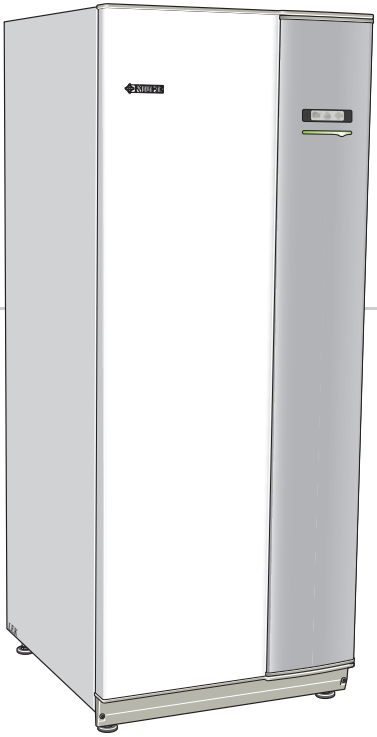


User manual

NIBE F1145

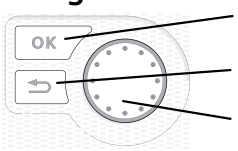
UK 1x230V

Ground source heat pump

UHB GB 1644-4
231992

Quick guide

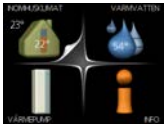
Navigation



A detailed explanation of the button functions can be found on page 12.

How to scroll through menus and make different settings is described on page 17.

Set the indoor climate

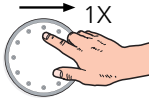


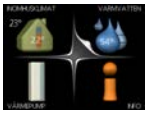


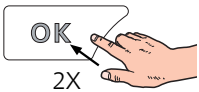


The mode for setting the indoor temperature is accessed by pressing the OK button twice, when in the start mode in the main menu. Read more about the settings on page 27.

Increase hot water volume









To temporarily increase the amount of hot water (if a hot water heater is installed to your F1145), first turn the control knob to mark menu 2 (water droplet) and then press the OK button twice. Read more about the settings on page 45.

In event of disturbances in comfort

If a disturbance in comfort of any type occurs there are some measures that can be taken before you need to contact your installer. See page 76 for instructions.

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1 Important information

Installation data

Product	F1145
Serial number	
Installation date	
Installer	
Type of brine - Mixing ratio/freezing point	
Active drilling depth/collector length	

No.	Name	Factory settings	Set	✔	Accessories
1.9.1.1	heating curve (off-set)	0			
1.9.1.1	heating curve (curve slope)	7			

Serial number must always be given

Certification that the installation is carried out according to instructions in NIBE's installer manual and applicable regulations.

Date _____ Signed _____

Safety information

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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NOTE

Do not start the heat pump, if there is a risk that the water in the system has frozen.

NOTE

If the supply cable is damaged, only NIBE, its service representative or similar authorised person may replace it to prevent any danger and damage.

System pressure	Max	Min
Brine	0.3 MPa (3 bar)	0.05 MPa (0.5 bar)
Heating medium	0.4 MPa (4 bar)	0.05 MPa (0.5 bar)

Symbols

NOTE

This symbol indicates danger to machine or person.

Caution

This symbol indicates important information about what you should observe when maintaining your installation.

TIP

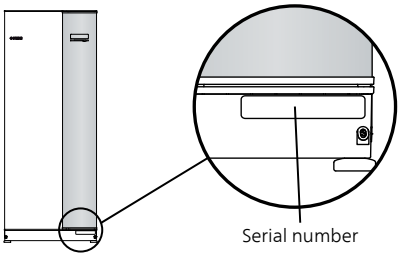
This symbol indicates tips on how to facilitate using the product.

Marking

The CE marking means that NIBE ensures that the product meets all regulations that are placed on it based on relevant EU directives. The CE mark is obligatory for most products sold in the EU, regardless where they are made.

Serial number

The serial number can be found at the bottom right of the front cover and in the info menu (menu 3.1).



Caution

You need the product's (14 digit) serial number for servicing and support.

Country specific information

Great Britain

This installation is subject to building regulation approval, notify the local Authority of intention to install.

Use only manufacturer's recommended replacement parts.



Nibe is a licensed member of the Benchmark Scheme which aims to improve the standards of installation and commissioning of domestic heating and hot water systems in the UK and to encourage regular servicing to optimise safety, efficiency and performance.

Benchmark is managed and promoted by the Heating and Hotwater Industry Council. For more information visit www.centralheating.co.uk

Warranty and insurance information

Thank you for installing a new NIBE heat pump in your home.

NIBE heat pumps are manufactured in Sweden to the very highest standard so we are pleased to offer our customers a comprehensive guarantee.

The product is guaranteed for 24 months for parts and labour from the date of installation or 33 months from the date of manufacture, whichever is the shorter.

The NIBE guarantee is based on the unit being installed and commissioned by a NIBE accredited installer, serviced every year and the Benchmark documents completed. Where this condition is not met, any chargeable spare parts or components issued within the applicable guarantee period still benefit from a 12 month warranty from the date of issue by the manufacturer.

We recommend the installer completes and returns as soon as possible, your guarantee registration card or completes the guarantee form on the NIBE website www.nibe.co.uk.

Please ensure that the installer has fully completed the Benchmark Checklist in the end of the Installation Instructions supplied with the product and that you have signed to say that you have received a full and clear explanation of its operation. The installer is legally required to complete a commissioning checklist as a means of complying with the appropriate Building Regulations (England and Wales).

All installations must be notified to Local Area Building Control either directly or through a Competent Persons Scheme. A Building Regulations Compliance Certificate will then be issued to the customer who should, on receipt, write the Notification Number on the Benchmark Checklist.

This product should be serviced regularly to optimise its safety, efficiency and performance. The service engineer should complete the relevant Service Record on the Benchmark Checklist after each service.

The Benchmark Checklist may be required in the event of any warranty work and as supporting documentation relating to home improvements in the optional documents section of the Home Information Pack.

F1145 – An excellent choice

F1145 is part of a new generation of heat pumps, which have been introduced to supply your home with inexpensive and environmentally friendly heating and/or cooling. Heat production is safe and economical with integrated immersion heater, circulation pumps and control system.

The heat pump can be connected to an optional low temperature heat distribution system. e.g. radiators, convectors or under floor heating. It is also prepared for connection to several different products and accessories, e.g. hot water heater, ventilation recovery, pool, free cooling and climate systems with different temperatures.

An immersion heater of 7 kW can be connected automatically if anything unforeseen should occur or as emergency operation (factory setting 6 kW).

F1145 is equipped with a control computer for good comfort, good economy and safe operation. Clear information about status, operation time and all temperatures in the heat pump are shown on the large and easy to read display. This means, for example, that external unit thermometers are not necessary.

Excellent properties for F1145:

- ***Scheduling the indoor comfort and hot water (accessory)***

  Heating and hot water as well as cooling and ventilation in some cases, can be scheduled for each day of the week or for longer periods (vacation).

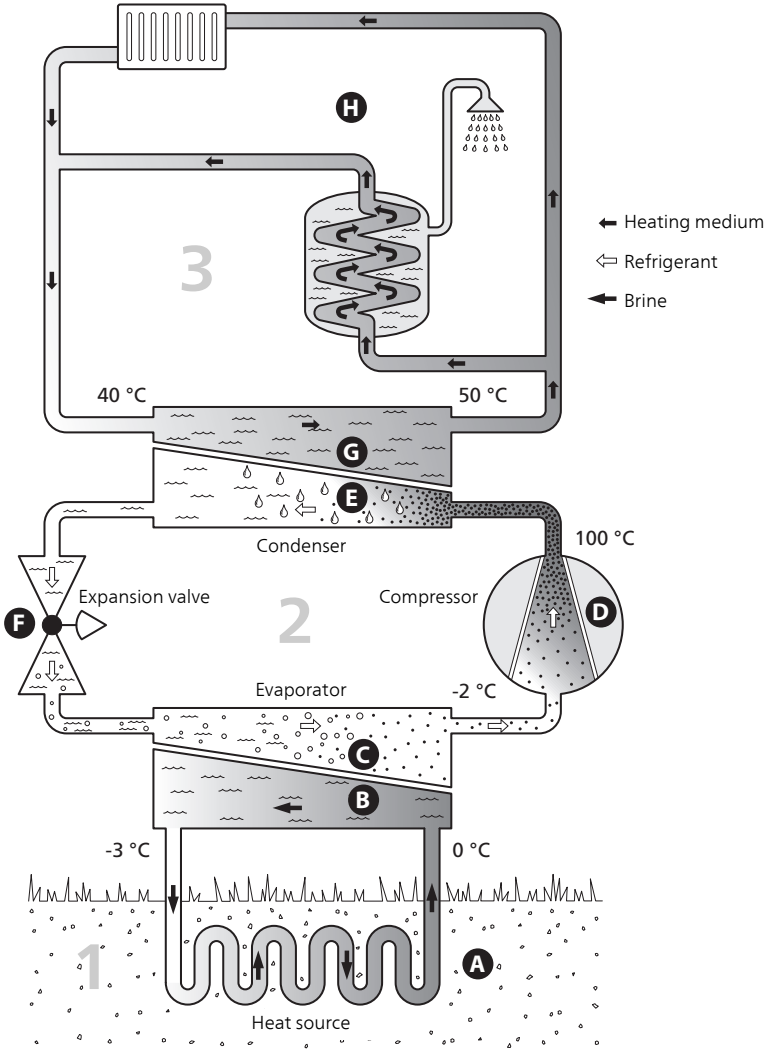
- ***Display with user instructions***

  The heat pump has a large display with easy-to-understand menus that facilitate setting a comfortable climate.

- ***Simple troubleshooting***

  In the event of a fault, the heat pump display shows what happened and the actions to be taken.

2 The heat pump – the heart of the house



The temperatures are only examples and may vary between different installations and time of year.

Heat pump function

A heat pump can use stored solar energy from rock, ground or water in order to heat a property. The conversion of stored energy in nature to property heating occurs in three different circuits. In the brine circuit, (1) , free heat energy is retrieved from the surroundings and transported to the heat pump. In the refrigerant circuit, (2) , the heat pump increases the retrieved heat's low temperature to a high temperature. In the heating medium circuit, (3) , the heat is distributed around the house.

The temperatures below are only examples and may vary between different installations and times of year.

Brine circuit

A In a hose, collector, an anti-freeze liquid, brine, circulates from the heat pump out to the heat source (rock/ground/lake). The energy from the heat source is stored by it heating the brine a few degrees, from about –3°C to about 0 °C.

B The collector then routes the brine to the heat pump's evaporator. Here, the brine releases heat energy and the temperature drops a few degrees. The liquid then returns to the heat source to retrieve energy again.

Refrigerant circuit

C Another liquid circulates in a closed system in the heat pump, a refrigerant, which also passes the evaporator. The refrigerant has a very low boiling point. In the evaporator the refrigerant receives the heat energy from the brine and starts to boil.

D The gas that is produced during boiling is routed into an electrically powered compressor. When the gas is compressed, the pressure increases and the gas's temperature increases considerably, from approx. 5-C to approx. 100 -C.

E From the compressor, gas is forced into a heat exchanger, condenser, where it releases heat energy to the heating system in the house, whereupon the gas is cooled and condenses to a liquid form again.

F As the pressure is still high, the refrigerant can pass an expansion valve, where the pressure drops so that the refrigerant returns to its original temperature. The refrigerant has now completed a full cycle. It is routed to the evaporator again and the process is repeated.

Heat medium circuit

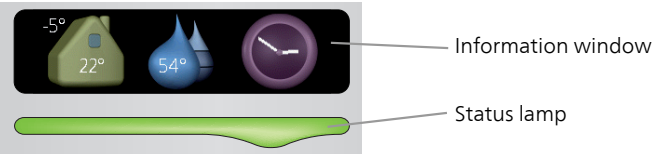
G The heating energy that the refrigerant releases in the condenser is retrieved by the heat pump's boiler section.

H The heating medium circulates in a closed system and transports the heated water's heat energy to the house water heater and radiators/heating coils.

Contact with F1145

External information

When the heat pump door is closed, information can be received via an information window and a status lamp.



Information window

The information window shows part of the display that is on the display unit (located behind the door to the heat pump). The information window can display different type of information, e.g. temperatures, clock, etc.

You determine what is to be displayed in the information window. Your own combination of information is entered using the display unit. This information is specific to the information window and disappears when the heat pump door is opened.

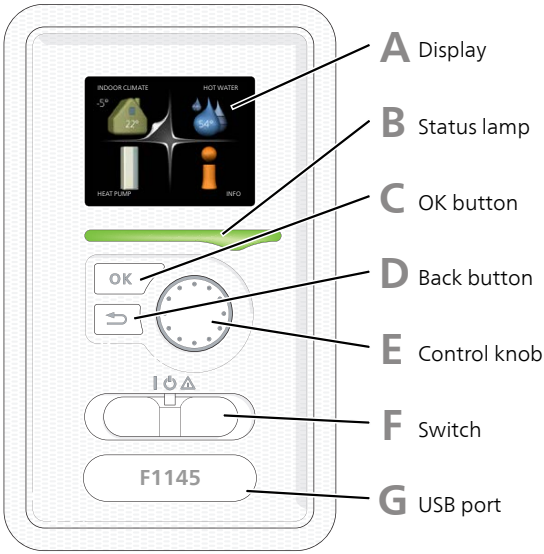
Instructions on how to set the information window can be found on page 68.

Status lamp

The status lamp indicates the status of the heat pump: continuous green light during normal function, continuous yellow light during activated emergency mode or continuous red light in the event of a deployed alarm.

Alarm management is described on page 75.

Display unit



There is a display unit behind the heat pump door, which is used to communicate with F1145. Here you:

- switch on, switch off or set the heat pump in emergency mode.
- sets the indoor climate and hot water as well as adjusts the heat pump to your needs.
- receive information about settings, status and events.
- see different types of alarms and receive instructions about how they are to be rectified.

A *Display*

Instructions, settings and operational information are shown on the display. You can easily navigate between the different menus and options to set the comfort or obtain the information you require.

B *Status lamp*

The status lamp indicates the status of the heat pump. It:

- lights green during normal operation.
- lights yellow in emergency mode.
- lights red in the event of a deployed alarm.

C

OK button

The OK button is used to:

- confirm selections of sub menus/options/set values/page in the start guide.

D

Back button

The back button is used to:

- go back to the previous menu.
- change a setting that has not been confirmed.

E

Control knob

The control knob can be turned to the right or left. You can:

- scroll in menus and between options.
- increase and decrease the values.
- change page in multiple page instructions (for example help text and service info).

F

Switch

The switch assumes three positions:

- On (I)
- Standby (⏻)
- Emergency mode (⚠)

Emergency mode must only be used in the event of a fault on the heat pump. In this mode, the compressor switches off and the immersion heater engages. The heat pump display is not illuminated and the status lamp illuminates yellow.

G

USB port

The USB port is hidden beneath the plastic badge with the product name on it.

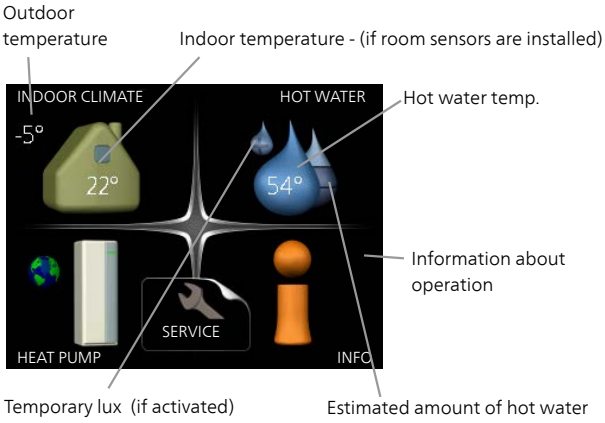
The USB port is used to update the software.

Visit www.nibeuplink.com and click the "Software" tab to download the latest software for your installation.

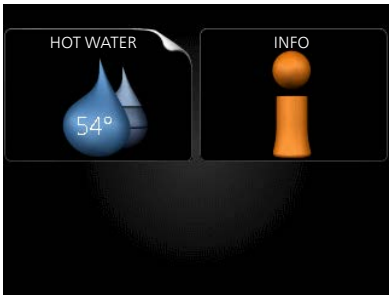
Menu system

When the door to the heat pump is opened, the menu system's four main menus are shown in the display as well as certain basic information.

Master



Slave



If the heat pump is set as slave a limited main menu is displayed because the majority of the settings for the system are made at the master heat pump.

Menu 1

INDOOR CLIMATE

Setting and scheduling the indoor climate. See page 26.

Menu 2

HOT WATER

Setting and scheduling hot water production. See page 45.

This menu only appears if a water heater is docked to the heat pump.

This menu is also set in the slave heat pump's limited menu system.

Menu 3

INFO

Display of temperature and other operating information and access to the alarm log. See page 50.

This menu is also set in the slave heat pump's limited menu system.

Menu 4

HEAT PUMP

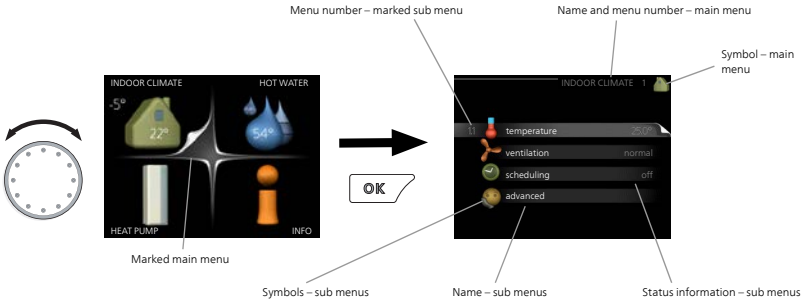
Setting time, date, language, display, operating mode etc. See page 54.

Symbols in the display

The following symbols can appear in the display during operation.

Symbol	Description
	This symbol appears by the information sign if there is information in menu 3.1 that you should note.
	These two symbols indicate whether the compressor or addition is blocked in F1145. These can, for example, be blocked depending on which operating mode is selected in menu 4.2, if blocking is scheduled in menu 4.9.5 or if an alarm has occurred that blocks one of them.  Blocking the compressor.  Blocking additional heat.
	This symbol appears if periodic increase or lux mode for the hot water is activated.
	This symbol indicates whether "holiday setting" is active in 4.7.
	This symbol indicates whether F1145 has contact with NIBE Uplink.
	This symbol indicates the actual speed of the fan if the speed has changed from the normal setting. Accessory NIBE FLM is needed.
	This symbol indicates whether solar heating is active. Accessory needed.
	This symbol indicates whether pool heating is active. Accessory needed.

Symbol	Description
	This symbol indicates whether cooling is active. Accessory needed.



Operation

To move the cursor, turn the control knob to the left or the right. The marked position is white and/or has a turned up tab.

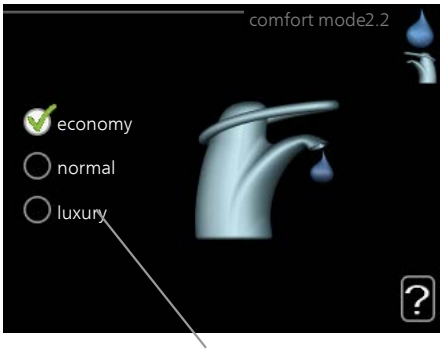


Selecting menu

To advance in the menu system select a main menu by marking it and then pressing the OK button. A new window then opens with sub menus.

Select one of the sub menus by marking it and then pressing the OK button.

Selecting options

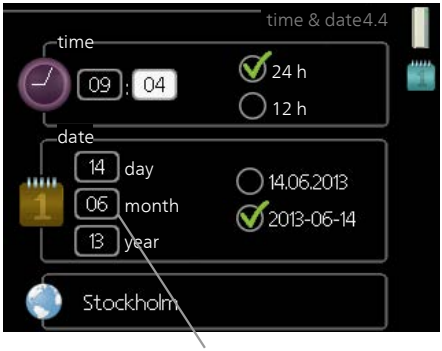


In an options menu the current selected option is indicated by a green tick.

To select another option:

1. Mark the applicable option. One of the options is pre-selected (white).
2. Press the OK button to confirm the selected option. The selected option has a green tick.

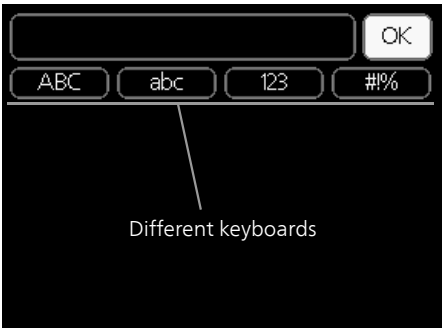
Setting a value



To set a value:

1. Mark the value you want to set using the control knob. 01
2. Press the OK button. The background of the value becomes green, which means that you have accessed the setting mode. 01
3. Turn the control knob to the right to increase the value and to the left to reduce the value. 04
4. Press the OK button to confirm the value you have set. To change and return to the original value, press the Back button. 04

Use the virtual keyboard



In some menus where text may require entering, a virtual keyboard is available.



Depending on the menu, you can gain access to different character sets which you can select using the control knob. To change character table, press the Back button. If a menu only has one character set the keyboard is displayed directly.

When you have finished writing, mark "OK" and press the OK button.

Scroll through the windows

A menu can consist of several windows. Turn the control knob to scroll between the windows.



Current menu window

Number of windows in the menu

Scroll through the windows in the start guide



Arrows to scroll through window in start guide

1. Turn the control knob until one of the arrows in the top left corner (at the page number) has been marked.
2. Press the OK button to skip between the steps in the start guide.

Help menu



In many menus there is a symbol that indicates that extra help is available.

To access the help text:

1. Use the control knob to select the help symbol.
2. Press the OK button.

The help text often consists of several windows that you can scroll between using the control knob.

Maintenance of F1145

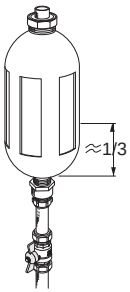
Regular checks

Your heat pump is, in principle, maintenance free and therefore requires minimal care after commissioning. However, it is recommended that your installation is checked and serviced annually by qualified personnel. This is to ensure the continued efficient operation of your heat pump, and that the warranty remains valid during the warranty period.

All servicing must be carried out by a person competent for the job.

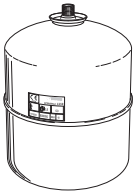
If something unusual occurs, messages about the malfunction appear in the display in the form of different alarm texts. See alarm management on page 75.

Level vessel



The brine that obtains the heat in the ground is not normally consumed but just pumped around. In most installations, there is a level vessel where you can check if there is sufficient fluid in the system. Ask your installer if you are unsure where the level vessel is located. The level can vary due to the fluid's temperature. If the level is below 1/3 topping up is required. Contact your installer for assistance with filling.

Expansion vessel



The brine that obtains the heat in the ground is not normally consumed but just pumped around. In some installations there is an expansion tank instead of a level vessel (for example, where the heat pump is not at the highest point in the brine system) where the system pressure can be checked. Ask your installer if you are unsure where the expansion tank is located. The pressure can vary due to the fluid's temperature. The pressure should not fall below 0.5 bar. Contact your installer for assistance with filling.

Safety valve

If your heating system has a water heater, it also has a safety valve that occasionally releases water after hot water usage. This is because the cold water, which enters the water heater to replace the hot water, expands when heated causing the pressure to rise and the safety valve to open. Therefore, ensure that the opening on the safety valve overflow pipe is always unimpeded.

The function of the safety valve must be checked regularly by a person competent for the job. Perform checks as follows:

1. Open the valve by turning the knob anti-clockwise carefully.
2. Check that water flows through the valve.
3. Close the valve by releasing it. If it does not close automatically when released, turn it anti-clockwise slightly.

Saving tips

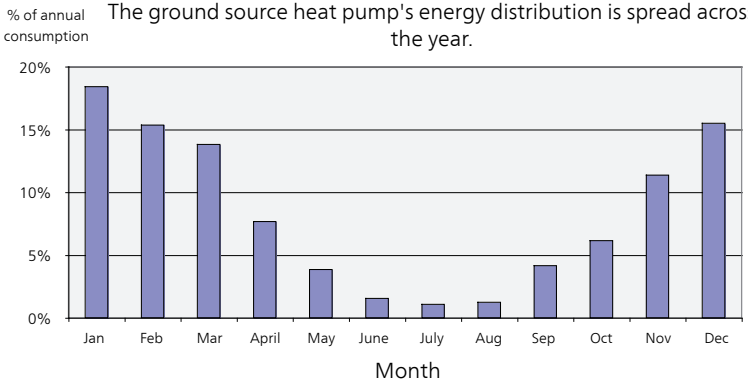
Your heat pump installation produces heat and/or hot water. This occurs via the control settings you made.

Factors that affect the energy consumption are, for example, indoor temperature, hot water consumption, the insulation level of the house and whether the house has many large window surfaces. The position of the house, e.g. wind exposure is also an affecting factor.

Also remember:

- Open the thermostat valves completely (except in the rooms that are to be kept cooler for various reasons, e.g. bedrooms). The thermostats slow the flow in the heating system, which the heat pump wants to compensate with increased temperatures. It then works harder and consumes more electrical energy.
- You can lower the temperature when away from the house by scheduling "holiday setting" in menu 4.7. See page 69 for instructions.
- If you activate "Hot water Economy", less energy is used.

Power consumption



Increasing the indoor temperature one degree increases the energy consumption by approx. 5%.

Domestic electricity

In the past it has been calculated that an average Swedish household has an approximate annual consumption of 5000 kWh domestic electricity/year. In today's society it is usually between 6000-12000 kWh/year.

Equipment	Normal Output (W)		Approx. annual consumption (kWh)
	Operation	Standby	
TV (Operation: 5 h/day, Standby: 19 h/day)	200	2	380
Digital box (Operation: 5 h/day, Standby: 19 h/day)	11	10	90
DVD (Operation: 2 h/week)	15	5	45
TV games console (Operation: 6 h/week)	160	2	67
Radio/stereo (Operation: 3 h/day)	40	1	50
Computer incl. screen (Operation: 3 h/day, standby 21 h/day)	100	2	120
Bulb (Operation 8 h/day)	60	-	175
Spot light, Halogen (Operation 8 h/day)	20	-	58

Equipment	Normal Output (W)		Approx. annual con-sump-tion (kWh)
Cooling (Operation: 24 h/day)	100	-	165
Freezer (Operation: 24 h/day)	120	-	380
Stove, hob (Operation: 40 min/day)	1500	-	365
Stove, oven (Operation: 2 h/week)	3000	-	310
Dishwasher, cold water connection (Operation 1 time/day)	2000	-	730
Washing machine (Operation: 1 times/day)	2000	-	730
Tumble drier (Operation: 1 times/day)	2000	-	730
Vacuum cleaner (Operation: 2 h/week)	1000	-	100
Engine block heater (Operation: 1 h/day, 4 months a year)	400	-	50
Passenger compartment heater (Operation: 1 h/day, 4 months a year)	800	-	100

These values are approximate example values.

Example: A family with 2 children live in a house with 1 flat-screen TV, 1 digital box, 1 DVD player, 1 TV games console, 2 computers, 3 stereos, 2 bulbs in the WC, 2 bulbs in the bathroom, 4 bulbs in the kitchen, 3 bulbs outside, a washing machine, tumble drier, fridge, freezer, oven, vacuum cleaner, engine block heater = 6240 kWh domestic electricity/year

Energy meter

Check the accommodation's energy meter regularly, preferably once a month. This will indicate any changes in power consumption.

Newly built houses usually have twin energy meters, use the difference to calculate your domestic electricity.

New builds

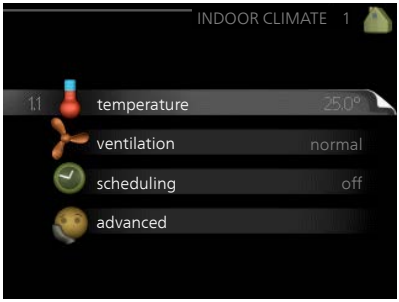
Newly built houses undergo a drying out process for a year. The house can then consume significantly more energy than it would thereafter. After 1-2 years the heating curve should be adjusted again, as well as the offset heating curve and the building's thermostat valves, because the heating system, as a rule, requires a lower temperature once the drying process is complete.

3 F1145 – at your service

Set the indoor climate

Overview

Sub-menus



For the menu INDOOR CLIMATE there are several sub-menus. Status information for the relevant menu can be found on the display to the right of the menus.

temperature Setting the temperature for the climate system. The status information shows the set values for the climate system.

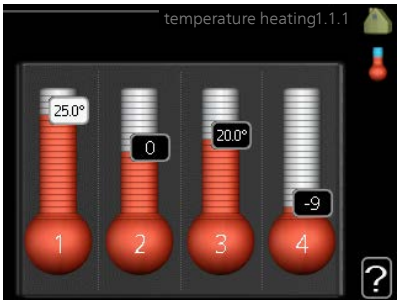
ventilation Setting the fan speed. The status information shows the selected setting. This menu is only displayed if the exhaust air module is connected (accessory).

scheduling Scheduling heating, cooling and ventilation. Status information "set" is displayed if you set a schedule but it is not active now, "holiday setting" is displayed if the vacation schedule is active at the same time as the schedule (the vacation function is prioritised), "active" displays if any part of the schedule is active, otherwise it displays " off".

advanced Setting of heat curve, adjusting with external contact, minimum value for supply temperature, room sensor, cooling function and +Adjust.

Menu 1.1

temperature



If the house has several climate systems, this is indicated on the display by a thermometer for each system.

Choose between heating or cooling and then set the desired temperature in the next menu "temperature heating/cooling" in menu 1.1.

Set the temperature (with room sensors installed and activated):

heating

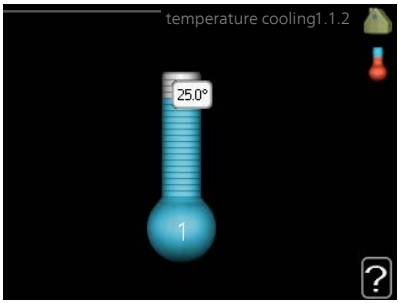
Setting range: 5 – 30 °C

Default value: 20

cooling (accessory is required)

Setting range: 5 – 30 °C

Default value: 25



The value in the display appears as a temperature in °C if the climate system is controlled by a room sensor.

Caution

A slow heat-releasing heating system, such as for example, underfloor heating, may not be suitable for control using the heat pump's room sensor.

To change the room temperature, use the control knob to set the desired temperature in the display. Confirm the new setting by pressing the OK button. The new temperature is shown on the right-hand side of the symbol in the display.

Setting the temperature (without room sensors activated):

Setting range: -10 to +10

Default value: 0

The display shows the set values for heating (curve offset). To increase or reduce the indoor temperature, increase or reduce the value on the display.

Use the control knob to set a new value. Confirm the new setting by pressing the OK button.

The number of steps the value has to be changed to achieve a degree change of the indoor temperature depends on the heating installation. One step is usually enough but in some cases several steps may be required.

Setting the desired value. The new value is shown on the right-hand side of the symbol in the display.

Caution

An increase in the room temperature can be slowed by the thermostats for the radiators or under floor heating. Therefore, open the thermostats fully, except in those rooms where a cooler temperature is required, e.g. bedrooms.

TIP

Wait 24 hours before making a new setting, so that the room temperature has time to stabilise.

If it is cold outdoors and the room temperature is too low, increase the curve slope in menu 1.9.1.1 by one increment.

If it is cold outdoors and the room temperature is too high, reduce the curve slope in menu 1.9.1.1 by one increment.

If it is warm outdoors and the room temperature is too low, increase the value in menu 1.1.1 by one increment.

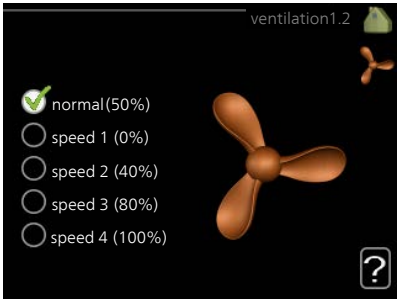
If it is warm outdoors and the room temperature is too high, reduce the value in menu 1.1.1 by one increment.

Menu 1.2

ventilation (accessory required)

Setting range: normal and speed 1-4

Default value: normal



The ventilation in the accommodation can be temporarily increased or reduced here.

When you have selected a new speed a clock starts a count down. When the time has counted down the ventilation speed returns to the normal setting.

If necessary, the different return times can be changed in menu 1.9.6.

The fan speed is shown in brackets (in percent) after each speed alternative.

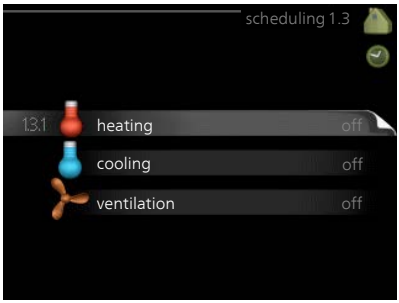
TIP

If longer time changes are required use the holiday function or scheduling.

Menu 1.3

scheduling

In the menu scheduling indoor climate (heating/cooling/ventilation) is scheduled for each weekday.



You can also schedule a longer period during a selected period (vacation) in menu 4.7.

Schedule: Which of the schedules to be changed is selected here.

Schedule setting

These settings can be made for each schedule (Menu 1.3.1, 1.3.2 and 1.3.3:

Activated: Scheduling for the selected period is activated here. Set times are not affected at deactivation.

System: Which climate system the schedule is for is selected here. This alternative is only displayed if more than one climate system is present.

Day: Select which day or days of the week the schedule is to apply to here. To remove the scheduling for a particular day, the time for that day must be reset by setting the start time to the same as the stop time. If the line "all" is used, all days in the period are set for these times.

Time period: The start and stop time for the selected day for scheduling are selected here.

Adjustment: See relevant sub menu.

Conflict: If two settings conflict with each other a red exclamation mark is displayed.

TIP

If you wish to set similar scheduling for every day of the week start by filling in “all” and then changing the desired days.

TIP

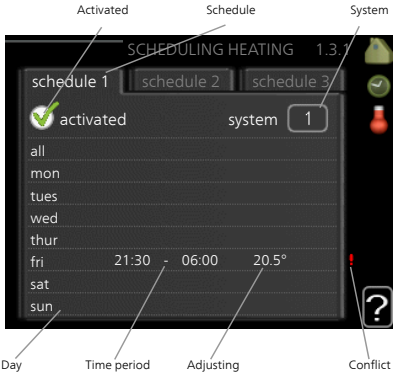
Set the stop time earlier than the start time so that the period extends beyond midnight. Scheduling then stops at the set stop time the day after.

Scheduling always starts on the date that the start time is set for.

Menu 1.3.1

heating

Increases or decreases in the accommodation temperature can be scheduled here for up to three time periods per day. If a room sensor is installed and activated the desired room temperature (°C) is set during the time period. Without an activated room sensor the desired change is set (of setting in menu 1.1). One step is usually enough to change the room temperature by one degree, but in some cases several steps may be required.



Adjusting: How much the heating curve is to be offset in relation to menu 1.1 during scheduling is set here. If the rooms sensor is installed the desired room temperature is set in °C.

Caution

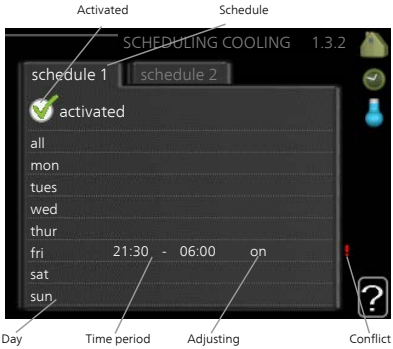
Changes of temperature in accommodation take time. For example, short time periods in combination with underfloor heating will not give a noticeable difference in room temperature.

Menu 1.3.2

cooling (accessory required)

Here you can schedule when cooling is permitted in the accommodation for up to two different time periods per day.

Here, you set when active cooling will not be permitted.

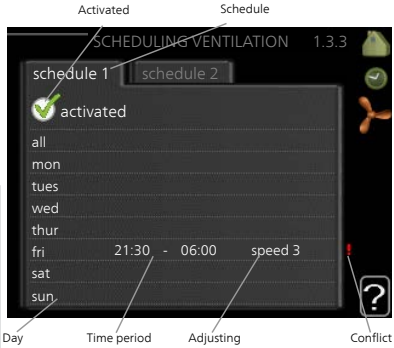


Menu 1.3.3

ventilation (accessory required)

Increases or decreases in the ventilation to the accommodation can be scheduled here for up to two time periods per day.

Adjusting: The desired fan speed is set here.



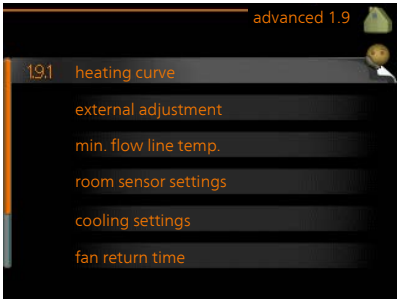
Caution

A significant change over a longer period of time may cause poor indoor environment and worse operating economy.

Menu 1.9

advanced

Menu advanced has orange text and is intended for the advanced user. This menu has several sub-menus.



curve Setting the curve slope for heating and cooling.

external adjustment Setting the heat curve offset when the external contact is connected.

min. flow line temp. Setting minimum permitted flow line temperature.

room sensor settings Settings regarding the room sensor.

cooling settings Settings for cooling.

fan return time Fan return time settings in the event of temporary ventilation speed change.

own curve Setting own curve for heating and cooling.

point offset Setting the offset of the heating curve or cooling curve at a specific outdoor temperature.

night cooling Setting night cooling.

+Adjust Setting how much effect +Adjust will have on calculated supply temperature for underfloor heating. The higher the value is the greater the effect.

Menu 1.9.1

curve

heating curve

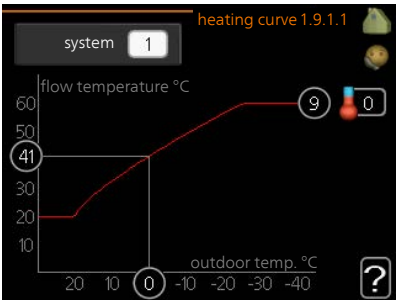
Setting range: 0 – 15

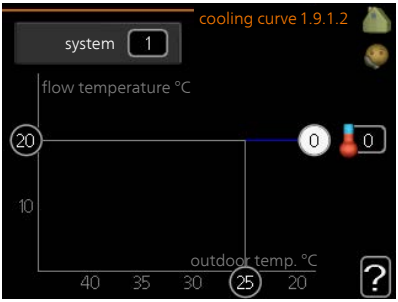
Default value: 9

cooling curve (accessory required)

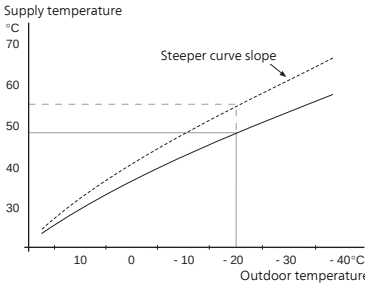
Setting range: 0 – 9

Default value: 0





You can select heating or cooling in the curve menu. The next menu (heating curve/cooling curve) shows the heating and cooling curves for your house. The task of the curve is to give an even indoor temperature, regardless of the outdoor temperature, and thereby energy efficient operation. It is from these heat curves that the heat pump's control computer determines the temperature of the water to the system, the supply temperature, and therefore the indoor temperature. Select the curve and read off how the supply temperature changes at different outdoor temperatures here. The number to the far right of "system" displays which system you have selected the heating curve/cooling curve for.



Curve coefficient

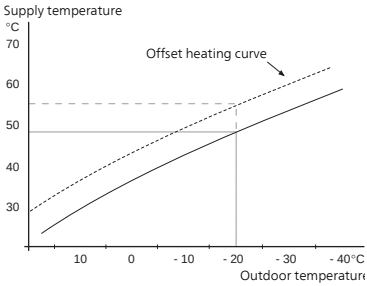
The slopes of the heating /cooling curves indicate how many degrees the supply temperature is to be increased/reduced when the outdoor temperature drops/increases. A steeper slope means a higher supply temperature for heating or a lower supply temperature for cooling at a certain outdoor temperature.

The optimum slope depends on the climate conditions in your location, if the house has radiators or under floor heating and how well insulated the house is.

The curve is set when the heating installation is installed, but may need adjusting later. Normally, the curve will not need further adjustment.

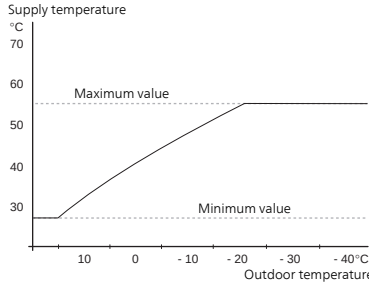
Caution

When making fine adjustments of the indoor temperature, the curve must be offset up or down instead, this is done in menu 1.1 temperature.



Curve offset

An offset of the curve means that the supply temperature changes by the same amount for all the outdoor temperatures, e.g. that a curve offset of +2 steps increases the supply temperature by 5 °C at all outdoor temperatures.



Flow line temperature– maximum and minimum values

Because the flow line temperature cannot be calculated higher than the set maximum value or lower than the set minimum value the heating curve flattens out at these temperatures.

Caution

Under floor heating systems are normally max flow line temperature set to between 35 and 45 °C.

Must be restricted with underfloor cooling min. flow line temp. to prevent condensation.

Check the max temperature for your floor with your installer/floor supplier.

The figure at the end of the curve indicates the curve slope. The figure beside the thermometer gives the curve offset. Use the control knob to set a new value. Confirm the new setting by pressing the OK button.

Curve 0 is an own curve created in menu 1.9.7.

To select another curve (slope):

NOTE

If you only have one climate system, the number of the curve is already marked when the menu window opens.

1. Select the climate system (if more than one) for which the curve is to be changed.
2. When the climate system selection has been confirmed, the curve number is marked.
3. Press the OK button to access the setting mode
4. Select a new curve. The curves are numbered from 0 to 15, the greater the number, the steeper the slope and the greater the supply temperature. Curve 0 means that own curve (menu 1.9.7) is used.
5. Press the OK button to exit the setting.

To read off a curve:

1. Turn the control knob so that the ring on the shaft with the outdoor temperature is marked.
2. Press the OK button.
3. Follow the grey line up to the curve and out to the left to read off the value for the supply temperature at the selected outdoor temperature.
4. You can now select to take read outs for different outdoor temperatures by turning the control knob to the right or left and read off the corresponding flow temperature.
5. Press the OK or Back button to exit read off mode.

TIP

Wait 24 hours before making a new setting, so that the room temperature has time to stabilise.

If it is cold outdoors and the room temperature is too low, increase the curve slope by one increment.

If it is cold outdoors and the room temperature is too high, lower the curve slope by one increment.

If it is warm outdoors and the room temperature is too low, increase the curve offset by one increment.

If it is warm outdoors and the room temperature is too high, lower the curve offset by one increment.

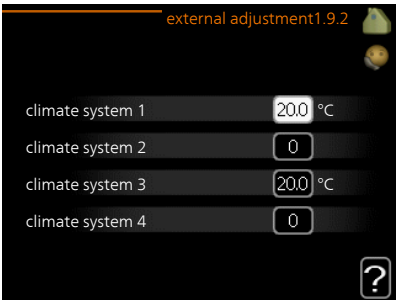
Menu 1.9.2

external adjustment

climate system

Setting range: -10 to +10 or desired room temperature if the room sensor is installed.

Default value: 0



Connecting an external contact, for example, a room thermostat or a timer allows you to temporarily or periodically raise or lower the room temperature while heating. When the contact is on, the heating curve offset is changed by the number of steps selected in the menu. If a room sensor is installed and activated the desired room temperature (°C) is set.

If there is more than one climate system the setting can be made separately for each system.

Menu 1.9.3

min. flow line temp.

heating

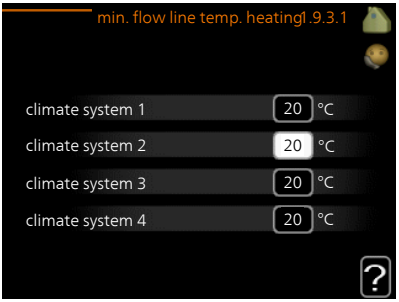
Setting range: 5-70 °C

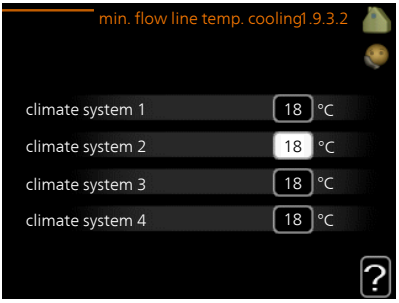
Default value: 20 °C

cooling (accessory required)

Depending on which accessory is used the setting range can vary.

Factory setting: 18 °C





In menu 1.9.3 you select heating or cooling, in the next menu (min. supply temp.heating/cooling) set the minimum temperature on the supply temperature to the climate system. This means that F1145 never calculates a temperature lower than that set here.

If there is more than one climate system the setting can be made separately for each system.

TIP

The value can be increased if you have, for example, a cellar that you always want to heat, even in summer.

You may also need to increase the value in "stop heating" menu 4.9.2 "auto mode setting".

Menu 1.9.4

room sensor settings

factor system

heating

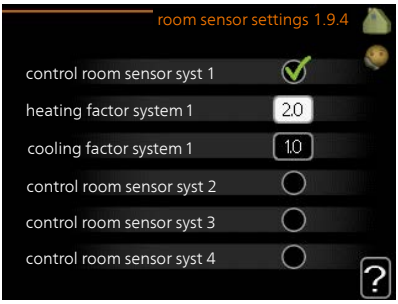
Setting range: 0.0 - 6.0

Factory setting heating: 2.0

cooling (accessory required)

Setting range: 0.0 - 6.0

Factory setting cooling: 1.0



Room sensors to control the room temperature can be activated here.

Caution

A slow heat-releasing heating system, such as for example, underfloor heating, may not be suitable for control using the heat pump's room sensor.

Here you can set a factor (a numerical value) that determines how much an over or sub normal temperature (the difference between the desired and actual room temperature) in the room is to affect the supply temperature to the climate system. A higher value gives a greater and faster change of the heating curve's set offset.

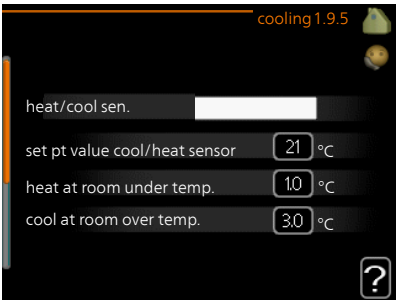
NOTE

Too high a set value for "factor system" can (depending on your climate system) produce an unstable room temperature.

If several climate systems are installed the above settings can be made for the relevant systems.

Menu 1.9.5

cooling settings (accessory required)



heat/cool sen.

Factory setting: no sensor selected

set pt value cool/heat sensor

Setting range: 5 - 40 °C

Default value: 21

heat at room under temp.

Setting range: 0.5 - 10.0 °C

Default value: 1.0

cool at room over temp.

Setting range: 0.5 - 10.0 °C

Default value: 3.0

start passive cooling

Setting range: 10 – 200

Factory setting: 30 GM

start active cooling

Setting range: 30 – 300 DM

Factory setting: 30 DM

degree minutes cooling

Setting range: -3000 - 3000 cooling degree minutes

Factory setting: 0

time betw. switch heat/cool

Setting range: 0 – 48 h

Factory setting: 2

You can use F1145 to cool the house during hot periods of the year.

Caution

Certain setting options only appear if their function is installed and activated in F1145.

heat/cool sen.

An extra temperature sensor can be connected to F1145 in order to determine when it is time to switch between heating and cooling operation.

When several heating/cooling sensors are installed, you can select which one of them should be in control.

Caution

When the heating/cooling sensors BT74 have been connected and activated in menu 5.4, no other sensor can be selected in menu 1.9.5.

set pt value cool/heat sensor

Here you can set at which indoor temperature F1145 is to shift between heating respectively cooling operation.

heat at room under temp.

Here you can set how far the room temperature can drop below the desired temperature before F1145 switches to heating operation.

cool at room over temp.

Here you can set how high the room temperature can increase above the desired temperature before F1145 switches to cooling operation.

start passive cooling

Here you can set when passive cooling is to start.

Degree minutes are a measurement of the current heating demand in the house and determine when the compressor, cooling operation respectively additional heat will start/stop.

start active cooling

Here you can set when active cooling is to start.

Degree minutes are a measurement of the current heating demand in the house and determine when the compressor, cooling operation respectively additional heat will start/stop.

degree minutes cooling

This selection is only available when the connected accessory itself counts cooling degree minutes.

After a min or max value has been set, the system will automatically set the real value in relation to the number of compressors that are running cooling.

time betw. switch heat/cool

This selection is only available in cooling 2 pipe systems.

Here you can set how long F1145 is to wait before it returns to heating mode when the cooling demand has ceased or vice versa.

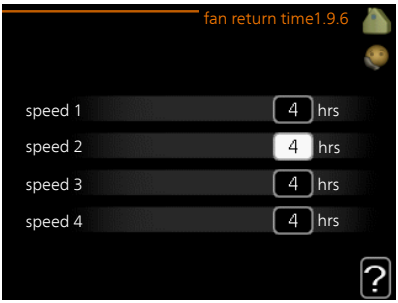
Menu 1.9.6

fan return time (accessory required)

speed 1-4

Setting range: 1 – 99 h

Default value: 4 h



Here you select the return time for temporary speed change (speed 1-4) on the ventilation in menu 1.2.

Return time is the time it takes before ventilation speed returns to normal.

Menu 1.9.7

own curve

supply temperature

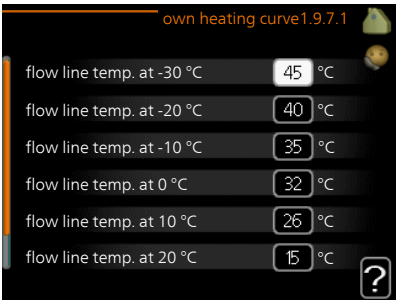
heating

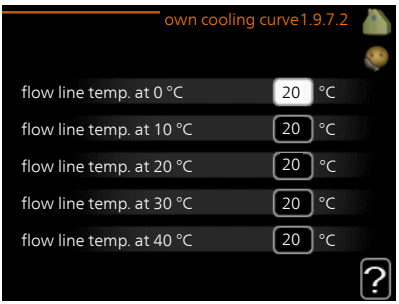
Setting range: 5 – 70 °C

cooling (accessory required)

Depending on which accessory is used the setting range can vary.

Setting range: -5 – 40 °C





Create your own heating or cooling curve here, by setting the desired supply temperatures for different outdoor temperatures.

Caution

Curve 0 in menu 1.9.1 must be selected for own curve to apply.

Menu 1.9.8

point offset

outdoor temp. point

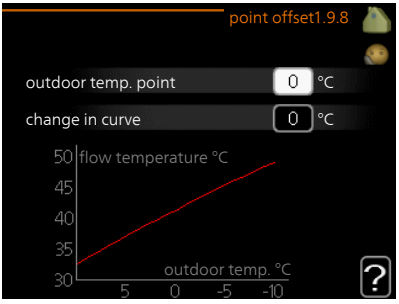
Setting range: -40 – 30 °C

Default value: 0 °C

change in curve

Setting range: -10 – 10 °C

Default value: 0 °C



Select a change in the heating curve at a certain outdoor temperature here. One step is usually enough to change the room temperature by one degree, but in some cases several steps may be required.

The heat curve is affected at ± 5 °C from set outdoor temp. point.

It is important that the correct heating curve is selected so that the room temperature is experienced as even.

TIP

If it is cold in the house, at, for example -2 °C, "outdoor temp. point" is set to "-2" and "change in curve" is increased until the desired room temperature is maintained.

Caution

Wait 24 hours before making a new setting, so that the room temperature has time to stabilise.

Menu 1.9.9

night cooling (accessory required)

start temp. exhaust air

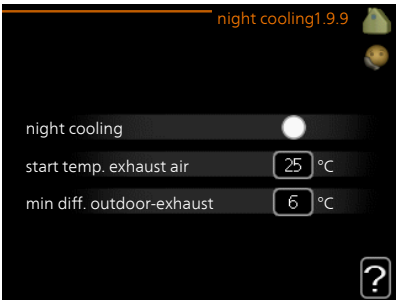
Setting range: 20 – 30 °C

Default value: 25 °C

min diff. outdoor-exhaust

Setting range: 3 – 10 °C

Default value: 6 °C



Activate night cooling here.

When the temperature in the house is high and the outdoor temperature is lower, a cooling effect can be obtained by forcing the ventilation.

If the temperature difference between the exhaust air and the outdoor air temperature is greater than the set value ("min diff. outdoor-exhaust") and the exhaust air temperature is higher than the set value ("start temp. exhaust air") run the ventilation at speed 4 until one of the conditions is no longer met.

Caution

Night cooling can only be activated when house heating has been deactivated. This is done in menu 4.2.

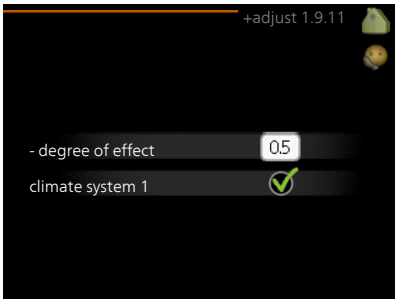
Menu 1.9.11

+Adjust

- degree of effect

Setting range: 0.1 – 1.0

Default value: 0.5



Using +Adjust, the installation communicates with the underfloor heating's control centre* and adjusts the heat curve and calculated supply temperature according to the underfloor heating system's reconnection.

Here you can activate the climate systems you want +Adjust to affect. You can also set how much effect +Adjust is to have on calculated supply temperature. The higher the value, the greater the effect.

*Support for +Adjust required

NOTE

+Adjust must first be selected in menu 5.4 "soft inputs/outputs".

Menu 1.9.12

FLM cooling (accessory required)

room set point value

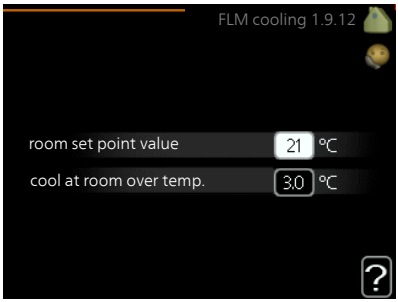
Setting range: 20 – 30 °C

Default value: 21 °C

cool at room over temp.

Setting range: 3 – 10 °C

Default value: 3 °C



When you have activated FLM cooling in menu 5.3.1, set the desired room temperature in this menu. You also select at the temperature at which cooling is to start.

FLM cooling starts when the room temperature exceeds the set room set point value + cool at room over temp..

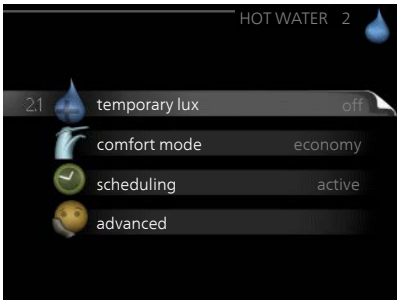
FLM cooling stops when the room temperature falls below room set point value.

If you have several FLM systems, you can set these values for each of them.

Set the hot water capacity

Overview

Sub-menus



This menu only appears if a water heater is docked to the heat pump.

This menu is also set in the slave heat pump's limited menu system.

For the menu HOT WATER there are several sub-menus. Status information for the relevant menu can be found on the display to the right of the menus.

temporary lux Activation of temporary increase in the hot water temperature. Status information displays “off" or what length of time of the temporary temperature increase remains.

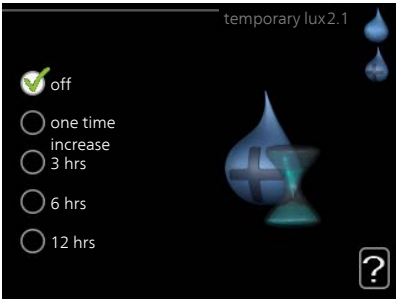
comfort mode Setting hot water comfort. The status information displays what mode is selected, "economy", "normal" or "luxury".

scheduling Scheduling hot water comfort. The status information "set" appears if you have set scheduling but it is not currently active, "holiday setting" appears if holiday setting is active at the same time as scheduling (when the holiday function is prioritised), "active" appears if any part of scheduling is active, otherwise "off" appears.

advanced Setting periodic increase in the hot water temperature.

Menu 2.1

temporary lux



Setting range: 3, 6 and 12 hours and mode "off" and "one time increase"

Default value: "off"

When hot water requirement has temporarily increased this menu can be used to select an increase in the hot water temperature to lux mode for a selectable time.

Caution

If comfort mode "luxury" is selected in menu 2.2 no further increase can be carried out.

The function is activated immediately when a time period is selected and confirmed using the OK button. The remaining time for the selected setting is shown to the right.

When the time has run out F1145 returns to the mode set in menu 2.2.

Select “off" to switch off temporary lux.

Menu 2.2

comfort mode

Setting range: economy, normal, luxury

Default value: normal



The difference between the selectable modes is the temperature of the hot tap water. Higher temperature means that the hot water lasts longer.

economy: This mode gives less hot water than the others, but is more economical. This mode can be used in smaller households with a small hot water requirement.

normal: Normal mode gives a larger amount of hot water and is suitable for most households.

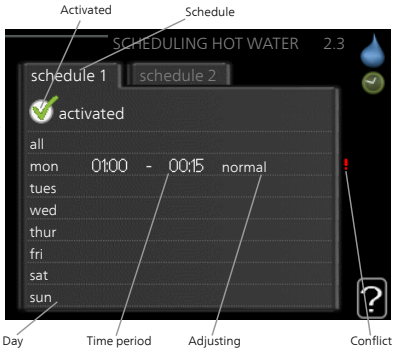
luxury: Lux mode gives the greatest possible amount of hot water. In this mode the immersion heater may be partially used to heat hot water, which may increase operating costs.

Menu 2.3

scheduling

What hot water comfort the heat pump is to work with can be scheduled here for up to two different time periods per day.

Scheduling is activated/deactivated by ticking/unticking"activated". Set times are not affected at deactivation.



Schedule: The schedule to be changed is selected here.

Activated: Scheduling for the selected period is activated here. Set times are not affected at deactivation.

Day: Select which day or days of the week the schedule is to apply to here. To remove the scheduling for a particular day, the time for that day must be reset by setting the start time to the same as the stop time. If the line "all" is used, all days in the period are set for these times.

Time period: The start and stop time for the selected day for scheduling are selected here.

Adjusting: Set the hot water comfort that is to apply during scheduling here.

Conflict: If two settings conflict with each other a red exclamation mark is displayed.

TIP

If you wish to set similar scheduling for every day of the week start by filling in “all” and then changing the desired days.

TIP

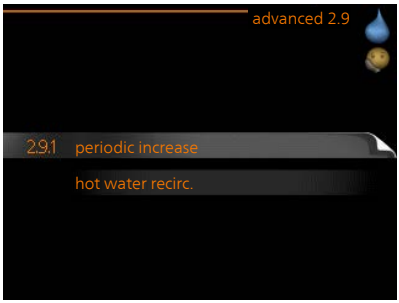
Set the stop time earlier than the start time so that the period extends beyond midnight. Scheduling then stops at the set stop time the day after.

Scheduling always starts on the date that the start time is set for.

Menu 2.9

advanced

Menu advanced has orange text and is intended for the advanced user. This menu has several sub-menus.



Menu 2.9.1

periodic increase

period

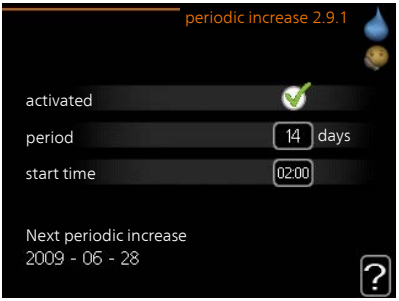
Setting range: 1 - 90 days

Default value: 14 days

start time

Setting range: 00:00 - 23:00

Default value: 00:00



To prevent bacterial growth in the water heater, the compressor and the immersion heater can increase the hot water temperature for a short time at regular intervals.

The length of time between increases can be selected here. The time can be set between 1 and 90 days. Factory setting is 14 days. Tick/untick "activated" to start/switch off the function.

Menu 2.9.2

hot water recirc. (accessory required)

operating time

Setting range: 1 - 60 min

Default value: 60 min

downtime

Setting range: 0 - 60 min

Default value: 0 min



Set the hot water circulation for up to three periods per day here. During the set periods the hot water circulation pump will run according to the settings above.

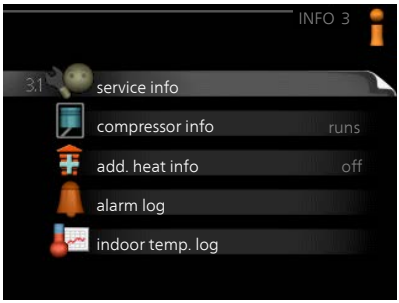
"operating time" decide how long the hot water circulation pump must run per operating instance.

"downtime" decide how long the hot water circulation pump must be stationary between operating instances.

Get information

Overview

Sub-menus



For the menu INFO there are several sub-menus. No settings can be made in these menus, they just display information. Status information for the relevant menu can be found on the display to the right of the menus.

This menu is also set in the slave heat pump's limited menu system.

service info shows temperature levels and settings in the installation.

compressor info shows operating times, number of starts etc for the compressor in the heat pump.

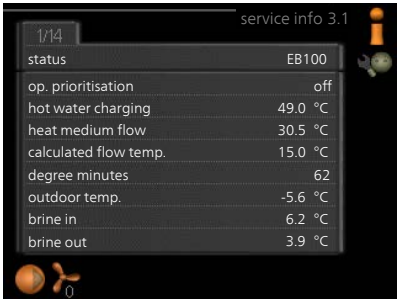
add. heat info displays information about the additional heat's operating times etc.

alarm log displays the latest alarm and information about the heat pump when the alarm occurred.

indoor temp. log the average temperature indoors week by week during the past year.

Menu 3.1

service info



Information about the heat pump's actual operating status (e.g. current temperatures etc.) can be obtained here. No changes can be made.

The information is on several pages. Turn the control knob to scroll between the pages.

A QR code appears on one side. This QR code indicates serial number, product name and limited operating data.

Symbols in this menu:


Compressor


Heating


Addition


Hot water


Brine pump (blue)


Heating medium pump (orange)


Cooling


Pool

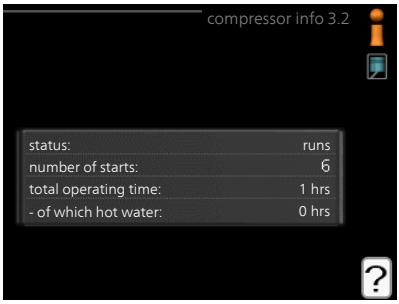

Ventilation

Menu 3.2

compressor info

Information about the compressor's operating status and statistics can be obtained here. No changes can be made.

The information is on several pages. Turn the control knob to scroll between the pages.

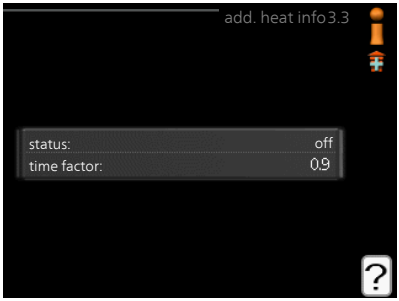


Menu 3.3

add. heat info

Information about the additional heat's settings, operating status and statistics can be obtained here. No changes can be made.

The information is on several pages. Turn the control knob to scroll between the pages.

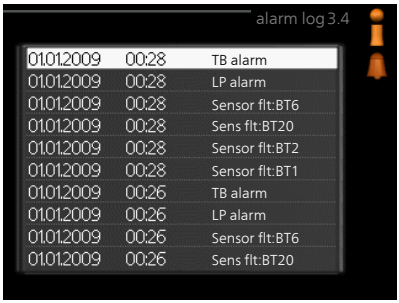


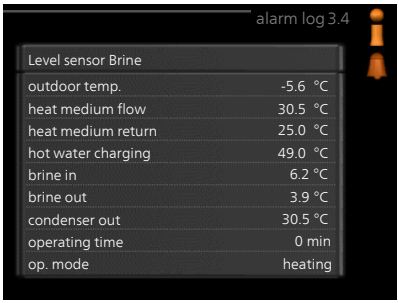
Menu 3.4

alarm log

To facilitate fault-finding the heat pump operating status at alarm alerts is stored here. You can see information for the 10 most recent alarms.

To view the run status in the event of an alarm, mark the alarm and press the OK button.

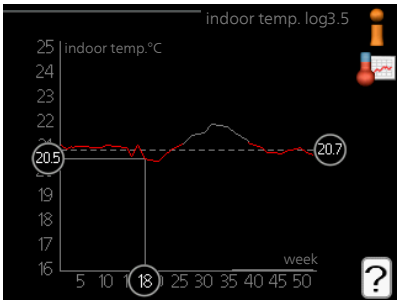




Information about an alarm.

Menu 3.5

indoor temp. log



Here you can see the average temperature indoors week by week during the past year. The dotted line indicates the annual average temperature.

The average outdoor temperature is only shown if a room temperature sensor/room unit is installed.

When an exhaust air module (NIBE FLM) is installed, the exhaust air temperature is shown.

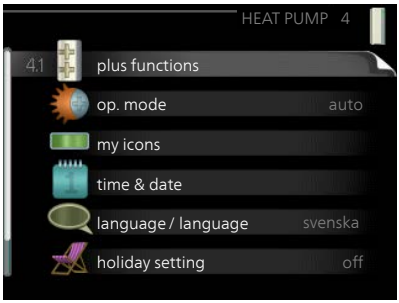
To read off an average temperature

1. Turn the control knob so that the ring on the shaft with the week number is marked.
2. Press the OK button.
3. Follow the grey line up to the graph and out to the left to read off the average indoor temperature at the selected week.
4. You can now select to take read outs for different weeks by turning the control knob to the right or left and read off the average temperature.
5. Press the OK or Back button to exit read off mode.

Adjust the heat pump

Overview

Sub-menus



For the menu HEAT PUMP there are several sub-menus. Status information for the relevant menu can be found on the display to the right of the menus.

plus functions Settings applying to any installed extra functions in the heating system.

op. mode Activation of manual or automatic operating mode. The status information shows the selected operating mode.

my icons Settings regarding which icons in the heat pump's user interface that are to appear in the slot when the door is closed.

time & date Setting current time and date.

language Select the language for the display here. The status information shows the selected language.

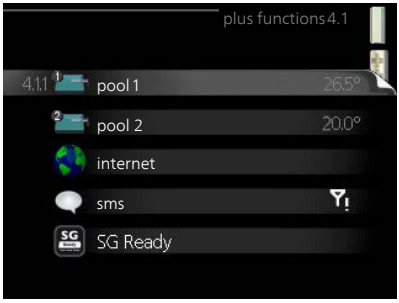
holiday setting Vacation scheduling heating, hot water and ventilation. Status information "set" is displayed if you set a vacation schedule but it is not active at the moment, "active" is displayed if any part of the vacation schedule is active, otherwise it displays " off".

advanced Setting heat pump work mode.

Menu 4.1

plus functions

Settings for any additional functions installed in F1145 can be made in the sub menus.



Menu 4.1.1 - 4.1.2

pool 1 - pool 2 (accessory is required)

start temp

Setting range: 5.0 - 80.0 °C

Default value: 22.0 °C

stop temperature

Setting range: 5.0 - 80.0 °C

Default value: 24.0 °C



Select whether the pool control is to be activated, within what temperatures (start and stop temperature) pool heating must occur and how many compressors may work against the pool at the same time.

When the pool temperature drops below the set start temperature and there is no hot water or heating requirement, F1145 starts pool heating.

Untick "activated" to switch off the pool heating.

Caution

The start temperature cannot be set to a value that is higher than the stop temperature.

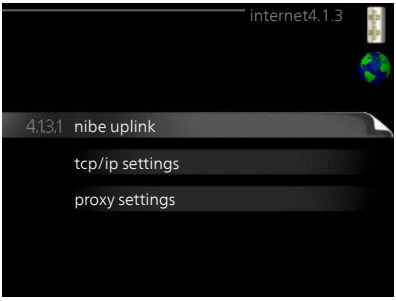
Menu 4.1.3

internet

Here you make settings for connecting F1145 to the internet.

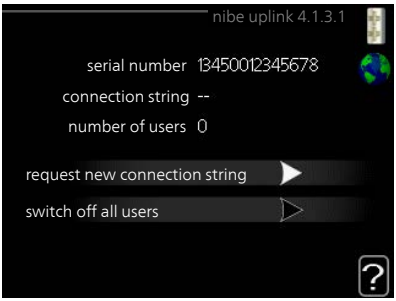
NOTE

For these functions to work the network cable must be connected.



Menu 4.1.3.1

NIBE Uplink™



Here you can manage the installation's connection to NIBE Uplink (www.nibeuplink.com) and see the number of users connected to the installation via the internet.

A connected user has a user account in NIBE Uplink , which has been given permission to control and/or monitor your installation.

Request new connection string

To connect a user account on NIBE Uplink to your installation, you must request a unique connection code.

1. Mark “request new connection string" and press the OK button.
2. The installation now communicates with NIBE Uplink to create a connection code.
3. When a connection string has been received, it is shown in this menu at "connection string" and is valid for 60 minutes.

Disconnect all users

1. Mark “switch off all users" and press the OK button.
2. The installation now communicates with NIBE Uplink to release your installation from all users connected via the internet.

NOTE

After disconnecting all users none of them can monitor or control your installation via NIBE Uplink without requesting a new connection string.

Menu 4.1.3.8

tcp/ip settings



You can set TCP/IP settings for your installation here.

Automatic setting (DHCP)

1. Tick “automatic". The installation now receives the TCP/IP settings using DHCP.
2. Mark “confirm" and press the OK button.

Manual setting

1. Untick "automatic", you now have access to several setting options.

2. Mark “ip-address" and press the OK button.
3. Enter the correct details via the virtual keypad.
4. Mark “OK" and press the OK button.
5. Repeat 1 - 3 for "net mask", "gateway" and "dns".
6. Mark “confirm" and press the OK button.

Caution

The installation cannot connect to the internet without the correct TCP/IP settings. If unsure about applicable settings use the automatic mode or contact your network administrator (or similar) for further information.

TIP

All settings made since opening the menu can be reset by marking "reset" and pressing the OK button.

Menu 4.1.3.9

proxy settings



You can set proxy settings for your installation here.

Proxy settings are used to give connection information to a intermediate server (proxy server) between the installation and Internet. These settings are primarily used when the installation connects to the Internet via a company network. The installation supports proxy authentication of the HTTP Basic and HTTP Digest type.

If unsure about applicable settings, contact your network administrator (or similar) for further information.

Setting

1. Tick “use proxy" if you do not want to use a proxy.
2. Mark “server" and press the OK button.
3. Enter the correct details via the virtual keypad.
4. Mark “OK" and press the OK button.
5. Repeat 1 - 3 for "port", "user name" and "password".
6. Mark “confirm" and press the OK button.

TIP

All settings made since opening the menu can be reset by marking "reset" and pressing the OK button.

Menu 4.1.4

sms (accessory is required)



Make settings for the accessory SMS 40 here.

Add the mobile numbers that are to have access to change and receive status information from the heat pump. Mobile numbers must include country code e.g. +46 XXXXXXXX.

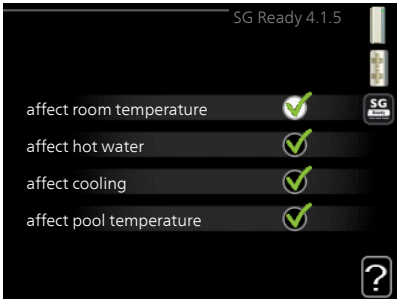
If you want to receive an SMS message in the event of the alarm mark the box to the right of the telephone number.

NOTE

Telephone numbers provided must be able to receive SMS messages.

Menu 4.1.5

SG Ready



This function can only be used in mains networks that support the "SG Ready"-standard .

Make settings for the function "SG Ready" here.

affect room temperature

Here you set whether room temperature should be affected when activating "SG Ready".

With low price mode on "SG Ready" the parallel offset for the indoor temperature is increased by "+1". If a room sensor is installed and activated, the desired room temperature is instead increased by 1 °C.

With over capacity mode on "SG Ready" the parallel offset for the indoor temperature is increased by "+2". If a room sensor is installed and activated, the desired room temperature is instead increased by 2 °C.

affect hot water

Here you set whether the temperature of the hot water should be affected when activating "SG Ready".

With low price mode on "SG Ready" the stop temperature of the hot water is set as high as possible at only compressor operation (immersion heater not permitted).

With over capacity mode of "SG Ready" the hot water is set to "luxury" (immersion heater permitted).

affect cooling (accessory required)

Here you set whether room temperature during cooling operation should be affected when activating "SG Ready".

With low price mode of "SG Ready" and cooling operation the indoor temperature is not affected.

With over capacity mode on "SG Ready" and cooling operation, the parallel offset for the indoor temperature is reduced by "-1". If a room sensor is installed and activated, the desired room temperature is instead reduced by 1 °C.

affect pool temperature (accessory is required)

Here you set whether pool temperature should be affected when activating "SG Ready".

With low price mode on "SG Ready", the desired pool temperature (start and stop temperature) is increased by 1 °C.

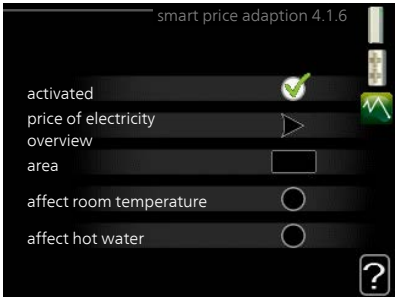
With over capacity mode on "SG Ready" the desired pool temperature (start and stop temperature) is increased by 2 °C

NOTE

The function must be connected and activated in your F1145.

Menu 4.1.6

Smart price adaption™



activated

This function can only be used if you have an hourly tariff agreement with your electricity supplier that supports Smart price adaption™ and you have an activated NIBE Uplink account.

area

Here you select where (which zone) the heat pump is set-up.

Contact your electricity supplier to find out which zone digit to enter.

affect room temperature

Setting range: 1 - 10

Factory setting: 5

affect hot water

Setting range: 1 - 4

Factory setting: 2

affect pool temperature

Setting range: 1 - 10

Factory setting: 2

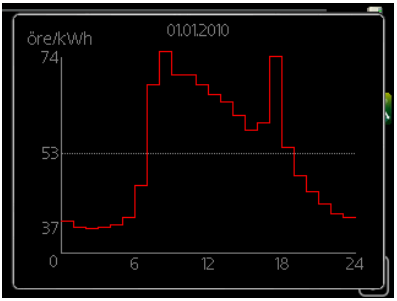
affect cooling

Setting range: 1 - 10

Factory setting: 3

price of electricity overview

Here you can obtain information on how the electricity price varies over up to three days.



In menu Smart price adaption™ you state where the heat pump is located and how great a role the electricity price should play. The greater the value, the greater the effect the electricity price has and the larger the possible savings, but at the same time there is an increased risk of affecting comfort.

Smart price adaption™ moves the heat pump's consumption over 24 hours to periods with the cheapest electricity tariff, which gives savings for hourly rate based electricity contracts. The function is based on hourly rates for the next 24 hours being retrieved via NIBE Uplink and therefore an internet connection and an account for NIBE Uplink are required.

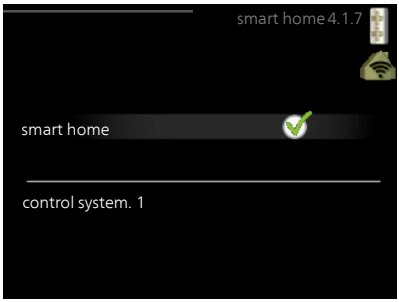
Deselect "activated" to switch off Smart price adaption™.

Menu 4.1.7

smart home (accessory is required)

When you have a smart home system that can speak to NIBE Uplink, you can control your heat pump via an app

By allowing connected units to communicate with NIBE Uplink, your heating system becomes a natural part of your homesmart home and gives you the opportunity to optimise the operation.

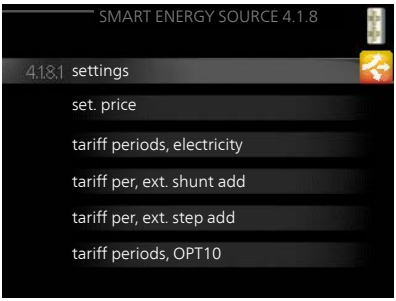


Caution

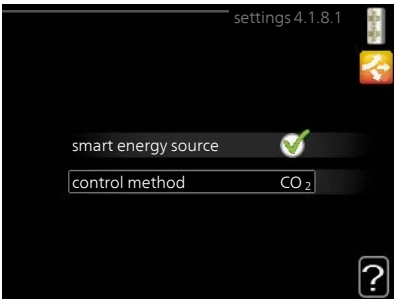
The smart home function requires NIBE Uplink in order to work.

Menu
4.1.8

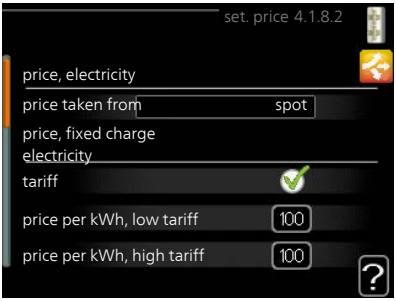
smart energy source™



settings
set. price
CO2 impact*
tariff periods, electricity
tariff periods, fixed price**
tariff per, ext. shunt add
tariff per, ext. step add
tariff periods, OPT10



The function prioritises how / to what extent each docked energy source will be used. Here you can choose if the system is to use the energy source that is cheapest at the time. You can also choose if the system is to use the energy source that is most carbon neutral at the time.



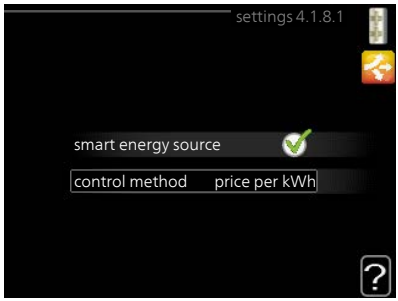
*Select control method "CO_2" under settings to open this menu.

**Select "spot" under set. price to open this menu.

Menu
4.1.8.1

settings

smart energy source™
Setting range: Off/On
Factory setting: Off
control method
Setting range: Price / CO_2
Factory setting: Price



Menu
4.1.8.2

set. price

price, electricity

Setting range: spot, tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, extern shunt add.

Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, extern step add.

Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, OPT addition.

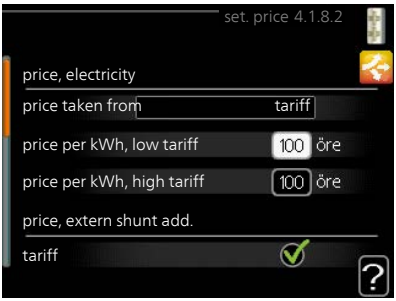
Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

Here you can choose if the system is to exercise control based on the spot price, tariff control or a set price. The setting is made for each individual energy source. Spot price can only be used if you have an hourly tariff agreement with your electricity supplier.

*The currency varies depending on the country selected.









Menu 4.1.8.3

CO2 impact

CO2, electricity

Setting range: 0–5

Default value: 2.5

CO2, ext. shunted contr. add.

Setting range: 0–5

Default value: 1

CO2, ext. step contr. add.

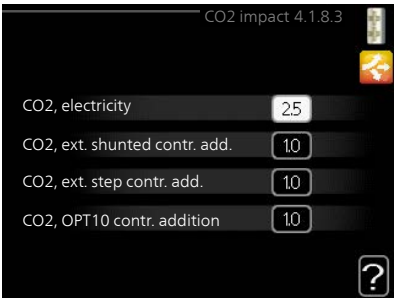
Setting range: 0–5

Default value: 1

CO2, OPT10 contr. addition

Setting range: 0–5

Default value: 1



Here you set the size of the carbon footprint for each energy source,

The carbon footprint is different for different energy sources. For example, the energy from solar cells and wind turbines can be considered carbon dioxide neutral and, therefore, has a low CO_2 impact. Energy from fossil fuels can be considered to have a higher carbon footprint and, therefore, has a higher CO_2 impact.

Menu 4.1.8.4

tariff periods, electricity

Here you can use tariff control for the electric additional heat.

Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).



Menu 4.1.8.5

tariff periods, fixed price

Here you can use tariff control for the fixed electricity cost.

Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).



Menu 4.1.8.6

tariff per, ext. shunt add

Here you can use tariff control for the external shunted additional heat.

Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).



Menu 4.1.8.7

tariff per, ext. step add

Here you can use tariff control for the external step controlled additional heat.

Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).



Menu 4.1.8.8

tariff periods, OPT10

Here you can use tariff control for the OPT 10 controlled additional heat.

Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).



Menu 4.2

op. mode

op. mode

Setting range: auto, manual, add. heat only

Default value: auto

functions

Setting range: compressor, addition, heating, cooling



The heat pump operating mode is usually set to "auto". It is also possible to set the heat pump to "add. heat only", but only when an addition is used, or "manual" and select yourself what functions are to be permitted.

Change the operating mode by marking the desired mode and pressing the OK button. When an operating mode is selected, it shows what is permitted in the heat pump (crossed out = not permitted) and selectable alternatives to the right. To select selectable functions that are permitted or not, mark the function using the control knob and press the OK button.

Operating mode auto

In this operating mode the heat pump automatically selects what functions are permitted.

Operating mode manual

In this operating mode you can select what functions are permitted. You cannot deselect "compressor" in manual mode.

Operating mode add. heat only

In this operating mode the compressor is not active, only additional heat is used.

Caution

If you choose mode "add. heat only" the compressor is deselected and there is a higher operating cost.

Functions

"**compressor**" is that which produces heating and hot water for the accommodation. If "compressor" is deselected, a symbol in the main menu on the heat pump symbol is displayed. You cannot deselect "compressor" in manual mode.

"**addition**" is what helps the compressor to heat the accommodation and/or the hot water when it cannot manage the whole requirement alone.

"**heating**" means that you get heat in the accommodation. You can deselect the function when you do not wish to have heating running.

"**cooling**" means that you get cooling in the accommodation in hot weather. You can deselect the function when you do not wish to have the cooling running. This alternative requires the accessory for cooling to be installed and activated.

Caution

If you deselect "addition" it may mean that sufficient heating in the accommodation is not achieved.

Menu 4.3

my icons

You can select what icons should be visible when the door to F1145 is closed. You can select up to 3 icons. If you select more, the ones you selected first will disappear. The icons are displayed in the order you selected them.



Menu 4.4

time & date

Set time and date, display mode and time zone here.



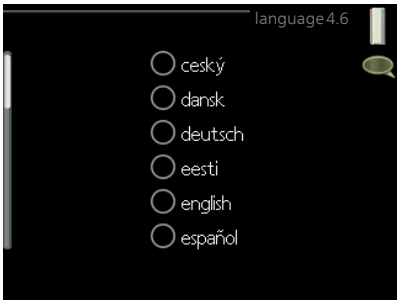
TIP

Time and date are set automatically if the heat pump is connected to NIBE Uplink. To obtain the correct time, the time zone must be set.

Menu 4.6

language

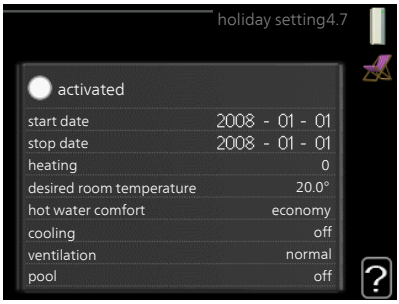
Choose the language that you want the information to be displayed in here.



Menu 4.7

holiday setting

To reduce energy consumption during a holiday you can schedule a reduction in heating and hot water temperature. Cooling, ventilation, pool and solar panel cooling can also be scheduled if the functions are connected.



If a room sensor is installed and activated, the desired room temperature (°C) is set during the time period. This setting applies to all climate systems with room sensors.

If a room sensor is not activated, the desired offset of the heating curve is set. One step is usually enough to change the room temperature by one degree, but in some cases several steps may be required. This setting applies to all climate systems without room sensors.

Vacation scheduling starts at 00:00 on the start date and stops at 23:59 on the stop date.

TIP

Complete holiday setting about a day before your return so that room temperature and hot water have time to regain usual levels.

TIP

Set the vacation setting in advance and activate just before departure in order to maintain the comfort.

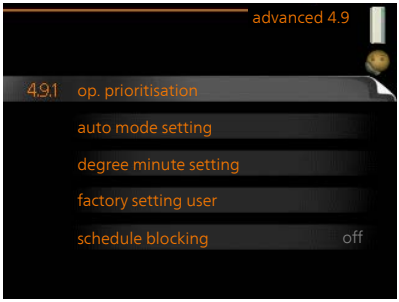
Caution

If you choose to switch off hot water production during the vacation "periodic increase" (preventing bacterial growth) are blocked during this time. "periodic increase" started in conjunction with the vacation setting being completed.

Menu 4.9

advanced

Menu advanced has orange text and is intended for the advanced user. This menu has several sub-menus.



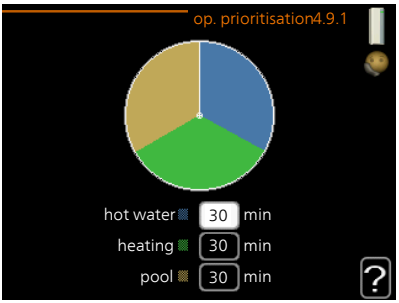
Menu 4.9.1

op. prioritisation

op. prioritisation

Setting range: 0 to 180 min

Default value: 30 min



Choose here how long the heat pump should work with each requirement if there are two or more requirements at the same time. If there is only one requirement the heat pump only works with that requirement.

The indicator marks where in the cycle the heat pump is.

If 0 minutes is selected it means that requirement is not prioritised, but will only be activated when there is no other requirement.

Menu 4.9.2

auto mode setting

start cooling (accessory required)

Setting range: -20 – 40 °C

Factory setting: 25

stop heating

Setting range: -20 – 40 °C

Default values: 17

stop additional heat

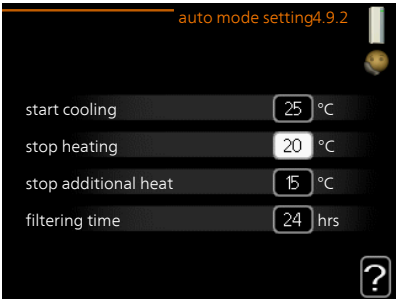
Setting range: -25 – 40 °C

Factory setting: 5

filtering time

Setting range: 0 – 48 h

Default value: 24 h



When the operating mode is set to "auto", the heat pump selects when start and stop of additional heat and heat production is permitted, dependent on the average outdoor temperature. If accessories for cooling are present or if the heat pump has the integrated cooling function you can also select the start temperature for cooling.

Select the average outdoor temperatures in this menu.

You can also set the time over which (filtering time) the average temperature is calculated. If you select 0, the present outdoor temperature is used.

Caution

It cannot be set "stop additional heat" higher than "stop heating".

Caution

In systems where heating and cooling share the same pipes "stop heating" cannot be set higher than "start cooling" if there is not a cooling/heating sensor.

Menu 4.9.3

degree minute setting

current value

Setting range: -3000 – 3000

start compressor

Setting range: -1000 – -30

Default value: -60

start diff additional heat

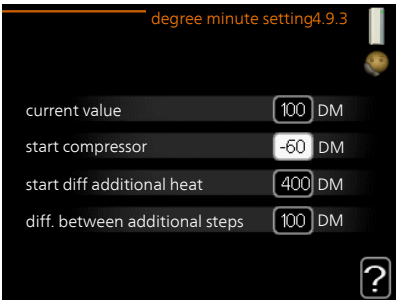
Setting range: 100 – 1000

Factory setting: 400

diff. between additional steps

Setting range: 0 – 1000

Factory setting: 100



Degree minutes are a measurement of the current heating requirement in the house and determine when the compressor respectively additional heat will start/stop.

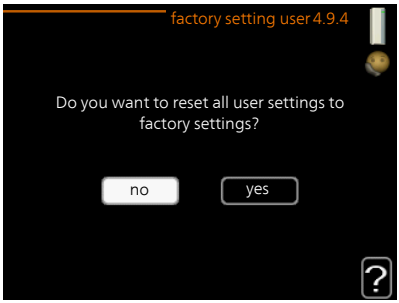
Caution

Higher value on "start compressor" gives more compressor starts, which increase wear on the compressor. Too low value can give uneven indoor temperatures.

Menu 4.9.4

factory setting user

All settings that are available to the user (including advanced menus) can be reset to default values here.



Caution

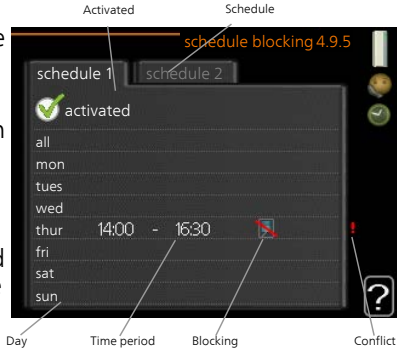
After factory setting, personal settings such as heating curves must be reset.

Menu 4.9.5

schedule blocking

The compressor can be scheduled to be blocked for up to two different time periods here.

When scheduling is active the actual blocking symbol in the main menu on the heat pump symbol is displayed.



Schedule: The period to be changed is selected here.

Activated: Scheduling for the selected period is activated here. Set times are not affected at deactivation.

Day: Select which day or days of the week the schedule is to apply to here.
To remove the scheduling for a particular day, the time for that day must be reset by setting the start time to the same as the stop time. If the line "all" is used, all days in the period are set for these times.

Time period: The start and stop time for the selected day for scheduling are selected here.

Blocking: The desired blocking is selected here.

Conflict: If two settings conflict with each other a red exclamation mark is displayed.



Blocking the compressor.



Blocking additional heat.



TIP

If you wish to set similar scheduling for every day of the week start by filling in “all” and then changing the desired days.



TIP

Set the stop time earlier than the start time so that the period extends beyond midnight. Scheduling then stops at the set stop time the day after.

Scheduling always starts on the date that the start time is set for.



Caution

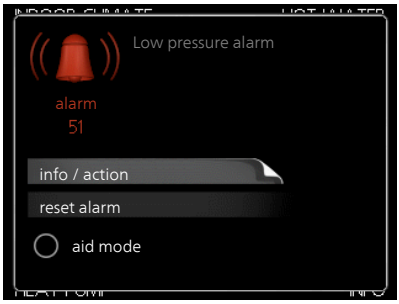
Long term blocking can cause reduced comfort and operating economy.

4 Disturbances in comfort

In most cases, the heat pump notes operational interference and indicates this with alarms and shows instructions in the display. See page 75 for information about managing alarms. If the malfunction does not appear in the display, or if the display is not lit, the following troubleshooting guide can be used.

Manage alarm

In the event of an alarm, some kind of malfunction has occurred, which is indicated by the status lamp changing from green continuously to red continuously. In addition, an alarm bell appears in the information window.



Alarm

In the event of an alarm with a red status lamp a malfunction has occurred that the heat pump cannot remedy itself. In the display, by turning the control knob and pressing the OK button, you can see the type of alarm it is and reset it. You can also choose to set the heat pump to aid mode.

info / action Here you can read what the alarm means and receive tips on what you can do to correct the problem that caused the alarm.

reset alarm In most cases it is enough to select "reset alarm" to correct the problem that caused the alarm. If a green light illuminates after selecting "reset alarm" the alarm has been remedied. If a red light is still visible and a menu called ”alarm” is visible in the display, the problem that caused the alarm remains. If the alarm disappears and then returns, contact your installer.

aid mode ”aid mode” is a type of emergency mode. This means that the heat pump produces heat and/or hot water despite there being some kind of problem. This can mean that the heat pump's compressor is not running. In this case the immersion heater produces heat and/or hot water.



Caution

Selecting "aid mode” is not the same as correcting the problem that caused the alarm. The status lamp will therefore continue to be red.

If the alarm does not reset, contact your installer for suitable remedial action.

NOTE

Always give the product's serial number (14 digits) when reporting a fault.

Troubleshooting

If the operational interference is not shown in the display the following tips can be used:

Basic actions

Start by checking the following possible fault sources:

- The switch's position.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.

Low hot water temperature or a lack of hot water

This part of the fault-tracing chapter only applies if the heat pump is docked to the hot water heater.

- Closed or choked filling valve
  - Open the valve.
- Mixing valve (if there is one installed) set too low.
  - Adjust the mixer valve.
- Heat pump in incorrect operating mode.
  - If mode "manual" is selected, select "addition".
- Large hot water consumption.
  - Wait until the hot water has heated up. Temporarily increased hot water capacity (temporary lux) can be activated in menu 2.1.
- Too low hot water setting.
  - Enter menu 2.2 and select a higher comfort mode.
- Too low or no operating prioritisation of hot water.
  - Enter menu 4.9.1 and increase the time for when hot water is to be prioritised.

Low room temperature

- Closed thermostats in several rooms.
  - Set the thermostats to max, in as many rooms as possible. Adjust the room temperature via menu 1.1, instead of choking the thermostats.

- Heat pump in incorrect operating mode.
  - Enter menu 4.2. If mode "auto" is selected, select a higher value on "stop heating" in menu 4.9.2.
  - If mode "manual" is selected, select "heating". If this is not enough, select "addition".
- Too low set value on the automatic heating control.
  - Enter menu 1.1 "temperature" and adjust the offset heating curve up. If the room temperature is only low in cold weather the curve slope in menu 1.9.1 "heating curve" needs adjusting up.
- Too low or no operating prioritisation of heat.
  - Enter menu 4.9.1 and increase the time for when heating is to be prioritised.
- "Holiday mode" activated in menu 4.7.
  - Enter menu 4.7 and select "Off".
- External switch for changing the room heating activated.
  - Check any external switches.
- Circulation pump(s) (GP1 and/or GP2) stopped.
  - See section "Helping the circulation pump to start" in the installation manual.
- Air in the climate system.
  - Vent the climate system.
- Closed valves
  - Open the valves (contact your installer for assistance in finding them).

High room temperature

- Too high set value on the automatic heating control.
  - Enter menu 1.1 (temperature) and reduce the offset heating curve. If the room temperature is only high in cold weather the curve slope in menu 1.9.1 "heating curve" needs adjusting down.
- External switch for changing the room heating activated.
  - Check any external switches.

Uneven room temperature.

- Incorrectly set heating curve.
  - Adjust the heating curve in menu 1.9.1..
- Too high set value on "dT at DOT"..
  - Contact your installer!

- Uneven flow over the radiators.
  – Contact your installer!

Low system pressure

- Not enough water in the climate system.
  – Top up the water in the climate system.

Low or a lack of ventilation

This part of the fault-tracing chapter only applies if the NIBE FLM accessory is installed.

- Filter blocked.

  blocked.
- The ventilation is not adjusted.
  – Order ventilation adjustment.
- Exhaust air device blocked or throttled down too much.
- Fan speed in reduced mode.
  – Enter menu 1.2 and select "normal".
- External switch for changing the fan speed activated.
  – Check any external switches.

High or distracting ventilation

This part of the fault-tracing chapter only applies if the NIBE FLM accessory is installed.

- Filter blocked.

  blocked.
- The ventilation is not adjusted.
  – Order ventilation adjustment.
- Fan speed in forced mode.
  – Enter menu 1.2 and select "normal".
- External switch for changing the fan speed activated.
  – Check any external switches.

The compressor does not start

- There is no heating requirement.
  – The heat pump does not call on heating nor hot water.
- Temperature conditions tripped.
  – Wait until the temperature condition has been reset.

- Minimum time between compressor starts has not been reached.
  - Wait 30 minutes and then check if the compressor has started.
- Alarm tripped.
  - Follow the display instructions.

Whining noise in the radiators

- Closed thermostats in the rooms and incorrectly set heating curve.
  - Set the thermostats to max. in as many rooms as possible. Adjust the heating curve via menu 1.1, instead of choking the thermostats.
- Circulation pump speed set too high.
  - Contact your installer!
- Uneven flow over the radiators.
  - Contact your installer!

Gurgling sound

This part of the fault-tracing chapter only applies if the NIBE FLM accessory is installed.

- Not enough water in the water seal.
  - Refill the water seal with water.
- Choked water seal.
  - Check and adjust the condensation water hose.

Only additional heat

If you are unsuccessful in rectifying the fault and are unable to heat the house, you can, whilst waiting for assistance, continue running the heat pump in "add. heat only" mode. This means that the heat pump only uses the immersion heater to heat the house.

Set the heat pump to additional heat mode

1. Go to menu 4.2 op. mode.
2. Mark "add. heat only" using the control knob and then press the OK button.
3. Return to the main menus by pressing the Back button.

5 Technical data

Detailed technical specifications for this product can be found in the installation manual (www.nibe.eu).

6 Glossary

Additional heat

The additional heat is the heat produced in addition to the heat supplied by the compressor in your heat pump. Additional heaters can be for example, immersion heater, electric heater, gas/oil/pellet/wood burner or district heating.

Brine

Anti-freeze liquid, e.g. ethanol or glycol mixed with water, which transports heat energy from the heat source (rock/ground/lake) to the heat pump.

Brine side

Brine hoses, any bore holes and the evaporator make up the brine side.

Calculated flow line temperature

The temperature that the heat pump calculates that the heating system requires for an optimum accommodation temperature. The colder the outdoor temperature, the higher the calculated supply temperature.

Charge coil

A charge coil heats the domestic hot water (tap water) in the water heater with heating water (heating medium) from F1145.

Circulation pump

Pump that circulates liquid in a pipe system.

Climate system

The climate system can also be called the heating and/or cooling system. The building is cooled or heated using radiators, under floor coils or convector fans.

Coil tank

A heater with a coil in it. The water in the coil heats the water in the heater.

Collector

Hose where the brine circulates in a closed system between the heat source and the heat pump.

Compressor

Compresses the gas state refrigerant. When the refrigerant is compressed, the pressure and the temperature increase.

Condenser

Heat exchanger where the hot gas state refrigerant condenses (cooled and becomes a liquid) and releases heat energy to the house heating and hot water systems.

Convector

Works in the same way as a radiator, but with the difference that the air is blown out. This means that the convector can be used to heat or cool the accommodation.

COP

If a heat pump has COP of 5, this means that you only pay for a fifth of your heating demand. This is the efficiency of the heat pump. This is measured at different measurement values, e.g.: 0 / 35 where 0 stands for the degrees in temperature of the incoming brine and 35 stands for how many degrees the supply temperature is maintaining.

Disturbances in comfort

Disturbances in comfort are undesirable changes to the hot water/indoor comfort, for example when the temperature of the hot water is too low or if the indoor temperature is not at the desired level.

A malfunction in the heat pump can sometimes be noticed in the form of a disturbance in comfort.

In most cases, the heat pump notes operational interference and indicates this with alarms and shows instructions in the display.

Domestic hot water

The water one showers in for example.

Double-jacketed tank

A heater with domestic hot water (tap water) is surrounded by an outer vessel with boiler water (to the house radiators/elements). The heat pump heats the boiler water, which in addition to going out to the all the house radiators/elements, heats the domestic hot water in the inner vessel.

DUT, dimensioned outdoor temperature

The dimensioned outdoor temperature differs depending on where you live. The lower the dimensioned outdoor temperature, the lower the value should be selected on "selecting a heat curve".

Efficiency

A measurement of how effective the heat pump is. The higher the value is the better it is.

Electrical addition

This is electricity that, for example, an immersion heater uses as addition during the coldest days of the year to cover the heating demand that the heat pump cannot manage.

Emergency mode

A mode that can be selected using the switch in the event of a fault, which means that the compressor stops. When the heat pump is in emergency mode, the building and/or hot water is heated using an immersion heater.

Evaporator

Heat exchanger where the refrigerant evaporates by retrieving heat energy from the brine which then cools.

Expansion valve

Valve that reduces the pressure of the refrigerant, whereupon the temperature of the refrigerant drops.

Expansion vessel

Vessel with brine or heating medium fluid with the task of equalising the pressure in the brine or heating medium system.

Fan convectors

A type of convector, but with auxiliary fan that blows hot or cold air into the accommodation.

Filtering time

Indicates the time the average outdoor temperature is calculated on.

Flow pipe

The line in which the heated water is transported from the heat pump out to the house heating system (radiators/heating coils).

Free cooling

The cold brine from the collector/borehole is used to cool the accommodation.

Heat exchanger

Device that transfers heat energy from one medium to another without mixing mediums. Examples of different heat exchangers are evaporators and condensers.

Heat factor

Measurement of how much heat energy the heat pump gives off in relation to the electric energy it needs to operate. Another term for this is COP.

Heating curve

The heating curve determines which heat the heat pump is to produce depending on the temperature outdoors. If a high value is selected, this tells the heat pump that it must produce a lot of heat when it is cold outdoors in order to achieve a warm indoor temperature.

Heating medium

Hot liquid, usually normal water, which is sent from the heat pump to the house climate system and makes the accommodation warm. The heating medium also heats the hot water through the double jacketed tank or coil tank.

Heating medium side

Pipes to the house's climate system and condenser make up the heating medium side.

Level monitor

Accessory that senses the level in the level vessel and gives an alarm if it becomes too low.

Level vessel

Partially transparent vessel with brine with the task of equalising the pressure in the brine system. When the temperature of the brine increases or decreases, the pressure in the system changes and the level in the level vessel also changes.

Mixing valve

A valve that mixes the cold water with the hot water leaving the heater.

Outside sensor

A sensor that is located outdoors. This sensor tells the heat pump how hot it is outdoors.

Passive cooling

See "Free cooling".

Pressostat

Pressure switch that triggers an alarm and/or stops the compressor if non-permitted pressures occur in the system. A high pressure pressostat trips if the condensing pressure is too great. A low pressure pressostat trips if the evaporation pressure is too low.

Radiator

Another word for heating element. They must be filled with water in order to be used with F1145.

Refrigerant

Substance that circulates around a closed circuit in the heat pump and that, through pressure changes, evaporates and condenses. During evaporation, the refrigerant absorbs heating energy and when condensing gives off heating energy.

Return pipe

The line in which the water is transported back to the heat pump from the house heating system (radiators/heating coils).

Return temp

The temperature of the water that returns to the heat pump after releasing the heat energy to the radiators/heating coils.

Room sensor

A sensor that is located indoors. This sensor tells the heat pump how hot it is indoors.

Safety valve

A valve that opens and releases a small amount of liquid if the pressure is too high.

Shuttle valve

A valve that can send liquid in two directions. A shuttle valve that enables liquid to be sent to the climate system, when the heat pump produces heating for the house, and to the hot water heater, when the heat pump produces hot water.

Supply temperature

The temperature of the heated water that the heat pump sends out to the heating system. The colder the outdoor temperature, the higher the supply line temperature becomes.

Water heater

Container where domestic water is heated. Is located somewhere outside the heat pump.

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