ventilation unit protects against the ingress of pollen.
If a Viessmann ventilation unit is connected to the heat pump control unit, all ventilation functions can be set at the heat pump control unit.

Operating principle of the ventilation unit

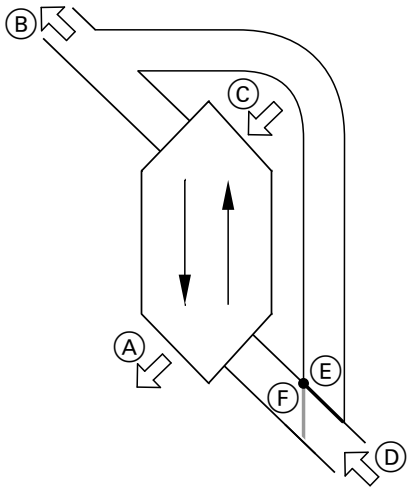

Fig. 68 Example: Vitovent 300-F

Ⓐ Supply air: e.g. for bedrooms, children's rooms, living room
Ⓑ Exhaust air
Ⓒ Outdoor air
Ⓓ Extract air: e.g. from the kitchen, bathroom, WC
Ⓔ Bypass not active:
Ventilation with heat recovery
Ⓕ Bypass active: ventilation without heat recovery, e.g. for passive heating or cooling

Ventilation with heat recovery, bypass blocked

The air that is introduced into the rooms (supply air) is preheated with the heat from the extracted air (extract air) via a heat exchanger in the ventilation unit. For this, bypass Ⓔ is **not** active.
This means the energy loss is very low, compared to airing via open windows.

Ventilation without heat recovery, bypass active

When bypass Ⓕ is **active**, 100 % of the extract air flow is routed past the heat exchanger, and filtered fresh outdoor air at outside temperature is introduced into the rooms.
Depending on the outside temperature and room temperature, when the bypass is active, cooler or warmer outdoor air is channelled into the rooms. This means the rooms are passively cooled or passively heated.

Passive cooling

Cooler outdoor air is supplied to the rooms on cool summer nights, for example.
The bypass is active for passive cooling if **all** of the following conditions are met:

Vitovent 200-C:
- It is at least 4 °C warmer inside than outside.
- The room temperature is at least 1 °C higher than the **"Set room temperature"** for ventilation.
- The outdoor air is at least 0.5 °C warmer than the **"Min supply air t. byp"**.

Vitovent 300-F:
- It is at least 4 °C warmer inside than outside.
- The room temperature is at least 1 °C higher than the **"Set room temperature"** for ventilation.
- The supply air exceeds the minimum temperature for passive cooling (**"Min supply air t. byp"**).

Terminology (cont.)

Vitovent 200-W, **Vitovent 300-C** and **Vitovent 300-W**:
- It is warmer inside than outside.
- The room temperature is higher than the **"Set room temperature"** for ventilation.
- The outdoor air is warmer than 7 °C.

Passive heating

Warmer outdoor air is supplied to the rooms on warm spring days, for example.
The bypass is active for passive heating if **all** of the following conditions are met:

Vitovent 200-C and **Vitovent 300-F**:
- The outdoor air is at least 4 °C warmer than the room temperature.
- The room temperature is at least 1 °C cooler than the **"Set room temperature"** for ventilation.

Note
*With the **Vitovent 200-W**, **Vitovent 300-C** and **Vitovent 300-W**, passive heating is not possible.*

Air flow rates

In order to prevent any negative or positive pressures developing in your rooms, the flow rate of the supply air must exactly match the flow rate of the extract air. Your contractor regulates these air flow rates during commissioning.

Regulating the humidity and carbon dioxide concentration (CO_2 concentration)

- If a CO_2/humidity sensor (accessories) is installed in one of your rooms, the ventilation unit can adjust the air flow rate subject to the humidity and/or carbon dioxide concentration (CO_2) of **this room**.
- If a humidity sensor (accessories) is installed in the central extract air duct, the ventilation unit can adjust the air flow rate subject to the humidity of **all rooms**.

The humidity and carbon dioxide concentration can only be controlled in the **"Ventilation program"**.

Frost protection for the heat exchanger in the ventilation unit

Heat recovery transfers heat from the extract air to the incoming outdoor air. This causes the extract air to cool down, which in turn leads to condensate forming in the heat exchanger. At low outside temperatures, condensate can freeze on the heat exchanger. Heat recovery is reduced. The worst-case scenario is that the ice damages the heat exchanger.

- **Frost protection with electric preheating coil**:
  To prevent ice forming on the heat exchanger, the outdoor air can be preheated by an electric preheating coil before it enters the heat exchanger. Some ventilation units have an electric preheating coil prefitted at the factory. For other units, your contractor will install an electric preheating coil in the outdoor air duct.
- **Frost protection without electric preheating coil**:
  If your ventilation unit does not have an electric preheating coil, the air flow rate will be reduced in order to protect the heat exchanger, if necessary until the fans come to a standstill.
- **Defrost functions**: Only with Vitovent 200-C
  Your contractor can set various functions to defrost any ice that may have formed on the heat exchanger: e.g. the outdoor air flow rate can bypass the heat exchanger and/or the supply air flow rate can be reduced. In addition, the electric preheating coil (accessories) can be switched on.

Note
With frost protection, the indicated ventilation level may deviate from the ventilation level selected. The ventilation level displayed is adjusted to reflect the reduced air flow rate brought about by the frost protection function.

Only with Vitovent 300-F: supply air heating via heating circuit 1 (ventilation heating circuit)

If a hydraulic reheating coil (accessories) has been installed in your ventilation unit, the supply air can be heated by the heat pump. The outdoor air/supply air preheated in the heat exchanger of the ventilation unit is reheated via the hydraulic reheating coil of the heat pump.
In such a case, set the room temperature and time program for central heating via the menu for heating circuit 1.

Note
The level of heating output that can be transmitted via the ventilation heating circuit is only minimal. Using supply air heating as the sole heat source is therefore only recommended for highly insulated buildings (e.g. passive houses).

Cooling mode

See "Heating mode/cooling mode".

Terminology (cont.)

Cooling functions

The natural cooling and active cooling functions are supported depending on the heat pump type and the installed accessories.

Brine/water heat pumps:
- "Natural cooling"
  With this function, the temperature level of the ground is transferred directly to the heating/cooling circuit or the separate cooling circuit. Compared with active cooling, the available cooling capacity is lower in natural cooling mode. As the compressor is switched off, this function is very energy efficient and therefore suitable for constant cooling.

- "Active cooling"
  If the natural cooling capacity is insufficient and the necessary accessories are installed, the control unit can automatically switch to active cooling mode.
  In active cooling mode, the temperature of the heat transfer medium cooled underground is reduced even further before it is transferred to the heating/cooling circuit or separate cooling circuit. As a result, the available cooling capacity is significantly higher compared to natural cooling.
  Constant cooling operation results in increased power consumption as the compressor is in operation in addition to the circulation pumps.
  You can enable and block the active cooling mode individually.

Air/water heat pumps:
- "Natural cooling"
  is not available.
- "Active cooling"
  Cooling takes place by reversing the heat pump operation. A high cooling capacity is available.

Cooling curve

See "Heating curve/cooling curve".

Cooling circuit

See "Heating/cooling circuits".

Output matching

In heat pumps with output-dependent control, the compressor speed is automatically matched to the required output. Heat pumps with output-dependent control are therefore more efficient than heat pumps without output adjustment.

When utilising power generated on site, the power consumption of the compressor can automatically adapt to the power available from the photovoltaic system. This optimises the utilisation of power generated on site.

Ventilation

See "Controlled domestic ventilation".

Terminology (cont.)

Mixer

Central heating

A mixer mixes the heated heating water with the cooled water returning from the heating circuit. The water, thus brought to the right temperature, is pumped to the heating circuit by the heating circuit pump. The heat pump control unit adjusts the heating circuit flow temperature via the mixer to suit different conditions, e.g. changing outside temperatures.

Central cooling

The flow temperature is also set via a mixer with central cooling.
In addition, the flow temperature is kept above the condensation point of the indoor air (dew point) via a mixer. This prevents condensation forming on the floor.

Buffer cylinder

A buffer cylinder stores a large quantity of heating water or coolant. This allows the heating/cooling circuits to be supplied over a longer period without the heat pump needing to start up, e.g. during power-OFF. Due to the large buffer volume, the heat pump continues to operate to heat or cool the buffer cylinder than it would if there were no buffer cylinder.
Infrequent starting of the heat pump and long runtimes ensure long and efficient operation.
By adjusting the time program appropriately, you can use economical night tariff power to heat the buffer cylinder to a higher level, or cool it to a lower level. During the daytime, the heating/cooling circuits can be supplied with this cheap energy.

The following buffer cylinders can be built into your system:
- Heating water buffer cylinder: See "Heating water buffer cylinder".
- Heating water/coolant buffer cylinder: See "Heating water/coolant buffer cylinder".

Room temperature

- Standard room temperature:
  Set the standard room temperature for periods when you are at home during the day.
- Reduced room temperature:
  For periods when you will be absent or during the night, set the reduced room temperature; see: "Heating mode/cooling mode".
- Room temperature for ventilation:
  This room temperature influences activation of the bypass: see "Controlled mechanical ventilation".

Return temperature

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

Smart Grid (SG)

To enable you to use Smart Grid, your contractor has connected the heat pump control unit to the mains supply via 2 switching contacts. The power supply utility can use these switching contacts to match operation of the heat pump to the current grid utilisation level.

Terminology (cont.)

The following 4 options for grid utilisation are taken into account:

1. Not a lot of power in the grid (grid overload):
   The power supply utility can block the heat pump if not a lot of power is available.
   The appliance restarts automatically with the selected operating program as soon as the power supply utility enables the power supply again.
   During power-OFF, central heating is provided by the heating water buffer cylinder. If no heating water buffer cylinder is installed or its temperature is too low, the rooms are heated using the available auxiliary heaters, e.g. oil boiler, electric booster heater.
   DHW can only be heated during the power-OFF period using the auxiliary heaters.
2. No excess power, normal grid utilisation:
   The heat pump is operated according to its settings and the agreed conditions (electricity price).
3. Small amount of excess power:
   The power supply utility provides the power at no cost.
   If a time phase is active in the time program, the heat pump is started. To utilise the cheap power, you can raise the set temperature for the following functions or lower it for cooling:
   - DHW heating
   - Heating the heating water buffer cylinder
   - Central heating
   - Central cooling
   - Enable electric booster heater

   Note
   The functions that can be utilised depend on the heat pump type.
4. Large amount of excess power:
   The power supply utility provides the excess power at no cost.
   The power supply utility starts the heat pump immediately, even if no time phase is active in the time program. System components are heated to the max. possible temperatures or cooled to the min. possible temperatures.

Information about operation with cheap and free electricity
Electric power consumptions of the heat pump and the electric booster heater are not taken into account when calculating the seasonal performance factor.

Example: utilisation of excess power for DHW heating

Cheap excess power

The heat pump is operated with the excess power from the power supply utility to heat DHW to the increased set DHW temperature.

In the time program you have set the time phases during which DHW heating is enabled. The power supply utility may start DHW heating, even outside the set time phases.
To utilise even more cheap excess electricity for DHW heating, the standard DHW temperature can be increased. You can set the value for this temperature increase.

- Standard DHW temperature:
  50 °C
- Increase the DHW temperature when utilising power generated on site:
  10 K (10 Kelvin)

The DHW is heated to 60 °C. If DHW consumption is the same, the next DHW heating period using power at the standard tariff is postponed until later.

Free excess power

DHW heating is started immediately, regardless of your settings in the time program.
The DHW will be heated to the maximum possible temperature. This temperature has been set by your contractor.

- Standard DHW temperature:
  50 °C
- Max. temperature of your DHW cylinder (set by your contractor):
  65 °C

The DHW is heated to 65 °C. If DHW consumption is the same, the next DHW heating period using power at the standard tariff is postponed until later.

Note

- *If you enable several functions for Smart Grid, the functions for DHW heating will have priority over the functions for central heating.*
- *The modified set temperatures do not affect the electric booster heater. The electric booster heater is switched off at the limits that apply without Smart Grid. In the example, this is the standard DHW temperature of 50 °C.*

Utilisation of power generated on site and utilisation of excess power from the grid (Smart Grid)
*If the utilisation of power generated on site **and** Smart Grid are enabled and active, the function with the largest temperature increase or reduction is used.*

Terminology (cont.)

Safety valve

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

The heating circuits and the brine circuit are also equipped with safety valves.

Secondary pump

The secondary pump transports the heating water from the heat pump into the heating system and, in heating systems with a heating water buffer cylinder, initially into the buffer cylinder.

Solar circuit pump

In conjunction with solar thermal systems.

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

Cylinder primary pump

Circulation pump for heating the DHW in the DHW cylinder.

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 cylinder or the instantaneous water heater.

Evaporator

The evaporator is a heat exchanger that transfers thermal energy to the heat pump. In air/water heat pumps, it is the thermal energy of the supplied air that is transferred. In brine/water heat pumps, it is the thermal energy from the brine.

In air/water heat pumps, cooling of the supplied air can cause water to condense. This condensate can freeze on the evaporator. To remove this ice, the evaporator is automatically defrosted.

Compressor

The compressor is the central component of the heat pump. The compressor raises the refrigerant to the temperature level required for the heating mode.
In heat pumps with output-dependent control, the compressor speed can be matched to the required output.

In conjunction with a photovoltaic system, power generated on site can be used to operate the compressor.

Condenser

The condenser is a heat exchanger that transfers thermal energy from the heat pump to the heating system.

Terminology (cont.)

Flow temperature

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

In the information bar on the standard menu, the flow temperature at which the heating water enters the system is displayed, i.e. the temperature at which it leaves the heat pump.

Heat pump cascade

A heat pump cascade is a system with multiple heat pumps.

In a heat pump cascade, each heat pump has its own control unit. The overall system is controlled and monitored by the control unit of the lead heat pump.

Weather-compensated heating/cooling mode

See "Heating mode/cooling mode".

Domestic ventilation

See "Controlled domestic ventilation".

Time program

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

Operating status

The operating status indicates how a component of your heating system is being operated.

For example, the operating statuses for central heating have different temperature levels.
The times for the operating status changeover are defined when the time programs are set.

DHW circulation pump

The DHW circulation pump transports the DHW around a loop line between the DHW cylinder and the draw-off points (e.g. hot tap). This ensures that hot water is rapidly available at the draw-off points.

Two-stage heat pumps

Two-stage heat pumps have 2 compressors. This increases total output.

The two compressors may be installed in a single heat pump casing or in 2 adjacent heat pump casings.

System equipment and functions

		To be entered by the contractor	
Heat pump		**Vitocal**	**Type**
▪ Air/water heat pump		☐	
▪ Air/water heat pump with indoor and outdoor units			
Outdoor unit 230 V~		☐	
Outdoor unit 400 V~		☐	
▪ Brine/water heat pump		☐	
▪ Water/water heat pump		☐	
▪ Heat pump compact appliance	/	☐	
▪ Two-stage heat pump	/	☐	
▪ Heat pump with output control	/	☐	
Heat pump cascade		☐	
System equipment level			
Ice store and solar air absorber		☐	
Heating circuits		☐ HC1 ☐ HC2 ☐ HC3	
Cooling circuits ***Note*** *Multiple cooling circuits are possible only on systems with a heating water/coolant buffer cylinder.* *If multiple cooling circuits are installed, a separate cooling circuit is **not** possible.*		☐ HC1 ☐ HC2 ☐ HC3 ☐ SKK	
Cylinder			
▪ Integral DHW cylinder		☐	
▪ Separate DHW cylinder			
With 1 temperature sensor, top		☐	
With 2 temperature sensors, top and bottom		☐	
Buffer cylinder			
▪ Heating water buffer cylinder		☐	
▪ Heating water/coolant buffer cylinder		☐	
Electric booster heater			
▪ Instantaneous heating water heater		☐	
▪ Immersion heater (in the DHW cylinder)		☐	
External heat generator, e.g. oil or gas boiler		☐	
Ventilation unit			
▪ Vitovent 200-C		☐	
▪ Vitovent 200-W		☐	
▪ Vitovent 300-C		☐	
▪ Vitovent 300-F		☐	
▪ Vitovent 300-W		☐	
Solar thermal system for DHW heating		☐	
Swimming pool		☐	

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System equipment and functions (cont.)

Functions	
Active cooling mode	☐
Utilisation of power generated on site (in conjunction with a photovoltaic system)	☐
Noise reduction	☐
Smart Grid	☐
External control	☐

Explanation of symbols: See page 8.

Information on disposal

Disposal of packaging

You heating contractor will dispose of the packaging of your Viessmann product.

DE: Packaging waste is channelled for recycling to a certified disposal contractor in line with statutory regulations.

AT: Packaging waste is channelled for recycling to a certified disposal contractor in line with statutory regulations. Use the ARA statutory disposal system (Altstoff Recycling Austria AG, licence number 5766).

Final decommissioning and disposal of the heating system

Viessmann products can be recycled. Components and fluids from your heating systems are not part of ordinary domestic waste.
Please contact your heating contractor in connection with the correct disposal of your old system.

DE: Operating fluids (e.g. heat transfer medium) can be disposed of at municipal collection points.

AT: Operating fluids (e.g. heat transfer medium) can be disposed of at municipal collection points (ASZ).

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Keyword index

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Keyword index (cont.)

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Your contact

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

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