

User reference guide

Packaged air-cooled water chillers and packaged air to water heat pumps

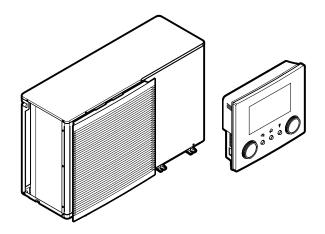


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1 About this document

Thank you for purchasing this product. Please:

- Read the documentation carefully before operating the user interface to ensure the best possible performance.
- Request the installer to inform you about the settings that he used to configure your system. Check if he has filled in the installer settings tables. If not, request him to do so.
- Keep the documentation for future reference.

Target audience

End users

Documentation set

This document is part of a documentation set. The complete set consists of:

General safety precautions:

- Safety instructions that you must read before installing
- Format: Paper (in the box of the outdoor unit)

Operation manual:

- Quick guide for basic usage
- Format: Paper (in the box of the outdoor unit)

User reference guide:

- Detailed step-by-step instructions and background information for basic and advanced usage
- Format: Digital files on http://www.daikineurope.com/support-and-manuals/ product-information/

• Installation manual:

- Installation instructions
- Format: Paper (in the box of the outdoor unit)

Installer reference guide:

- Preparation of the installation, good practices, reference data, ...
- Format: Digital files on http://www.daikineurope.com/support-and-manuals/ product-information/

• Addendum book for optional equipment:

- Additional info about how to install optional equipment
- Format: Paper (in the box of the outdoor unit) + Digital files on http:// www.daikineurope.com/support-and-manuals/product-information/

Latest revisions of the supplied documentation may be available on the regional Daikin website or via your installer.

The original documentation is written in English. All other languages are translations.



Daikin Residential Controller app



If set up by your installer, you can use the Daikin Residential Controller app to control and monitor the status of your system. For more information, see:

http://www.onlinecontroller.daikineurope.com/



Breadcrumbs

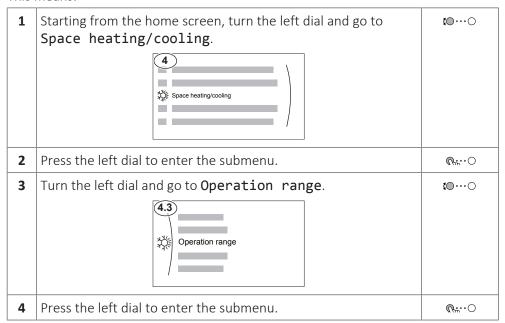
Breadcrumbs (example: **[4.3]**) help you to locate where you are in the menu structure of the user interface.

| 1 | To enable the breadcrumbs: In the home screen or main menu screen, press the help button. The breadcrumbs appear in the top left corner of the screen. | ? |
|---|---|---|
| 2 | To disable the breadcrumbs: Press the help button again. | ? |

This document also mentions these breadcrumbs. **Example:**

| 1 | Go to [4.3]: Space heating/cooling > Operation | t ₩○ |
|---|--|-------------|
| | range. | |

This means:



1.1 Meaning of warnings and symbols



DANGER

Indicates a situation that results in death or serious injury.



DANGER: RISK OF ELECTROCUTION

Indicates a situation that could result in electrocution.





DANGER: RISK OF BURNING/SCALDING

Indicates a situation that could result in burning/scalding because of extreme hot or cold temperatures.



DANGER: RISK OF EXPLOSION

Indicates a situation that could result in explosion.



WARNING

Indicates a situation that could result in death or serious injury.



WARNING: FLAMMABLE MATERIAL



CAUTION

Indicates a situation that could result in minor or moderate injury.



NOTICE

Indicates a situation that could result in equipment or property damage.



INFORMATION

Indicates useful tips or additional information.

Symbols used on the unit:

| Symbol | Explanation |
|------------|--|
| Ţ <u>i</u> | Before installation, read the installation and operation manual, and the wiring instruction sheet. |
| | Before performing maintenance and service tasks, read the service manual. |
| | For more information, see the installer and user reference guide. |
| | The unit contains rotating parts. Be careful when servicing or inspecting the unit. |

Symbols used in the documentation:

| Symbol | Explanation |
|--------|---|
| | Indicates a figure title or a reference to it. |
| | Example: "■ 1–3 Figure title" means "Figure 3 in chapter 1". |
| | Indicates a table title or a reference to it. |
| | Example: " 1−3 Table title" means "Table 3 in chapter 1". |



2 User safety instructions

Always observe the following safety instructions and regulations.

2.1 General



WARNING

If you are NOT sure how to operate the unit, contact your installer.



WARNING

Children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge can only use this appliance if they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety.

Children MUST NOT play with the appliance.

Cleaning and user maintenance MUST NOT be carried out by children without supervision.



WARNING

To prevent electrical shocks or fire:

- Do NOT rinse the unit.
- Do NOT operate the unit with wet hands.
- Do NOT place any objects containing water on the unit.



CAUTION

- Do NOT place any objects or equipment on top of the unit.
- Do NOT sit, climb or stand on the unit.



Units are marked with the following symbol:



This means that electrical and electronic products may NOT be mixed with unsorted household waste. Do NOT try to dismantle the system yourself: the dismantling of the system, treatment of the refrigerant, of oil and of other parts must be done by an authorized installer and must comply with applicable legislation.

Units must be treated at a specialized treatment facility for reuse, recycling and recovery. By ensuring this product is disposed of correctly, you will help to prevent potential negative consequences for the environment and human health. For more information, contact your installer or local authority.

Batteries are marked with the following symbol:



This means that the batteries may NOT be mixed with unsorted household waste. If a chemical symbol is printed beneath the symbol, this chemical symbol means that the battery contains a heavy metal above a certain concentration. Possible chemical symbols are: Pb: lead (>0.004%).

Waste batteries must be treated at a specialized treatment facility for reuse. By ensuring waste batteries are disposed of correctly, you will help to prevent potential negative consequences for the environment and human health.

2.2 Instructions for safe operation



WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



WARNING

The appliance shall be stored so as to prevent mechanical damage and in a well-ventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).



WARNING

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.





WARNING

The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of a harmful gas.

Turn off any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit.

Do NOT use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.



WARNING

Air purging heat emitters or collectors. Before you purge air from heat emitters or collectors, check if \triangle or \triangle is displayed on the home screen of the user interface.

- If not, you can purge air immediately.
- If yes, make sure that the room where you want to purge air is sufficiently ventilated. **Reason:** Refrigerant might leak into the water circuit, and subsequently into the room when you purge air from the heat emitters or collectors.



3 About the system

Depending on the system layout, the system can:

- Heat up a space
- Cool down a space



INFORMATION

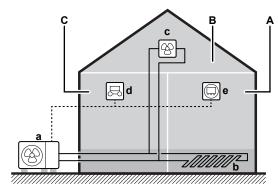
Heating is only applicable in case of reversible models.



INFORMATION

If underfloor heating is installed in the main zone, then in cooling mode the main zone can only provide refreshment. Real cooling is then NOT allowed.

3.1 Components in a typical system layout



- Main zone. Example: Living room.
- Additional zone. **Example:** Bedroom.
- Technical room. Example: Garage.
- Outdoor unit
- Underfloor heating
- Fan coil units
- User interface
- Dedicated Human Comfort Interface (BRC1HHDA used as room thermostat)



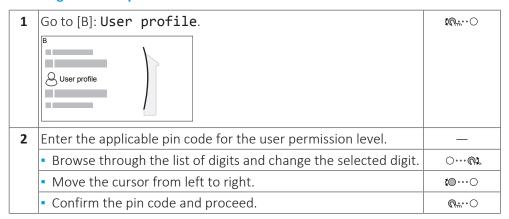
4 Quick guide

4.1 User permission level

The amount of information you can read out and edit in the menu structure depends on your user permission level:

- User: Standard mode
- Advanced user: You can read out and edit more information

To change the user permission level



User pin code

The User pin code is 0000.



Advanced user pin code

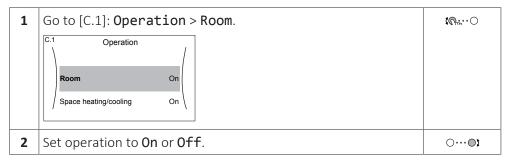
The **Advanced user** pin code is **1234**. Additional menu items for the user are now visible.





4.2 Space heating/cooling

To turn room temperature control ON or OFF



To turn space heating/cooling operation ON or OFF



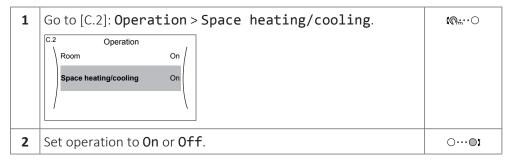
NOTICE

Room frost protection. Even if you turn OFF space heating/cooling operation ([C.2]: Operation > Space heating/cooling), room frost protection —if enabled— will remain active.



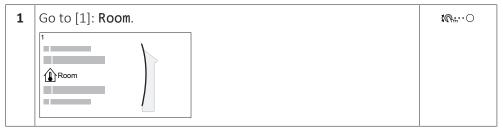
NOTICE

Water pipe freeze prevention. Even if you turn OFF space heating/cooling operation ([C.2]: **Operation > Space heating/cooling**), water pipe freeze prevention —if enabled— will remain active.

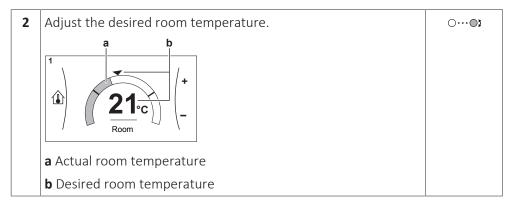


To change the desired room temperature

During room temperature control, you can use the room temperature setpoint screen to read out and adjust the desired room temperature.

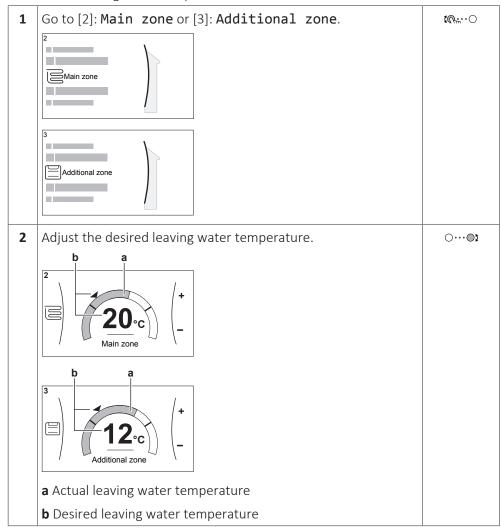






To change the desired leaving water temperature

You can use the leaving water temperature setpoint screen to read out and adjust the desired leaving water temperature.



To change the weather-dependent curve for the space heating/cooling zones

1 Go to the applicable zone:

| Zone | Go to |
|---------------------|------------------------------------|
| Main zone – Heating | [2.5] Main zone > Heating WD curve |
| Main zone – Cooling | [2.6] Main zone > Cooling WD curve |

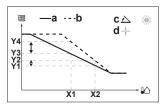
| Zone | Go to |
|---------------------------|--|
| Additional zone – Heating | [3.5] Additional zone > Heating WD curve |
| Additional zone – Cooling | [3.6] Additional zone > Cooling WD curve |

2 Change the weather-dependent curve.

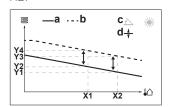
There are 2 types of WD curves: slope-offset curve (default), and 2-points curve. If needed, you can change the type in [2.E] Main zone > WD curve type. The way to adjust the curve depends on the type.

Slope-offset curve

Slope. When slope is changed, the new preferred temperature at X1 is unequally higher than the preferred temperature at X2.



Offset. When offset is changed, the new preferred temperature at X1 is equally higher as the preferred temperature at X2.



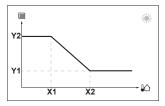
X1, X2 Outdoor ambient temperature

Y1~Y4 Desired leaving water temperature

- **a** WD curve before changes
- b WD curve after changes
- **c** Slope
- **d** Offset

| Possible actions on this screen | |
|---------------------------------|---|
| €○ | Select slope or offset. |
| OO | Increase or decrease the slope/offset. |
| O@*** | When slope is selected: set slope and go to offset. |
| | When offset is selected: set offset. |
| <i>&</i> ○ | Confirm changes and return to the submenu. |

2-points curve



X1, X2 Outdoor ambient temperature Y1, Y2 Desired leaving water temperature

| Possible actions on this screen | |
|---------------------------------|------------------------------|
| (00 | Go through the temperatures. |
| ○…○} | Change the temperature. |
| OQ. | Go to the next temperature. |
| U. O | Confirm changes and proceed. |

More information

For more information, see also:



- "5.4 Turning operation ON or OFF" [▶ 24]
- "5.6 Space heating/cooling control" [▶ 26]
- "5.7 Preset values and schedules" [> 30]
- "5.8 Weather-dependent curve" [▶ 40]



5 Operation

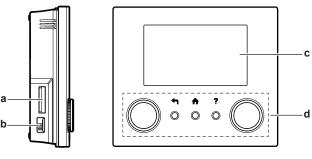


INFORMATION

Heating is only applicable in case of reversible models.

5.1 User interface: Overview

The user interface has the following components:



- Slot for WLAN cartridge
- USB connector
- LCD screen
- Dials and buttons

Slot for WLAN cartridge

With the WLAN cartridge, the installer can connect the system to the internet. As user you can then control the system via the Daikin Residential Controller app. **Note:** This slot cannot be used for SD cards.

USB connector

With a USB memory stick, the installer can:

- Update the software. This requires a correct config file on the USB memory stick.
- Import the settings generated by E-Configurator (Heating Solutions Navigator) from the USB memory stick to the user interface (MMI). This requires a correct config file on the USB memory stick.
- Export the current settings (i.e. field settings, MMI EEPROM settings, schedule timers) from the user interface (MMI) to the USB memory stick.

LCD screen

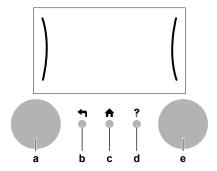
The LCD screen has a sleeping function. After 15 min of non-interaction with the user interface, the screen darkens. Pressing any button or rotating any dial awakens the display.

Dials and buttons

You use the dials and buttons:

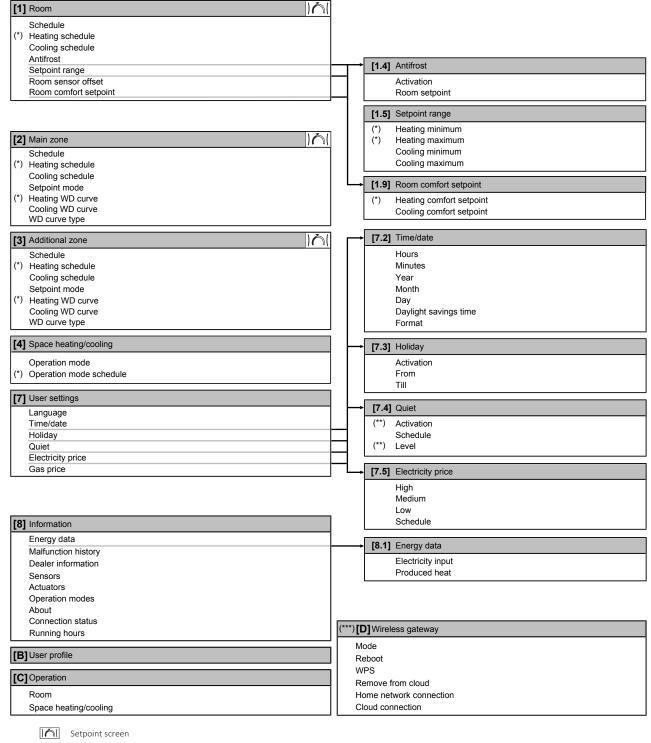
- To navigate through the screens, menus and settings of the LCD screen
- To set values





| Item | | Description |
|--------------------|-------------|---|
| a Left dial | | The LCD shows an arc on the left side of the display when you can use the left dial. |
| | | • ເດີ:: Turn, then press the left dial. Navigate through the menu structure. |
| | | • : : Turn the left dial. Choose a menu item. |
| | | • • • Press the left dial. Confirm your choice or go to a submenu. |
| b | Back button | ←: Press to go back 1 step in the menu structure. |
| С | Home button | ♠: Press to go back to the home screen. |
| d | Help button | ?: Press to show a help text related to the current page (if available). |
| е | Right dial | The LCD shows an arc on the right side of the display when you can use the right dial. |
| | | • ০…ঝ: Turn, then press the right dial. Change a value or setting, shown at the right side of the screen. |
| | | • O···•• Turn the right dial. Navigate through the possible values and settings. |
| | | • O…@.: Press the right dial. Confirm your choice and go to the next menu item. |

5.2 Menu structure: Overview user settings



Only applicable for reversible models Only accessible by installer (*)

Only applicable when WLAN is installed

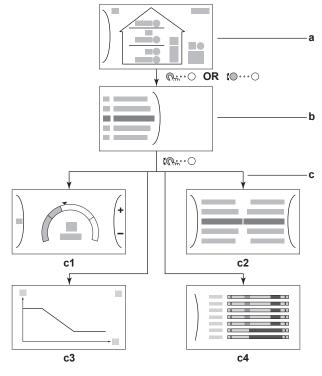


INFORMATION

Depending on the selected installer settings and unit type, settings will be visible/ invisible.



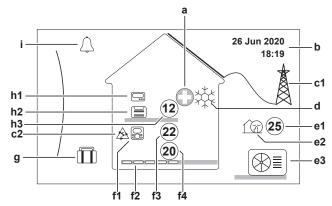
The most common screens are as follows:



- a Home screen
- **b** Main menu screen
- c Lower level screens:
 - c1: Setpoint screen
 - c2: Detailed screen with values
 - c3: Screen with weather-dependent curve
 - c4: Screen with schedule

5.3.1 Home screen

Press the \spadesuit button to go back to the home screen. You see an overview of the unit configuration and the room and setpoint temperatures. Only symbols applicable for your configuration are visible on the home screen.



| Possible actions on this screen | |
|---|-----------------------------|
| © ···○ Go through the list of the main menu. | |
| U **•••• | Go to the main menu screen. |
| ? Enable/disable breadcrumbs. | |

| Item | | m | Description | | | | |
|--------------------------|------------------------------------|-----------|--|--|--|--|--|
| а | Emergency | | | | | | |
| | | | Heat pump failure and system operates in Emergency mode or heat pump is forced off. | | | | |
| b | Curr | ent date | and time | | | | |
| С | Sma | rt energy | , | | | | |
| | c1 | \ | Smart energy is available via solar panels or smart grid. | | | | |
| | c2 | A | Smart energy is currently being used for space heating. | | | | |
| d | Spac | e operati | ion mode | | | | |
| | | * | Cooling | | | | |
| | | | Heating | | | | |
| е | Outo | door / qu | iet mode | | | | |
| | e1 | 25 | Measured outdoor temperature ^(a) | | | | |
| | e2 | 13 | Quiet mode active | | | | |
| | е3 | | Outdoor unit | | | | |
| f | Main zone | | | | | | |
| | f1 Installed room thermostat type: | | room thermostat type: | | | | |
| | | | Unit operation is decided based on the ambient temperature of the dedicated Human Comfort Interface (BRC1HHDA used as room thermostat). | | | | |
| | | | Unit operation is decided by the external room thermostat (wired or wireless). | | | | |
| decided based on the lea | | _ | No room thermostat installed or set. Unit operation is decided based on the leaving water temperature regardless of the actual room temperature and/or heating demand of the room. | | | | |
| | f2 Installed | | heat emitter type: | | | | |
| | 00000 | | Underfloor heating | | | | |
| | | | Fancoil unit | | | | |
| | | | Radiator | | | | |
| | f3 22 | | Measured room temperature ^(a) | | | | |
| | f4 | 20 | Leaving water temperature setpoint ^(a) | | | | |
| g | Holid | day mode | | | | | |
| | | | Holiday mode active | | | | |

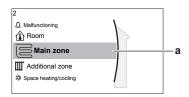


| Item | | m | Description | |
|----------|--------------------|-------------|--|--|
| h | Additional zone | | | |
| | h1 | Installed | room thermostat type: | |
| | | 000 | Unit operation is decided by the external room thermostat (wired or wireless). | |
| | | _ | No room thermostat installed or set. Unit operation is decided based on the leaving water temperature regardless of the actual room temperature and/or heating demand of the room. | |
| | h2 | Installed | heat emitter type: | |
| | Underfloor heating | | Underfloor heating | |
| | | | Fancoil unit | |
| Radiator | | | Radiator | |
| | h3 | 12 | Leaving water temperature setpoint ^(a) | |
| i | Malfunction | | | |
| | \triangle | | A malfunction occurred. | |
| | | \triangle | See "8.1 To display the help text in case of a malfunction" [▶ 51] for more information. | |

 $^{^{(}a)}$ If the corresponding operation (for example: space heating) is not active, the circle is greyed out.

5.3.2 Main menu screen

Starting from the home screen, press (\bigcirc) or turn (\bigcirc) the left dial to open the main menu screen. From the main menu, you can access the different setpoint screens and submenus.



a Selected submenu

| Possible actions on this screen | | |
|------------------------------------|--|--|
| © ···○ Go through the list. | | |
| രംഗ Enter the submenu. | | |
| ? Enable/disable breadcrumbs. | | |

| Submenu | | Submenu | Description | |
|---|--|---|--|--|
| [0] \triangle or \triangle Malfunctioning | | \triangle or \triangle Malfunctioning | Restriction: Only displayed if a malfunction occurs. | |
| | | | See "8.1 To display the help text in case of a malfunction" [▶ 51] for more information. | |



| | Submenu | Description |
|-----|------------------------|---|
| [1] | (♣ Room | Restriction: Only displayed if a dedicated Human Comfort Interface (BRC1HHDA used as room thermostat) is controlling the outdoor unit. |
| | | Set the room temperature. |
| [2] | ⊠Main zone | Shows the applicable symbol for your main zone emitter type. |
| | | Set the leaving water temperature for the main zone. |
| [3] | □ Additional zone | Restriction: Only displayed if there are two leaving water temperature zones. Shows the applicable symbol for your additional zone emitter type. |
| | | Set the leaving water temperature for the additional zone (if present). |
| [4] | ☆ Space heating/ | Shows the applicable symbol of your unit. |
| | cooling | Put the unit in heating mode or cooling mode. You cannot change the mode on cooling only models. |
| [7] | OUser settings | Gives access to user settings such as holiday mode and quiet mode. |
| [8] | ① Information | Displays data and information about the outdoor unit. |
| [9] | X Installer settings | Restriction: Only for the installer. |
| | | Gives access to advanced settings. |
| [A] | ≜ Commissioning | Restriction: Only for the installer. |
| | | Perform tests and maintenance. |
| [B] | 8User profile | Change the active user profile. |
| [C] | Ů Operation | Turn heating/cooling functionality on or off. |
| [D] | ❤️Wireless gateway | Restriction: Only displayed if a wireless LAN (WLAN) is installed. |
| | | Contains settings needed when configuring the Daikin Residential Controller app. |

5.3.3 Setpoint screen

The setpoint screen is displayed for screens describing system components that need a setpoint value.



Examples

[1] Room temperature screen

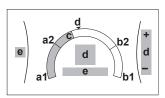




[2] Main zone screen



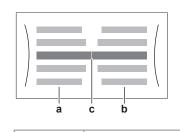
Explanation



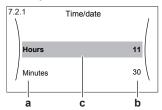
| Possible actions on this screen | | |
|--|--|--|
| ©···○ Go through the list of the submenu. | | |
| രും∙ം Go to the submenu. | | |
| O···●: Adjust and automatically apply the desired temperature. | | |

| Item Description | | |
|---------------------------|----|---|
| Minimum temperature limit | a1 | Fixed by the unit |
| | a2 | Restricted by the installer |
| Maximum temperature limit | b1 | Fixed by the unit |
| | b2 | Restricted by the installer |
| Current temperature | С | Measured by the unit |
| Desired temperature | d | Turn the right dial to increase/ decrease. |
| Submenu | е | Turn or press the left dial to go to the submenu. |

5.3.4 Detailed screen with values



Example:



a Settings

| b | Values |
|---|----------------------------|
| С | Selected setting and value |

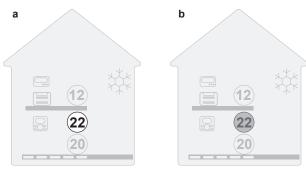
| Possible actions on this screen | | |
|---------------------------------------|------------------------------|--|
| Go through the list of settings. | | |
| ○···•• Change the value. | | |
| ○··· @ Go to the next setting. | | |
| <i>&</i> ○ | Confirm changes and proceed. | |

5.4 Turning operation ON or OFF

5.4.1 Visual indication

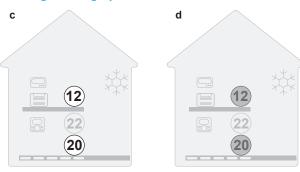
Certain functionalities of the unit can be enabled or disabled separately. If a functionality is disabled, the corresponding temperature icon in the home screen will be greyed out.

Room temperature control



- Room temperature control ON Room temperature control OFF

Space heating/cooling operation

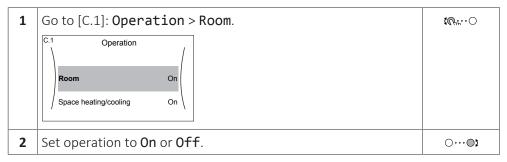


- Space heating/cooling operation ON
- Space heating/cooling operation OFF



5.4.2 To turn ON or OFF

Room temperature control



Space heating/cooling operation



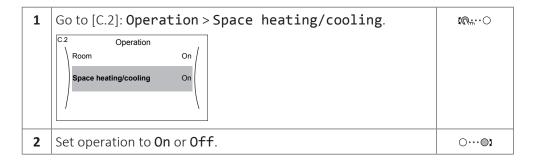
NOTICE

Room frost protection. Even if you turn OFF space heating/cooling operation ([C.2]: Operation > Space heating/cooling), room frost protection —if enabled— will remain active.



NOTICE

Water pipe freeze prevention. Even if you turn OFF space heating/cooling operation ([C.2]: Operation > Space heating/cooling), water pipe freeze prevention —if enabled— will remain active.



5.5 Reading out information

To read out information

1 Go to [8]: Information.

Possible read-out information

| In menu | You can read out |
|---------------------------|---|
| [8.1] Energy data | Produced energy, consumed electricity, and consumed gas |
| [8.2] Malfunction history | Malfunction history |
| [8.3] Dealer information | Contact/helpdesk number |
| [8.4] Sensors | Room temperature, outside temperature, leaving water temperature, |
| [8.5] Actuators | Status/mode of each actuator |
| | Example: Unit pump ON/OFF |

| In menu | You can read out |
|-------------------------|--|
| [8.6] Operation modes | Current operation mode |
| | Example: Defrost/oil return mode |
| [8.7] About | Version information about the system |
| [8.8] Connection status | Information about the connection status of the unit, the room thermostat and WLAN. |
| [8.9] Running hours | Running hours of specific system components |

5.6 Space heating/cooling control

5.6.1 About space heating/cooling control

Controlling space heating/cooling typically consists of the following stages:

- 1 Setting the space operation mode
- 2 Controlling the temperature

Depending on the system layout and installer configuration, you use a different temperature control:

- Room thermostat control
- Leaving water temperature control
- External room thermostat control

5.6.2 Setting the space operation mode

About space operation modes

Your unit can be a cooling or a heating/cooling model:

- If your unit is a cooling model, it can cool down a space.
- If your unit is a heating/cooling model, it can both heat up and cool down a space. You have to tell the system which operation mode to use.

To determine if a heating/cooling heat pump model is installed

| 1 | Go to [4]: Space heating/cooling. | (€○ |
|---|---|-------------|
| 2 | Check if [4.1] Operation mode is listed and editable. If so, a heating/cooling heat pump model is installed. | (Air.·· |

To tell the system which space operation to use, you can:

| You can | Location |
|--|-------------|
| Check which space operation mode is currently used. | Home screen |
| Set the space operation mode permanently. | Main menu |
| Restrict automatic changeover according to a monthly schedule. | |

To check which space operation mode is currently used

The space operation mode is displayed on the home screen:

• When the unit is in heating mode, the [™] icon is shown.



• When the unit is in cooling mode, the ☼ icon is shown.

The status indicator shows if the unit is currently in operation:

- When the unit is not in operation, the status indicator will show a blue pulsation with an interval of approximately 5 seconds.
- While the unit is in operation, the status indicator will light up blue constantly.

To determine if a heating/cooling heat pump model is installed

| 1 | Go to [4]: Space heating/cooling. | |
|---|---|-----------------|
| | Check if [4.1] Operation mode is listed and editable. If so, a heating/cooling heat pump model is installed. | : @::··O |

To tell the system which space operation to use, you can:

| You can | Location |
|--|-------------|
| Check which space operation mode is currently used. | Home screen |
| Set the space operation mode permanently. | Main menu |
| Restrict automatic changeover according to a monthly schedule. | |

To check which space operation mode is currently used

The space operation mode is displayed on the home screen:

- When the unit is in heating mode, the ॐ icon is shown.
- When the unit is in cooling mode, the ☼ icon is shown.

The status indicator shows if the unit is currently in operation:

- When the unit is not in operation, the status indicator will show a blue pulsation with an interval of approximately 5 seconds.
- While the unit is in operation, the status indicator will light up blue constantly.

To set the space operation mode

| 1 | Go to [4.1]: Space heating/cooling > Operation mode | (€:○ |
|---|--|--------------|
| 2 | Select one of the following options: | ! @:0 |
| | Heating: Only heating mode | |
| | Cooling: Only cooling mode | |
| | Automatic: The operation mode changes automatically between heating and cooling based on the outdoor temperature. Restricted per month according to the Operation mode schedule [4.2]. | |

To restrict automatic changeover according to a schedule

Conditions: You set the space operation mode to **Automatic**.

| 1 | Go to [4.2]: Space heating/cooling > Operation mode schedule. | : ₩…○ |
|---|---|--------------|
| 2 | Select a month. | |
| 3 | For each month, select an option: | |
| | Reversible: Not restricted | |
| | • Heating only: Restricted | |
| | Cooling only: Restricted | |



| 4 | Confirm the changes. | & ○ |
|---|----------------------|----------------|
|---|----------------------|----------------|

Example: Changeover restrictions

| When | Restriction |
|---|--------------|
| During cold season. | Heating only |
| Example: October, November, December, January, February and March. | |
| During warm season. | Cooling only |
| Example: June, July and August. | |
| In-between. | Reversible |
| Example: April, May and September. | |

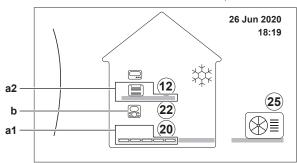
5.6.3 Determining which temperature control you are using

To determine which temperature control you are using (method 1)

Check the installer settings table filled in by the installer.

To determine which temperature control you are using (method 2)

You can see on the home screen which temperature control you are using.



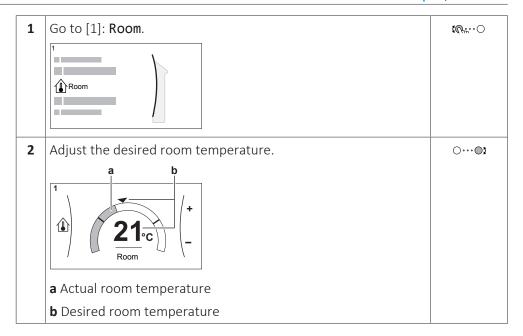
- Heat emitter of the main zone (in this example Underfloor heating)
- Heat emitter of the additional zone (in this example Fancoil unit). If no icon is displayed, there is no additional zone.
- Room thermostat type of the main zone:

| If b= | Then the temperature control is | |
|---------|-----------------------------------|-----------------------------------|
| | Main zone | Additional zone (if any) |
| | Room thermostat control | External room thermostat |
| | External room thermostat control | control |
| No icon | Leaving water temperature control | Leaving water temperature control |

5.6.4 To change the desired room temperature

During room temperature control, you can use the room temperature setpoint screen to read out and adjust the desired room temperature.





If scheduling is on after changing the desired room temperature

- The temperature will stay the same as long as there is no scheduled action.
- The desired room temperature will return to its scheduled value whenever a scheduled action occurs.

You can avoid scheduled behaviour by (temporarily) turning off scheduling.

To turn off room temperature scheduling

| 1 | Go to [1.1]: Room > Schedule. | : 0::0 |
|---|-------------------------------|---------------|
| 2 | Select No. | € @○ |

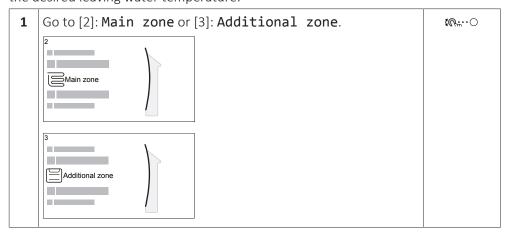
5.6.5 To change the desired leaving water temperature

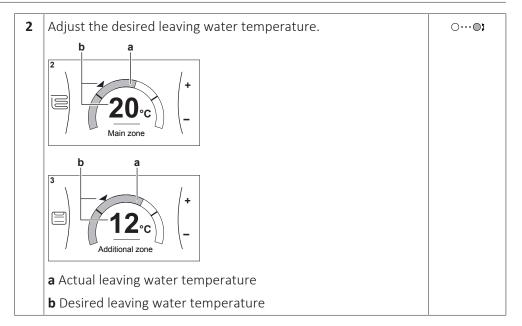


INFORMATION

The leaving water is the water that is sent to the heat emitters. The desired leaving water temperature is set by your installer in accordance with the heat emitter type. Only adjust the leaving water temperature settings in case of problems.

You can use the leaving water temperature setpoint screen to read out and adjust the desired leaving water temperature.





If scheduling is on after changing the desired leaving water temperature

- The temperature will stay the same as long as there is no scheduled action.
- The desired leaving water temperature will return to its scheduled value whenever a scheduled action occurs.

You can avoid scheduled behaviour by (temporarily) turning off scheduling.

To turn off leaving water temperature scheduling

| 1 | Go to one of the following: | : ₩○ |
|---|-------------------------------------|-------------|
| | • [2.1]: Main zone > Schedule | |
| | • [3.1]: Additional zone > Schedule | |
| 2 | Select No. | : ₩○ |

To enable weather-dependent operation for the leaving water temperature

See "5.8.4 Using weather-dependent curves" [▶ 43].

5.7 Preset values and schedules

5.7.1 Using preset values

About preset values

For some settings in the system, you can define preset values. You only need to set these values one time, then reuse the values in other screens such as the scheduling screen. If you later want to change the value, you only have to do it in one place.

Possible preset values

You can set the following user-defined preset values:



| Preset | value | Where used |
|---|-----------------------|---|
| Electricity prices | [7.5.1] High | You can use these preset values in |
| under [7.5] User settings > | [7.5.2] Medium | [7.5.4] Schedule (weekly schedule screen for the energy prices). |
| Electricity price | [7.5.3] Low | See "5.7.4 Setting the energy prices" [▶ 38]. |
| Restriction: Only applicable if Bivalent is enabled by the installer. | | |

Additional to the user-defined preset values, the system also contains some system-defined preset values that you can use when programming schedules.

Example: In [7.4.2] **User settings > Quiet > Schedule** (weekly schedule for when the unit has to use which quiet mode level), you can use the following system-defined preset values: **Quiet/More quiet/Most quiet**.

5.7.2 Using and programming schedules

About schedules

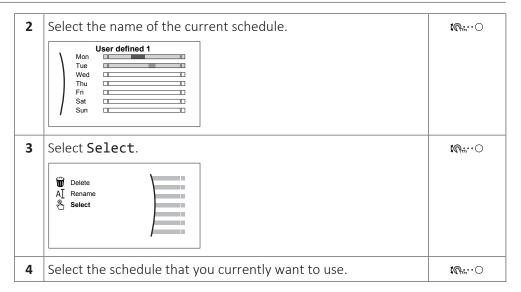
Depending on your system layout and installer configuration, schedules for multiple controls may be available.

| | You can | See |
|---|--|---|
| | et if a specific control needs to act according a schedule. | "Activation screen" in "Using and programming schedules" [▶ 32] |
| Select which schedule you currently want to us contains some predefined schedules. You can: | | e for a specific control. The system |
| | Consult which schedule is currently selected. | "Schedule/Control" in "Using and programming schedules" [▶ 32] |
| | Select another schedule if needed. | "Using and programming schedules" [▶ 31] |
| | Program your own schedules if the predefined schedules are not satisfactory. The actions you can program are control | • "Possible actions" in "Using and programming schedules " [▶ 32] |
| | specific. | ■ "5.7.3 Schedule screen: Example" [▶ 34] |

To select which schedule you currently want to use

| 1 | Go to the schedule for the specific control. | |
|---|--|--|
| | See "Schedule/Control" in "Using and programming schedules " [> 32]. | |
| | Example: For the schedule for the desired room temperature in cooling mode, go to [1.3] Room > Cooling schedule . | |





Possible schedules

The table contains the following information:

- Schedule/Control: This column shows you where you can consult the currently selected schedule for the specific control. If needed, you can:
 - Select another schedule. See "Using and programming schedules" [▶ 31].
 - Program your own schedule. See "5.7.3 Schedule screen: Example" [> 34].
- Predefined schedules: Number of available predefined schedules in the system for the specific control. If needed, you can program your own schedule.
- Activation screen: For most controls, a schedule is only effective if it activated in its corresponding activation screen. This entry shows you where to activate it.
- Possible actions: Actions you can use when programming a schedule. For most schedules, you can program up to 6 actions per day.

| Schedule/Control | Description | | |
|--|--|--|--|
| [1.2] Room > Heating | Predefined schedules: 3 | | |
| schedule | Activation screen: [1.1] Schedule | | |
| Schedule for the desired room temperature in heating mode. | Possible actions : Temperatures within range. | | |
| [1.3] Room > Cooling | Predefined schedules: 1 | | |
| schedule | Activation screen: [1.1] Schedule | | |
| Schedule for the desired room temperature in cooling mode. | Possible actions: Temperatures within range. | | |
| [2.2] Main zone > Heating | Predefined schedules: 3 | | |
| schedule | Activation screen: [2.1] Schedule | | |
| Schedule for the desired leaving | Possible actions: | | |
| rater temperature for the nain zone in heating mode. | In case of weather-dependent: Shift temperatures within range. | | |
| | Otherwise: Temperatures within range | | |



| Schedule/Control | Description |
|---|---|
| [2.3] Main zone > Cooling | Predefined schedules: 1 |
| schedule | Activation screen: [2.1] Schedule |
| Schedule for the desired leaving water temperature for the | Possible actions: |
| main zone in cooling mode. | In case of weather-dependent: Shift temperatures within range. |
| | Otherwise: Temperatures within range |
| [3.2] Additional zone > | Predefined schedules: 1 |
| Heating schedule | Activation screen: [3.1] Schedule |
| Schedule for when the system is allowed to heat up the | Possible actions: |
| additional zone in heating mode. | Off: When the system is NOT allowed to heat up the additional zone. |
| | • On : When the system is allowed to heat up the additional zone. |
| [3.3] Additional zone > | Predefined schedules: 1 |
| Cooling schedule | Activation screen: [3.1] Schedule |
| Schedule for when the system is allowed to cool down the | Possible actions: |
| additional zone in cooling mode. | Off: When the system is NOT allowed to cool down the additional zone. |
| | On: When the system is allowed to cool down the additional zone. |
| [4.2] Space heating/ cooling > Operation mode schedule | See "5.6.2 Setting the space operation mode" [▶ 26]. |
| Schedule (per month) for when to operate the unit in heating mode and when in cooling mode. | |
| [7.4.2] User settings > | Predefined schedules: 1 |
| Quiet > Schedule | Activation screen: [7.4.1] Activation (only |
| Schedule for when the unit has | available to installers). |
| o use which quiet mode level. | Possible actions : You can use the following system-defined preset values: |
| | • Quiet |
| | • More quiet |
| | • Most quiet |
| | See "5.9.2 Using quiet mode" [▶ 45]. |

| Schedule/Control | Description |
|------------------------------|---|
| [7.5.4] User settings > | Predefined schedules: 1 |
| Electricity price> | Activation screen: Not applicable |
| Schedule for when a certain | Possible actions : You can use the following system-defined preset values: |
| electricity tariff is valid. | • High |
| | - Medium |
| | - Low |
| | See "5.7.4 Setting the energy prices" [▶ 38]. |

5.7.3 Schedule screen: Example

This example shows how to set a room temperature schedule in cooling mode for the main zone.

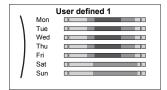


INFORMATION

The procedures to program other schedules are similar.

To program the schedule: overview

Example: You want to program the following schedule:



Prerequisite: The room temperature schedule is only available if room thermostat control is active. If leaving water temperature control is active, you can program the main zone schedule instead.

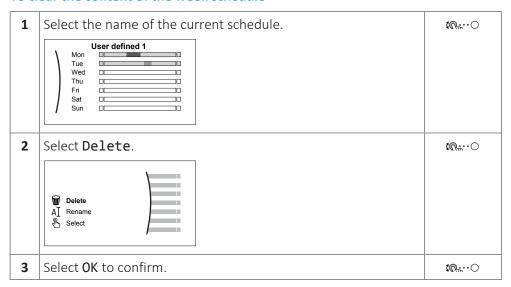
- Go to the schedule.
- 2 (optional) Clear the content of the whole week schedule or the content of a selected day schedule.
- **3** Program the schedule for **Monday**.
- **4** Copy the schedule to the other weekdays.
- **5** Program the schedule for **Saturday** and copy it to **Sunday**.
- **6** Give the schedule a name.

To go to the schedule

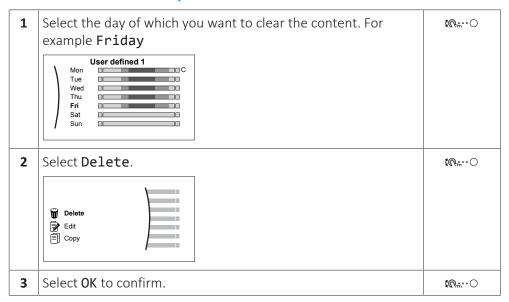
| 1 | Go to [1.1]: Room > Schedule. | ! @**○ |
|---|--------------------------------------|---------------|
| 2 | Set scheduling to Yes . | : ₩○ |
| 3 | Go to [1.3]: Room > Cooling schedule | ™ ○ |



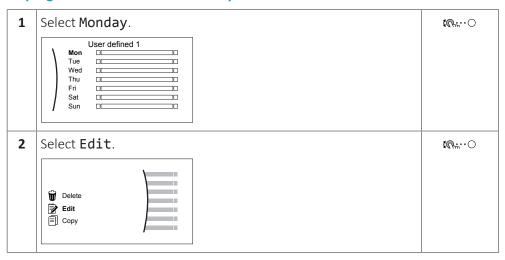
To clear the content of the week schedule



To clear the content of a day schedule

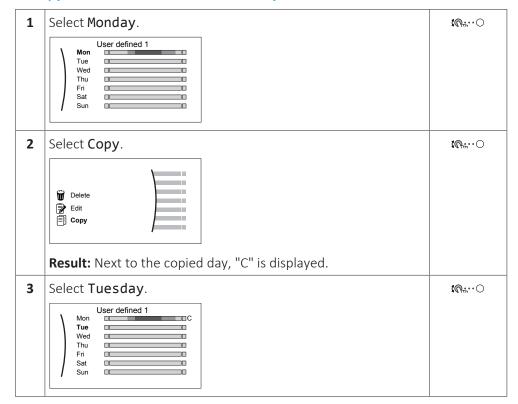


To program the schedule for Monday

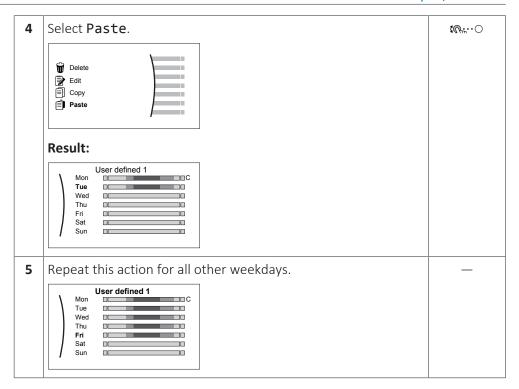


Use the left dial to select an entry and edit the entry with the ${\bf 10} \cdots \bigcirc$ right dial. You can program up to 6 actions each day. On the $\bigcirc\cdots\bigcirc$ bar, a high temperature has a darker colour than a low temperature. Mon 6:00 22°C 22:00 20°C 8:30 26°C 17:30 22°C Note: To clear an action, set its time as the time of the previous action. Confirm the changes. $\mathbb{Q}_{m}...\bigcirc$ **Result:** The schedule for Monday is defined. The value of the last action is valid until the next programmed action. In this example, Monday is the first day you programmed. Thus, the last programmed action is valid up to the first action of next Monday.

To copy the schedule to the other weekdays







To program the schedule for Saturday and copy it to Sunday

| 1 | Select Saturday . | € \$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |
|---|---|---|
| 2 | Select Edit. | : ₩○ |
| 3 | Use the left dial to select an entry and edit the entry with the right dial. The select an entry and edit the entry with the right dial. Solution 12 24 8:00 22°C 23:00 20°C -: | |
| 4 | Confirm the changes. | Ø#○ |
| 5 | Select Saturday . | |
| 6 | Select Copy. | |
| 7 | Select Sunday. | |
| 8 | Select Paste. Result: User defined 1 Mon Tue Wed Thu Fri Sat Sun C Sun | <i>tw</i> ○ |

To rename the schedule

| 1 | Select the name of the current schedule. | |
|---|--|-----------------|
| | User defined 1 Tue Wed Thu Fri Sat Sun | |
| 2 | Select Rename . | : @:○ |
| | Delete AI Rename Select | |
| 3 | (optional) To delete the current schedule name, browse through the character list until tis displayed, then press to remove the previous character. Repeat for each character of the schedule name. | ○@r |
| 4 | To name the current schedule, browse through the character list and confirm the selected character. The schedule name can contain up to 15 characters. | O…⊌T |
| 5 | Confirm the new name. | & :○ |



INFORMATION

Not all schedules can be renamed.

Usage example: You work in a 3-shift system

If you work in a 3-shift system, you can do the following:

- 1 Program 3 room temperature schedules and give them appropriate names. **Example:** EarlyShift, DayShift and LateShift
- **2** Select the schedule that you currently want to use.

5.7.4 Setting the energy prices

In the system, you can set the following energy prices:

- a fixed gas price
- 3 electricity price levels
- a weekly schedule timer for electricity prices.

Example: How to set the energy prices on the user interface?

| Price | Value in breadcrumb |
|--------------------------------|---------------------|
| Fuel: 5.3 euro cents/kWh | [7.6]=5.3 |
| Electricity: 12 euro cents/kWh | [7.5.1]=12 |

To set the gas price

| 1 | Go to [7.6]: User settings > Gas price. | (04:○ |
|---|---|----------------|
| 2 | Select the correct gas price. | € |
| 3 | Confirm the changes. | & ○ |



INFORMATION

Price value ranging from 0.00~990 valuta/kWh (with 2 significant values).

To set the electricity price

| 1 | Go to [7.5.1]/[7.5.2]/[7.5.3]: User settings > Electricity price > High/Medium/Low. | 10 44() |
|---|---|----------------|
| 2 | Select the correct electricity price. | 1 00 |
| 3 | Confirm the changes. | @:: ··O |
| 4 | Repeat this for all three electricity prices. | _ |



INFORMATION

Price value ranging from 0.00~990 valuta/kWh (with 2 significant values).



INFORMATION

If no schedule is set, the **Electricity price** for **High** is taken into account.

To set the electricity price schedule timer

| 1 | Go to [7.5.4]: User settings > Electricity price > Schedule. | : ₩…○ |
|---|--|--------------|
| 2 | Program the selection using the scheduling screen. You can set the High , Medium and Low electricity prices according to your electricity supplier. | _ |
| 3 | Confirm the changes. | @:···O |



INFORMATION

The values correspond with the electricity price values for **High**, **Medium** and **Low** previously set. If no schedule is set, the electricity price for **High** is taken into account.

About energy prices in case of an incentive per kWh renewable energy

An incentive can be taken into account when setting the energy prices. Although the running cost can increase, the total operation cost, taking into account the reimbursement will be optimized.



NOTICE

Make sure to modify the setting of the energy prices at the end of the incentive period.

To set the gas price in case of an incentive per kWh renewable energy

Calculate the value for the gas price with the following formula:

Actual gas price+(Incentive/kWh×0.9)

For the procedure to set the gas price, see "To set the gas price" [▶ 38].

To set the electricity price in case of an incentive per kWh renewable energy

Calculate the value for the electricity price with following formula:

Actual electricity price+Incentive/kWh



For the procedure to set the electricity price, see "To set the electricity price" [> 39].

Example

This is an example and the prices and/or values used in this example are NOT accurate.

| Data | Price/kWh |
|----------------------------------|-----------|
| Gas price | 4.08 |
| Electricity price | 12.49 |
| Renewable heat incentive per kWh | 5 |

Calculation of the gas price

Gas price=Actual gas price+(Incentive/kWh×0.9)

Gas price=4.08+(5×0.9)

Gas price=8.58

Calculation of the electricity price

Electricity price=Actual electricity price+Incentive/kWh

Electricity price=12.49+5

Electricity price=17.49

| Price | Value in breadcrumb |
|-------------------------|---------------------|
| Gas: 4.08 /kWh | [7.6]=8.6 |
| Electricity: 12.49 /kWh | [7.5.1]=17 |

5.8 Weather-dependent curve

5.8.1 What is a weather-dependent curve?

Weather-dependent operation

The unit operates 'weather dependent' if the desired leaving water temperature is determined automatically by the outdoor temperature. It therefore is connected to a temperature sensor on the North wall of the building. If the outdoor temperature drops or rises, the unit compensates instantly. Thus, the unit does not have to wait for feedback by the thermostat to increase or decrease the leaving water temperature. Because it reacts more quickly, it prevents high rises and drops of the indoor temperature.

Advantage

Weather-dependent operation reduces energy consumption.

Weather-dependent curve

To be able to compensate for differences in temperature, the unit relies on its weather-dependent curve. This curve defines how much the leaving water temperature must be at different outdoor temperatures. Because the slope of the curve depends on local circumstances such as climate and the insulation of the house, the curve can be adjusted by an installer or user.

Types of weather-dependent curve

There are 2 types of weather-dependent curves:



Slope-offset curve

Which type of curve you use to make adjustments, depends on your personal preference. See "5.8.4 Using weather-dependent curves" [> 43].

Availability

The weather-dependent curve is available for:

- Main zone Heating
- Main zone Cooling
- Additional zone Heating
- Additional zone Cooling



INFORMATION

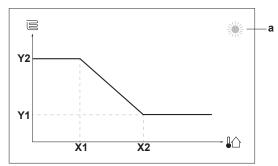
To operate weather dependent, correctly configure the setpoint of the main zone and additional zone. See "5.8.4 Using weather-dependent curves" [> 43].

5.8.2 2-points curve

Define the weather-dependent curve with these two setpoints:

- Setpoint (X1, Y2)
- Setpoint (X2, Y1)

Example



| Item | Description |
|--------|--|
| а | Selected weather dependent zone: |
| | - ※: Main zone or additional zone heating |
| | - 挙: Main zone or additional zone cooling |
| X1, X2 | Examples of outdoor ambient temperature |
| Y1, Y2 | Examples of desired leaving water temperature. The icon corresponds to the heat emitter for that zone: |
| | ■ 📴: Underfloor heating |
| | ■ 🗐: Fan coil unit |
| | ■ III: Radiator |

| Possible actions on this screen | |
|---------------------------------|------------------------------|
| €○ | Go through the temperatures. |
| ○…◎1 | Change the temperature. |
| OQm | Go to the next temperature. |
| <i>©</i> #○ | Confirm changes and proceed. |



5.8.3 Slope-offset curve

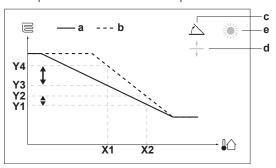
Slope and offset

Define the weather-dependent curve by its slope and offset:

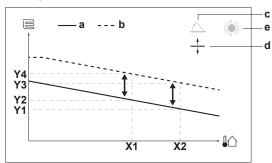
- Change the **slope** to differently increase or decrease the temperature of the leaving water for different ambient temperatures. For example, if leaving water temperature is in general fine but at low ambient temperatures too cold, raise the slope so that leaving water temperature is heated increasingly more at decreasingly lower ambient temperatures.
- Change the **offset** to equally increase or decrease the temperature of the leaving water for different ambient temperatures. For example, if leaving water temperature is always a bit too cold at different ambient temperatures, shift the offset up to equally increase the leaving water temperature for all ambient temperatures.

Examples

Weather-dependent curve when slope is selected:



Weather-dependent curve when offset is selected:



| Item | Description | |
|--------|--|--|
| а | WD curve before changes. | |
| b | WD curve after changes (as example): | |
| | • When slope is changed, the new preferred temperature at X1 is unequally higher than the preferred temperature at X2. | |
| | • When offset is changed, the new preferred temperature at X1 is equally higher as the preferred temperature at X2. | |
| С | Slope | |
| d | Offset | |
| е | Selected weather dependent zone: | |
| | Main zone or additional zone heating | |
| | • ‡: Main zone or additional zone cooling | |
| X1, X2 | Examples of outdoor ambient temperature | |



| Item | Description |
|------|---|
| Y4 | Examples of desired leaving water temperature. The icon corresponds to the heat emitter for that zone: Underfloor heating Fan coil unit Radiator |

| Possible actions on this screen | | |
|--|--|--|
| €○ | Select slope or offset. | |
| ○···•• Increase or decrease the slope/offset. | | |
| ○····♠ When slope is selected: set slope and go to offset. | | |
| When offset is selected: set offset. | | |
| ⊘ :○ | Confirm changes and return to the submenu. | |

5.8.4 Using weather-dependent curves

Configure weather-dependent curves as following:

To define the setpoint mode

To use the weather-dependent curve, you need to define the correct setpoint mode:

| Go to setpoint mode | Set the setpoint mode to |
|---------------------------------------|---|
| Main zone – Heating | |
| [2.4] Main zone > Setpoint mode | WD heating, fixed cooling OR Weather dependent |
| Main zone – Cooling | |
| [2.4] Main zone > Setpoint mode | Weather dependent |
| Additional zone – Heating | |
| [3.4] Additional zone > Setpoint mode | WD heating, fixed cooling OR Weather dependent |
| Additional zone – Cooling | |
| [3.4] Additional zone > Setpoint mode | Weather dependent |

To change the type of weather-dependent curve

To change the type for all zones (main + additional), go to [2.E] Main zone > WD curve type.

Viewing which type is selected is also possible via [3.C] Additional zone > WD curve type

To change the weather-dependent curve

| Zone | Go to |
|---------------------|------------------------------------|
| Main zone – Heating | [2.5] Main zone > Heating WD curve |
| Main zone – Cooling | [2.6] Main zone > Cooling WD curve |



| Zone | Go to |
|---------------------------|--|
| Additional zone – Heating | [3.5] Additional zone > Heating WD curve |
| Additional zone – Cooling | [3.6] Additional zone > Cooling WD curve |



INFORMATION

Maximum and minimum setpoints

You cannot configure the curve with temperatures that are higher or lower than the set maximum and minimum setpoints for that zone. When the maximum or minimum setpoint is reached, the curve flattens out.

To fine-tune the weather-dependent curve: slope-offset curve

The following table describes how to fine-tune the weather-dependent curve of a zone:

| You feel | | | ith slope and set: |
|---------------------------------|------------------------------|----------|--------------------|
| At regular outdoor temperatures | At cold outdoor temperatures | Slope | Offset |
| OK | Cold | ↑ | _ |
| OK | Hot | <u> </u> | _ |
| Cold | OK | \ | ↑ |
| Cold | Cold | _ | ↑ |
| Cold | Hot | \ | ↑ |
| Hot | OK | ↑ | <u></u> |
| Hot | Cold | ↑ | <u></u> |
| Hot | Hot | _ | <u> </u> |

To fine-tune the weather-dependent curve: 2-points curve

The following table describes how to fine-tune the weather-dependent curve of a zone:

| You feel | | Fine | -tune wi | th setpo | ints: |
|---------------------------------|------------------------------|-------------------|--------------------------|-------------------|-------------------|
| At regular outdoor temperatures | At cold outdoor temperatures | Y2 ^(a) | Y1 ^(a) | X1 ^(a) | X2 ^(a) |
| OK | Cold | \uparrow | _ | \uparrow | _ |
| OK | Hot | \ \ | _ | \ | _ |
| Cold | OK | _ | \uparrow | _ | \uparrow |
| Cold | Cold | 1 | \uparrow | \uparrow | \uparrow |
| Cold | Hot | \downarrow | \uparrow | \downarrow | \uparrow |
| Hot | OK | _ | \downarrow | _ | \downarrow |
| Hot | Cold | \uparrow | \downarrow | \uparrow | \downarrow |
| Hot | Hot | \downarrow | \downarrow | \downarrow | \downarrow |

⁽a) See "5.8.2 2-points curve" [▶ 41].



5.9 Other functionalities

5.9.1 To configure time and date

| | 1 | Go to [7.2] User sett | ings > Time/date. | \$ @+;··○ | |
|--|---|-----------------------|-------------------|------------------|--|
|--|---|-----------------------|-------------------|------------------|--|

5.9.2 Using quiet mode

About quiet mode

You can use quiet mode to decrease the sound of the outdoor unit. However, this also decreases the heating/cooling capacity of the system. There are multiple quiet mode levels.

The installer can:

- Completely deactivate quiet mode
- Manually activate a quiet mode level
- Enable the user to program a quiet mode schedule

If enabled by the installer, the user can program a quiet mode schedule.



INFORMATION

If the outdoor temperature is below zero, we recommend to NOT use the most quiet level.

To check if quiet mode is active

If $\widehat{\mathbb{G}}$ is displayed on the home screen, quiet mode is active.

To program a quiet mode schedule

Restriction: Only possible if enabled by the installer.

| 1 | Go to [7.4.2]: User settings > Quiet > Schedule. | 1 €○ |
|---|--|-------------|
| 2 | Program the schedule. | _ |
| | Possible actions : You can use the following system-defined preset values: | |
| | - Quiet | |
| | • More quiet | |
| | • Most quiet | |
| | For more information about scheduling, see "5.7.2 Using and programming schedules" [> 31]. | |

5.9.3 Using holiday mode

About holiday mode

During your holiday, you can use the holiday mode to deviate from your normal schedules without having to change them. While holiday mode is active, space heating/cooling operation will be turned off. Room frost protection and water pipe freeze prevention will remain active.



Typical workflow

Using holiday mode typically consists of the following stages:

- Setting the starting date and ending date of your holiday.
- Activating the holiday mode.

To check if holiday mode is activated and/or running

If \square is displayed on the home screen, holiday mode is active.

To configure the holiday

| 1 | 1 Activate the holiday mode. | | |
|---|--|----------------|--|
| | • Go to [7.3.1]: User settings > Holiday > Activation. Activation From Till | (@±○ | |
| | • Select On . | 1 €○ | |
| 2 | Set the first day of your holiday. | _ | |
| | • Go to [7.3.2]: From . | : ₩○ | |
| | Select a date. | €○ | |
| | | ○…○} | |
| | Confirm the changes. | € ○ | |
| 3 | Set the last day of your holiday. | _ | |
| | • Go to [7.3.3]: Till . | : ₩○ | |
| | Select a date. | 10··· 0 | |
| | | 001 | |
| | Confirm the changes. | <i>©</i> #○ | |

5.9.4 Using WLAN



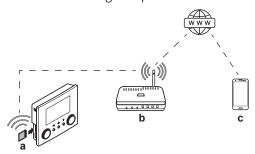
INFORMATION

Restriction: WLAN settings are only visible when a WLAN cartridge is inserted in the user interface.

About the WLAN cartridge

The WLAN cartridge connects the system to the internet. As user you can then control the system via the Daikin Residential Controller app.

This needs the following components:

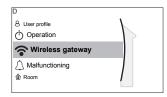




| а | WLAN cartridge | The WLAN cartridge needs to be inserted in the user interface. |
|---|------------------|---|
| b | Router | Field supply. |
| С | Smartphone + app | The Daikin Residential Controller app needs to be installed on the user's smartphone. See: http://www.onlinecontroller.daikineurope.com/ |

Configuration

To configure the Daikin Residential Controller app, follow the in-app instructions. While doing this, the following actions and information are needed on the user interface:



[D] Wireless gateway

- [D.1] Mode
- [D.2] Reboot
- [D.3] WPS
- [D.4] Remove from cloud
- [D.5] Home network connection
- [D.6] Cloud connection

[D.1] **Mode**: Turn AP mode ON (= WLAN cartridge active as access point):

| 1 | 1 Go to [D.1]: Wireless gateway > Mode. | |
|---|--|-------------|
| 2 | In the Enable AP mode screen, select Yes . | : 0○ |

[D.2] **Reboot**: Reboot the WLAN cartridge:

| 1 | Go to [D.2]: Wireless gateway > Reboot. | \$ @**○ |
|---|---|----------------|
| 2 | In the Reboot the gateway screen, select OK . | (<i>O</i> #○ |

[D.3] WPS: Connect the WLAN cartridge to the router:



INFORMATION

You can only use this function if it is supported by the software version of the WLAN, and the software version of the Daikin Residential Controller app.

| 1 | Go to [D.3]: Wireless gateway > WPS. | 1 €○ |
|---|--------------------------------------|--------------|
| 2 | In the WPS screen, select Yes. | 1 €#○ |

[D.4] Remove from cloud: Remove the WLAN cartridge from the cloud:

| 1 | Go to [D.4]: Wireless gateway > Remove from cloud. | |
|---|--|--|
| 2 | In the Remove from cloud screen, select Yes. | |

[D.5] **Home network connection**: Read out the status of the connection to the home network:

| 1 | Go to [D.5]: Wireless gateway > Home network | € ○ |
|---|--|------------|
| | connection. | |



| 2 | Read out the connection status: | 1 €%○ |
|---|--|--------------|
| | <pre>• Disconnected from [WLAN_SSID]</pre> | |
| | Connected to [WLAN_SSID] | |

[D.6] Cloud connection: Read out the status of the connection to the cloud:

| 1 | Go to [D.6]: Wireless gateway > Cloud connection. | € 0○ |
|---|---|-------------|
| 2 | Read out the connection status: | : ₩0 |
| | • Not connected | |
| | - Connected | |



6 Energy saving tips

Tips about room temperature

- Make sure the desired room temperature is NEVER too high (in heating mode) or too low (in cooling mode), but ALWAYS according to your actual needs. Each saved degree can save up to 6% of heating/cooling costs.
- Do NOT increase/decrease the desired room temperature to speed up space heating/cooling. The space will NOT heat up/cool down faster.
- When your system layout contains slow heat emitters (example: underfloor heating), avoid large fluctuation of the desired room temperature and do NOT let the room temperature drop too low/rise too high. It will take more time and energy to heat up/cool down the room again.
- Use a weekly schedule for your normal space heating or cooling needs. If necessary, you can easily deviate from the schedule:
 - For shorter periods: You can overrule the scheduled room temperature until the next scheduled action. **Example:** When you have a party, or when you are leaving for a couple of hours.
 - For longer periods: You can use the holiday mode.

Tips about leaving water temperature

- In heating mode, a lower desired leaving water temperature results in lower energy consumption and better performance. In cooling, the opposite is valid.
- Set the desired leaving water temperature in accordance with the heat emitter type. **Example:** Underfloor heating is designed for lower leaving water temperature than radiators and fan coil units.



7 Maintenance and service

7.1 Overview: Maintenance and service

The installer has to perform a yearly maintenance. You can find the contact/ helpdesk number via the user interface.

Go to [8.3]: **Information > Dealer information**.

(€:..○

As end user, you have to:

- Keep the area around the unit clean.
- Keep the user interface clean with a soft damp cloth. Do NOT use any detergents.
- Regularly check if the water pressure is above 1 bar.

Refrigerant

This product contains fluorinated greenhouse gases. Do NOT vent gases into the atmosphere.

Refrigerant type: R32

Global warming potential (GWP) value: 675



NOTICE

Applicable legislation on **fluorinated greenhouse gases** requires that the refrigerant charge of the unit is indicated both in weight and CO₂ equivalent.

Formula to calculate the quantity in CO₂ equivalent tonnes: GWP value of the refrigerant × total refrigerant charge [in kg] / 1000

Please contact your installer for more information.



WARNING: MILDLY FLAMMABLE MATERIAL

The refrigerant inside this unit is mildly flammable.



WARNING

The appliance shall be stored so as to prevent mechanical damage and in a wellventilated room without continuously operating ignition sources (example: open flames, an operating gas appliance or an operating electric heater).



WARNING

- Do NOT pierce or burn refrigerant cycle parts.
- Do NOT use cleaning materials or means to accelerate the defrosting process other than those recommended by the manufacturer.
- Be aware that the refrigerant inside the system is odourless.



WARNING

The refrigerant inside the unit is mildly flammable, but normally does NOT leak. If the refrigerant leaks in the room and comes in contact with fire from a burner, a heater, or a cooker, this may result in fire, or the formation of a harmful gas.

Turn off any combustible heating devices, ventilate the room, and contact the dealer where you purchased the unit.

Do NOT use the unit until a service person confirms that the part from which the refrigerant leaked has been repaired.



8 Troubleshooting

Contact

For the symptoms listed below, you can try to solve the problem yourself. For any other problem, contact your installer. You can find the contact/helpdesk number via the user interface.

| 1 Go to [8.3]: Information > Dealer information. |) |
|--|---|
|--|---|

8.1 To display the help text in case of a malfunction

In case of a malfunction, the following will appear on the home screen depending on the severity:

- 🗘: Error
- ⚠: Malfunction

You can get a short and a long description of the malfunction as follows:

| 1 | Press the left dial to open the main menu and go to Malfunctioning. | U #○ |
|---|--|-------------|
| | Result: A short description of the error and the error code is displayed on the screen. | |
| 2 | Press ? in the error screen. | ? |
| | Result: A long description of the error is displayed on the screen. | |

8.2 To check the malfunction history

Conditions: The user permission level is set to advanced end user.

| 1 | Go to [8.2]: Information > Malfunction history. | 1 04 |
|---|---|-------------|
|---|---|-------------|

You see a list of the most recent malfunctions.



8.3 Symptom: You are feeling too cold (hot) in your living room

| Possible cause | Corrective action |
|---|--|
| The desired room temperature is too low (high). | Increase (decrease) the desired room temperature. See "5.6.4 To change the desired room temperature" [> 28]. |
| | If the problem recurs daily, do one of the following: |
| | Increase (decrease) the room temperature preset value. See "5.7.1 Using preset values" [▶ 30]. |
| | ■ Adjust the room temperature schedule. See "5.7.2 Using and programming schedules" [▶ 31] and "5.7.3 Schedule screen: Example" [▶ 34]. |
| The desired room temperature cannot be reached. | Increase the desired leaving water temperature in accordance with the heat emitter type. See "5.6.5 To change the desired leaving water temperature" [> 29]. |
| The weather-dependent curve is set incorrectly. | Adjust the weather-dependent curve. See "5.8 Weather-dependent curve" [> 40]. |

8.4 Symptom: Unit failure

When the heat pump fails to operate, the optional external backup heater kit can serve as an emergency heater. It then takes over the heat load either automatically or by manual interaction.

- When Emergency is set to Automatic (or auto SH normal/DHW off)⁽¹⁾ and a heat pump failure occurs, the backup heater automatically takes over the heat load.
- When Emergency is set to Manual and a heat pump failure occurs, the space heating stops.
 - To manually recover it via the user interface, go to the Malfunctioning main menu screen and confirm whether the backup heater can take over the heat load or not.
- When Emergency is set to auto SH reduced/DHW off (or auto SH **reduced/DHW** on)⁽²⁾ and a heat pump failure occurs, space heating is reduced. Similarly as in Manual mode, the unit can take the full load with the backup heater if the user activates this via the Malfunctioning main menu screen.

When the unit fails, \triangle or \triangle will appear on the user interface.

⁽²⁾ auto SH reduced/DHW on has the same effect as auto SH reduced/DHW off, but should NOT be used because there is no domestic hot water.



⁽¹⁾ auto SH normal/DHW off has the same effect as Automatic, but should NOT be used because there is no domestic

| Possible cause | Corrective action |
|----------------|---|
| | See "8.1 To display the help text in case of a malfunction" [> 51]. |



INFORMATION

When the backup heater takes over the heat load, electricity consumption will be considerably higher.

8.5 Symptom: The system is making gurgling noises after commissioning

| Possible cause | Corrective action |
|-----------------------------|---|
| There is air in the system. | Purge air from the system. (a) |
| Various malfunctions. | Check if △ or △ is displayed on the home screen of the user interface. See "8.1 To display the help text in case of a malfunction" [▶ 51] for more information about the malfunction. |

⁽a) We recommend to purge air with the air purge function of the unit (to be performed by the installer). If you purge air from the heat emitters or collectors, mind the following:



WARNING

Air purging heat emitters or collectors. Before you purge air from heat emitters or collectors, check if \bigcirc or \bigcirc is displayed on the home screen of the user interface.

- If not, you can purge air immediately.
- If yes, make sure that the room where you want to purge air is sufficiently ventilated. Reason: Refrigerant might leak into the water circuit, and subsequently into the room when you purge air from the heat emitters or collectors.



9 Relocation

9.1 Overview: Relocation

If you want to relocate parts of your system, contact your installer. You can find the contact/helpdesk number via the user interface.

Go to [8.3]: **Information > Dealer information**.

(€...○



10 Disposal



NOTICE

Do NOT try to dismantle the system yourself: dismantling of the system, treatment of the refrigerant, oil and other parts MUST comply with applicable legislation. Units MUST be treated at a specialised treatment facility for reuse, recycling and recovery.



11 Glossary

DHW = Domestic hot water

Hot water used, in any type of building, for domestic purposes.

LWT = Leaving water temperature

Water temperature at the water outlet of the unit.

Dealer

Sales distributor for the product.

Authorised installer

Technical skilled person who is qualified to install the product.

User

Person who is owner of the product and/or operates the product.

Applicable legislation

All international, European, national and local directives, laws, regulations and/or codes that are relevant and applicable for a certain product or domain.

Service company

Qualified company which can perform or coordinate the required service to the product.

Installation manual

Instruction manual specified for a certain product or application, explaining how to install, configure and maintain it.

Operation manual

Instruction manual specified for a certain product or application, explaining how to operate it.

Accessories

Labels, manuals, information sheets and equipment that are delivered with the product and that need to be installed according to the instructions in the accompanying documentation.

Optional equipment

Equipment made or approved by Daikin that can be combined with the product according to the instructions in the accompanying documentation.

Field supply

Equipment NOT made by Daikin that can be combined with the product according to the instructions in the accompanying documentation.



12 Installer settings: Tables to be filled in by installer

12.1 Configuration wizard

| | Setting | Fill in |
|-----|---|---------|
| Sys | tem | |
| | Backup heater type [9.3.1] | |
| | Emergency [9.5] | |
| | Number of zones [4.4] | |
| | Glycol Filled system (overview field setting [E-OD]) | |
| Вас | kup heater | |
| | Voltage [9.3.2] | |
| | Configuration [9.3.3] | |
| | Capacity step 1[9.3.4] | |
| | Additional capacity step 2 [9.3.5] (if applicable) | |
| Mai | n zone | |
| | Emitter type [2.7] | |
| | Control [2.9] | |
| | Setpoint mode [2.4] | |
| | Schedule [2.1] | |
| | WD curve type[2.E] | |
| Add | itional zone (only if [4.4]=1, dual zone | e) |
| | Emitter type [3.7] | |
| | Control (read only) [3.9] | |
| | Setpoint mode [3.4] | |
| | Schedule [3.1] | |
| | WD curve type [3.C] (read only) | |

12.2 Settings menu

| | Setting | Fill in |
|---------------------------------|-----------------------|---------|
| Main zone | | |
| | Thermostat type [2.A] | |
| Additional zone (if applicable) | | |
| | Thermostat type [3.A] | |

| | Setting | Fill in | |
|-------------|--------------------------|---------|--|
| Information | | | |
| | Dealer information [8.3] | | |





