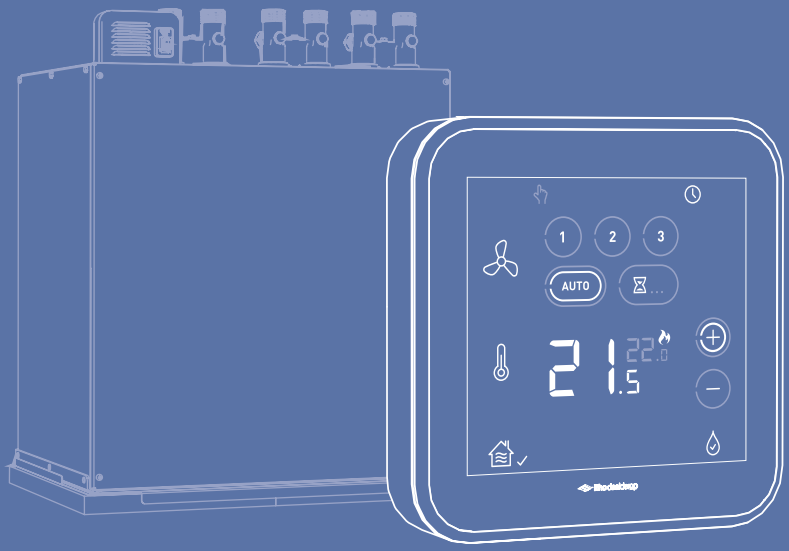
Itho Daalderop
WPU 5G

A+++

User manual



itho daalderop
Climate for life

Translation of the original document.

Introduction

This manual is intended for the user and contains important information concerning safe and correct use, maintenance and troubleshooting the appliance.

The following definitions are used in this manual to draw attention to hazards, instructions or indications related to people, products, installations and/or the surroundings.

⚠ Danger!

Indicates that action may result in serious or fatal injuries.

⚠ Warning!

Indicates a hazard that can cause severe injury and/or severe damage to the product, system or surrounding area.

⚠ Caution!

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor injury and/or severe damage to the product, system or surrounding area.

Note

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor damage to the product, system or surrounding area.

Tip

Instructions that may be important for the installation, functioning, operation or maintenance of the product, but are not related to injury or material damage.

The installer is responsible for the installation and commissioning of the product and/or system.

- The installer must give the user instructions on:
  - how the appliance works
  - how to operate it;
  - how to put it into service, fill and bleed it
  - how to put it out of service and drain it;
  - annual inspection and maintenance;
  - troubleshooting.

Due to our continuous product improvement process, this document may not match the appliance you received. You can download the latest version of the manual from www.ithodaalderop.nl.

Itho Daalderop cannot be held responsible for costs, damage or personal injury if the product is not used in accordance with the instructions given in the manual.

If you have any questions after reading this user manual, please contact your installer.

Tip

Don't forget to register the product via the website of Itho Daalderop to receive an extended guarantee!

Tip

Keep the installation instructions and user manual in a safe place, e.g. with the appliance, so they are available when needed.

Contents

1. Safety and other regulations

1.1. Safety

- Install the product as outlined in this manual and according to the relevant installation and safety instructions.
- The installation, commissioning, inspection, maintenance and repair of this product and/or system may only be carried out by a qualified installer (*) in accordance with the (safety) requirements set out in the manual. Only original accessories and parts prescribed by the manufacturer may be used.
- Do not use the product for purposes other than those for which it is intended, as described in this manual.
- The safety instructions must be followed in order to prevent physical injury and/or damage to the product.
- The product may not be modified.
- Ensure that the electrical system to which the product is connected meets the necessary conditions.
- This product and/or system may be operated safely by children aged 8 years and older and by people with physical, sensory or mental disabilities or a lack of experience/knowledge if under supervision or after having received instructions regarding safe use, and if they are aware of the product and/or system hazards.

- Cleaning and maintenance by the user may not be done by children or people with physical, sensory or mental disabilities or a lack of experience/knowledge without supervision.
- Do not allow children to play with the product and/or system.
- This product or system is intended for use in domestic and similar environments such as office kitchens in shops, offices and other working environments; on farms; by customers in hotels, motels and other residential establishments and 'bed and breakfast'-style establishments.
- Use in other environments in consultation with the product and/or system manufacturer.
- Do not expose the product to the elements.
- The electrical connection must always be readily accessible for disconnection of power.
- Never use the device with an extension cord.
- If the power cable is damaged, it must be replaced by the manufacturer, their agent or a qualified person to avoid any danger.
- Maintain a minimum distance of 20 cm from any radio antennas during normal operation to avoid radiation exposure.
- Maintenance instructions must be followed to prevent damage and excessive wear and tear.
- Inspect the product for defects regularly.
- In the event of any defects, switch off the unit and contact your installer or service organisation.
- Only use those parts specified by Itho Daalderop when replacing parts.
- Take the following steps before carrying out work on an open appliance:
  - Switch the power off.
  - Make sure that the power cannot be switched back on accidentally.
  - Avoid contact with electrical components when power is required for working. Risk of electric shock.

) **The Netherlands:*

A qualified installer is an installer employed by a central heating or mechanical installation company registered with the Chamber of Commerce and listed in the SEI accreditation register (Foundation for Accreditation of Installation Companies) or which has a Sterkin accreditation.

Belgium

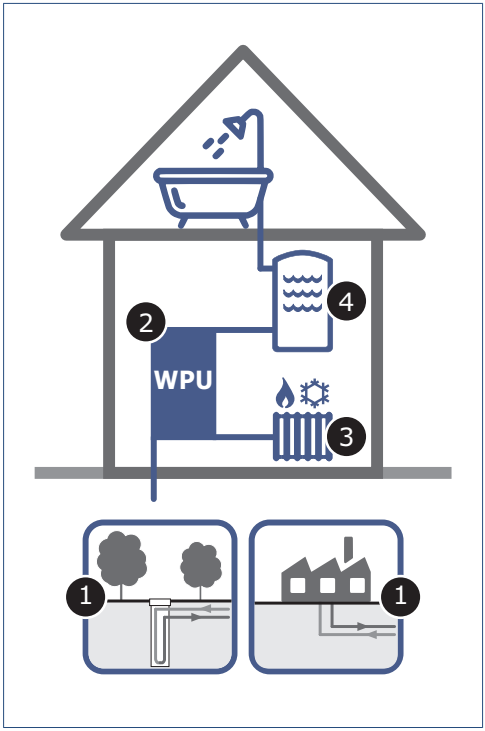
A qualified installer is a technician employed by an HVAC or electrical installation company registered with the Crossroads Bank for Enterprises with a valid VAT number.

2. Product information

2.1. Application

The WPU heat pump is suitable for:

- heating a home;
- cooling a home;
- heating tap water.



The WPU heat pump system of Itho Daalderop consists of the following parts:

1. Source system
2. Heat pump
3. Central heating system
4. Tap water system

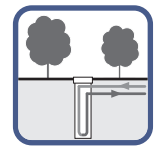
2.2. The WPU heat pump - How does it work?

The WPU heat pump can heat a home and generate hot domestic water in an energy-efficient way. In order to do this, the heat pump extracts heat from a source. This heat is upgraded to a usable level and used for low temperature heating and/or hot domestic water.

2.2.1. Source system

The following source systems are used by the WPU heat pump system as a sustainable heat source:

Ground

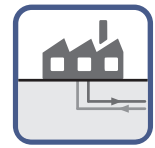


Suitable for:

- WPU C-5G
- WPU E-5G
- WPU GE-5G
- WPU I-5G
- WPU KC-5G

Vertical pipes (ground loops) are installed in the ground and filled with water. This water is pumped through the heat pump to extract heat from the ground or return heat to the ground.
Depending on the energy demand, a borehole depth of 100 to 200 metres is necessary for a single dwelling.

District heating



Suitable for:

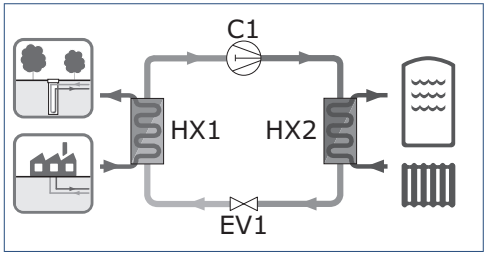
- WPU COE-5G

District heating uses the residual heat of an industrial business, such as a power plant or a waste incineration plant, for the central heating of water. This heated water is transported to dwellings, office buildings or companies nearby via an underground network of insulated pipes for heating and/or hot domestic water. This way, energy that would otherwise have been lost is re-used sustainably.

2.2.2. Heat pump

The WPU heat pump is an electrically powered device, in which liquid is pumped around in a closed circuit; this liquid reaches boiling point and evaporates at a low temperature and low pressure. This liquid is also referred to as a refrigerant and is in liquid or gaseous state, depending on the pressure and temperature. The refrigerant's change from gas or liquid causes heat to be absorbed or released.

The refrigerant circuit in the heat pump consists of a compressor **C1**, an expansion valve **EV1** and two heat exchangers **HX1** and **HX2**.



The refrigerant circuit works as follows:

1. The liquid refrigerant flows from the expansion valve **EV1** to the evaporator **HX1**. The evaporator is linked to the source system. Due to the temperature difference, the refrigerant absorbs the heat from the heat source and evaporates.
2. The compressor **C1** draws in the gas and compresses it under high pressure, causing the temperature of the gas to rise further.
3. The gas then enters the **HX2** condensor. The condensor is linked to the storage tank and the central heating system of the home. Due to the temperature difference, the heat of the gaseous refrigerant will be released to the central heating water or the tap water. In doing so, the gas will cool down and condensate.
4. The liquid refrigerant cools down even further until the expansion valve reduces the pressure.
5. After this, the process can start again.

2.2.3. Central heating system

An efficient use of the WPU heat pump requires the use of supply systems, such as:

- Wall, floor or ceiling heating (pipes incorporated in wall, floor or ceiling)
- LT-radiators (oversized radiators)
- LV-convectors (larger than standard convectors)

The benefit of wall, floor and ceiling heating is that the surface is usually much greater than that of a regular radiator. A relatively low temperature is therefore enough to transfer sufficient heat to the environment.
In addition to improved efficiency, these low temperature systems ensure an even heat distribution and create more comfort.

LT-radiators and LT-convectors are supply systems that can still emit sufficient heat at a relatively low water temperature. They have an extra large surface area (often due to additional slats or connections) or are equipped with a ventilator, which enhances the convection effect.

When choosing the supply system, make sure that it is also suitable for the cooling of the home.

2.2.4. Tap water system

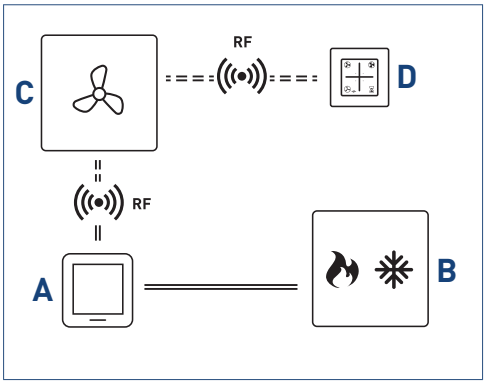
Besides heating and cooling the home, the heat pump also provides hot domestic water. A traditional gas boiler can quickly supply an unlimited amount of water at high temperature, but a heat pump cannot. In order to guarantee a constant temperature, a storage vessel is required. The heat pump slowly heats up the water in the storage vessel.

The WPV storage vessels of Itho Daalderop were especially designed fro the WPU heat pump, whereby the power and temperature are harmonised.

2.3. Spider Climate Thermostat

The Spider WP climate thermostat is a thermostat that regulates the temperature of the room in which it is placed. The thermostat is suitable for controlling the WPU heat pump, which can also cool the house in addition to heating. The thermostat is connected to the heat pump.

A unique feature of the climate thermostat is that it is also suitable for controlling your Itho Daalderop ventilation system. By connecting the ventilation unit wirelessly to the thermostat, you can control the ventilation via the thermostat in addition to the RF controls.



Thermostat connection schematic diagram.

Legend	
A	Spider WP climate thermostat
B	Heat pump
C	Ventilation unit
D	RF ventilation control

2.4. Zone control

Itho Daalderop **Autotemp** is an optional zone control that allows you to control the temperature in multiple rooms, independently from each other. This active temperature control ensures that heating or cooling is distributed depending on the desired temperature in each room.

The Spider WP room thermostat in the living room is the main thermostat and controls heating and cooling for the entire dwelling. It is not possible to control the temperature of each individual room by only using the main thermostat.

The temperatures in the other rooms can be controlled using their own Spider thermostats. Even when the living room temperature is at the right level, **Autotemp** maintains the desired temperatures in other rooms.

Tip

The room thermostat does not have a fixed mounting point, so you can move it within the subzone.
For example, to the coldest room in the winter or to the warmest room in the summer.

2.5. Climate For Life | Up to Date

This product has its own internet connection so it is always up to date!

We can use this internet connection to monitor your product's performance and perform online updates to ensure that it continues to operate as it should.

Learn more at .

2.6. Application in new-build houses

Each new-build house contains a large amount of moisture, on average about 4,000 litres. This moisture comes from wet construction materials, such as concrete, cement, spray paint and glue. During construction, rain can also make the construction materials wet. The best way to get rid of the moisture is by properly ventilating the home and keeping the temperature as level as possible.

Forced drying - not too quickly.
By heating the home, you speed up the drying process of the dwelling, this is also referred to as forced drying of a home. The forced drying process should not take place too quickly, as this could cause a lot of damage (such as shrinkage cracks). It is therefore important to pay a lot of attention to the forced drying process. Please note that this forced drying process may take up to six months. Set the heat to 15 to 18°C, and when you move into the property to 20°C, Do not turn up the heat any higher, as this will cause the materials to dry too quickly, damaging the building construction.

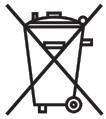
Ventilation during forced drying.
During the drying process, proper ventilation and circulation of the air are indispensable. Make sure to keep approximately 5 centimetres of space between the walls and your furniture during the first year, allowing the moisture to escape. Open the windows for a while every day. Furthermore, the mechanical ventilation system must always be turned on, so never pull the plug. Set the mechanical ventilation system in the highest position as much as possible during the first months.
This creates the best possible air circulation in the home.

Energy bill.
Good and continuous ventilation is not only good for our health, it is an important way of combating moisture issues in the home. Ventilation causes heat-loss. The forced drying process of a new-build property also results in a higher energy consumption and a subsequently a higher energy bill.

2.7. Recycling

This product was manufactured using sustainable materials. It should be disposed of in a responsible manner at the end of its life cycle. Your local authorities can provide you with information on how to do so.

The product's packaging can be recycled. These materials should be disposed of in a responsible manner in accordance with government regulations.



As a reminder of the need to dispose of batteries and electrical household appliances separately, the product features a symbol consisting of a crossed-out wheeled bin. This means that the product should not be disposed of with the rest of your domestic waste at the end of its life cycle. It must be taken either to a special separate waste collection centre operated by the local council or to an outlet specified by this service.

Any adverse effects on the environment and human health are minimised by handling batteries and household appliances separately. This ensures that the materials comprising the appliance can be recycled, thereby saving a significant amount of energy and raw materials.

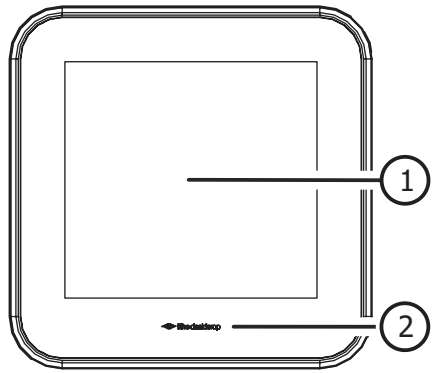
3. Operation

3.1. Activation thermostat

During normal operation, the thermostat is in a standby mode. This means that the screen is turned off.
The thermostat is activated by pressing the **Itho Daalderop LOGO**, after which it displays the active operation status.

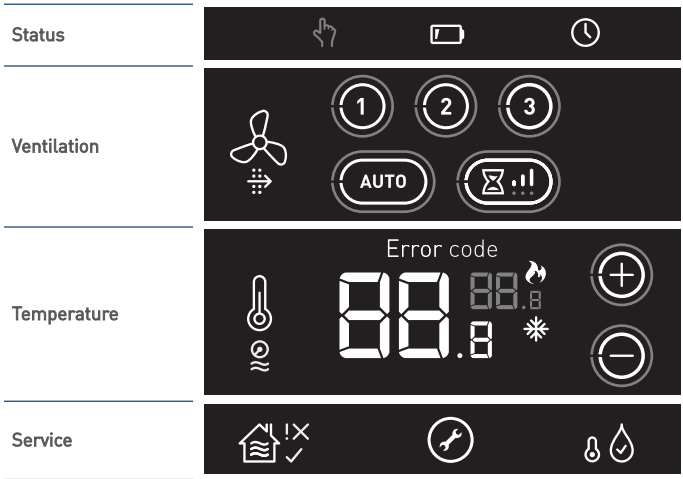
After operation, the thermostat returns to standby mode after 20 seconds.

When the thermostat is activated for the very first time, it will only display the current temperature. This is the case when the thermostat has not yet been connected to the heat pump and has no wireless connection to any other devices.



Key	
1	Screen
2	Logo (activate/confirm button)

3.2. Screen



The screen is a capacitive touch screen. This means that the thermostat is controlled by the physical touching of the symbols on the screen.
The screen will normally not be active (standby), as a means of extending the battery life.

3.3. Status

STATUS	
Symbol	Description
	**Manual operation** Indicates that the thermostat operates without time programme.
	**Battery** Indicates that the battery capacity is low.
	**Time/Date** Requesting and setting the current time and date. **Tap water start** Setting the time at which the full hot water storage is heated every day.

3.4. Ventilation

VENTILATION	
Symbol	Description
	**Ventilation** Visible when the ventilation unit is connected. To be used as option button during wireless pairing.
	**Low mode** Level 1, **low speed**; when one person is present, or when no-one is present.
	**Medium mode** Level 2, **medium speed**; when more than one person is present.
	**High mode** Level 3, **high speed**; during cooking, showering or bathing, or when a lot of people are present.
	**Auto-ventilation** Auto mode, **automatic mode**; control based on existing sensors (CO_2 and/or RV). The capacity is controlled automatically. **Auto-Night** [1] The additional function ensures that the capacity is increased during the low mode, ensuring an optimal climate during sleep.
	**Timer** **Timer** for switching the unit to high speed for a period of time that can be adjusted.
	**Replace filter** [1] If the ventilation unit has a filter, a notification will appear on the thermostat if the filter is contaminated.

1) Only available if the connected product supports the functionality.

3.5. Temperature

TEMPERATURE	
Symbol	Description
	**Temperature** Visible when the heat pump is connected. To be used as menu button or option button during wireless pairing.
	**Room temperature** The 'large' white numbers reflect the current room temperature. **Error code** An error code is displayed by way of the first two digits.
	**Desired temperature** The 'small' grey numbers reflect the desired temperature. **Serial number error** The serial number of an error is displayed by way of the first two digits.
	**Heating active** Indicates that the heat pump has heat demand.
	**Cooling active** Indicates that the heat pump has cooling demand.
	**Increase** By pressing the button, the desired temperature will be increased by 0.5°C.
	**Reduce** By pressing the button, the desired temperature will be reduced by 0.5°C.
	**Fill with water** If the water pressure of the central heating system is (too) low, then this notification will appear on the thermostat.
Error code	**Error code** Appears on the screen when an error is displayed by way of the error code.
Error	**Fault** Appears on the screen when an error is displayed without error code.

3.6. Service

SERVICE NOTIFICATIONS	
Symbol	Description
	**Home** Only visible as selection button during wireless pairing of the gateway.
	**Indoor climate Good** [1] The indoor air quality is good.
	**Indoor climate Reasonable** [1] The indoor climate is reasonable.
	**Indoor climate Poor** [1] The indoor climate is poor.
	**Service** Indicates that a connected device is in an error state.
	**Tap water comfort** Setting the tap water heating. **Tap water turned off** The tap water heating is in **STAND-BY** mode or**OFF**.
	**Tap water enabled** The tap water heating is in **ECO** mode, **COMFORT** mode or **BOOST**mode.
	**Heating the tap water** Indicates that the tap water is heated.

1) Only available if the connected product supports the functionality.

4. Time/date

4.1. Request time/date

Time/Date

- When the heat pump is connected to monitoring, the current time and date are automatically set by the thermostat.
- When the heat pump is not connected to monitoring, then the current time and date must be set via the thermostat.

Note

If the current time is not automatically adjusted at the start of summer or winter time, you will need to manually adjust the correct time.

View the current time and date as follows:

a) Activate the thermostat.

b) Press the **TIME/DATE** button.

*When the **TIME/DATE** button flashes, then the current time and date is not yet set.*

c) The time is displayed on the screen.

Example time (14:36).

d) By again pressing the **TIME/DATE** button, the date is displayed.

Example date (27-11).

e) By again pressing the **TIME/DATE** button, the year is displayed.

Example year (2018).

f) The thermostat will automatically return to the operating status once it is not used for 10 seconds.

4.2. Setting time/date

	Time/date
	Increase
	Decrease

The set-up is done as follows:

a) Activate the thermostat.

b) Press the **TIME/DATE** button for approximately 3 seconds until the settings are flashing.

If, during the set-up, the thermostat is not used for 10 seconds, then the thermostat will return to operating status. The settings entered until that moment will be saved.

c) **year.**
The year can be set by briefly pressing the **INCREASE** or **REDUCE** button.
Confirm the setting by pressing the **LOGO**. The thermostat moves to the next setting.

Example year (2018).

d) **Month.**
The month can be set by briefly pressing **INCREASE** or **REDUCE** button.
Confirm the setting by pressing the **LOGO**. The thermostat moves to the next setting.

Example month (11).

e) **Day.**
The day can be set by briefly pressing the **INCREASE** or **REDUCE** button.
Confirm the setting by pressing the **LOGO**. The thermostat moves to the next setting.

Example day (27).

f) **Hours.**
The hour can be set by briefly pressing the **INCREASE** or **REDUCE** button.
Confirm the setting by pressing the **LOGO**. The thermostat moves to the next setting.

Example hour (13).

g) **Minutes.**
The minutes can be set by briefly pressing the **INCREASE** or **REDUCE** button.
Confirm the setting by pressing the **LOGO**. The date and time are now set.

Example minutes (36).

h) For confirmation, the time is displayed for 3 seconds.

i) The thermostat will then automatically return to the operating status.

5. Temperature

5.1. Heating or cooling

	Temperature
	Heating active
	Cooling active

Heating

In a dwelling with a heat pump system, it is recommended to maintain a constant temperature. You set the thermostat to a certain fixed temperature, and it automatically determines whether heating or cooling is required. As a heat pump system is a slow-acting system (slower than a boiler), and to avoid disruption of switching between heating and cooling, daily adjustment of the temperature is strongly discouraged. If, however, you do wish to make a minor night adjustment, you can do so by slightly adjusting the thermostat. An adjustment by more than 1°C is not recommended.

The heating temperature is adjustable between 18°C and 24°C.

Cooling in the summer

Limited cooling of your home is possible during summer. The room thermostat automatically switches to cooling depending on the outdoor temperature and the desired room temperature. By directing the relatively cold water from the source through your central heating system, heat is extracted from the dwelling and transported to the source. This gives a cooling effect in the dwelling as the indoor temperature is reduced by a few degrees compared to the temperature without cooling.

The cooling temperature is adjustable between 20°C and 32°C.

Caution!

A lot of building moisture will be present in your home in the first year after completion. To avoid condensation problems when cooling during this period, it is recommended that the thermostat temperature is not set lower than 23°C.

Caution!

Note that you cannot switch off the **COOLING** function.

Cooling of the dwelling has another important function: regeneration of the ground source. This means that heat from your dwelling is returned to the ground and stored. This stored heat can be reused for low temperature heating and/or hot tap water. A heated source increases the efficiency of the heat pump and reduces your energy costs.

Caution!

You must therefore never switch off the heat pump.

Thermostat

To prevent the heat pump from switching on and off unnecessarily, the thermostat will automatically adjust the following settings:

- When switching to **COOLING**, the desired temperature is increased by 1°C.
- When switching to **HEATING**, the desired temperature is lowered by 1°C.

The desired temperature can always be adjusted manually afterwards.

5.2. Increase/reduce temperature

Setting the desired temperature once will suffice for a pleasant indoor climate. The heat pump will heat or cool the home based on the set temperature and the season.

The heat pump works at its most economical at a constant temperature. Lowering the temperature during the night takes additional energy in a well-insulated home. Lowering the temperature during the night is therefore not recommended.

	Increase
	Reduce
	Room temperature
	Desired temperature
	Changing temperature during heating
	Changing temperature during cooling

The temperature can be adjusted as follows:

a) Activate the thermostat.
   The 'large' white numbers reflect the current room temperature. The 'small' grey numbers reflect the desired temperature.

b) By pressing the **INCREASE** or **REDUCE** button, the desired temperature can be increased or reduced by 0.5°C.

*The **HEATING** or **COOLING** symbol will flash during the change in temperature.*

5.3. Settings heating/cooling

 Temperature

The following (temporary) settings can be selected for the heating or cooling of the home.

	Description
Automatic heating/cooling	Thermostat enabled.
Electric heating [1][2]	Electric additional heating of the home.
Stand-by	Thermostat switched off.

1) Option only visible if the heat pump is equipped with an electric heating element.

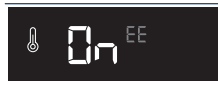
*2) For the **WPU GE-5G**, **ELECTRIC HEATING** is permanently enabled.*

Selecting setting

a) Activate the thermostat.

b) Press the **TEMPERATURE** button for about 3 seconds until the current setting is displayed flashing on the screen.

c) By pressing the **TEMPERATURE** button multiple times, the various settings are displayed.

	Automatic heating/cooling
	Electric heating
	Stand-by

d) Select the correct setting.

e) Confirm the selection by pressing the **LOGO**. The selected setting is shown for 3 seconds.

If you do not confirm your choice within 10 seconds, no change will be made and the thermostat will return to operating status mode.

f) Then the thermostat returns to operating status mode.

5.3.1. Automatic heating/cooling

By default, the heat pump system will automatically heat or cool based on the temperature you set. After heating, it takes at least 24 hours for the system to cool.

5.3.2. Electric heating

⚠ Caution!

For the **WPU GE-5G**, **ELECTRIC HEATING** function is permanently enabled. Under certain conditions, the electric element will switch on for additional heating of the dwelling if needed. Manual activation of **ELECTRIC HEATING** is only possible in case of an error.

Activating the **ELECTRIC HEATING** setting causes the heat pump to raise the temperature faster in the event of an error or for greater comfort. After activating this setting, the electrical element will switch on for 24 hours, when necessary, for the additional heating of the home.

After 24 hours, the electrical additional heating switches off automatically.

*The **ELECTRIC HEATING** setting will result in a higher energy consumption, which will result in a higher energy bill.*

If **ELECTRIC HEATING** is turned on, you'll see the letters **EE** every two seconds at the place of the desired room temperature.

For example:

5.3.3. Stand-by

It is possible to turn off the thermostat's temperature demand (**HEATING** or **COOLING**) indefinitely, for example during your holiday. To do this, the thermostat must be set to **STANDBY** mode.

Although the thermostat's temperature demand is switched off, the temperature in the home is continuously monitored so that it doesn't get too cold or too hot. During the **STAND-BY** setting, the house is not heated above 18°C or cooled below 21°C.

⚠ Caution!

After switching off **STAND-BY** mode, the heat pump system takes some time to get the house back to its set temperature.
If necessary, use the **ELECTRIC HEATING** setting to reach the desired temperature faster.

If your thermostat is in **STAND-BY** mode, you'll see two gray dashes at the place of the desired room temperature.

For example:

6. Hot water

6.1. DHW comfort

DHW comfort

You can set DHW heating by the heat pump via the **DHW COMFORT** function.

	Description
Eco	The supply of hot water is heated to about 58°C once a day at a set time. The supply of hot water is heated to about 62°C once a week to ensure legionella prevention.
Comfort	Throughout the day, the supply of hot water is heated to about 55°C when the temperature falls below 45°C. The supply of hot water is heated to about 58°C once a day at a set time. The supply of hot water is heated to about 62°C once a week to ensure legionella prevention.
Boost	After switching on, the supply of hot water is heated directly and once to about 62°C.
Stand-by	Water heating is disabled. The supply of hot water is heated to about 62°C once a week to ensure legionella prevention.
Off	Water heating is disabled. The Legionella prevention function is disabled.

To view the current setting:

a) Activate the thermostat.

b) Briefly press the **DHW COMFORT** button.

c) The current setting is shown on the screen.

Example DHW comfort setting.

d) The thermostat will return to operating status mode after 10 seconds if there is no further user action.

6.2. Setting DHW comfort

To adjust the DHW comfort, proceed as follows:

a) Activate the thermostat.

b) Press and hold the **DHW COMFORT** button for approximately 3 seconds until the current setting appears flashing on the display.

c) Press the **DHW COMFORT** button repeatedly to display the various settings.

Eco	
Comfort	
Boost	
Stand-by	
Off	

d) Choose the right setting.

e) Confirm the selection by pressing the **LOGO**. The selected setting is shown for 3 seconds.

If you do not confirm your choice within 10 seconds, no change will be made and the thermostat will return to operating status mode.

f) Then the thermostat returns to operating status mode.

6.3. DHW heating start time

DHW comfort

The hot water storage tank is heated once a day to approximately 58°C. You can set the start time. This ensures that you always have enough hot water available when you need it.

Viewing the start time

To view the set start time:

a) Activate the thermostat.

b) Briefly press the **DHW COMFORT** button twice until the start time is displayed.

c) The set start time is shown on the screen.

d) The thermostat will return to operating status mode after 10 seconds if there is no further user action.

Setting the start time

The time required for heating the water depends on the size of the storage tank and the type of heat pump.

WPU 5G	WPV heating time (hours:minutes)				
	90	150	200	240	270
18	2:50	4:40	—	—	—
25/35	1:40	2:45	3:35	4:20	4:55
45	1:20	2:10	2:50	3:25	3:50
55	1:00	1:40	2:10	2:35	2:55
65	0:55	1:30	2:00	2:20	2:40
75	0:45	1:15	1:35	1:55	2:10

To adjust the start time, proceed as follows:

a) Activate the thermostat.

b) Briefly press the **DHW COMFORT** button twice until the start time is displayed.

c) The current setting is shown on the screen.

d) Press and hold the **DHW COMFORT** button for approximately 3 seconds until the start time is displayed flashing.

The thermostat will return to operating status mode after 10 seconds if there is no further user action.

e) **Hours.**
Briefly press the **INCREASE** or **DECREASE** button to set the hours.
Confirm the setting by pressing the **LOGO**. The thermostat goes to the next setting.

f) **Minutes.**
Briefly press the **INCREASE** or **DECREASE** button to set the minutes.
Confirm the setting by pressing the **LOGO**. The time is now set.

g) The time is shown for 3 seconds for confirmation.

h) Then the thermostat returns to operating status mode.

6.4. Setting the DHW temperature

DHW comfort

You can set the desired DHW temperature via the **DHW TEMPERATURE** function. The storage tank is heated to this temperature once a day.

Viewing the DHW temperature

To view the DHW temperature setting:

a) Activate the thermostat.

b) Briefly press the **DHW COMFORT** button three times until the setting appears.

c) The DHW temperature is shown on the screen.

d) The thermostat will return to operating status mode after 10 seconds if there is no further user action.

Setting the DHW setpoint

To adjust the DHW temperature, proceed as follows:

a) Activate the thermostat.

b) Press the **DHW COMFORT** button three times until the DHW temperature is displayed.

c) The current setting is shown on the screen.

d) Press and hold the **DHW COMFORT** button for approximately 3 seconds until the DHW temperature is shown flashing.

The thermostat will return to operating status mode after 10 seconds if there is no further user action.

e) Briefly press the **INCREASE** or **DECREASE** button to set the DHW temperature.
Confirm the setting by pressing the **LOGO**. The DHW temperature is now set.

f) The DHW temperature is shown for 3 seconds for confirmation.

g) Then the thermostat returns to operating status mode.

6.5. Legionella prevention

The WPU heat pump is equipped with the automatic **LEGIONELLA PREVENTION** function. This function ensures that the water in the storage tank is heated once a week to about 62 °C. At this temperature, any bacteria present are killed.

> ⚠ **Warning!**
>
> If you turn off tap water heating (e.g. during a holiday absence), the **LEGIONELLA PREVENTION** function will also be disabled!

If you switched on the tap water heating again (**ECO** or **COMFORT**); and the tap water heating has been off for over a week, make sure you follow this procedure before use:

a) Use the single **TAP WATER COMFORT - BOOST** setting and wait for the water in the storage tank to be at temperature **for at least 20 minutes**.

b) Open the hot water taps and rinse the hot water pipes with hot water for a few minutes.

> ⚠ **Warning!**
>
> Make sure that the water does not spray during flushing.

c) If desired, you can heat up the storage tank again after flushing via **BOOST**.

> **Tip**
>
> After a holiday period, we recommend flushing the entire pipe network (both cold and hot water) with fresh water.

7. Ventilation

7.1. Wireless connection

To control your Itho Daalderop ventilation system via the thermostat, you must first connect the ventilation unit wirelessly (RF) to the thermostat.
Follow the instructions for this in this chapter.

*If the thermostat is connected to the heat pump, the **TEMPERATURE** symbol will not be visible during the registering process.*

7.1.1. Pair VENTILATION UNIT to THERMOSTAT

⚠ Caution!

Only a Itho Daalderop ventilation unit is suitable for wireless (RF) connection to the thermostat.

Connect the thermostat to the ventilation unit as follows:

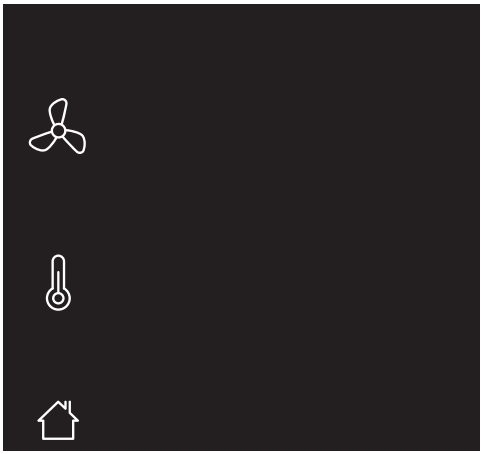
a) Put the ventilation unit in pairing mode as described in the ventilation unit manual.

Make sure that a pairing signal is sent by the thermostat within 2 minutes. If the pairing fails, the procedure must be restarted.

b) The thermostat's pairing procedure can only be started within 2 minutes of the batteries being placed in the thermostat.

If necessary, install the batteries again!

c) Activate the thermostat within two minutes, press the **LOGO** and hold it down (about 5 seconds) until the **VENTILATION**, **TEMPERATURE** and **HOUSE** symbols are displayed on the screen.



Flashing symbols/parts can be paired.
Continuously lit symbols/parts can be unpaired.

*To stop, press the **LOGO**. If no choice is made, the thermostat will return to operating status after 1 minute.*

d) Press the flashing **VENTILATION** symbol.

The symbol will light up continuously and the remaining symbols will disappear.

e) Confirm the choice by pressing the **LOGO**.

f) When setting up the wireless connection, a flashing dot will be visible on the screen.

g) Once the pairing is completed successfully, the signal strength of the connection will be displayed on the screen.
1 = poor | 5 = strong.

h) The thermostat will return to operating status.

If the pairing fails, the symbol will flash on the thermostat and two white dashes of "--" will be displayed on the screen. After that, the thermostat will return to the pairing screen.
Stop the pairing procedure and repeat the procedure from the start.

---

i) The ventilation unit is now connected to the thermostat and the settings are visible in the screen.

7.1.2. Unpairing VENTILATION UNIT from THERMOSTAT

The thermostat and the ventilation unit are unpaired as follows:

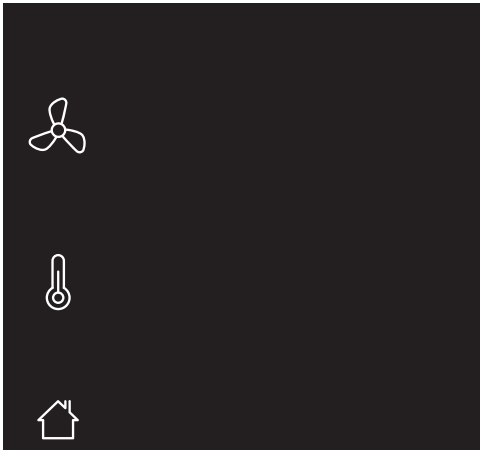
a) Set the ventilation unit to pairing mode as described in the ventilation unit manual.

Make sure that an unpairing signal is sent by the thermostat within 2 minutes. If the unpairing fails, the procedure must be restarted.

b) The thermostat unpairing procedure can only be started within 2 minutes of the batteries being placed in the thermostat.

If necessary, replace the batteries!

c) Activate the thermostat within two minutes, press the **LOGO** and hold it down (about 5 seconds) until the **VENTILATION**, **TEMPERATURE** and **HOUSE** symbols are displayed on the screen.



Flashing symbols/parts can be paired.
Continuously lit symbols/parts can be unpaired.

*To stop the unpairing procedure, press the **LOGO** . If no choice is made, the thermostat will return to operating status after 1 minute.*

d) Press the **VENTILATION** symbol .

The remaining symbols disappear.

e) Confirm the choice by pressing the **LOGO**.

f) After unpairing, the thermostat will automatically return to the operating status.

g) The thermostat is no longer paired with the ventilation unit. The settings of the ventilation unit are no longer visible on the screen.

7.2. Ventilation system

The Itho Daalderop ventilation unit will automatically set the thermostat to the correct type of ventilation system:

- **Standard ventilation**:

The ventilation system consists only of a ventilation unit.

- **Auto-ventilation**

The ventilation system consists of a ventilation unit extended with one or more sensors (CO_2, PIR or RV) for a regulated indoor climate.

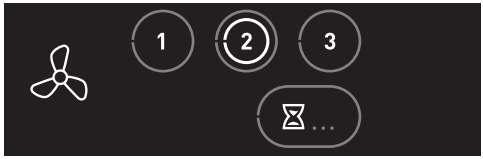
7.3. Standard ventilation

1	Low mode
2	Medium mode
3	High mode

The ventilation unit can be switched to three different ventilation modes via the thermostat.

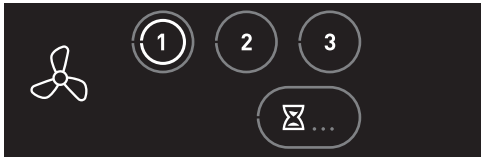
- Level 1, **low speed**; when one person is present, or when no-one is present.
- Level 2, **medium speed**; when more than one person is present.
- Level 3, **high speed**; during cooking, showering or bathing, or when a lot of people are present.

a) Activate the thermostat.
On the screen, the active position is shown by means of a white ring in button **1**, **2** or **3**.



b) Choose the desired ventilation mode by pressing the button **1**, **2** or **3** briefly.

c) Your choice is confirmed by the appearance of a white ring in the button.



7.4. Auto-ventilation

AUTO	• Auto-ventilation • Auto-Night [1]

1) Only available if the connected product supports the functionality.

Always use the Auto-ventilation mode when the ventilation system is extended with one or more sensors for a controlled indoor climate.

- Auto mode, **automatic mode**; control based on existing sensors (CO_2 and/or RV). The capacity is controlled automatically.

- The RF CO_2 sensor measures the CO_2 concentration in space.
- The RF-RV sensor measures the relative humidity in the space.
- The RF-PIR sensor detects presence (and absence) in the space.

This way, the ventilation is constantly automatically adjusted and you are assured of a good indoor climate in the most efficient and energy-efficient way.

a) Activate the thermostat.
On the screen, the active position is shown by means of a white ring in the **AUTO** button.

Auto-Night

Caution!

The **Auto-Night** mode is only available with one or more CO_2 sensors.

During the **Auto-Night mode**, the capacity during low mode is increased, so that you are assured of an optimal climate during sleep.

Turning the **Auto-Night** mode on or off is as follows:

a) Activate the thermostat.
On the screen, the active position is shown by means of the white ring in the **AUTO** button.

b) Repeatedly press the **AUTO button** to turn **Auto-Night** mode on or off.
- **Auto-Night** enabled: the white ring is shown flashing.
- **Auto-Night** disabled: the white ring is lit continuously.

Caution!

The **Auto-Night** mode does not automatically turn off. You have to turn off the mode yourself!

Manually enable mode 1, 2, or 3

It is possible to manually opt for mode 1, 2 or 3 during auto-ventilation (see *Standard ventilation on page 29*).

a) Activate the thermostat.
b) Choose the ventilation mode by pressing the button **1**, **2** or **3** briefly.
c) Your choice is confirmed by the appearance of a white ring in button **1**, **2** or **3**.
The Auto-ventilation mode is now turned off.

The Auto-ventilation mode must be manually switched back on!

Turn auto-ventilation again

If manually chosen for the mode 1, 2 or 3 will also have to be manually switched back to Auto-ventilation.

a) Activate the thermostat.
b) Choose automatic mode by pressing the **AUTO** button briefly.
c) On the screen, the active position is shown by means of a white ring in the **AUTO** button.
The Auto-ventilation mode is switched back on.

7.5. Timer

	Timer, position 1 10 minutes high position
	Timer, position 2 20 minutes high position
	Timer, position 3 30 minutes high position

It is possible to switch the ventilation unit to the highest position via the thermostat for 10, 20 or 30 minutes.

- **Timer** for switching the unit to high speed for a period of time that can be adjusted.

After the set time period has expired, the ventilation unit switches back to Auto-ventilation or the last chosen position before the timer is switched on, unless this is the high setting. In that case, the ventilation unit switches to the medium or low setting depending on which one was chosen last.

a) Activate the thermostat.
b) By pressing the **TIMER** button several times, the different positions will appear.
c) Choose the correct position.
d) Your choice is confirmed by the appearance of a white ring in the **TIMER** button.

The timer can be interrupted at any time by pressing the low setting, medium setting, high setting or auto-ventilation button.

8. The most frequent complaints

The following is an overview of the most common complaints known to Itho Daalderop. For each of these complaints there are a number of possible causes with a solution given in each case, however, further research may be needed to resolve a complaint.

Tip

If you cannot resolve the complaint yourself, please contact your installer or service organisation.

Thermostat | Your thermostat doesn't respond/stays black	
Cause	Solution
a) The batteries have not been installed.	• Install new batteries.
b) The batteries are flat.	• Install new batteries.
c) The thermostat is faulty.	• If you can't fix the fault or the defect yourself, contact your installer or service organisation.

Thermostat | Symbols/buttons are not visible on the screen.	
Cause	Solution
a) The heat pump is not connected to the thermostat.	• Connect the thermostat to the heat pump.
b) The thermostat is wrongly wired whilst connected to the heat pump.	• Connect the thermostat to the OT terminal of the heat pump.
c) The ventilation unit is not wirelessly connected to the thermostat.	• Pair the thermostat with the ventilation unit.

Thermostat | You can't connect wirelessly.	
Cause	Solution
a) There is no voltage on the device to be connected.	• Check and restore the voltage of the device.
b) The device to be connected is defective.	• If you can't fix the fault or the defect yourself, contact your installer or service organisation.
c) The thermostat is faulty.	• If you can't fix the fault or the defect yourself, contact your installer or service organisation.

It's too cold in the living room.			
Cause		Solution	
a)	The desired temperature is set too low on the thermostat.	•	Increase the desired temperature.
b)	The thermostat is placed in a sunny and/or warm place.	•	Move the thermostat to a better position.
		•	Limit the impact of a heat source or direct sunlight on the thermostat.
c)	The screen of the room thermostat does not show anything.	•	Check the thermostat's batteries.
		•	Check and restore the power supply of the heat pump.
		•	Has the fuse in the meter box tripped?
		•	Is the residual current device (RCD) in the meter box enabled?
d)	Hot water is generated.	•	Wait until the heat pump is ready to generate hot water; there can be no heating at the same time.
e)	There is too much heat loss from your home due to open windows or doors.	•	Close open windows or doors.
f)	There is no good flow of water in the heating system.	•	The pressure of the central heating system should be between 1.5 and 2 bar.
		•	Vent the heating system.
g)	The heat pump provides insufficient heat.	•	Switch on the auxiliary electric heater. [1]
h)	The heat pump is in an error state.	•	Check the error code tables for a solution.

1) Only available if the heat pump is equipped with an electric heating element.

Temperature | Too hot in the living room.			
Cause		Solution	
a)	The desired temperature is set too high on the thermostat.	•	Lower the desired temperature.
b)	The central heating system is not properly regulated.	•	Ensure the radiators of the central heating system are correctly adjusted.
c)	The thermostat is placed in a draughty and/or cold place.	•	Move the thermostat to a better position.
		•	Limit the influence of draughts and cold.
e)	There is too much heat supply in your home due to, for example, heat irradiation from the sun or electrical appliances.	•	Avoid additional heat supply.
		•	Close open windows or doors.
f)	There is no good flow of water in the heating system.	•	The pressure of the central heating system should be between 1.5 and 2 bar.
		•	Vent the heating system.

It's too cold in another room with its own thermostat.			
Cause		Solution	
a)	The desired temperature is set too low on the thermostat.	•	Increase the desired temperature.
b)	The thermostat is placed in a sunny and/or warm place.	•	Move the thermostat to a better position.
		•	Limit the impact of a heat source or direct sunlight on the thermostat.
c)	The screen of the room thermostat does not show anything.	•	Check the thermostat's batteries.
d)	Hot water is generated.	•	Wait until the heat pump is ready to generate hot water; there can be no heating at the same time.
e)	There is too much heat loss from your home due to open windows or doors.	•	Close open windows or doors.
f)	There is no good flow of water in the heating system.	•	The pressure of the central heating system should be between 1.5 and 2 bar.
		•	Vent the heating system.
g)	The heat pump is in an error state.	•	Check the error code tables for a solution.

Temperature | Too hot in another room with its own thermostat.			
Cause		Solution	
a)	The desired temperature is set too high on the thermostat.	•	Lower the desired temperature.
b)	The central heating system is not properly regulated.	•	Ensure the radiators of the central heating system are correctly adjusted.
c)	The thermostat is placed in a draughty and/or cold place.	•	Move the thermostat to a better position.
		•	Limit the influence of draughts and cold.
d)	There is too much heat supply in your home due to, for example, heat irradiation from the sun or electrical appliances.	•	Avoid additional heat supply.
		•	Close open windows or doors.
e)	There is no good flow of water in the heating system.	•	The pressure of the central heating system should be between 1.5 and 2 bar.
		•	Vent the heating system.

The heat pump does not respond to operation.			
Cause		Solution	
a)	The anti-tripping mode of the heat pump is active.	•	The heat pump will start heating or cooling again after a waiting period.
b)	The heat pump is in an error state.	•	Check the error code tables for a solution.

There's no hot water.			
Cause		Solution	
a)	The tap water heating is set to **ECO** and the daily supply of hot water has been consumed.	•	Use the **BOOST** setting to heat up the water once. • If this happens often, change the tap water heating to the **COMFORT** mode.
b)	The tap water heater is disabled.	•	Change the tap water heating to **ECO**co or **COMFORT** mode.
c)	The screen of the room thermostat does not show anything.	•	Check the thermostat's batteries. • Check and restore the power supply of the heat pump. • Has the fuse in the meter box tripped? • Is the residual current device (RCD) in the meter box enabled?
d)	The heat pump is in an error state.	•	Check the error code tables for a solution.

The ventilation unit does not respond to operation.			
Cause		Solution	
a)	The wireless connection to your thermostat has been interrupted.	•	Check and restore the wireless connection between the ventilation unit and the thermostat. • Check and restore the voltage of the ventilation unit.
b)	The ventilation unit has an error.	•	For causes and solutions, see the ventilation unit manual.

9. Notifications

9.1. Tap water

	Tap water disabled
	Tap water enabled
	Heating tap water

The screen shows the status of the hot tap water.

- **Tap water turned off**
  The tap water heating is in **STAND-BY** mode or**OFF**.

- **Tap water enabled**
  The tap water heating is in **ECO** mode, **COMFORT** mode or **BOOST**mode.

- **Heating the tap water**
  The tap water in the storage tank is brought to temperature.

When the BOOST function is activated, the thermostat symbol will flash.

9.2. Battery

	Battery

The battery symbol appears when the thermostat is activated and battery capacity is reduced to 10% or less.

Go to **Replacing thermostat batteries on page 57** to fit new batteries.

9.3. Fill with water

	Fill with water
	Service

If the water pressure in the central heating system is too low, this will be displayed on the screen via the **Refill Water** notification.
The orange water pressure symbol flashes and the temperature symbol lights up continuously after the thermostat is activated.

The **SERVICE** button will also be lit on this notification.

The notification disappears automatically once the water pressure of the central heating system has been restored.

9.4. Replace air filter

	Replace filter
	Service

If the ventilation unit is equipped with a filter, the notification **Replace filter**on the thermostat will appear when this filter is polluted [1].
The orange filter symbol flashes and the ventilation symbol is lit continuously after the thermostat is activated.

The **SERVICE** button will also be lit on this notification.

Reset notification.

After the filter has been replaced, you must reset the notification.

The notification can only be reset within 10 minutes of the ventilation unit being connected to the power. After 10 minutes, the procedure must be restarted.

a) Activate the thermostat.
b) Hold down the **SERVICE** button (about 5 seconds) until the **Replace Filter** notification is gone.

1) Function only available if the connected products support the functionality.

9.5. Air quality

	Indoor Climate Good
	Indoor Climate Reasonable
	Indoor climate Poor

Caution!

This feature is only available when a CO_2 sensor is connected to the ventilation system.

The screen shows the air quality in the home.

Unhealthy air is caused in many cases by factors that you yourself control. Moisture, for example, is released during activities such as cooking, showering and washing dishes. It is important to drain moisture, because if the air contains too much moisture, mold and dust mites are given free rein. In addition, we also pollute the indoor climate ourselves. We perspire, we exhale carbon dioxide, performing DIY activities in the house, like painting and gluing, and some people smoke. The latter is the strongest polluter of the indoor air.

If you ventilate continuously, moisture, mold and dust mites are less likely. In addition, this saves you on your heating costs, because heating a home with a humid indoor climate costs more energy than heating a house that is dry on the inside.
Make sure the ventilation system is always on.

Ventilation ensures that polluted air is discharged and clean air enters the house. This way you can prevent health problems. Also, your house stays in a better condition because it is less humid. Plus, you'll feel more comfortable in a house with clean air.

9.6. Communication

	Temperature
	Ventilation

If there are problems with communication between your thermostat and a connected device, the following notifications may appear:

Notification	Cause	Solution
The **TEMPERATURE** button flashes.	Communication with the heat pump has been interrupted.	• Check the device in question and fix the error.
The **TEMPERATURE** symbols/ buttons are not visible.	The heat pump is not connected to the thermostat.	• Connect the thermostat to the heat pump.
The **VENTILATION** button flashes.	Communication with the ventilation unit has been interrupted.	• Check the device in question and fix the error.
The symbols/buttons for **VENTILATION** are not visible.	The ventilation unit is not connected to the thermostat.	• Turn on the thermostat to the ventilation unit.

9.7. Sensor error

If the temperature sensor in the thermostat is faulty, you will see 2 white dashes at the location of the room temperature.

Caution!

The error or defect cannot be fixed. Contact your installer.

10. Faults

10.1. Error messages

	Service

If a connected device or appliance has a malfunction, this is indicated by a flashing **SERVICE** button on the screen The flashing service notification appears once the thermostat is activated.

By pressing the **SERVICE** button, more information appears on the screen.

- If the heat pump displays a message, the temperature symbol also appears (see **Temperature error on page 40**).
- If the ventilation unit displays a message, the ventilation symbol also appears. (see **Ventilation error on page 41**)

By pressing the **SERVICE** button again or after 20 seconds of no operation, the thermostat will return to operating status.

If you can't fix the error or the defect yourself, contact your installer or service organisation.

10.2. Temperature error

	Temperature
Error code	Error code
	Service

By pressing the **SERVICE** button, the temperature symbol and an error code appear on the screen. This error code allows you to determine the cause of the error.

*For example: The error code **A1 13** consists of a device code (A1) and a serial number (13) that are shown alternately.*

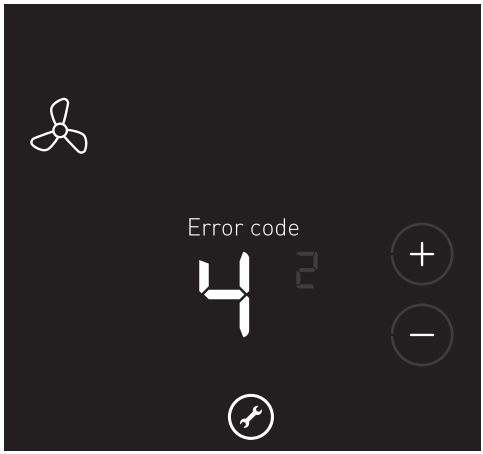
If another device has an error at the same time, the **INCREASE** or **REDUCE** buttons will be visible. By pressing these buttons, the various errors can be viewed. The small grey digits show the serial number of the error.

Follow the instructions as described in the **Error tables on page 42**.

10.3. Ventilation error

	Ventilation
Error code	Error code
	Service

By pressing the **SERVICE** button, the ventilation symbol and an error code appear on the screen. This error code allows you to determine the cause of the error.



*The thermostat may be paired with an **existing** Itho Daalderop ventilation unit, which does not support this functionality. In the event of an error, only the ventilation symbol with the text **ERROR CODE** will appear on the screen.*

If another device has an error at the same time, the **INCREASE** or **REDUCE** buttons will be visible. By pressing these buttons, the various errors can be viewed. The small grey digits show the serial number of the error.

For an overview of the various error codes, please refer to the manual of the ventilation unit.

10.4. Error tables

Try to resolve the error by resetting the device:

a) Disconnect the device from the mains power for twenty seconds.

b) Re-start the device.

> **Tip**
>
> If the appliance remains in an error state or the same error occurs repeatedly, contact your installer or service organisation.

A0 3	
Communication error.	
Cause	Solution
a) Communication with the heat pump has been interrupted.	• Check and restore the power supply of the heat pump. • Check and restore the cabling between the ventilation unit and the thermostat.

A1 1	
Temperature sensor error. T1 outside sensor.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 2	
Temperature sensor error. T3 Boiler low.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the sensor resistance and use the spare sensor if needed.

A1 3	
Temperature sensor error. T2 Boiler high.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the sensor resistance and replace the thermal storage tank if needed.

A1 4	
Temperature sensor error. T4 Injection.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 5	
Temperature sensor error. T5 Suction gas.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 6	
Temperature sensor error. T6 Discharge.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 7	
Temperature sensor error. T7 Liquid.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 8	
Temperature sensor error. T8 Source return.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 9	
Temperature sensor error. T9 Source supply.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 10	
Temperature sensor error. T11 Central heating return.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 11	
Temperature sensor error. T10 CH supply.	
Cause	Solution
a) Temperature is outside the normal operational area or the sensor has been interrupted or short-circuited.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 12	
CH pressure sensor error.	
Cause	Solution
a) Central heating pressure sensor is not functioning properly or is faulty.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 13	
Flow measuring coil 1 error.	
Cause	Solution
a) Flow measuring coil 2 is not functioning properly or is faulty.	• Check the WPU control board and replace if necessary.

A1 14	
Flow measuring coil 2 error.	
Cause	Solution
a) Flow measuring coil 2 is not functioning properly or is faulty.	• Check the WPU control board and replace if necessary.

A1 15	
Source flow sensor error.	
Cause	Solution
a) The source flow sensor is not functioning properly or is faulty.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 16	
Manual operation selected.	
Cause	Solution
a) An automatic function or setting has been changed to manual control.	• Use the Itho Daalderop Service Tool to turn off manual operation.

A1 17	
HP switch activated.	
Cause	Solution
a) The pressure switch (high pressure switch) has been activated.	• Check the condenser's water-side flow. • Vent the tap water system. • Vent the heating system. • Check the boiler pump's cabling and connectors. • Check the boiler pump and replace if necessary. • Check the CH pump's cabling and connectors. • Check the central heating pump and replace if necessary.

A1 18	
HP switch error.	
Cause	Solution
a) The pressure switch (high pressure switch) is not functioning properly or is faulty.	• Check the pressure switch's cabling and connectors. • Check the pressure switch and replace if necessary.

A1 19	
CH pressure too low.	
The heat pump will not work until the CH pressure is restored.	
Cause	Solution
a) Central heating system water pressure too low.	• Refill the heating system and check for water leakage. The pressure of the central heating system should be between 1.5 and 2 bar.

A1 20	
CH pressure too low.	
Heat pump is running constantly.	
Cause	Solution
a) Central heating system water pressure too low.	• Refill the heating system and check for water leakage. The pressure of the central heating system should be between 1.5 and 2 bar.

A1 21	
Compressor error.	
Cause	Solution
a) The compressor starting current is too high.	• Check the compressor temperature protection setting and replace if necessary. • Check the contactor (compressor relay) if present and replace if necessary. • Wait until the compressor has cooled down, then reset the heat pump and check the maximum condensation pressure during operation.
b) The compressor temperature protection setting is not functioning properly or is faulty.	• Check the temperature protection's cabling and connectors. • Check the compressor temperature protection setting and replace if necessary.

A1 22	
Power socket phase sequence error.	
Cause	Solution
a) The phase order in the power socket is not clockwise on heat pump.	• At the power socket, swap over phases L2 and L3.

A1 23	
3-phase power supply error.	
Cause	Solution
a) There is no clockwise field on the incoming 3 phase power supply on heat pump.	• At the power socket, swap over phases L2 and L3.

A1 24	
Compressor current draw too low.	
Cause	Solution
a) The power consumption of the compressor is too low.	• Wait until the compressor has cooled down, then reset the heat pump and check the maximum condensation pressure during operation. • Check the temperature protection's cabling and connectors. • Check the compressor temperature protection setting and replace if necessary. • Check the contactor (compressor relay) if present and replace if necessary.

A1 25	
Heating element current draw too low.	
Cause	Solution
a) The power consumption of the electric heating element is too low.	• Resistance heating element has overheated and been disabled. Reset the thermal switch (Klixon). • Check the resistance heating element's cabling and connectors. • Check the resistance heating element and replace if necessary.

A1 26	
Compressor current draw too high.	
Cause	Solution
a) The power consumption of the compressor is too high.	• Check the condenser's water-side flow. • Vent the tap water system. • Vent the heating system. • Check the boiler pump's cabling and connectors. • Check the boiler pump and replace if necessary. • Check the CH pump's cabling and connectors. • Check the central heating pump and replace if necessary. • Check for a short circuit in the compressor windings and replace the compressor if necessary.

A1 27	
Heating element current draw too high.	
Cause	Solution
a) The power consumption of the electric heating element is too high.	• Check the resistance heating element's cabling and connectors. • Check the resistance heating element and replace if necessary.

A1 28	
Source return temperature too low.	
Cause	Solution
a) The source return temperature (T8) is too low.	• Check the resistance of the sensor and replace it if necessary. • Increase the flow in the source system. • Increase the source temperature through additional regeneration or an additional source loop. • Check that the check valves are functioning for all WPU heat pumps connected to the collective source system. Clean these or replace if necessary. Only applies to WPU E/GE/KC-5G.

A1 29	
Source supply temperature too low.	
Cause	Solution
a) The source supply temperature (T9) is too low.	• Check the resistance of the sensor and replace it if necessary. • Increase the flow in the source system. • Increase the source temperature through additional regeneration or an additional source loop. • Check that the check valves are functioning for all WPU heat pumps connected to the collective source system. Clean these or replace if necessary. Only applies to WPU E/GE/KC-5G.

A1 30	
Liquid temperature too high.	
Cause	Solution
a) The liquid temperature (T7) is too high.	• Check the condenser's water-side flow. • Check the resistance of the sensor and replace it if necessary. • Vent the tap water system. • Vent the heating system. • Check the boiler pump's cabling and connectors. • Check the boiler pump and replace if necessary. • Check the CH pump's cabling and connectors. • Check the central heating pump and replace if necessary.

A1 31	
Discharge temperature too high.	
Cause	Solution
a) The discharge temperature (T6) is too high.	• Check the resistance of the sensor and replace it if necessary. • Use a pressure gauge set to check the pressure for the compressor suction and discharge lines. • Use a contact thermometer to check the temperatures for the compressor suction and discharge lines. Compare the measured values to the service tool's read-out. • Check the heat pump for refrigerant leaks.

A1 32	
Injection temperature too low.	
Cause	Solution
a) The injection temperature (T4) is too low.	• Check the resistance of the sensor and replace it if necessary. • Use a pressure gauge set to check the pressure for the compressor suction and discharge lines. • Use a contact thermometer to check the temperatures for the compressor suction and discharge lines. Compare the measured values to the service tool's read-out. • Increase the source temperature through additional regeneration or an additional source loop.

A1 33	
Discharge temperature too high in relation to liquid temperature.	
Cause	Solution
a) Too high discharge temperature in relation to the liquid temperature and the expansion valve is completely open.	• Check the resistance of the sensor and replace it if necessary. • Use a pressure gauge set to check the pressure for the compressor suction and discharge lines. • Use a contact thermometer to check the temperatures for the compressor suction and discharge lines. Compare the measured values to the service tool's read-out. • Check the heat pump for refrigerant leaks.

A1 34	
CH supply temperature too high.	
Cause	Solution
a) The central heating supply temperature (T10) is too high.	• Check the water-side flow of the central heating system. • Vent the heating system. • Check the CH pump's cabling and connectors. • Check the central heating pump and replace if necessary.

A1 36	
Thermostat communication error.	
Cause	Solution
a) Thermostat communication error.	• Is the room thermostat properly connected? • Replace the thermostat. • Check the WPU control board and replace if necessary.

A1 37	
Compressor power consumption error.	
Cause	Solution
a) Compressor power consumption without control.	• Check the contactor (compressor relay) if present and replace if necessary. • Check the WPU control board and replace if necessary.

A1 38	
Element relay error.	
Cause	Solution
a) The element relay lingers.	• Check the WPU control board and replace if necessary.

A1 42	
Temperature sensor error. T8 (Source return) and T9 (Source supply).	
Cause	Solution
a) Temperature sensor T8 (Source return) and T9 (Source supply) are not functioning properly or are defective.	• Check the sensor cabling and/or connectors. • Check the resistance of the sensor and replace it if necessary.

A1 43	
Thermostat error.	
Cause	Solution
a) An unsuitable thermostat is connected.	• Connect a Spider climate thermostat, version 34 or higher.

A3 1	
No communication between main thermostat and controller.	
Cause	Solution
a) There is no wireless communication between the main thermostat and the controller for too long.	• The distance between the thermostat and the controller is too great. Install an Itho Daalderop RF repeater. • Replace the thermostat battery if necessary. • Check the power to the controller and restore if necessary. • Contact your installer or service organisation.

A3 2	
No communication between room thermostat and controller.	
Cause	Solution
a) There is no RF communication between a room thermostat and the controller for too long.	• The distance between the thermostat and the controller is too great. Install an Itho Daalderop RF repeater. • Replace the thermostat battery if necessary. • Contact your installer or service organisation.

A3 3

No communication between master controller and subcontroller 1.

Cause	Solution
a) There is no communication between the master controller and subcontroller 1 for too long.	• Check the power to the controller and restore if necessary. • The distance between the controllers is too large. Install an RF+ communication board and antenna. • The distance between the controllers is still too great. Install an Itho Daalderop RF repeater. • Contact your installer or service organisation.

A3 4

No communication between master controller and subcontroller 2.

Cause	Solution
a) There is no communication between the master controller and subcontroller 2 for too long.	• Check the power to the controller and restore if necessary. • The distance between the controllers is too large. Install an RF+ communication board and antenna. • The distance between the controllers is still too great. Install an Itho Daalderop RF repeater. • Contact your installer or service organisation.

A3 5

Configuration error.

Cause	Solution
a) Configuration not completed properly.	• Contact your installer or service organisation.

A3 6

Valve motor defective.

A fast flashing LED on the controller indicates which valve motor is defective.

Cause	Solution
a) A valve motor is not responding.	• Check the valve motor cabling and/or connectors. • Check the valve motor and replace if necessary.

A3 8	
Replace room thermostat batteries.	
Cause	Solution
a) The batteries of a room thermostat must be replaced.	• Check the thermostat to see whether the battery symbol is visible. • Replace the thermostat batteries.

A3 9	
Replace main thermostat batteries.	
Cause	Solution
a) The batteries of the main thermostat must be replaced.	• Check the thermostat to see whether the battery symbol is visible. • Replace the thermostat batteries.

A3 10	
Main thermostat sensor error	
The error or defect cannot be fixed.	
Cause	Solution
a) The temperature sensor of the main thermostat is defective.	• Replace the thermostat. • Contact your installer or service organisation.

A3 11	
Room thermostat sensor fault	
The error or defect cannot be fixed.	
Cause	Solution
a) The temperature sensor of a room thermostat is defective.	• Replace the thermostat. • Contact your installer or service organisation.

A3 13	
Controller manual mode enabled.	
Cause	Solution
a) The controller is in manual mode.	• Disconnect the power to the controller for at least 10 seconds.

11. Service and maintenance

11.1. Inspection and/or maintenance

⚠ Caution!

Always use original Itho Daalderop parts when performing replacements or repairs.
This ensures the safety and correct operation of your product and any warranty claim.

Note

Poor maintenance of the appliance can lead to higher energy consumption, shorter life and unsafe operation.
Claims against the factory warranty may be rejected if it can be shown that the maintenance was not carried out properly.

As a user, there are a number of things that you can check and perform yourself (regularly):

- Check for abnormal noises from the heat pump during operation.
- Inspect the pipes and system components for leakage, corrosion and condensation.
- Check the system pressure of the central heating. The pressure of the central heating system should be between 1.5 and 2 bar.
- Check the air in the central heating system for a bubbling noise in the pipes.
- Check the safety group for expansion water dripping into the funnel when heating tap water.
- Check the batteries of the thermostat.
- To clean the outside of the product, it is best to use a damp (use only water) microfibre cloth. If this does not suffice, use liquid soap in combination with a moist microfiber cloth.
  Never use abrasive or aggressive cleaning products that may affect lacquer or materials used.

Itho Daalderop advises the following:

- **Without monitoring**:
  Inspect the device and heat pump system **annually**.
- **With monitoring**:
  Inspect the device and heat pump system **once every 4 years**.
- Maintenance may only be carried out if indicated by the inspection or monitoring.
- Inspection and maintenance work may only be carried out by an approved installer or service organisation.
- As the device owner, it is recommended to sign a maintenance contract with an authorised installer or service organisation
  to ensure a long life and efficient operation.

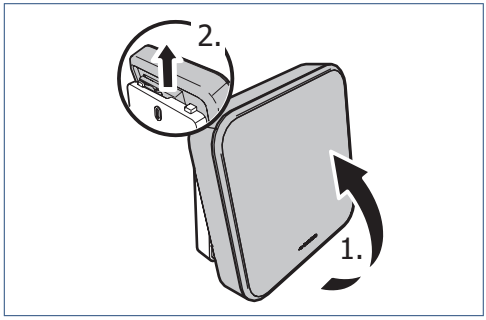
11.2. Replacing thermostat batteries

⚠ Caution!

The use of rechargeable batteries is not permitted.

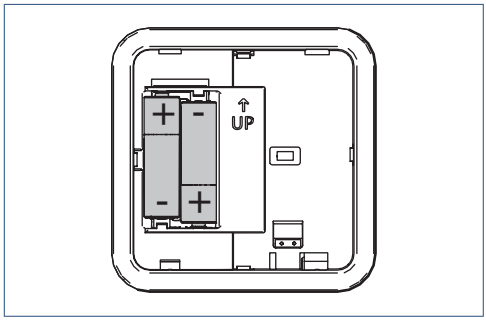
The batteries are replaced as follows:

a) Remove the thermostat from the wall mounting.



b) Remove the two batteries from the battery holder.

c) Fit two new batteries.
Use only 1.5 V lithium AA batteries.

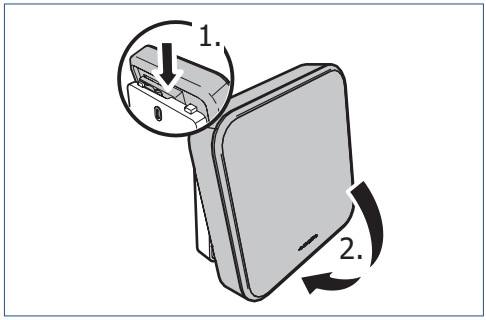


Note the plus and minus poles in the battery holder to fit the batteries in the correct position.

d) After fitting the batteries, the following information will appear on the screen:

1. All symbols for 5 seconds.
2. Then the version number of the software for 5 seconds.
3. The thermostat will then go into standby mode.

e) Place the thermostat back on the wall mounting.



f) Check and restore the lost settings.

11.3. Thermostat Factory Settings

It may be necessary to reset the thermostat to restore factory settings.
The thermostat settings erased by the reset are:

- the temperature setting ;
- the connection with the ventilation unit.

The following settings are stored in the heat pump and remain active:

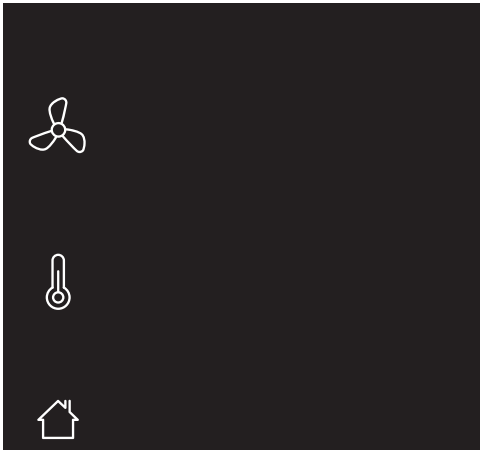
- the **TIME/DATE** settings .;
- the **TAP WATER START** setting.

Resetting your thermostat is done as follows:

a) Thermostat reset can only start within 2 minutes of the batteries being fitted in the thermostat.

If necessary, refit the batteries!

b) Activate the thermostat within two minutes, press the **LOGO** and hold it down (about 5 seconds) until the **VENTILATION**, **TEMPERATURE** and **HOUSE** symbols are displayed on the screen.

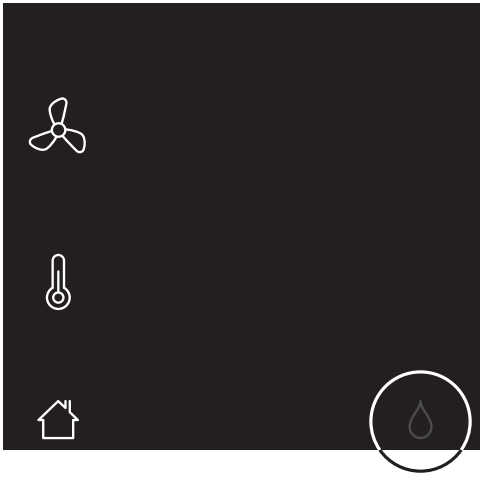


Flashing symbols/parts are not paired.
Continuously lit symbols/parts are connected.

c) Press the lower-right corner of the screen (**TAP WATER COMFORT** button) for about 5 seconds until your thermostat restarts

Caution!

The **TAP WATER COMFORT** button is not visible to prevent accidental resetting.



d) The thermostat has been reset to factory settings.
e) Restore the lost settings and wireless connections.

12. Warranty

All Itho Daalderop products are covered by a standard two-year factory warranty.
The full warranty conditions and/or additional warranty periods can be found on the product's page on our website.

Only products supplied with a warranty registration card and serial number, or a QR registration code can be registered for parts warranty.

If there are problems with the operation of our product, we recommend that the consumer first reads the manual.

If problems persists, please contact the installer that installed the product or the Itho Daalderop service department.

13. Declarations

EU declaration of conformity

This declaration of conformity is issued under the sole responsibility of :

Itho Daalderop bv
Postbus 7
4000 AA Tiel
The Netherlands

and concerns the type variants of the product **Combination Heat Pump (WPU)**, **Itho Daalderop** brand :

-
- 03-00357 WPU 55I-5G
- 03-00685 WPU 55I-5G
- 03-00508 WPU 65I-5G
- 03-00686 WPU 65I-5G
- 03-00614 WPU 75I-5G
- 03-00687 WPU 75I-5G
- 03-00719 WPU 18C-5G
- 03-00358 WPU 55C-5G
- 03-00691 WPU 55C-5G
- 03-00509 WPU 65C-5G
- 03-00692 WPU 65C-5G
- 03-00615 WPU 75C-5G
- 03-00693 WPU 75C-5G
- 03-00662 WPU 18KC-5G
- 03-00580 WPU 55KC-5G
- 03-00697 WPU 55KC-5G
- 03-00581 WPU 65KC-5G
- 03-00698 WPU 65KC-5G
- 03-00608 WPU 75KC-5G
- 03-00699 WPU 75KC-5G

- 03-00663 WPU 18E-5G
- 03-00606 WPU 55E-5G
- 03-00703 WPU 55E-5G
- 03-00607 WPU 65E-5G
- 03-00704 WPU 65E-5G
- 03-00582 WPU 75E-5G
- 03-00705 WPU 75E-5G
- 03-00664 WPU 18COE-5G
- 03-00612 WPU 55COE-5G
- 03-00709 WPU 55COE-5G
- 03-00613 WPU 65COE-5G
- 03-00710 WPU 65COE-5G
- 03-00513 WPU 75COE-5G
- 03-00711 WPU 75COE-5G
- 03-00752 WPU 18GE-5G
- 03-00756 WPU 55GE-5G
- 03-00757 WPU 65GE-5G
- 03-00758 WPU 75GE-5G

The product is in conformity with the relevant Union harmonisation legislation.

Directive 2009/125/EC (Ecodesign) **Delegated Regulation (EU) 811/2013** **Regulation (EU) 813/2013** **Regulation (EU) 2017/1369**	- EN 12102-1:2022 - EN 12102-2:2019 - EN 14825:2022
Directive 2011/65/EU (RoHS)	

Directive 2014/53/EU (RED)	- EN 55014-1:2017 +A11:2020 - EN 55014-2:2015 - EN 60335-1:2012 +AC:2014 +A11:2014 +A13:2017 +A1:2019 +A2:2019 +A14:2019 +A15:2021 - EN 60335-2-40:2003 +A11:2004 +A12:2005 +A1:2006 +AC:2006 +A2:2009 +AC:2010 +A13:2012 +A13:2012/AC:2013 - EN 61000-3-2:2019 - EN 61000-3-3:2013 +A1:2019 - EN 60730-1:2011 - EN 60730-2-9:2010 - EN 62311:2020 - EN 300 220-1 V3.1.1:2017 - EN 300 220-2 V3.2.1:2018 - EN 301 489-1 V2.2.3:2019 - ENV2.1.1:2019 - EN 301 489-52 V1.2.1:2021 - EN 301 908-1 V15.2.1:2023 - EN 301 908-13 V13.2.1:2022
Directive 2014/68/EU (PED)	- EN 378-2:2016

The notified body **Kiwa Nederland bv (NB 0063)** has performed a conformity assessment procedure according to **Annex III** of the Directive and issued the EU type examination certificate **222140062/AA/00**.

Signed for and on behalf of:
Tiel, 1 April 2024.

CE

Thijs Kleijn
Innovation Manager Heat Pumps

EU declaration of conformity

This declaration of conformity is issued under the sole responsibility of :

Itho Daalderop bv
Postbus 7
4000 AA Tiel
The Netherlands

and concerns the type variants of the product **Combination Heat Pump (WPU)**, **Itho Daalderop** brand :

- **03-00414 WPU 25I-5G**
- **03-00682 WPU 25I-5G**
- **03-00351 WPU 35I-5G**
- **03-00683 WPU 35I-5G**
- **03-00354 WPU 45I-5G**
- **03-00684 WPU 45I-5G**
- **03-00415 WPU 25C-5G**
- **03-00688 WPU 25C-5G**
- **03-00352 WPU 35C-5G**
- **03-00689 WPU 35C-5G**
- **03-00355 WPU 45C-5G**
- **03-00690 WPU 45C-5G**
- **03-00562 WPU 25KC-5G**
- **03-00694 WPU 25KC-5G**
- **03-00563 WPU 35KC-5G**
- **03-00695 WPU 35KC-5G**
- **03-00564 WPU 45KC-5G**
- **03-00696 WPU 45KC-5G**

- **03-00603 WPU 25E-5G**
- **03-00700 WPU 25E-5G**
- **03-00604 WPU 35E-5G**
- **03-00701 WPU 35E-5G**
- **03-00605 WPU 45E-5G**
- **03-00702 WPU 45E-5G**
- **03-00609 WPU 25COE-5G**
- **03-00706 WPU 25COE-5G**
- **03-00610 WPU 35COE-5G**
- **03-00707 WPU 35COE-5G**
- **03-00611 WPU 45COE-5G**
- **03-00708 WPU 45COE-5G**
- **03-00753 WPU 25GE-5G**
- **03-00754 WPU 35GE-5G**
- **03-00755 WPU 45GE-5G**

The product is in conformity with the relevant Union harmonisation legislation.

Directive 2009/125/EC (Ecodesign) **Delegated Regulation (EU) 811/2013** **Regulation (EU) 813/2013** **Regulation (EU) 2017/1369**	- EN 12102-1:2022 - EN 12102-2:2019 - EN 14825:2022
Directive 2011/65/EU (RoHS)	

Directive 2014/53/EU (RED)	- EN 55014-1:2017 +A11:2020 - EN 55014-2:2015 - EN 60335-1:2012 +AC:2014 +A11:2014 +A13:2017 +A1:2019 +A2:2019 +A14:2019 +A15:2021 - EN 60335-2-40:2003 +A11:2004 +A12:2005 +A1:2006 +AC:2006 +A2:2009 +AC:2010 +A13:2012 +A13:2012/AC:2013 - EN 61000-3-2:2019 - EN 61000-3-11:2019 - EN 60730-1:2011 - EN 60730-2-9:2010 - EN 62311:2020 - EN 300 220-1 V3.1.1:2017 - EN 300 220-2 V3.2.1:2018 - EN 301 489-1 V2.2.3:2019 - ENV2.1.1:2019 - EN 301 489-52 V1.2.1:2021 - EN 301 908-1 V15.2.1:2023 - EN 301 908-13 V13.2.1:2022
Directive 2014/68/EU (PED)	- EN 378-2:2016

The notified body **Kiwa Nederland bv (NB 0063)** has performed a conformity assessment procedure according to **Annex III** of the Directive and issued the EU type examination certificate **222140266/AA/00**.

Signed for and on behalf of:
Tiel, 1 April 2024.

CE

Thijs Kleijn
Innovation Manager Heat Pumps

EU declaration of conformity

This declaration of conformity is issued under the sole responsibility of :

Itho Daalderop bv
Postbus 7
4000 AA Tiel
The Netherlands

and concerns the type variants of the product **Room Thermostat**, **Itho Daalderop** brand :

- **03-00476 Spider Climate Thermostat**

The product is in conformity with the relevant Union harmonisation legislation.

Directive 2011/65/EU (RoHS)	
Directive 2014/53/EU (RED)	- EN 60730-1:2016 +A1:2019 - EN 60730-2-9:2019 - EN 62479:2010 - EN 300 220-1 V3.1.1:2017 - EN 300 220-2 V3.2.1:2018 - EN 301 489-1 V2.2.3:2019 - ENV2.1.1:2019

The notified body **Kiwa Nederland bv (NB 0063)** has performed a conformity assessment procedure according to **Annex III** of the Directive and issued the EU type examination certificate **222140243/AA/00**.

The following accessories and parts, including software, are required for the the product to operate as intended:

- **2x AA batteries**

Signed for and on behalf of:

Tiel, December 1, 2022.

CE

Pieter Lagerwerf
Innovation Manager Connectivity