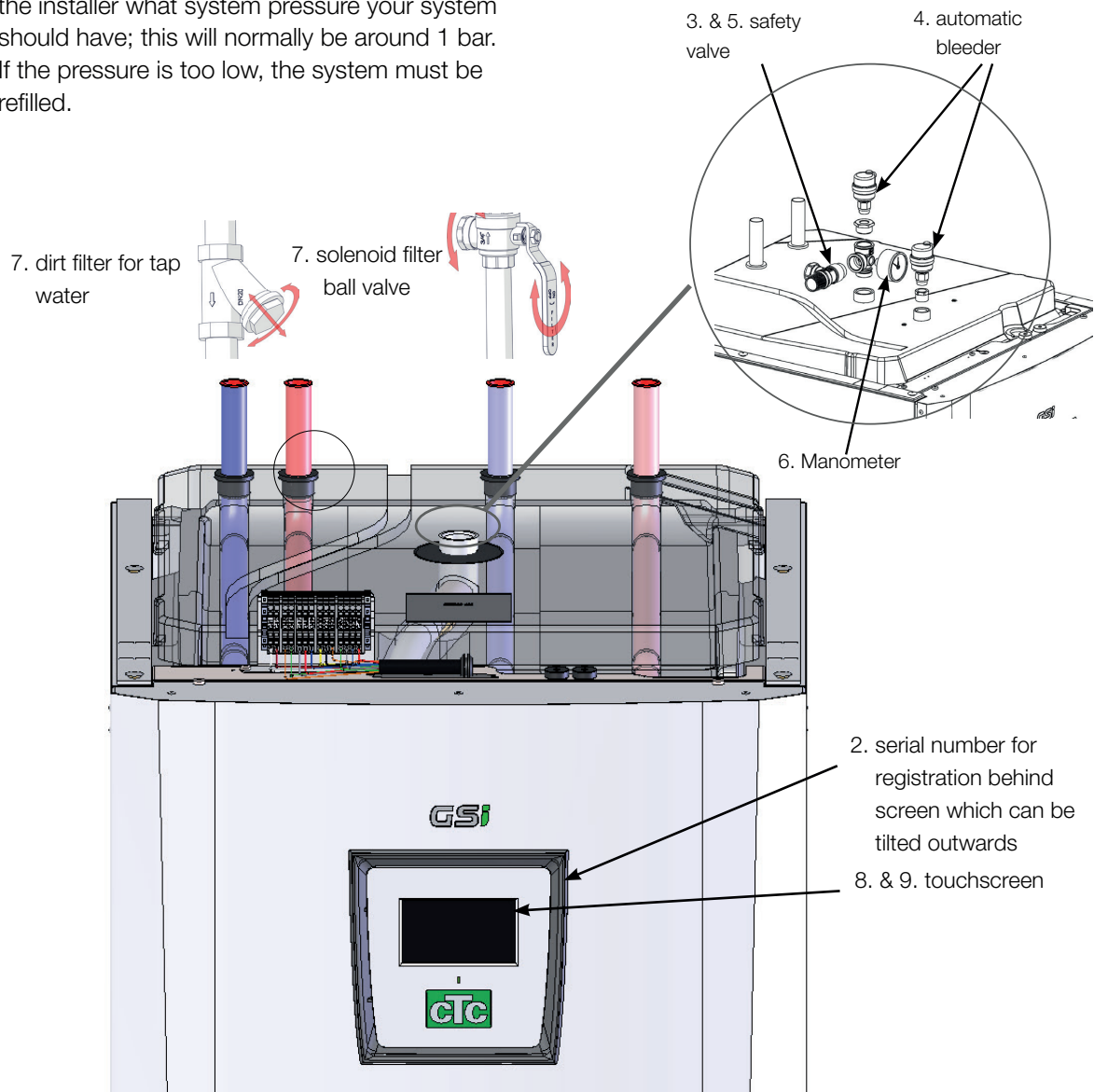


# End customer overview

## CTC GSi

Modulating ground source heat pump

1. Sign the installation checklist.
2. (Serial no. behind touchscreen.)
3. Bleed radiator system and products approx. one month after installation, and at least once per year.
4. Screw in/close the bleeding valve screws on the two automatic bleeding valves approx. 3 months after installation.
5. Fit/turn the safety valve approx. four times per year.
6. Check the system pressure regularly and ask the installer what system pressure your system should have; this will normally be around 1 bar. If the pressure is too low, the system must be refilled.
7. Regularly clean the dirt filter (close off incoming tap water; remove and clean the filter)/solenoid filter ball valve (close the flow; remove and clean the filter).
8. Set the correct heating curve for a comfortable room temperature; check that the thermostat valves on the element or floor heating are set up correctly. These may need to be opened.
9. Set the hot water mode according to your requirements.



### Touchscreen

All product settings are set up via the touchscreen. Set the heat and hot water settings here.

### Outdoor sensor

Measures outdoor temperature; placement should not be in direct sunlight or where the measured outdoor temperature may be misleading. The outdoor sensor provides the product with information on the current need for heat.

### Room sensor

Measures indoor temperature and finely adjusts the heating curve so that the product runs more evenly. The room sensor is optional and the product can work using only the heating curve. The room sensor should preferably not be activated until the heating curve has been completely adjusted. The room sensor is fitted at a central point in the house, in the most open position possible. This is the best position for the sensor to record an average temperature for the house.

### Clean, safe hot water

The water in the tank (as in the heat pump and radiators) rises and is layered so that the hottest water surrounds the DHW heat exchanger where the tap water flows through quickly, draws energy and flows out to the tap or shower. This provides fresh hot water and minimises the risk of legionella bacteria.

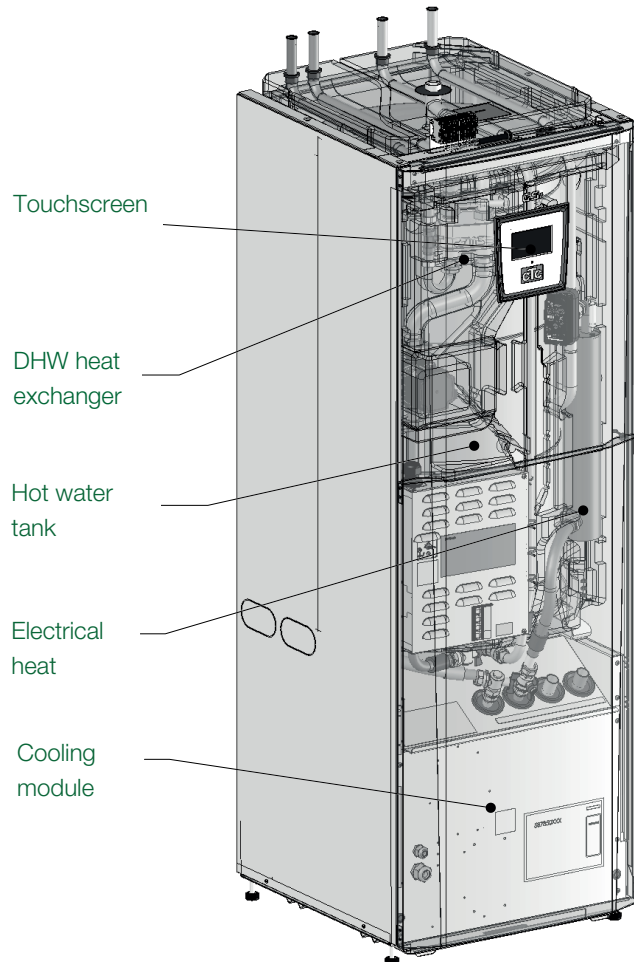
### Cooling module

The energy in the bore hole (bedrock) or ground is drawn up by the cooling system. The compressor then increases the temperature to a usable level. Afterwards it releases the energy for the heating circuit and DHW.

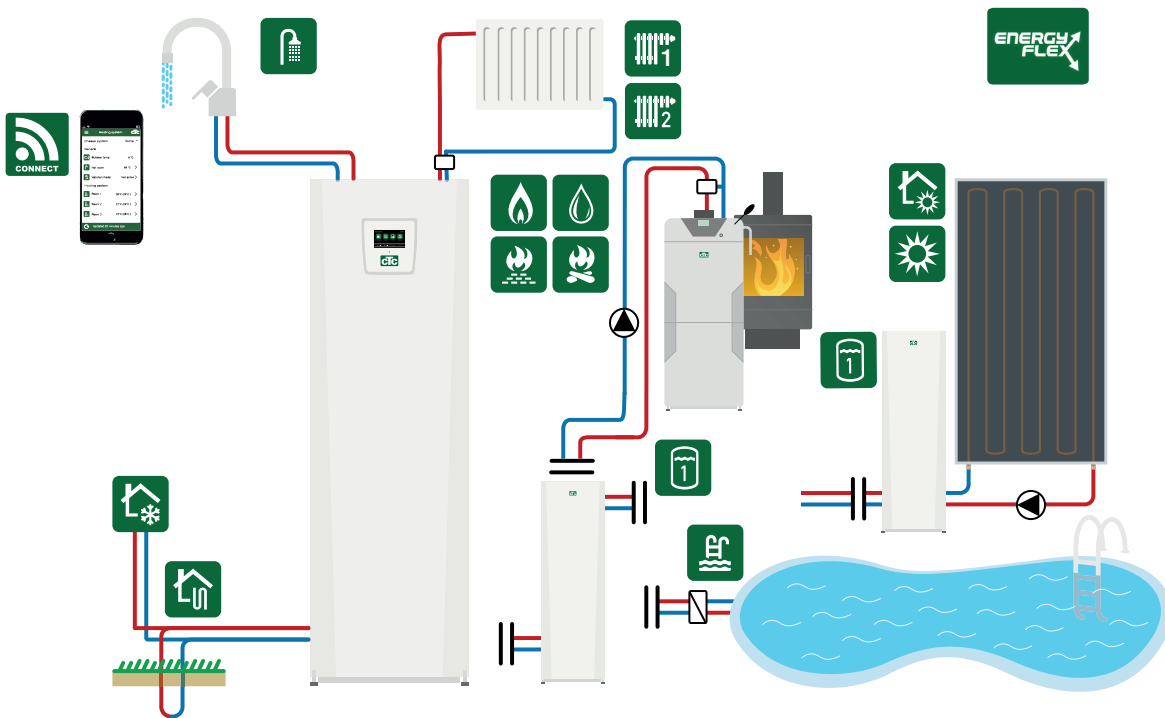
Remember that the brine fluid must be checked and refilled as needed.

### Electrical operation

The product can also provide both heating and hot water to the building when running on electricity only. With the heat pump connected, the immersion heater works to provide additional heat as needed only. The touchscreen can be used to set whether the immersion heater goes in and with how much power.



## Possibilities with CTC GSi



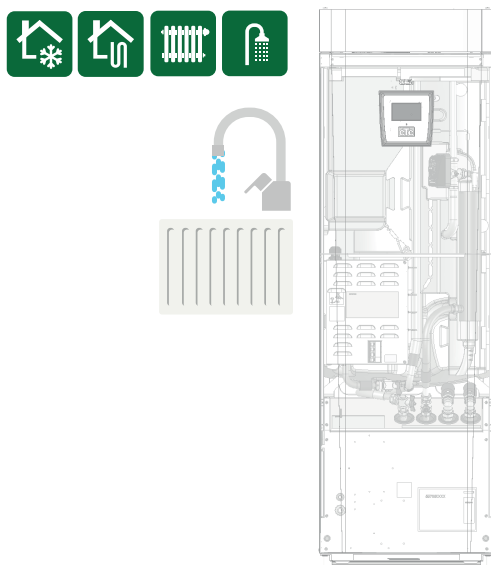
\* In addition to the basic installation, accessories are required such as: Extra sensor, mixing valve group 2, expansion card, etc.

Volume tank CTC VT 80 may be required for some houses (see installation manual for more information).

## Basic installation CTC GSi

CTC GSi

1 x heating system



# Navigate on the touchscreen



**Home**  
The Home button takes you back to the Start menu.



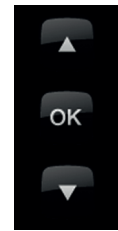
**Return**  
The Return button takes you back to the previous level.



**+ / -**  
Press + to increase value  
Press - to decrease value



**OK**  
The OK button is used to mark and confirm text and options in the menus.



**Arrow & OK**  
Press up arrow to increase value  
Press OK to save settings  
Press down arrow to decrease value

## Home screen

### Room temperature heating circuit 1

-Measured by Room sensor 1

### Room temperature Heating circuit 2

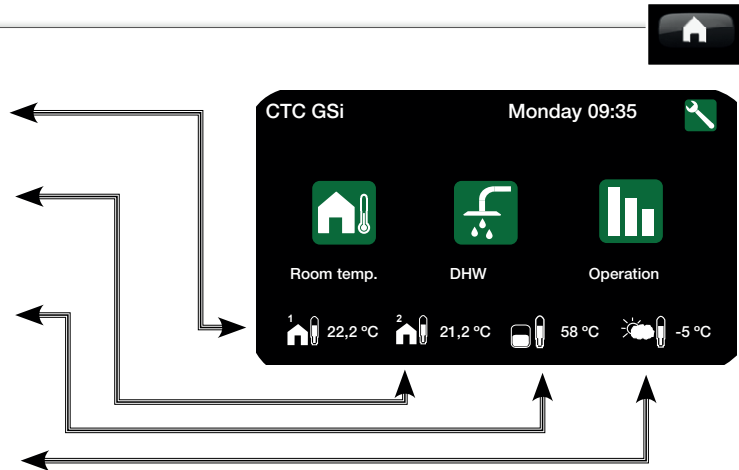
-Measured by Room sensor 2

### Tank temperature

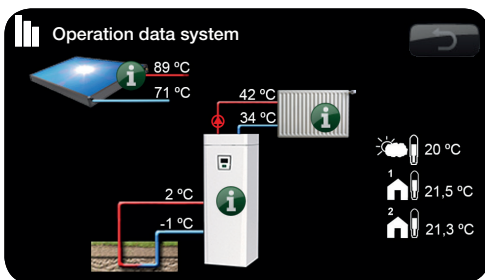
-Measured by Hot water sensor in the top of the tank.

### Outdoor temperature

- Measured by Outdoor sensor

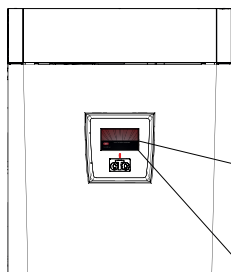


## See operation data



Press to see detailed information on each part

## Alarm management



Green LED – status OK  
Red LED – alarm

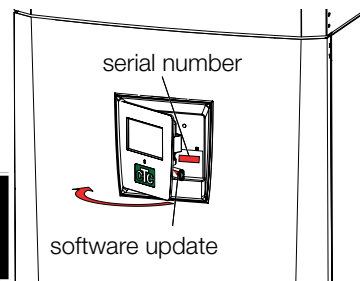
Alarm: Wrong phase order compressor  
Reset alarm



See troubleshooting chart at the very back of the installation manual.



Call your installation engineer in the first instance



The serial number (12 digits) can be found behind the display. This number needs to be given to the installation engineer and CTC support in the event of a fault report.

Serial number  
XXXX-XXXX-XXXX  
↑ ↑ ↑  
article group-year/week-sequential number

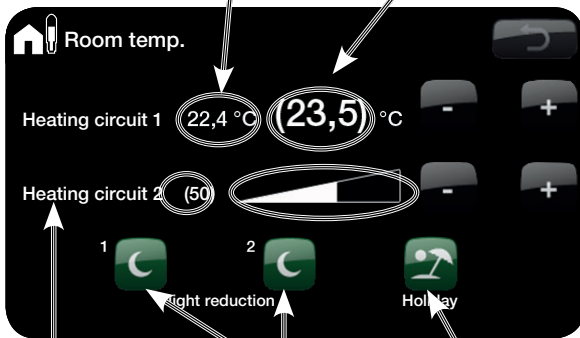
## Set heating

### Fine adjustment Increase/decrease heat



Measured temp  
Room sensor

Desired  
Setpoint



Fine adjustment with no room sensor. To allow the temperature to be changed even more, use the coarse adjustment on the right.

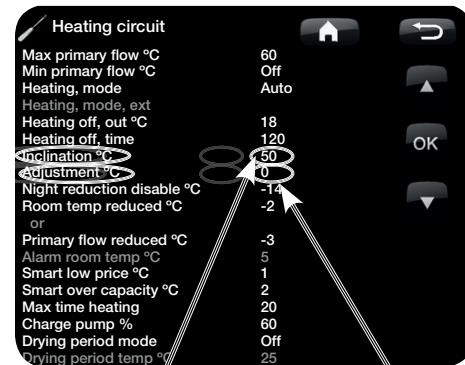
**Night reduction**  
-Set a higher or lower temperature at certain times of day.

**Holiday**  
-Set higher or lower temperatures on certain days.

### Coarse adjustment Increase/decrease heat

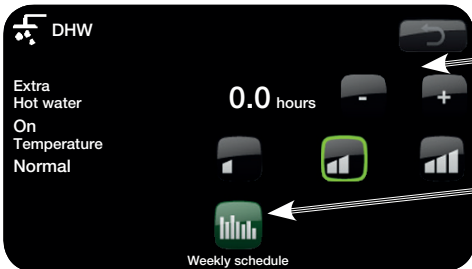


Select:  
Heating circuit



If the outdoor temperature is lower than 0 °C. Change curve inclination + If the outdoor temperature is higher than 0 °C. Change curve adjustment + Push OK to confirm changes

## Set hot water



The product will start to produce additional hot water.

**Weekly program**  
- Set weekly interval for extra hot water

### Select the hot water program.



Economic – Small DHW requirement.



Normal – Normal DHW requirement.



Comfort - Large DHW requirement.

### Change hot tap water temperature

For detailed information on other hot water settings, please refer to the Installation and Care instructions.

### Allow additional heat and immersion heater for safe comfort at all times

To ensure hot water comfort in all operating conditions, it may be necessary to allow additional heat. If there is no heat pump or other heat source installed, these settings need to be changed so that the product can function as an electric boiler.



Select: Hot water tank + Change: Add heat DHW – Yes

## Installer

"Installer" is used by the installer to configure the settings and servicing for your heating system.

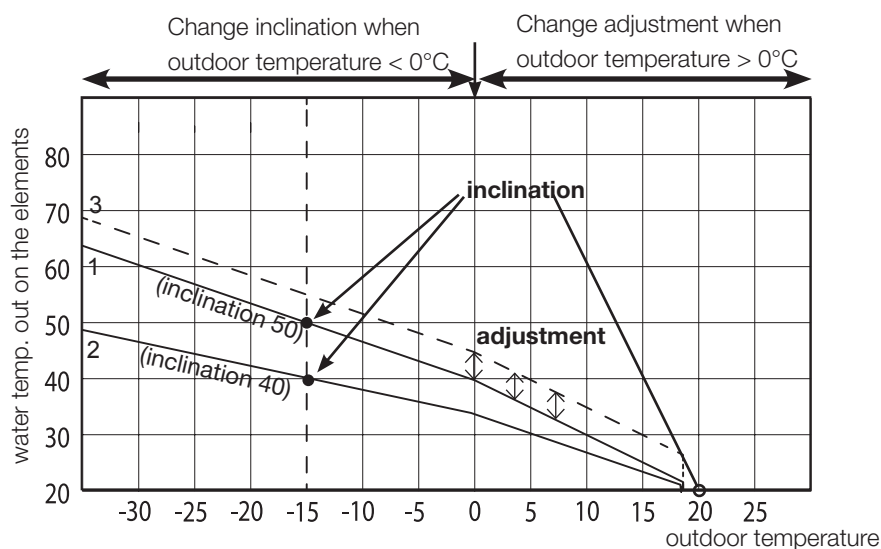


# Heat settings

The product regulates itself to provide a constant, comfortable temperature throughout the year using the set heating curve. The curve may need to be changed using the touchscreen if the room temperature feels too cold or hot over time. For information on how to do this, see "Navigate touchscreen" on the previous page. Correction may be required for a few weeks after installation until the system has been matched to the building. For more information, see the Installation and Maintenance Manual, section: The house heating curve.

## Find the right heating curve

- The heating curve for the house is determined by two main factors: inclination and adjustment. These can be changed to fit the house's energy needs for heating.
- The house's heating needs depend on:
  - The size of the house (volume/area)
  - Insulation
  - Window area
  - > inclination and adjustment increase the more energy is required
- Thermal conductivity of the radiators
  - Elements
  - Floor heating
  - Number of elements/surface for heat transfer
  - > inclination and adjustment decrease the faster energy is discharged



Examples of inclination values for different systems Floor heating only  
 Low temperature system (well-insulated houses)  
 Normal temperature system (factory setting)  
 High temperature system (older houses, small radiators, poorly insulated)

inclination = 35  
 inclination = 40  
 inclination = 50  
 inclination = 60

### Example in image:

1. Inclination 50, Adjustment 0°
2. Inclination 40, Adjustment 0°
3. Inclination 50, Adjustment 5°

# Energy consumption

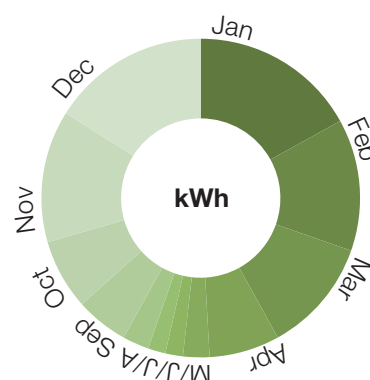
The total energy consumption of the product is linked to:

- The energy needed by the house, which varies significantly through the year depending on the outdoor temperature (see image on energy consumption, right).
- DHW consumption.



## Remember:

- Energy consumption is much higher in the winter months than in the summer months
- Energy consumption increases when DHW consumption is high
- What is important is the total energy bill for the year.



## Energy-saving tips

- Make sure that the thermostat valves on the house's element are open in most rooms; only adjust downwards in bedrooms, for example.
- Use the DHW chart for extra DHW to avoid high-temperature operation when it is not needed.
- Install a room sensor; this provides more even heat and compensates for natural solar radiation or other natural heat sources.
- Clean any dirt filters regularly; a deterioration in water flow can increase the electricity used by the circulation pump.
- Make sure the speed of the charge/circulation pump provides the right flow (see the chapter "System adjustments" in the Installation and Maintenance Manual).

# Checklist

The checklist must always be completed by the installation engineer

- If a service is performed, you may be required to provide this document.
- Installation must always be carried out according to the installation and maintenance instructions.
- Installation must always be carried out in accordance with best professional practice.
- Following installation, the unit must be inspected and checked for functionality.

The points below must be checked off.

## Pipe installation

- Product filled, positioned and adjusted in the correct manner according to the instructions.
- Product positioned so that it can be serviced.
- Capacity of charge pump (G11) adjusted for correct flow.
- Open radiator valves and other relevant valves.
- Tightness test.
- Bleed the system.
- Safety valve function test.
- Waste pipe connected to floor drain.

## Electrical installation

- Compressor, direction of rotation
- Omnipolar switch
- Heat pump activated and started
- Electric power (kW) and fuse, adapted to the property, in heating mode, in hot water mode, BBR and backup mode
- Correct tight wiring
- Requisite sensors for selected system
- Outdoor sensor
- Room sensor (optional)
- Current sensor
- Accessories

## Customer information (adapted to the relevant installation)

- Start-up with customer/installer
- Menus/controls for selected system
- Installation and maintenance manual supplied to the customer
- Check and filling, heating circuit
- Trimming information, heat curve
- Alarm information
- Safety valve function test
- Information on procedures for fault registration

The above points have been reviewed upon installation

\_\_\_\_\_  
Date/Place

\_\_\_\_\_  
Signature/HVAC installation engineer Tel. no.

\_\_\_\_\_  
Customer's signature

\_\_\_\_\_  
Signature/Electrician      Tel. no.

\_\_\_\_\_  
Product

\_\_\_\_\_  
Serial number