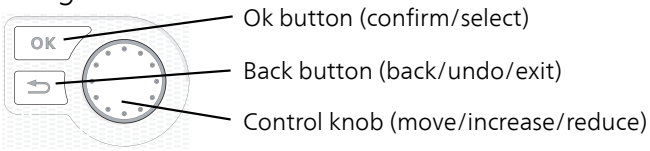
UHB EN 2008-3
231712

USER MANUAL

Ground source heat pump NIBE F1126

Quick guide

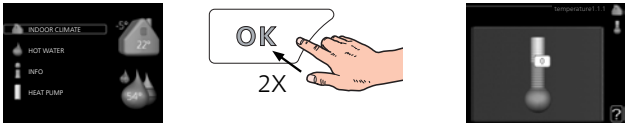
Navigation



A detailed explanation of the button functions can be found on page 10.

How to scroll through menus and make different settings is described on page 14.

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 23.

Increase hot water volume

To increase the amount of hot water temporarily (if a water heater is installed for your F1126), first turn the control knob to select menu 2 (water droplet) and then press the OK button twice. Read more about the settings on page temporary lux.

In event of disturbances in comfort

If you experience a disturbance in comfort of any kind, there are some measures you can take yourself before you need to contact your installer. See page 44 for instructions.

Table of Contents

1 Important information

INSTALLATION DATA

Product	*F1126*
Serial number	
Installation date	
Installer	
Type of brine - Mixing ratio/freezing point	
Active drilling depth/collector length	

No.	*Name*	*Fact. sett.*	*Set*
1.9.1.1	heating curve (offset)	0	
1.9.1.1	heating curve (curve slope)	7	

✔	*Accessories*

Serial number must always be given

Certification that the installation is carried out according to instructions in the accompanying 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.

Do not start F1126 if there is a risk that the water in the system has frozen.

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

Water may drip from the safety valve's overflow pipe, so the overflow pipe's opening must be open. The safety valves must be actuated regularly to remove dirt and to check that they are not blocked.

Symbols

WARNING!

This symbol indicates serious danger to person or machine.

NOTE

This symbol indicates danger to person or machine .

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

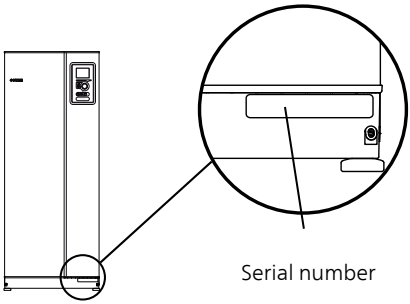
CE The CE mark is obligatory for most products sold in the EU, regardless of where they are made.

IP21 Classification of enclosure of electro-technical equipment.

Danger to person or machine.

Serial number

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



Caution

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

F1126 – An excellent choice

F1126 is part of a new generation of heat pumps, which have been introduced to supply your home with inexpensive and environmentally friendly heating. 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 underfloor heating. It is also prepared for connection to several different products and accessories, e.g. water heaters and ventilation recovery.

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

F1126 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 F1126:

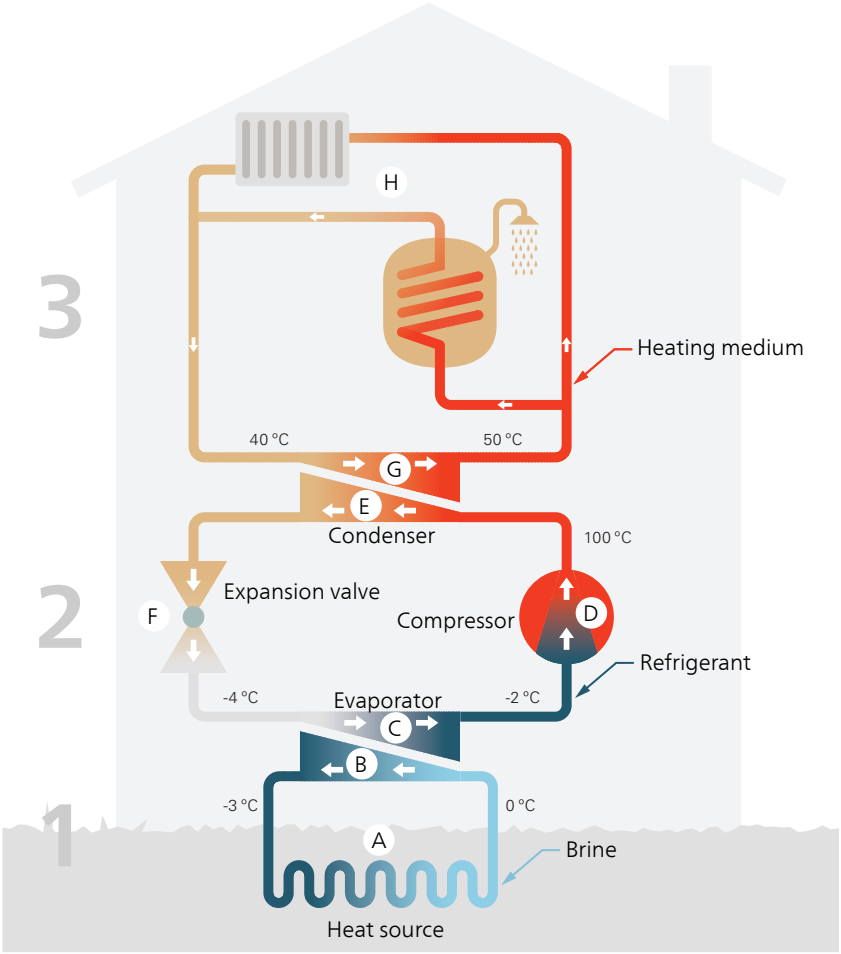
- *Display with user instructions*

  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.

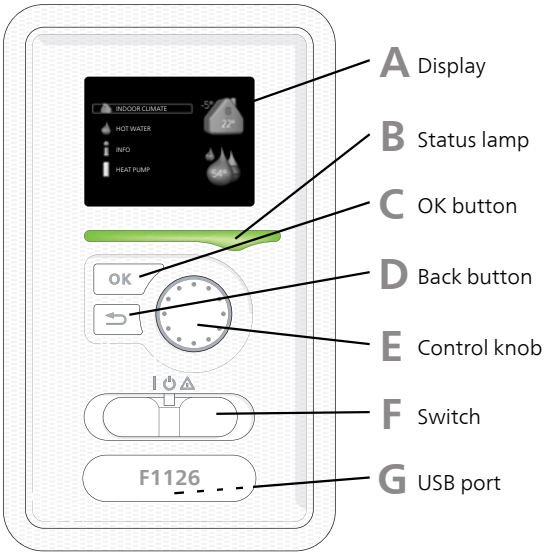
Heat medium circuit

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 F1126

DISPLAY UNIT



There is a display unit on the front of the heat pump, which is used to communicate with F1126.. 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.

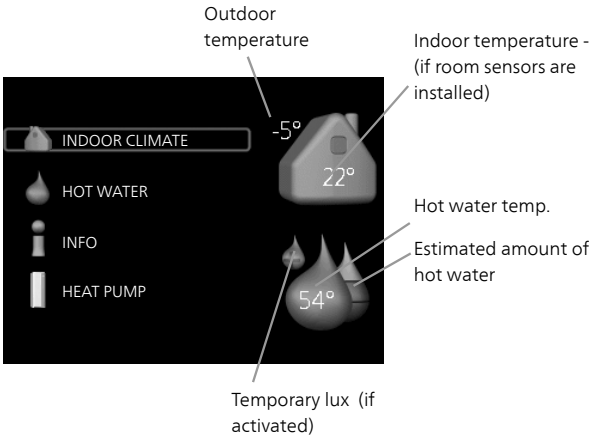
G *USB port*

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

MENU SYSTEM



Menu 1

INDOOR CLIMATE

Setting the indoor climate. See page 22.

Menu 2

HOT WATER

Setting the hot water production. See page 29.

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

Menu 3

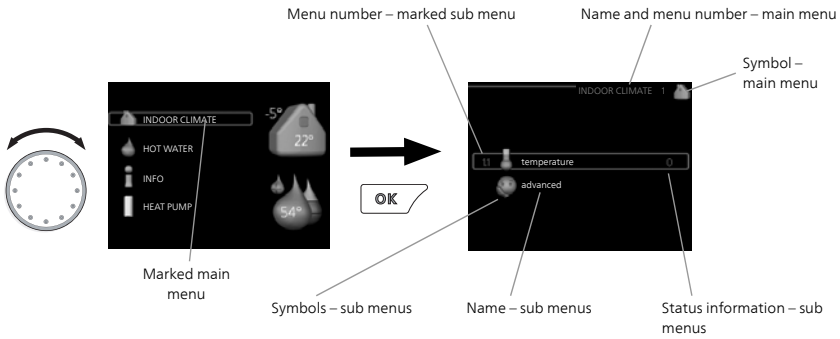
INFO

Display of temperature and other operating information and access to the alarm log. See page 33.

Menu 4

HEAT PUMP

Setting time, date, language, display, operating mode etc. See page 37.



Operation

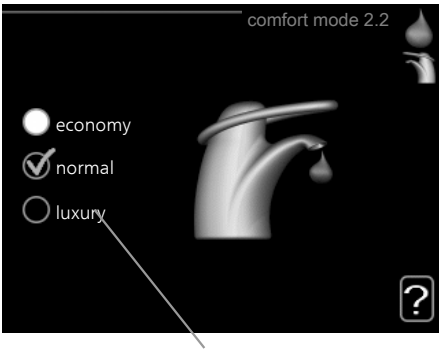
To move the cursor, turn the control knob to the left or the right. The marked position is brighter and/or has a light frame.

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

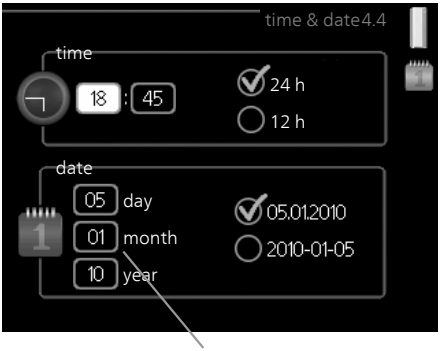


In an options menu the current selected option is indicated by a green tick.

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



Values to be changed

To set a value:

1. Mark the value you want to set using the control knob. 

2. Press the OK button. The background of the value becomes green, which means that you have accessed the setting mode. 

3. Turn the control knob to the right to increase the value and to the left to reduce the value. 

4. Press the OK button to confirm the value you have set. To change and return to the original value, press the Back 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 F1126

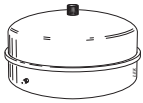
F1126 requires minimal maintenance after commissioning. However, it is recommended that you check your installation regularly.

If something unusual occurs, messages about the malfunction appear in the display in the form of different alarm texts. See alarm management on page 43.

BRINE

Brine

The brine that obtains the heat in the ground is not normally consumed, but just pumped around.



Your installation includes an expansion vessel, where you can control the pressure in the system. The pressure can vary slightly due to the fluid's temperature. The pressure should not fall below 0.5 bar.

Ask your installer if you are unsure where the expansion vessel is located.

Your installer can also help you to top-up if the pressure has dropped.

SAFETY VALVE

For installations with a water heater.

You can find the safety valve on the incoming pipe (cold water) to the water heater.

The water heater's safety valve sometimes releases a little 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.

The function of the safety valve must be checked regularly. Perform checks as follows:

1. Open the valve.
2. Check that water is flowing through it.
3. Close the valve.

Saving tips

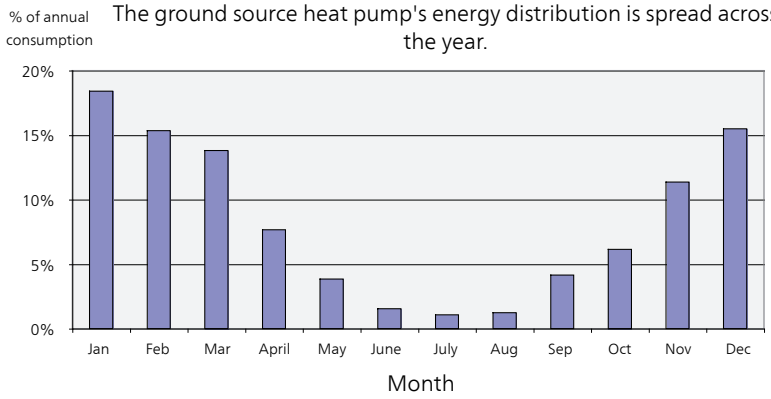
Your heat pump installation produces heat and/or hot water. This occurs via the control settings you made.

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 rooms where you want it to be cooler). The thermostats slow the flow in the heating system, which F1126 wants to compensate by increasing the temperature. It will then work harder and consume more energy.

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)*		*Appr. ann. consump (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
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 TVs, 1 digital boxes, 1 DVD players, 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, dishwasher, 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.

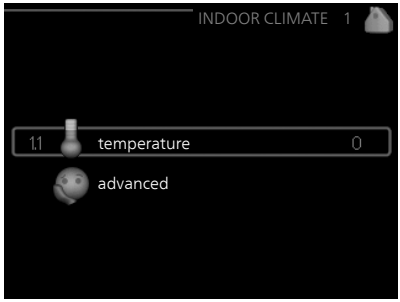
3 F1126 – at your service

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.



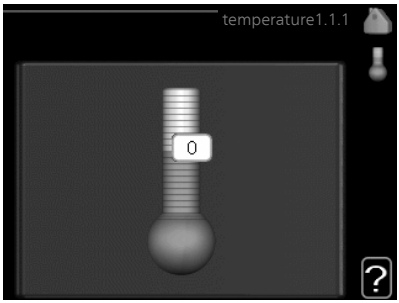
temperature Setting the temperature for the climate system. The status information shows the set values for the climate system.

advanced Setting of heat curve, adjusting with external contact, minimum value for supply temperature, own curve, point offset and +Adjust.

Menu 1.1

TEMPERATURE

Accessories are required to control the climate system using room sensors.



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

heating

Setting range: 5 – 30 °C

Default value: 20

The value in the display appears as a temperature in °C if the climate system is controlled by a 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 raise or lower 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.

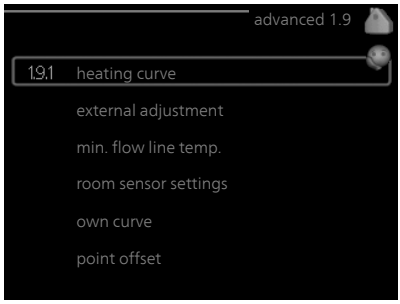
If it is cold outdoors and the room temperature is too high, reduce the curve slope in menu 1.9.1.1 by one increment.

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 1.9

ADVANCED



Menu advanced is intended for the advanced user. This menu has several submenus.

heating curve Setting the heating curve slope.

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.

own curve Setting own heat curve.

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

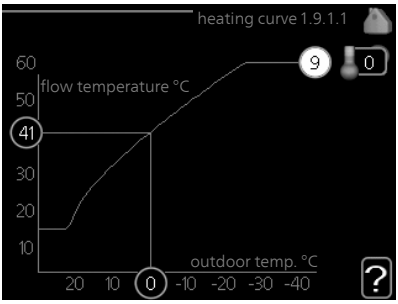
Menu 1.9.1

HEATING CURVE

heating curve

Setting range: 0 - 15

Default value: 9



The prescribed heating curve for your house can be viewed in the menu heating curve. The task of the heating curve is to give an even indoor temperature, regardless of the outdoor temperature, and thereby energy efficient operation. It is from this heating curve that the heat pump's control computer determines the temperature of the water to the heating system, supply temperature, and therefore the indoor temperature. Select the heating curve and read off how the supply temperature changes at different outdoor temperatures here.

Caution

With underfloor heating systems, max flow line temperature should normally be set to between 35 and 45 °C.

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

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

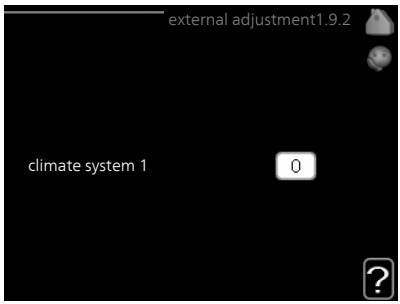
EXTERNAL ADJUSTMENT

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.

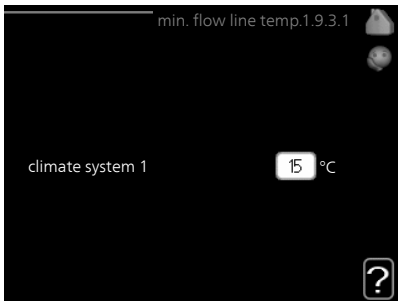
Menu 1.9.3

MIN. FLOW LINE TEMP.

climate system

Setting range: 5-70 °C

Default value: 20 °C



Set the minimum temperature on the supply temperature to the climate system. This means that F1126 never calculates a temperature lower than that set here.

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

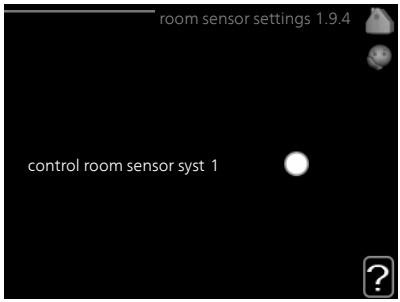
ROOM SENSOR SETTINGS

1.9.4

factor system

Setting range: 0.0 - 6.0

Default value: 2.0



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

Caution

A slow heating system such as underfloor heating may not be suitable for control using the installation's room sensors.

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

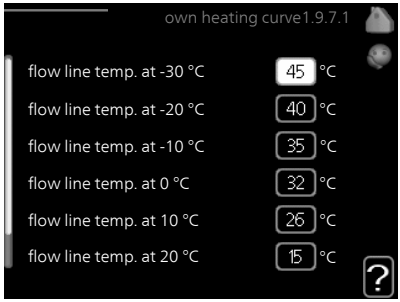
Too high a set value for "factor system" can (depending on your climate system) produce an unstable room temperature.

Menu 1.9.7

OWN CURVE

supply temperature

Setting range: 0 – 80 °C



You can create your own heating curve here, if there are special requirements, 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

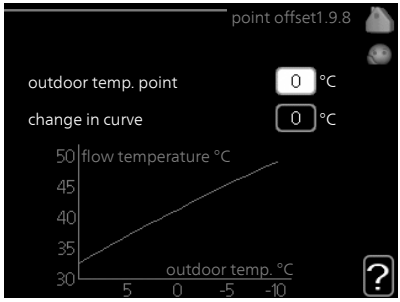
Setting range: -40 – 30 °C

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.

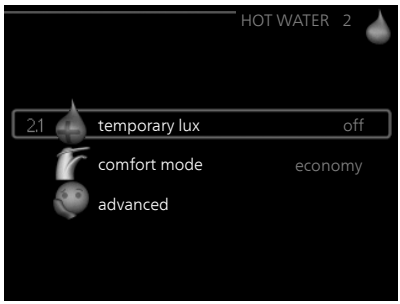
Caution

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

Set the hot water capacity

OVERVIEW

Sub-menus



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

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".

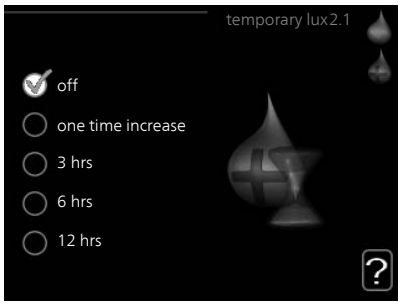
advanced Setting periodic increase in the hot water temperature.

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 F1126 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 produces less hot water than the others, but is more economical. This mode can be used in smaller households with a small hot water requirement.

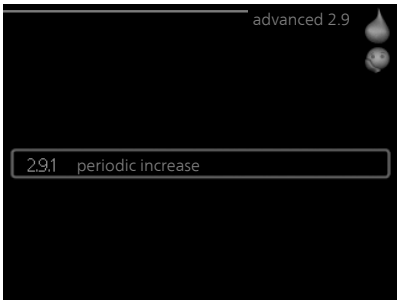
normal: Normal mode gives a larger amount of hot water and is suitable for most households.

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 increases operating costs.

Menu 2.9

ADVANCED

Menu advanced is intended for the advanced user. This menu has several submenus.



Menu 2.9.1

PERIODIC INCREASE

period

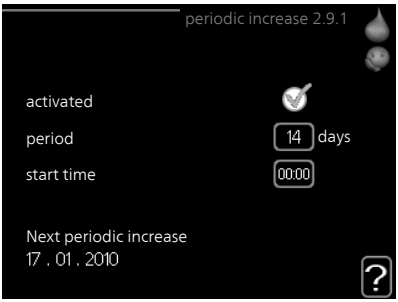
Setting range: 1 - 90 days

Default value: 14 days

start time

Setting range: 00:00 - 23:00

Default value: 00:00



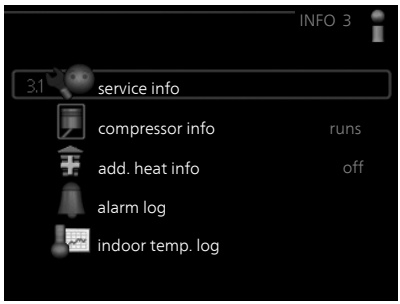
To prevent bacterial growth in the water heater, the compressor and the immersion heater can increase the hot water temperature for a short time at regular intervals.

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.

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.

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.

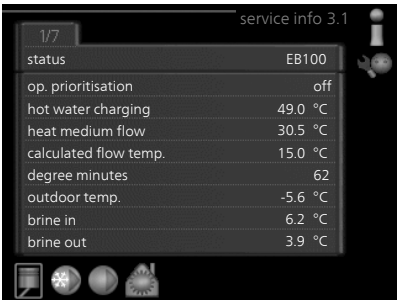
add. heat info displays information about the additional heat's operating times etc.

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.

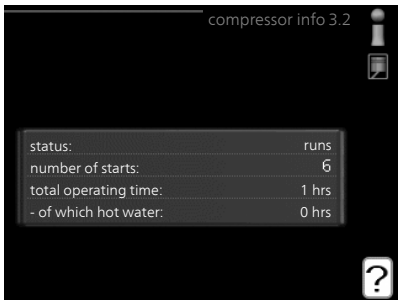
Symbols in this menu:			
	Compressor		Heating
	Addition		Hot water
	Brine pump		Heating medium pump

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.

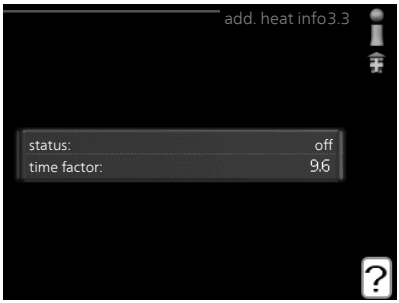


Menu 3.3

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.

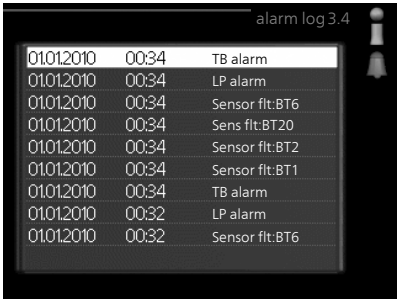


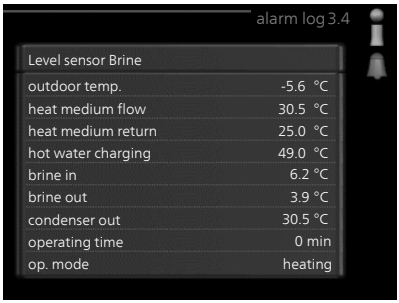
Menu 3.4

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.

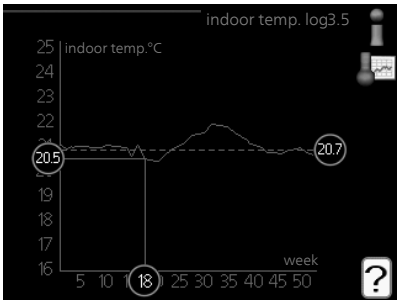




Information about an alarm.

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.

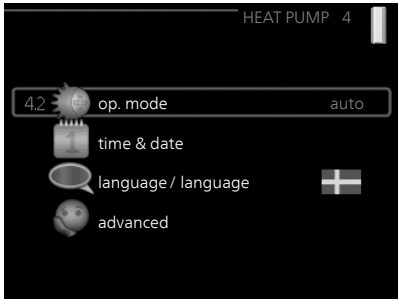
To read off an average temperature

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.

time & date Setting current time and date.

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

advanced Setting heat pump work mode.

Menu 4.1

PLUS FUNCTIONS

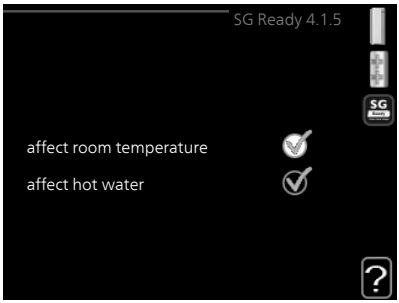
Settings for any additional functions installed in F1126 can be made in the sub menus.

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 for the hot water is set as high as possible with compressor operation only (immersion heater not permitted).

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

NOTE

The function must be connected and activated in your F1126.

Menu 4.2

OP. MODE

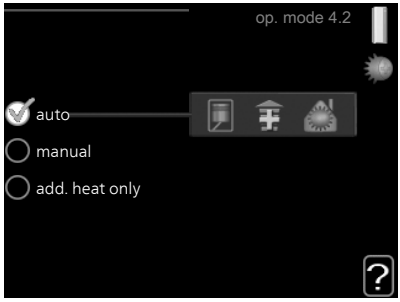
op. mode

Setting range: auto, manual, add. heat only

Default value: auto

functions

Setting range: compressor, addition, heating



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 the unit that produces heating and hot water for the home. If "compressor" is deselected in auto mode, this is displayed with a symbol in the main menu. You cannot deselect "compressor" in manual mode.

"addition" is the unit that helps the compressor to heat the home and/or the hot water when it cannot manage the entire requirement alone.

"heating" means you obtain heating in the home. You can deselect the function when you do not wish to have the heating on.

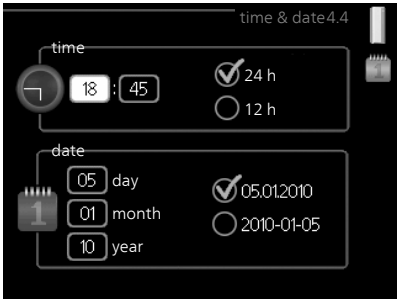
Caution

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

Menu 4.4

TIME & DATE

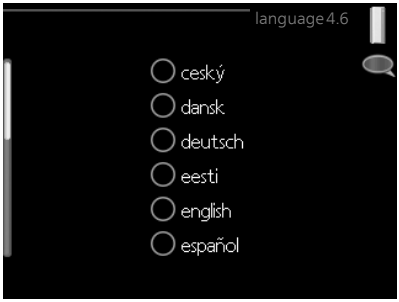
Set time and date and display mode here.



Menu 4.6

LANGUAGE

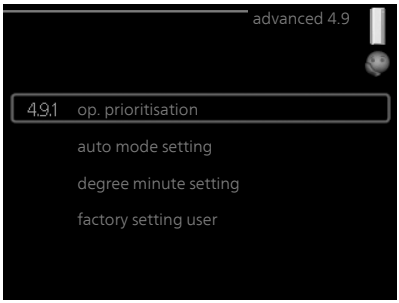
Choose the language that you want the information to be displayed in here.



Menu 4.9

ADVANCED

Menu advanced is intended for the advanced user. This menu has several submenus.



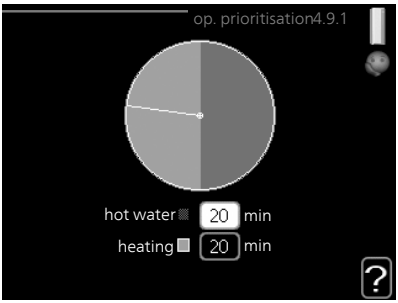
Menu 4.9.1

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 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, this means that the requirement is not prioritised, but will only be activated when there is no other requirement.

Menu 4.9.2

AUTO MODE SETTING

stop heating

Setting range: -20 – 40 °C

Default values: 17

stop additional heat

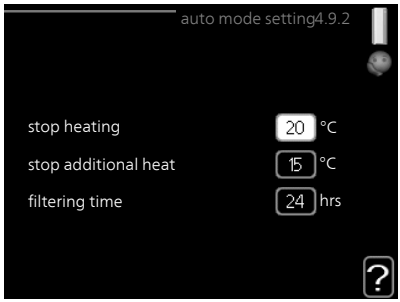
Setting range: -25 – 40 °C

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.

Select the average outdoor temperatures in this menu.

Caution

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

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

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

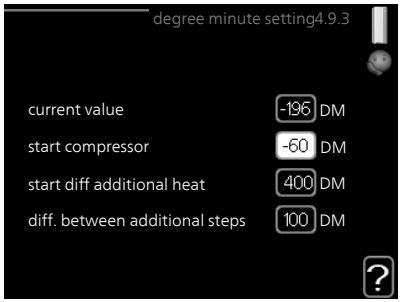
Setting range: 100 – 1000

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.

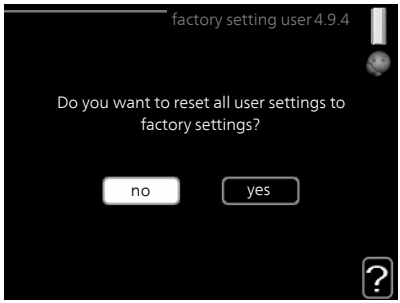
Caution

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

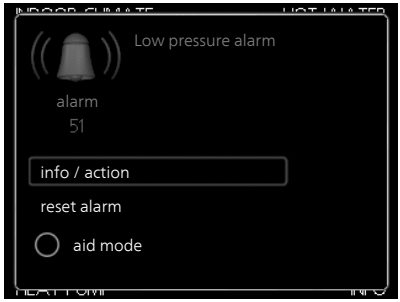
After factory setting, personal settings such as heating curves must be reset.

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 43 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 many cases, it is sufficient to select "reset alarm" in order for the product to revert to normal operation. If a green light comes on 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 causing the alarm still remains. If the alarm initially disappears and then returns, you should 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 even though there is some kind of problem. This could mean that the heat pump's compressor is not running. In this case, the immersion heater produces heat and/or hot water.

Caution

To select aid mode an alarm action must be selected in the menu 5.1.4.

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

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

Troubleshooting

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

BASIC ACTIONS

Start by checking the following items:

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

LOW HOT WATER TEMPERATURE OR NO HOT WATER

- Mixing valve (if there is one installed) set too low.
  - Adjust the mixer valve.

- F1126 in incorrect operating mode.
  - Enter menu 4.2. If mode "auto" is selected, select a higher value on "stop additional heat" in menu 4.9.2.
  - 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. Note that, if the time for hot water is increased, the time for heating production is reduced, which can give lower/uneven room temperatures.

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.

    See the "Saving tips" section for more detailed information about how to best set the thermostats.
- 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.
- F1126 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 or no operating prioritisation of heat.

– Enter menu 4.9.1 and increase the time for when heating is to be prioritised. Note that if the time for heating is increased the time for hot water production is reduced, which can give smaller amounts of hot water.

- External switch for changing room temperature activated.
  – Check any external switches.
- Air in the climate system.
  – Vent the climate system.
- Closed valves to the climate system.
  – 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 room temperature activated.
  – Check any external switches.

UNEVEN ROOM TEMPERATURE.

- Incorrectly set heating curve.
  – Fine-tune 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.
  – Fill the climate system with water and check for leaks. In event of repeated filling, contact the installer.

COMPRESSOR DOES NOT START

- There is no heating requirement.
  - F1126 does not call on heating or hot water.
- Compressor blocked due to the temperature conditions.
  - Wait until the temperature is within the product's working range.
- Minimum time between compressor starts has not been reached.
  - Wait for at least 30 minutes and then check if the compressor has started.
- Alarm tripped.
  - Follow the display instructions.
- "Additional heat only" is selected.
  - Switch to "Auto" or "Manual" in menu 4.1 "Operating mode".

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

- 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 do not succeed in correcting the fault and are unable to heat the house, you can put the heat pump in ”add. heat only” mode while waiting for assistance. This means that the heat pump uses only the immersion heater to produce heating and/or hot water.

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 (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 F1126.

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.

DOT, 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".

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.

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 include 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 F1126.

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.

Item register

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