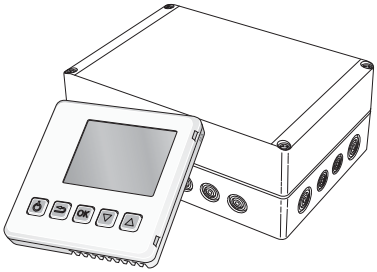


User manual

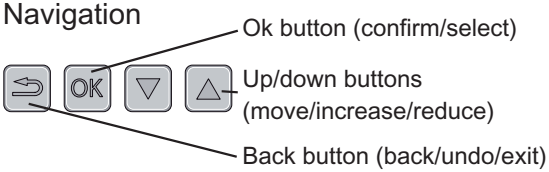
NIBE™ SMO 05

Accessories

UHB GB 1146-1
431198

Quick guide

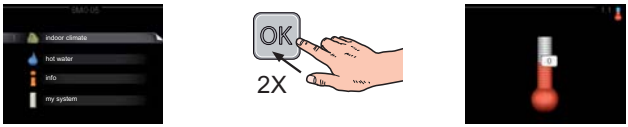
Navigation



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

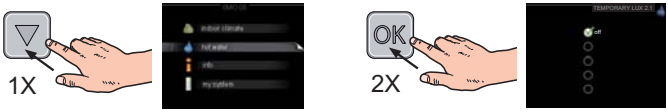
How to scroll through menus and make different settings is described on page 12.

Set the indoor climate



The mode for setting the indoor temperature is reached, when in the start mode in the main menu, by pressing the OK button twice. Read more about the settings on page 18.

Increase hot water volume



To temporarily increase the amount of hot water (if a hot water heater is installed to your SMO 05), first push the down button once to mark menu 2 (water droplet) and then press the OK button twice. Read more about the settings on page 30.

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 43 for instructions.

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1 Important information

Installation data

Product	SMO 05
Serial number	
Installation date	
Installer	
Type of docking	
Accumulator/hot water heater	
Heat pump/output size	
Add. heat type/power	

No.	Name	Default settings	Set
1.9.1	heating curve (offset/curve slope)	0/7	

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 is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
Children should be supervised to ensure that they do not play with the appliance.
Rights to make any design or technical modifications are reserved.

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

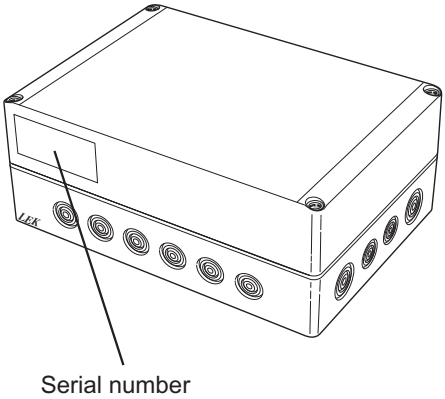
This accessory is CE marked and fulfils IP20 (room unit) and IP21 (unit box).

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.

IP20 means that the product can be touched by hand, that objects with a diameter larger than or equivalent to12.5 mm cannot penetrate and cause damage.

Serial number

The serial number can be found on one long side of the cover on the unit box.



Caution

Always give the product's serial number when reporting a fault.

Contact information

AT **KNV Energietechnik GmbH**, Gahberggasse 11, 4861 Schörfling

Tel: +43 (0)7662 8963-0 Fax: +43 (0)7662 8963-44 E-mail: mail@knv.at www.knv.at

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For countries not mention in this list, please contact Nibe Sweden or check www.nibe.eu for more information.

SMO 05 – An excellent choice

SMO 05 is a control module, which has been introduced to supply your home with inexpensive and environmentally friendly heating. Heat production is reliable and economical with a NIBE air/water heat pump and accumulator/water heater.

An additional heater (for example electric/oil/gas boiler) can engage automatically if something unexpected should occur or as reserve operation.

Excellent properties for SMO 05:

- ***Easy to read display***

  The room unit has an easy to read display with easy-to-understand menus that facilitate setting a comfortable indoor climate.

- ***Easy to install***

  SMO 05 is easy to install together with NIBE F2015/F2025/F2016/F2026/F2300. When installing together with these, the control module is connected to the heat pump, which enables you to see any heat pump alarms in SMO 05.

- ***Two part design***

  SMO 05 consists of a room unit and a unit box. The room unit can be positioned in a convenient place for the user and the unit box can be positioned in another location together with other equipment in your system.

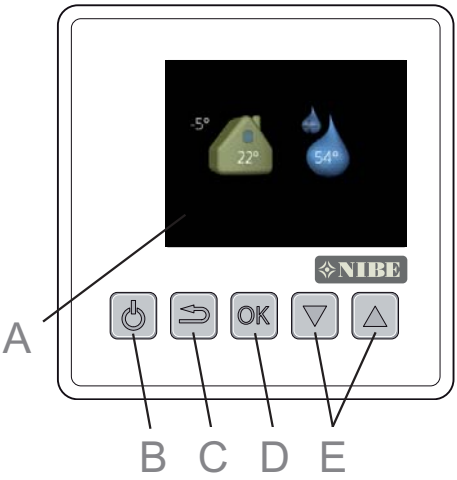
2 The control module – the heart of the house

Control module's function

SMO 05 is a simple control module, which, together with NIBE air/water heat pump, accumulator/water heater and additional heater (e.g. electric/oil/gas boiler), creates a complete installation.

Contact with SMO 05

Room unit



There is a room unit for SMO 05 that is used to control your installation. Here you:

- 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.

B ***Stand-by button***

The room unit can be switched to stand-by mode using the stand-by button. Heat pump operation is not affected by pressing the button.

C ***Back button***

The back button is used to:

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

D ***OK button***

The OK button is used to:

- confirm selections of sub menus/options/set values.

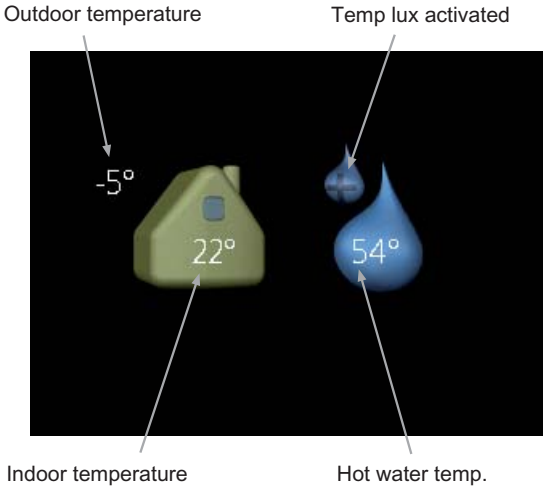
E ***Up and down buttons***

With the up and down buttons you can:

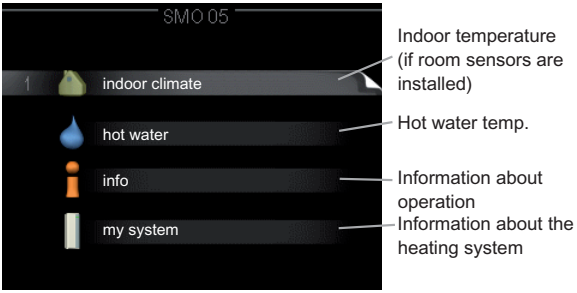
- scroll in menus and between options.
- increase and decrease the values.
- change page in multiple page instructions

Menu system

When the room unit starts up you come to the information menu. Basic information about your system status is shown here.



Press any button to go to the main menu.



The information menu shows:

- on starting
- when the back button in the main menu is pressed
- after 15 minutes of inactivity.

In the event of an alarm a symbol is shown in the display together with the alarm's number. See page 43 for instructions.

In the other menus the alarm symbol is shown in the bottom right hand corner.

Menu 1

INDOOR CLIMATE

Setting the indoor climate. See page 17.

Menu 2

HOT WATER

Setting the hot water production. See page 29.

This menu only appears if a water heater is activated in the menu system.

Menu 3

INFO

Display of temperature and other operating information. See page 33.

Menu 4

MY INSTALLATION

Setting operating mode etc. See page 34.

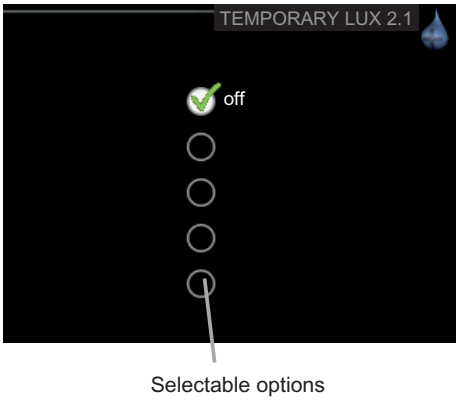
Operation

To move the cursor, press the up or down button. The marked position is brighter and/or has a turned up tab.

Selecting menu

To advance in the menu system select a sub-menu by marking it by using the up and down buttons and then pressing the OK button.

Selecting options

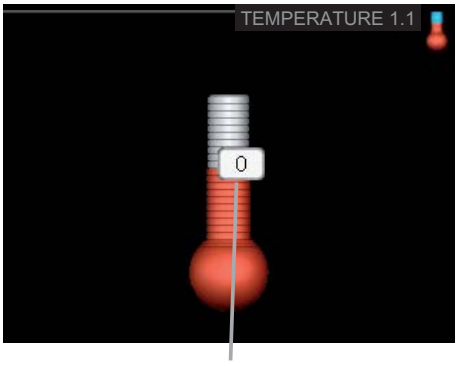


In an options menu the current selected option is indicated by a green tick.

To select another option:

1. Mark the applicable option using the up or down button. 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



Adjustable value

To set a value:

1. Mark the value you want to set using the up or down button.

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

3. Press the up button to increase the value or the down button to reduce the value.

4. Press the OK button to confirm the value you have set. To undo and return to the original value, press the back button.

Maintenance of SMO 05

Regular checks

Your heat pump requires minimal maintenance after commissioning. On the other hand, it is recommended that you check your installation regularly. For more information regarding the maintenance of heat pumps and/or accumulator tanks/water heaters, refer to the relevant manual.

If something unusual occurs, messages about the malfunction appear in the display in the form of different alarm texts. See alarm management on page 42.

Saving tips

Your heat pump installation produces heat and 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.

If you activate "Hot water Economy", less energy is used.

Power consumption

Increasing the indoor temperature one degree increases power 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 6000-12.000 kWh/year.

Equipment	Normal Output (W)		Approximate annual consumption (kWh)
	Operation	Standby	
Flat-screen (Operation: 5 h/day, Standby: 19 h/day)	200	2	380

Equipment	Normal Output (W)		Approximate annual consumption (kWh)
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	-	55
Cooler (Operation: 24 h/day)	100	-	165
Freezer (Operation: 24 h/day)	120	-	380
Oven, hob (Operation: 40 min/day)	1500	-	365
Oven (Operation: 2 h/week)	3000	-	310
Dishwasher, cold water connection (Operation 1 time/day)	2000	-	730
Washing machine (Operation: 1 time/day)	2000	-	730
Tumble drier (Operation: 1 time/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.

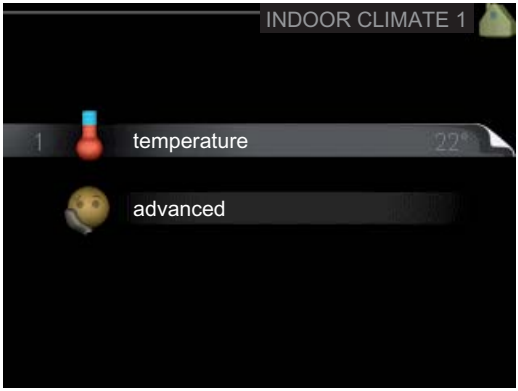
Energy meter

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

3 SMO 05 – at your service

Set the indoor climate

Overview



Sub-menus

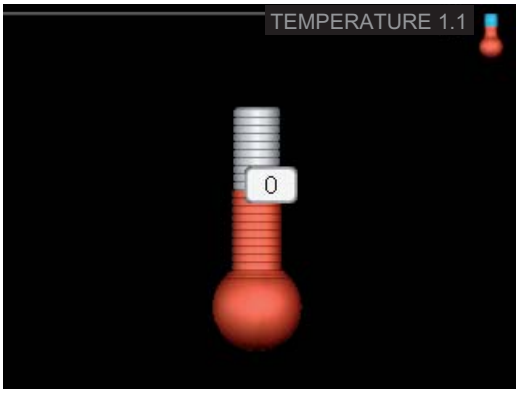
For the menu INDOOR CLIMATE there are several sub-menus. Status information for the relevant menu can be found on the display to the right of the menus.

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 and room sensor.

Menu 1.1

temperature



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

Setting range: 5 - 30 °C

Default value: 20

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

To change the room temperature, use the up and down buttons 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 up and down buttons 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 unit. One step for under floor heating whilst radiators may require three.

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 thermostat valves 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 by one increment.

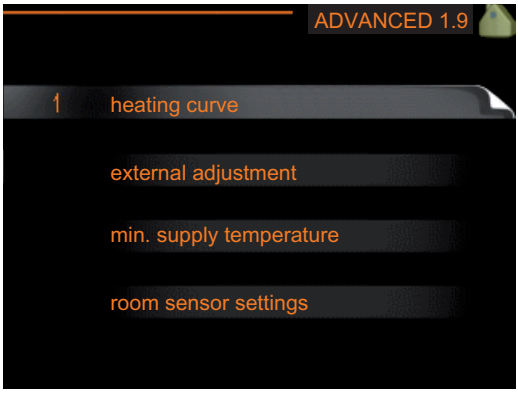
If it is cold outdoors and the room temperature is too high, lower the curve slope menu 1.9.1 by one increment.

If it is warm outdoors and the room temperature is too low, increase the value in menu 1.1 by one increment.

If it is warm outdoors and the room temperature is too high, reduce the value in menu 1.1 by one increment.

Menu 1.9

advanced



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

heating curve Setting the heating curve slope.

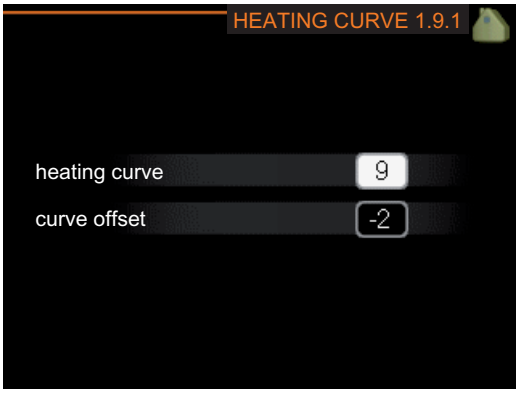
external adjustment Setting the heat curve offset when the external contact is connected.

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

room sensor settings Settings regarding the room sensor.

Menu
1.9.1

heating curve



heating curve

Setting range: 1 - 15

Default value: 13

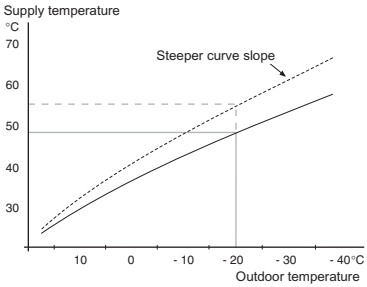
offset

Setting range: -10 to +10

Default value: 0

In the menu heating curve the so-called heating curve for your house can be set. 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, flow line temperature, and therefore the indoor temperature. You can select heating curve and read

off how the flow line temperature changes at different outdoor temperatures here.



Curve coefficient

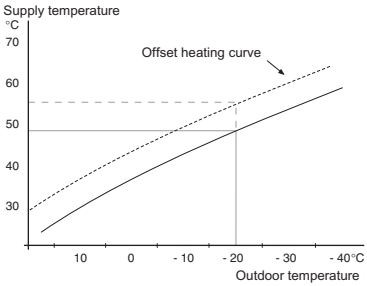
The slope of the heating curve indicates how many degrees the supply temperature is to be increased/reduced when the outdoor temperature drops/increases. A steeper slope means a higher supply temperature at a certain outdoor temperature.

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 heating curve is set when the heating installation is installed, but may need adjusting later. Thereafter the heating curve should not need further adjustment.

Caution

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

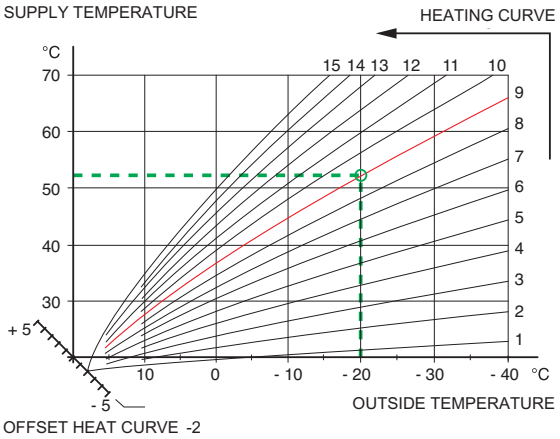


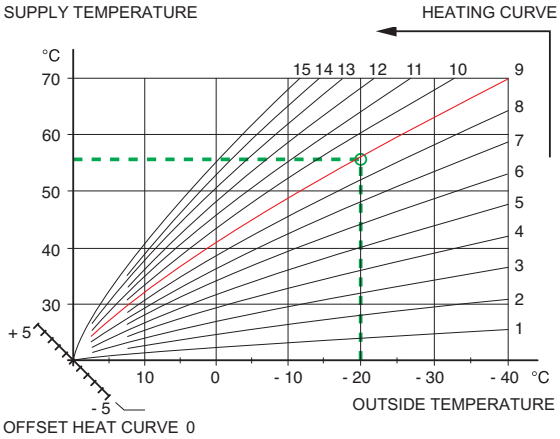
Curve offset

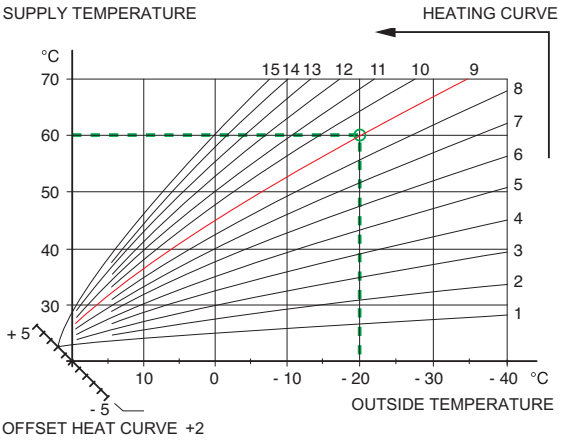
An offset of the heating curve means that the supply temperature changes as much for all the outdoor temperatures, e.g. that a curve offset of +2 steps increases the supply temperature by 5 °C at all outdoor temperatures.

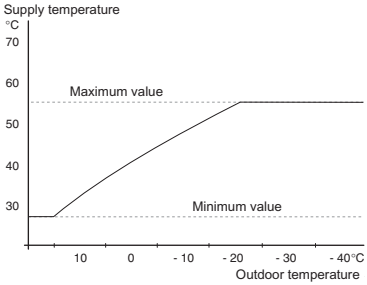
Setting automatic heating controls with diagram

The diagrams are based on the dimensioned outdoor temperature in the area and the dimensioned supply temperature of the climate system. When these two values "meet", the heating control's curve slope can be read.









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

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

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

Use the up and down buttons to set a new value. Confirm the new setting by pressing the OK button.

To select another heat curve (slope):

1. Press the OK button to access the setting mode

2. Select a new heating curve. The heating curves are numbered from 1 to 15, the greater the number, the steeper the slope and the greater the supply temperature.
3. Press the OK button to exit the setting.

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.

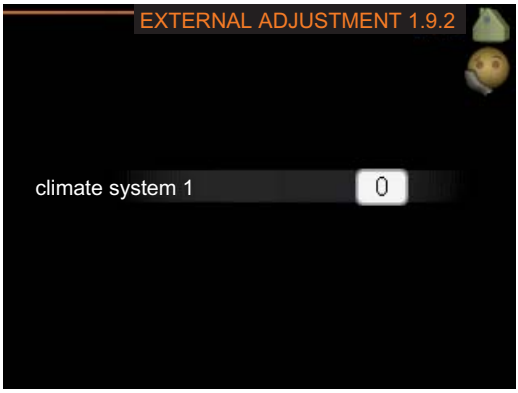
If it is cold outdoors and the room temperature is too high, lower the curve slope by one increment.

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 (with room temperature sensors installed and activated)

Setting range: 5 - 30 °C

Default value: 20

climate system (without room temperature sensors activated)

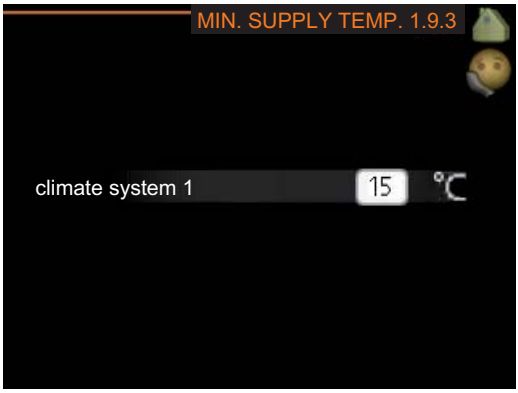
Setting range: -10 to +10

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. When the contact is on, the heat 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: 15 – 50 °C

Default value: 15 °C

Set the minimum temperature on the supply temperature to the climate system. This means that SMO 05 never calculates a temperature lower than that set here.

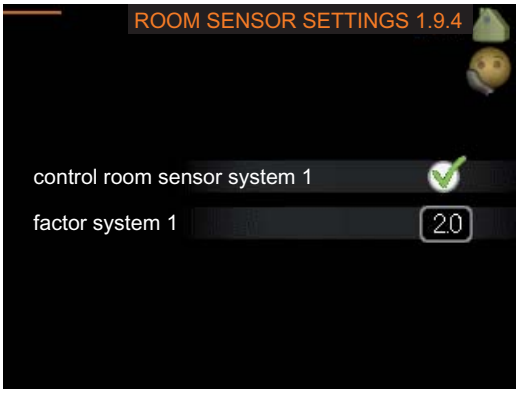
TIP

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
1.9.4

room sensor settings



factor system

Setting range: 0.1 - 6.0

Default value: 2.0

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

Here you can set a factor that determines how much the supply temperature is to be affected by the difference between the desired room temperature and the actual room temperature. A higher value gives a greater change of the heating curve's set offset.

Set the hot water capacity

Overview

Sub-menus

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.

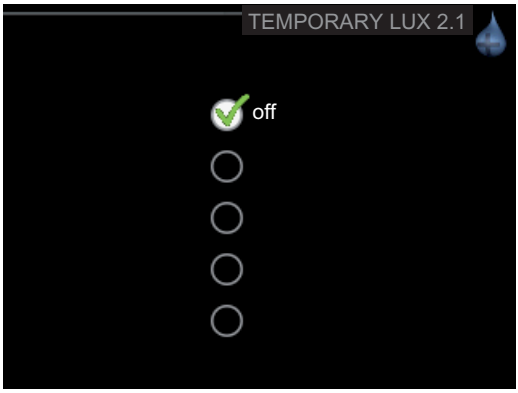
temporary lux Activation of temporary increase in the hot water temperature. Status information displays “off" or what length of time of the temporary temperature increase remains.

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: 1, 3, 6 and 12 hours, and mode "off"

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 time to the right displays the remaining time at the selected setting.

When the time has run out SMO 05 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.

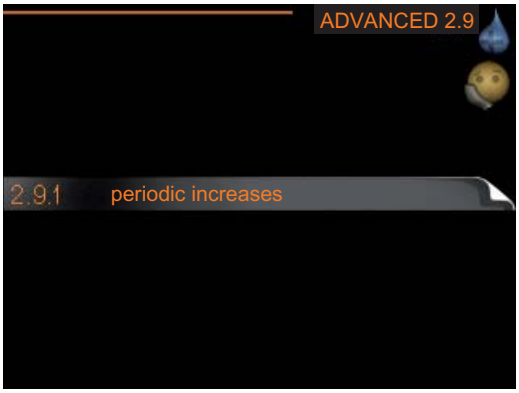
economy: This mode gives less hot water than the other, but is more economical. This mode can be used in smaller households with a small hot water requirement.

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 2.9

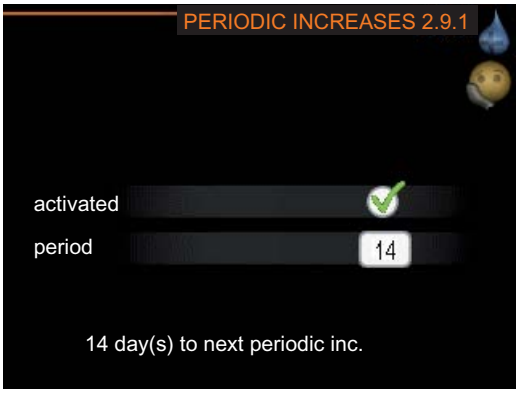
advanced



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

Menu 2.9.1

periodic increases



period

Setting range: 1 - 90 days

Default value: 14 days

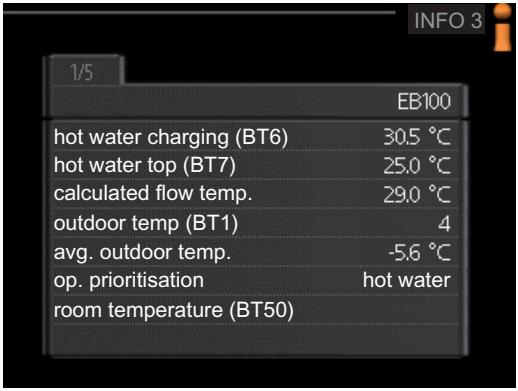
To prevent bacterial growth in the water heater, the compressor and the immersion heater can increase hot water temperature at regular intervals.

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. Untick "activated" to switch off the function.

Get information

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. Push the up and down buttons to scroll between the pages.

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.

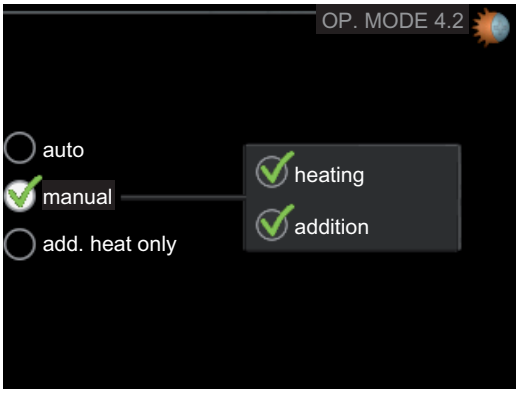
op. mode Activation of manual or automatic operating mode. The status information shows the selected operating mode.

alarm reset Alarms can be reset here.

advanced Setting heat pump work mode.

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, selectable options are displayed to the right. To select selectable functions that are permitted or not, mark the function using the up and down buttons and press the OK button.

Operating mode auto

In this operating mode you cannot select which functions are to be permitted because it is handled automatically by the heat pump.

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

Caution

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

In this operating mode the compressor is not active and only additional heating is used.

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.

Caution

If you deselect "addition" it may mean that insufficient hot water and/or heating in the accommodation is achieved.

Menu 4.8

alarm reset

This menu is only available if an alarm has occurred.

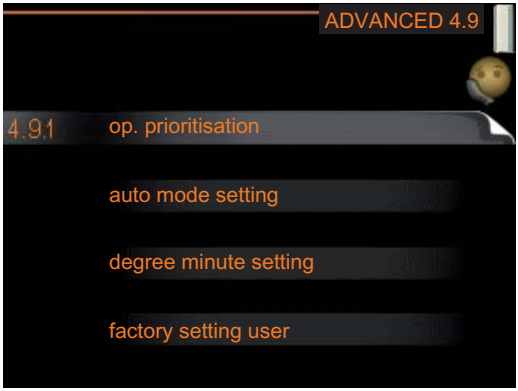
Here you can reset any alarms that have occurred in SMO 05 or heat pump.

Caution

In the event of an alarm reset, the control system restarts in the heat pump.

Menu 4.9

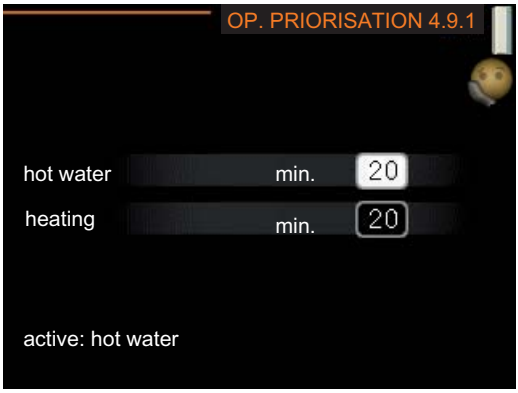
advanced



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 hot water / heating

Setting range: 0 to 180

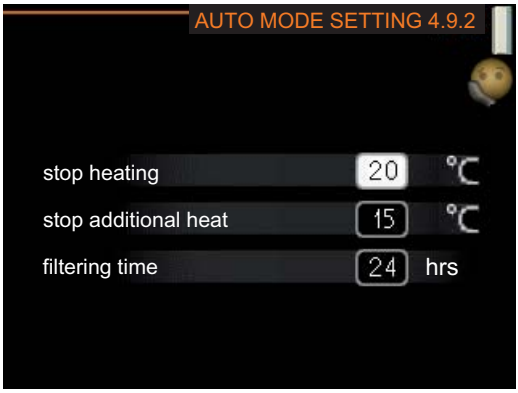
Default value: 20

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.

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



stop heating

Setting range: 0 – 40 °C

Default value: 20

stop additional heat

Setting range: -20 – 40 °C

Default value: 15

filtering time

Setting range: 0 – 48 h

Default value: 24 h

When 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.

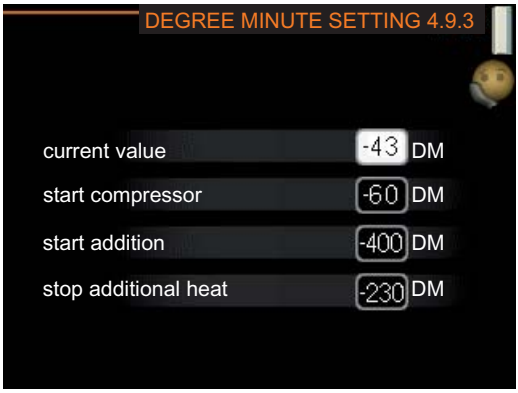
You can also set the time over which (filtering time) the average temperature is calculated. If you select 0, the present outdoor temperature is used.

Caution

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

Menu
4.9.3

degree minute setting



current value

Setting range: -3000 – 100

start compressor

Setting range: -1000 – -30

Default value: -60

start addition

Setting range: -2000 – -30

Default value: -400

stop additional heat

Setting range: -2000 – -30

Default value: -230

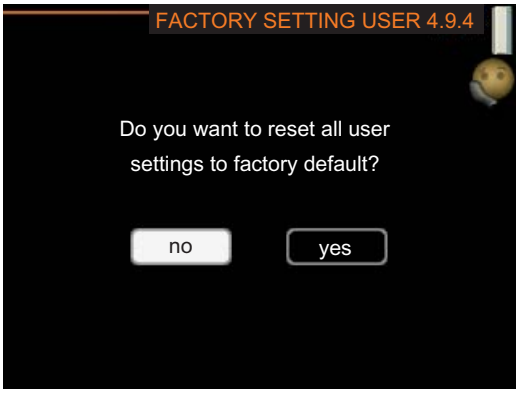
Degree minutes are a measurement of the current heating requirement in the house and determine when the compressor respectively additional heat will start/stop.

Caution

Higher value on "start compressor" gives more compressor starts, which increases wear in 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.

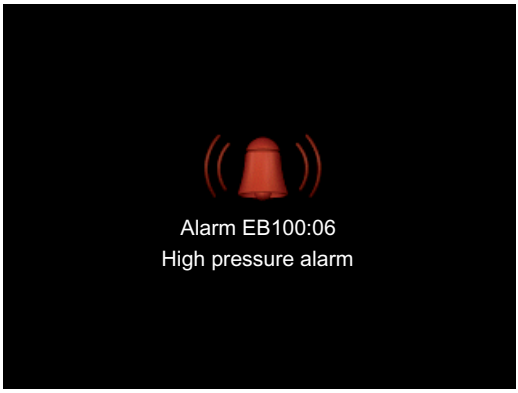
Caution

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

4 Disturbances in comfort

In most cases, the heat pump notes malfunctions and indicates this with alarms and shows instructions in the room unit display. See page 42 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, a malfunction has occurred, which is indicated by an alarm clock in the room unit.

Alarm

In the event of an alarm a malfunction has occurred that SMO 05 cannot rectify itself. The display shows what type of alarm it is.

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

NOTE

Always give the heat pump, control module and any accumulator tank serial numbers when contacting your installer.

Alarm list

Alarm AA25:## (where ## is a number) means that the alarm has occurred in SMO 05.

Alarm EB100:## (where ## is a number) means that the alarm has occurred in the heat pump (see the heat pump manual).

Sensor alarm BT1/BT6/BT25:

The sensor is probably broken or has lost contact with the accessory card. The alarm resets automatically after correct connection.

- Contact your installer!

Communication alarm heat pump

The heat pump has lost contact with the accessory card.

- Contact your installer!

Communication alarm accessory card

The room unit has lost contact with the accessory card.

- Contact your installer!

Resetting the alarm

Alarm reset can be carried out in two ways.

1. Select "yes" in menu 4.8.
2. Restart of SMO 05 (on/off of voltage to SMO 05).

In the event of an alarm reset, the control system restarts in the heat pump and any alarms in SMO 05 are reset.

NOTE

Contact your installer if the alarm recurs.

Troubleshooting

If the malfunction is not shown in the display the following tips can be used or consult the heat pump manual.

Basic actions

Start by checking the following possible fault sources:

- That the heat pump is running or that the supply cable to SMO 05 is connected.
- 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.

- 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.
- Installation 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 heat curve offset of the heat curve. If the room temperature is only low in cold weather the curve slope in the menu 1.9.1 (heating curve) needs to be adjusted 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.
- External switch for changing the room heating activated.
  - Check any external switches.

High room temperature

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

Add. heat only

If you are unsuccessful in rectifying the fault and are unable to heat the house, you can, whilst waiting for assistance, continue running SMO 05 in "add. heat only". This means that SMO 05 only uses the additional heating to heat the house and domestic hot water.

Set SMO 05 to additional heat mode

1. Go to menu 4.2 op. mode.
2. Mark "add. heat only" using the control buttons 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, solar power system, gas/oil/pellet/wood burner or district heating.

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.

Circulation pump

Pump that circulates liquid in a pipe system.

Climate system

Climate systems can also be called heating systems. The building is heated using radiators, under floor coils or convector fans.

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.

COP

If it is stated that a heat pump has COP 4, this means, in principle that if you insert 10 pence, you will get 40 pence worth of heat. It is the efficiency of the heat pump. This is measured at different measurement values, e.g.: 7/45 where 7 stands for the outdoor temperature and 45 for how many degrees the supply temperature is.

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.

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.

Filtering time

Enter 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).

Heat exchanger

Device that transfers heat energy from one medium to another without mixing mediums.

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.

Hot water heater

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

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.

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 SMO 05.

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.

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