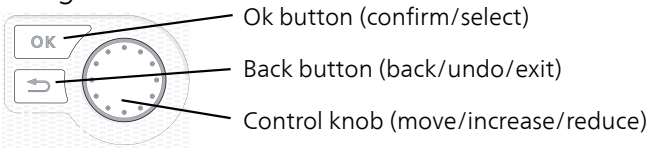
UHB EN 1918-6
231761

USER MANUAL

Control module NIBE SMO 40

Quick guide

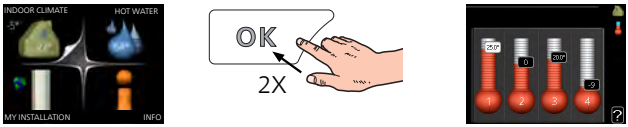
Navigation



A detailed explanation of the button functions can be found on page 11.

How to scroll through menus and make different settings is described on page 16.

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 25.

Increase hot water volume

To temporarily increase the amount of hot water (if a hot water heater is installed to your SMO 40), first turn the control knob to mark menu 2 (water droplet) and then press the OK button twice. Read more about the settings on page 47.

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 78 for instructions.

Table of Contents

1 Important information

Installation data

Product	*SMO 40*
Serial number	
Serial number, heat pump	
Installation date	
Installer	
Type of docking	
Accumulator/ water heater	
Heat pump/ capacity	
Add. heat type/power	

No.	*Name*	*Default settings*	*Set*
1.9.1	heating curve (offset/curve slope)	0 / 9	

Specificați întotdeauna numărul de serie.

Se certifică prin prezenta faptul că instalarea este realizată în conformitate cu instrucțiunile din manualul de instalare de la NIBEși regulamentele aplicabile.

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.

SMO 40 must be installed via an isolator switch. The cable area has to be dimensioned based on the fuse rating used.

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

SYMBOLS

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.

SERIAL NUMBER

The serial number can be found on the top of the cover for the control module and in the info menu (menu 3.1).

Caution

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

SMO 40 – An excellent choice

SMO 40 is an electric 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.

Additional heat (for example electric/gas boiler) can engage automatically if something unexpected should occur or as emergency operation.

EXCELLENT PROPERTIES FOR SMO 40:

- *Easy to read display*

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

- *Checks all of your installation*

  SMO 40 is installed together with one or more compatible NIBE air/water heat pumps. The control module is connected to the air/water heat pumps, which means that all important settings can be made in SMO 40. SMO 40 can control the entire heating installation and support many accessory functions.

2 The control module – the heart of the house

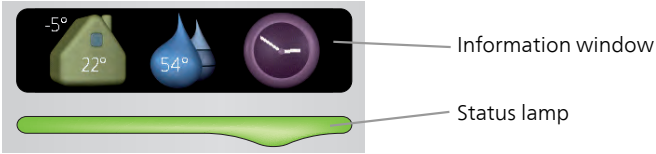
Control module's function

SMO 40 is a simple electrical 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. Among other things, it controls the heat pump, circulation pumps, reversing valves and additional heat to supply your home with inexpensive and environmentally friendly heating in the most efficient way.

Contact with SMO 40

EXTERNAL INFORMATION

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



Information window

The information window shows part of the display that is on the display unit (located behind the door to the control module). The information window can display different types of information, e.g. temperatures, clock, status etc.

You determine what is to be displayed in the information window. Your own combination of information is entered using the display unit. This information is specific to the information window and disappears when the front hatch of the control module is opened.

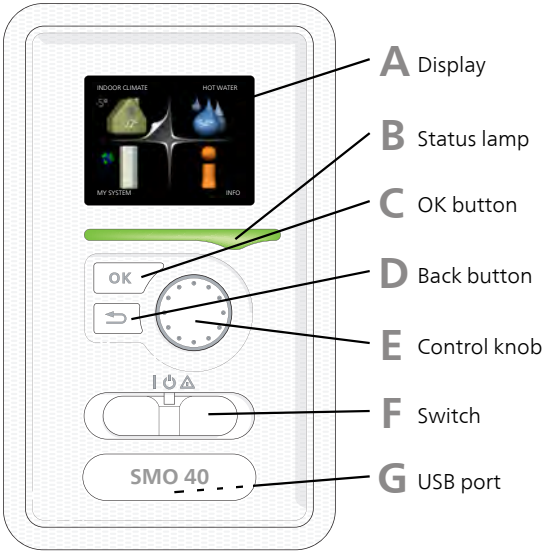
Instructions on how to set the information window can be found on page 70.

Status lamp

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

Alarm management is described on page 78.

DISPLAY UNIT



There is a display unit behind the control module door, which is used to communicate with SMO 40. Here you:

- switch on, switch off or set the installation to emergency mode.
- set the indoor climate and hot water as well as adjust the installation 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 control module. 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 (⚠)

The emergency mode must only be used in the event of a fault in the control module. In this mode, the compressor in the heat pump switches off and any immersion heater engages. The control module display is not lit and the status lamp shines yellow.

G *USB port*

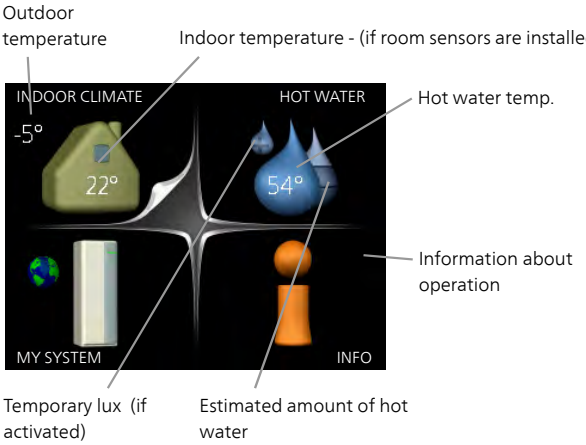
The USB port is hidden beneath the plastic badge with the product name on it.

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

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



Menu 1

INDOOR CLIMATE

Setting and scheduling the indoor climate. See page 25.

Menu 2

HOT WATER

Setting and scheduling hot water production. See page 47.

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

Menu 3

INFO

Display of temperature and other operating information and access to the alarm log. See page 52.

Menu 4

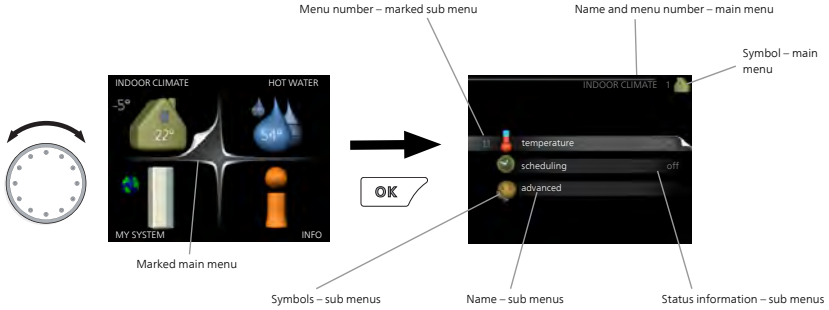
MY SYSTEM

Setting time, date, language, display, operating mode etc. See page 56.

Symbols in the display

The following symbols can appear in the display during operation.

Symbol	*Description*
	This symbol appears by the information sign if there is information in menu 3.1 that you should note.
	These two symbols indicate if the compressor in the outdoor module or the additional heat in the installation is blocked via SMO 40. These can, for example, be blocked depending on which operating mode is selected in menu 4.2, if blocking is scheduled in menu 4.9.5 or if an alarm has occurred that blocks one of them.  Blocking the compressor.  Blocking additional heat.
	This symbol appears if periodic increase or lux mode for the hot water is activated.
	This symbol indicates whether "holiday setting" is active in 4.7.
	This symbol indicates whether SMO 40 has contact with NIBE Uplink.
	This symbol indicates the actual speed of the fan if the speed has changed from the normal setting. Accessory needed.
	This symbol is visible in installations with active solar accessories.
	This symbol indicates whether pool heating is active. Accessory needed.
	This symbol indicates whether cooling is active. Heat pump with cooling function required.



Operation

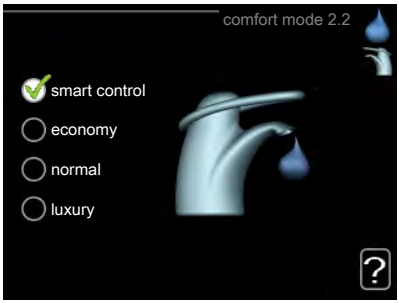
To move the cursor, turn the control knob to the left or the right. The marked position is white and/or has a turned up tab.

Selecting menu

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

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

Selecting options



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

To select another option:

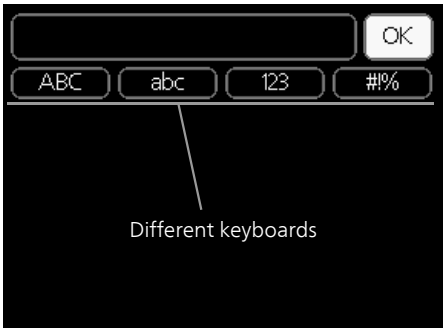
1. Mark the applicable option. One of the options is pre-selected (white).
2. Press the OK button to confirm the selected option. The selected option has a green tick.

Setting a value

To set a value:

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

Use the virtual keyboard



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

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

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

Scroll through the windows

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

Current menu window

Number of windows in the menu

Scroll through the windows in the start guide

Arrows to scroll through window in start guide

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

Help menu

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

To access the help text:

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

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

Maintenance of SMO 40

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 anything unusual occurs, messages about the malfunction appear in the display in the form of various alarm texts. See alarm management on page 78.

SAVING TIPS

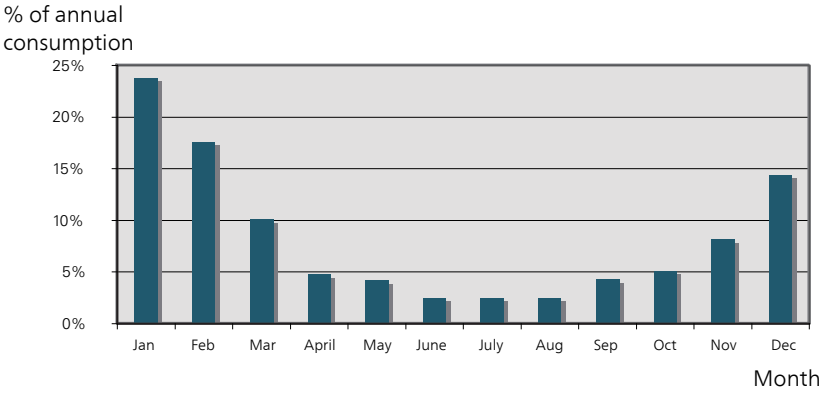
Your installation produces heat and hot water. This occurs via the control settings you made.

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.

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 SMO 40 wants to compensate by increasing the temperature. The installation will then work harder and consequently also consume more energy.
- You can lower the temperature when away from the house by scheduling "holiday setting" in menu 4.7. See page 71 for instructions.
- If you activate "Hot water Economy", less energy is used.

Power consumption



Increasing the indoor temperature by 1°C 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 6000-12000 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

Equipment	*Normal Output (W)*		*Appr. ann. consump (kWh)*
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

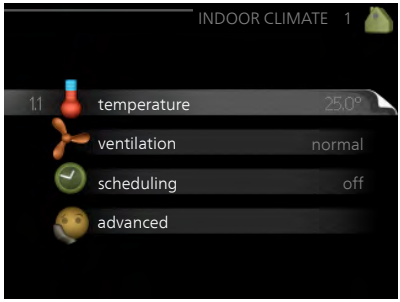
Check the accommodation's energy meter regularly, preferably once a month. This will indicate any changes in power consumption.

3 SMO 40 – at your service

Set the indoor climate

OVERVIEW

Sub-menus



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

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

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

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

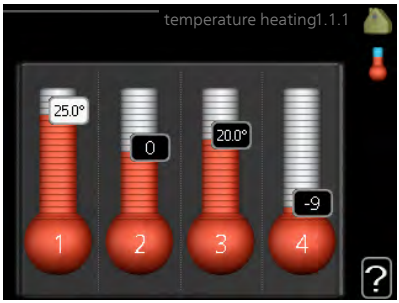
advanced Setting of heat curve, adjusting with external contact, minimum value for supply temperature, room sensor and cooling function.

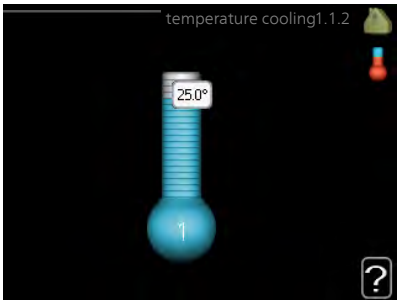
Menu 1.1

TEMPERATURE

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

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





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

heating

Setting range: 5 – 30 °C

Default value: 20

cooling (accessory required)

Setting range: 5 – 30 °C

Default value: 25

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

Caution

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

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

Setting the temperature (without room sensors activated):

Setting range: -10 to +10

Default value: 0

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

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

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

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

Caution

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

TIP

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

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

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

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

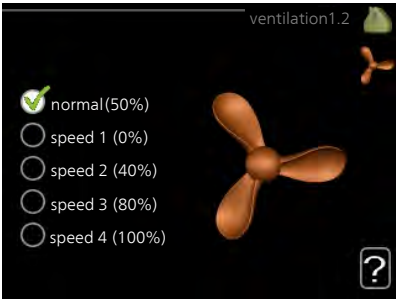
If it is warm outdoors and the room temperature is too high, reduce the value in menu 1.1.1 by one increment.

Menu 1.2

VENTILATION (ACCESSORY REQUIRED)

Setting range: normal and speed 1-4

Default value: normal



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

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

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

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

TIP

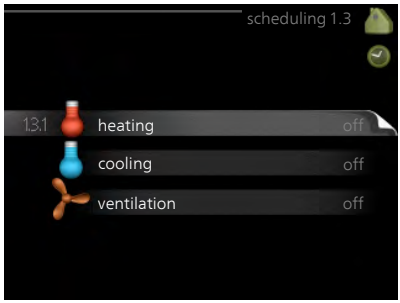
If longer time changes are required use the holiday function or scheduling.

Menu 1.3

SCHEDULING

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

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

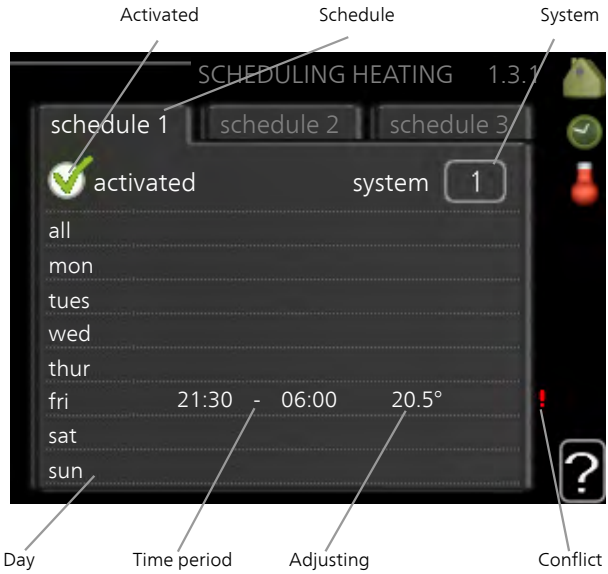


Menu 1.3.1

HEATING

Increases or decreases in the accommodation temperature can be scheduled here for up to three time periods per day. One step is usually enough to change the room temperature by one degree, but in some cases several steps may be required.

If a room sensor is installed and activated, the desired room temperature (°C) is set during the time periods.



Schedule: The schedule to be changed is selected here.

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

System: The climate system that the relevant schedule relates to is selected here. This alternative is only displayed if there is more than one climate system.

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

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

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

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

TIP

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

TIP

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

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

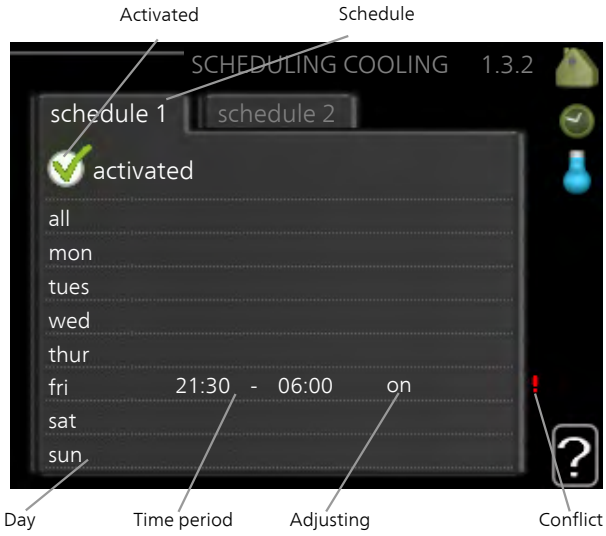
Caution

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

Menu 1.3.2

COOLING (HEAT PUMP WITH COOLING FUNCTION REQUIRED)

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



Schedule: The schedule to be changed is selected here.

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

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

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

Adjustment: Here, you schedule when cooling will not be permitted.

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

TIP

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

TIP

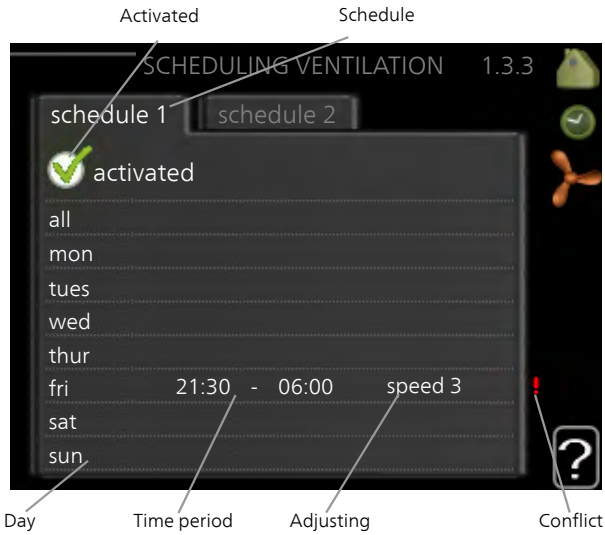
Set the stop time earlier than the start time so that the period extends beyond midnight. Scheduling then stops at the set stop time the day after.

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

Menu 1.3.3

VENTILATION (ACCESSORY REQUIRED)

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



Schedule: The schedule to be changed is selected here.

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

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

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

Adjustment: The desired fan speed is set here.

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

TIP

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

TIP

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

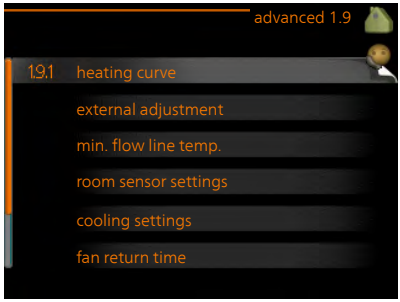
Scheduling always starts on the date that the start time is set for.

Caution

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

Menu 1.9

ADVANCED



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

curve Setting the curve slope for heating and cooling.

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

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

room sensor settings Settings regarding the room sensor.

cooling settings Settings for cooling.

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

own curve Setting own curve for heating and cooling.

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

night cooling Setting night cooling.

Menu 1.9.1

CURVE

heating curve

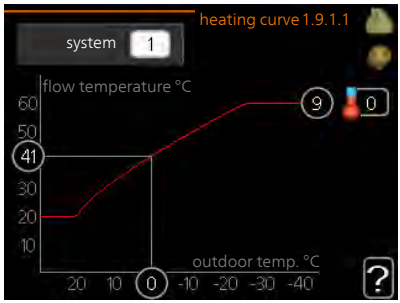
Setting range: 0 – 15

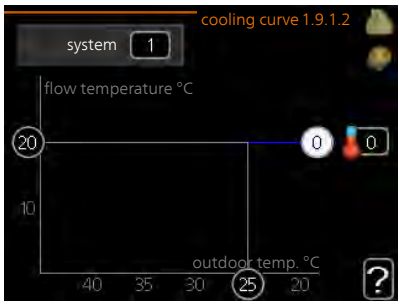
Default value: 9

cooling curve (accessory required)

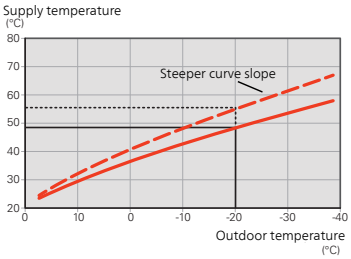
Setting range: 0 – 9

Default value: 0





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 control module'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. If there is access to cooling the same settings can be made for the cooling curve.



Curve coefficient

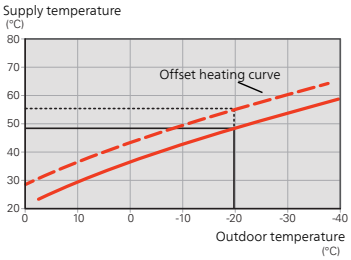
The slopes of the heating /cooling curves indicate how many degrees the supply temperature is to be increased/reduced when the outdoor temperature drops/increases. A steeper slope means a higher supply temperature for heating or a lower supply temperature for cooling at a certain outdoor temperature.

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

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

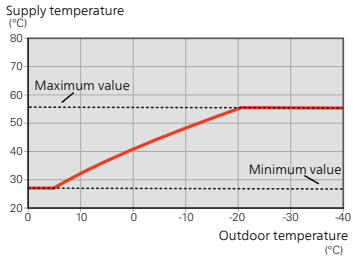
Caution

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



Curve offset

An offset of the curve means that the supply temperature changes by the same amount for all the outdoor temperatures, e.g. a curve offset of +2 steps increases the supply temperature by 5 °C at all outdoor temperatures. A corresponding change to the cooling curve results in a reduction of the supply temperature.



Flow line temperature– maximum and minimum values

Because the supply temperature cannot be calculated higher than the set maximum value or lower than the set minimum value, the curves flatten out at these temperatures.

Caution

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

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

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

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

Curve 0 is an own curve created in menu 1.9.7.

To select another curve (slope):

NOTE

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

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

To read off a curve:

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

TIP

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

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

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

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

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

Cooling in 2-pipe system

SMO 40 contains a built-in function for operating cooling in a 2-pipe system down to 7 °C, factory setting 18 °C. This requires that the outdoor module can perform cooling. (See the Installer Manual for your air/water heat pump.) If the outdoor module is permitted to run cooling, the cooling menus are activated in the display on SMO 40.

In order for operating mode "cooling" to be permitted, the average temperature must be above the setting value for "start cooling" in menu 4.9.2

The cooling settings for the climate system are adjusted in the indoor climate menu, menu 1.

Menu 1.9.2

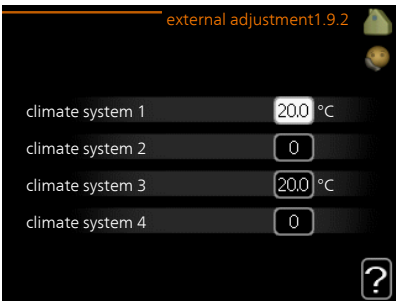
EXTERNAL ADJUSTMENT

climate system

Setting range: -10 to +10.

Or desired room temperature if the room sensor is installed. See illustration.

Default value: 0



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

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

Menu 1.9.3

MIN. FLOW LINE TEMP.

heating

Setting range: 5-70 °C

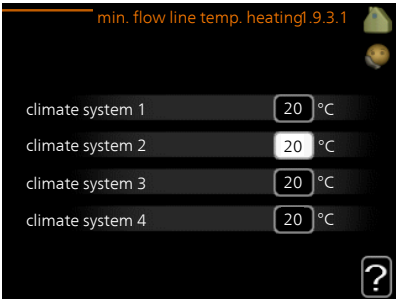
Default value: 20 °C

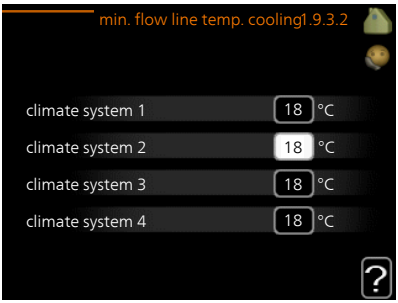
cooling (heat pump with cooling function required)

Depending on which cooling function (in 2-pipe system or 4-pipe system) is used, the lower limit of the setting range can vary from 7 to 18 °C.

Setting range: 7-30 °C

Factory setting: 18 °C





In menu 1.9.3 you select heating or cooling, in the next menu (min. supply temp.heating/cooling) set the minimum temperature on the supply temperature to the climate system. This means that SMO 40 never calculates a temperature lower than that set here.

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

TIP

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

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

Menu 1.9.4

ROOM SENSOR SETTINGS

factor system

heating

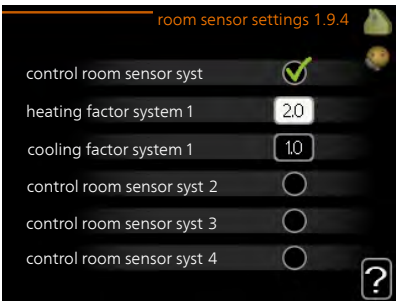
Setting range: 0.0 - 6.0

Factory setting heating: 1.0

cooling (accessory required)

Setting range: 0.0 - 6.0

Factory setting cooling: 1.0



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

Caution

A slow 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.

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

Menu 1.9.5

COOLING SETTINGS (HEAT PUMP WITH COOLING FUNCTION REQUIRED)

delta at +20 °C

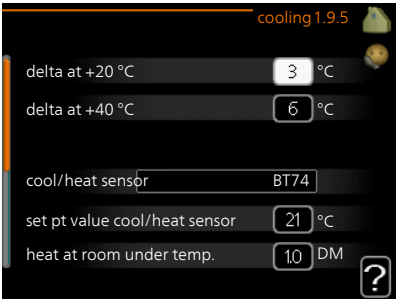
Setting range: 3 – 10 °C

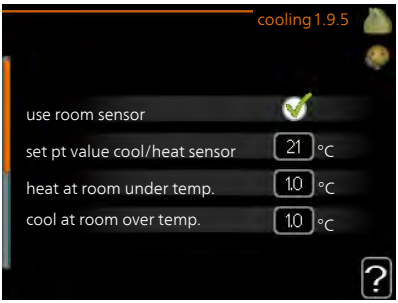
Factory setting: 3

delta at +40 °C

Setting range: 3 – 20 °C

Factory setting: 6





cool/heat sensor

Setting range: BT74 (BT50, RMU-BT50)

Factory setting: BT74

set pt value cool/heat sensor

Setting range: 5 – 40 °C

Factory setting: 21

heat at room under temp.

Setting range: 0.5 – 10.0 °C

Default value: 1.0

cool at room over temp.

Setting range: 0.5 – 10.0 °C

Default value: 3.0

start active cooling

Setting range: 10 – 300 DM

Factory setting: 30 DM

step difference compressors

Setting range: 10 – 150

Default value: 30

degree minutes cooling

Setting range: -3000 – 3000 cooling degree minutes

Factory setting: -1

time betw. switch heat/cool (Displayed if cooling in 2-pipe system is activated.)

Setting range: 0 – 48 h

Factory setting: 2

You can use SMO 40 to control the cooling in your house during hot periods of the year.

Caution

Certain setting options only appear if their function is installed and activated in SMO 40.

delta at +20 °C

Set the desired temperature on the temperature difference between supply and return lines to the climate system during cooling operation when the outdoor temperature is +20 °C. SMO 40 then attempts to get as close to the set temperature as possible.

delta at +40 °C

Set the desired temperature on the temperature difference between supply and return lines to the climate system during cooling operation when the outdoor temperature is +40 °C. SMO 40 then attempts to get as close to the set temperature as possible.

cool/heat sensor

If a single room is to determine how the whole installation will work, a cooling/heating sensor (BT74) is connected to SMO 40. This sensor determines when it is time to switch between cooling and heating operation for the whole installation.

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

set pt value cool/heat sensor

Here you can set at which indoor temperature SMO 40 is to shift between heating respectively cooling operation.

heat at room under temp.

Here you can set how far the room temperature can drop below the desired temperature before SMO 40 switches to heating operation.

cool at room over temp.

Here you can set how high the room temperature can increase above the desired temperature before SMO 40 switches to cooling operation.

larm rumsgivare kyla

This is where you set whether SMO 40 is to initiate an alarm if the room sensor is disconnected or breaks during cooling operation.

start active cooling

Here you can set when active cooling is to start.

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

step difference compressors

> *Caution*
>
> This setting option only appears if cooling is activated in menu 5.2.4.

The degree minute difference for controlling when the next compressor is to start is set here.

degree minutes cooling

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

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

time betw. switch heat/cool

This selection is only available when cooling in 2-pipe systems.

Here you can set how long SMO 40 is to wait before it returns to heating mode when the cooling demand has ceased or vice versa.

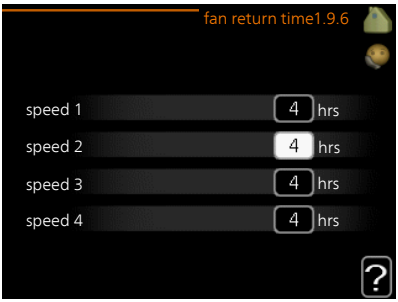
Menu 1.9.6

FAN RETURN TIME (ACCESSORY REQUIRED)

speed 1-4

Setting range: 1 – 99 h

Default value: 4 h



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

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

Menu 1.9.7

OWN CURVE

supply temperature

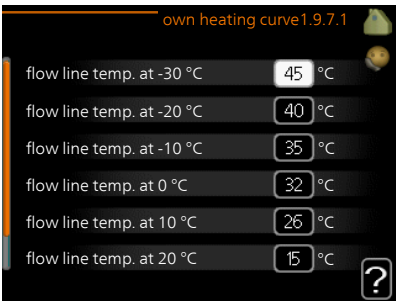
heating

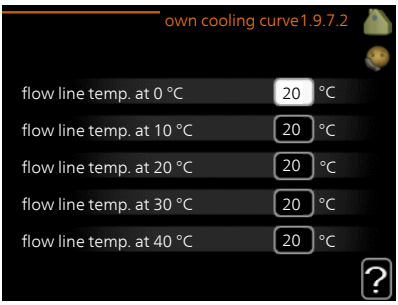
Setting range: 5 – 80 °C

cooling (accessory required)

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

Setting range: 7 – 40 °C





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

Caution

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

Menu 1.9.8

POINT OFFSET

outdoor temp. point

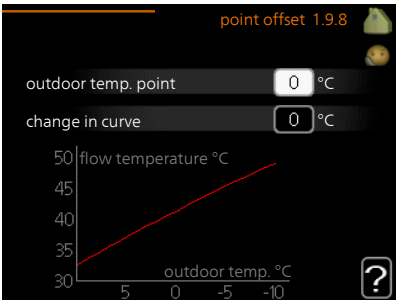
Setting range: -40 – 30 °C

Default value: 0 °C

change in curve

Setting range: -10 – 10 °C

Default value: 0 °C



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

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

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

TIP

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

Caution

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

Menu 1.9.9

NIGHT COOLING (ACCESSORY REQUIRED)

start temp. exhaust air

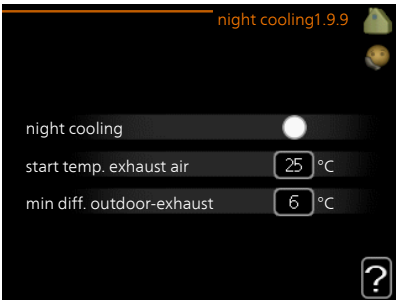
Setting range: 20 – 30 °C

Default value: 25 °C

min diff. outdoor-exhaust

Setting range: 3 – 10 °C

Default value: 6 °C



Activate night cooling here.

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

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

Caution

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

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".

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

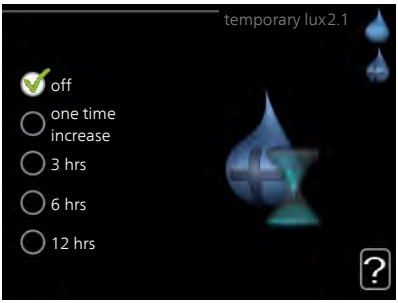
advanced Setting periodic increase in the hot water temperature.

Menu 2.1

TEMPERARY 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 SMO 40 returns to the mode set in menu 2.2.

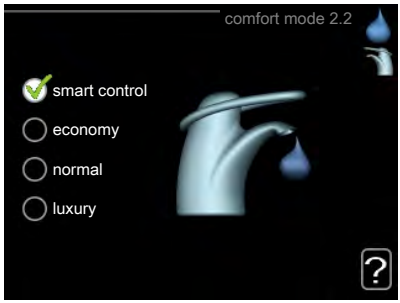
Select "off" to switch off temporary lux.

Menu 2.2

COMFORT MODE

Setting range: smart control, 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.

smart control: In this menu you activate the Smart Control function. The function learns the previous week's hot water consumption and adapts the temperature in the water heater for the coming week to ensure minimal energy consumption.

If the hot water demand is greater, there is a certain additional amount of hot water available.

When the Smart Control function is activated, the water heater delivers the reported performance according to the energy decal.

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 is used to heat hot water as well as the compressor, which increases operating costs.

Menu 2.3

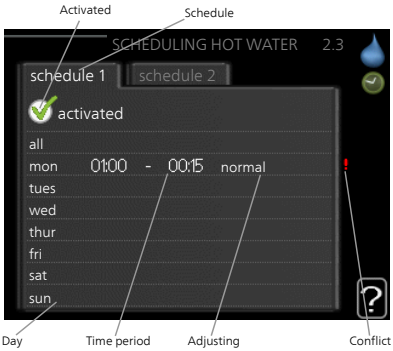
SCHEDULING

Two different periods of hot water comfort per day can be scheduled here.

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

Schedule: The schedule to be changed is selected here.

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



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

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

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

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

TIP

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

TIP

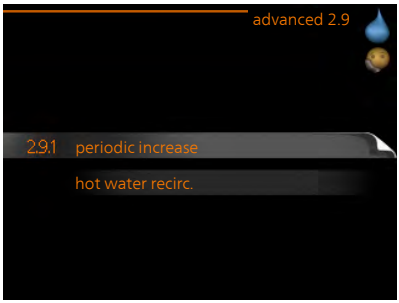
Set the stop time earlier than the start time so that the period extends beyond midnight. Scheduling then stops at the set stop time the day after.

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

Menu 2.9

ADVANCED

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



Menu 2.9.1

PERIODIC INCREASE

period

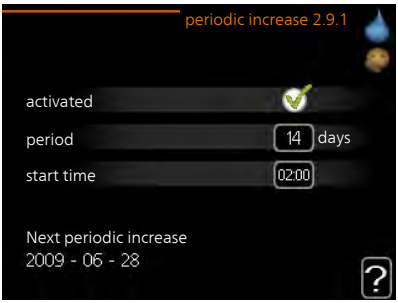
Setting range: 1 - 90 days

Default value: 14 days

start time

Setting range: 00:00 - 23:00

Default value: 00:00



To prevent bacterial growth in the water heater, the heat pump and any additional heater can increase the hot water temperature for a short time at regular intervals.

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

Menu 2.9.2

HOT WATER RECIRC. (ACCESSORY REQUIRED)

operating time

Setting range: 1 - 60 min

Default value: 60 min

downtime

Setting range: 0 - 60 min

Default value: 0 min

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

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

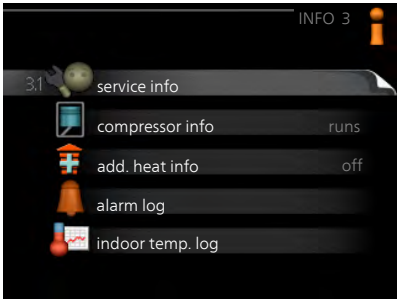
"downtime" decide how long the hot water circulation pump must be stationary between operating instances.

Hot water circulation is activated in menu 5.4 "soft inputs and outputs".

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.

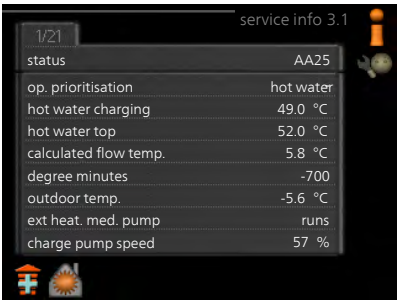
add. heat info displays information about the additional heat's operating times etc.

alarm log shows the latest alarms.

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

Menu 3.1

SERVICE INFO



Information about the actual operating status of the installation (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.

This figure shows the number of compressors that are needed for the current demand.

Symbols in this menu:


Compressor


Heating


Addition


Hot water


Cooling


Pool


Heating medium pump (orange)


Ventilation


Solar accessory

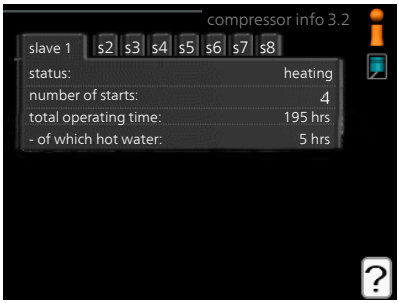

Additional heat in tank

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.

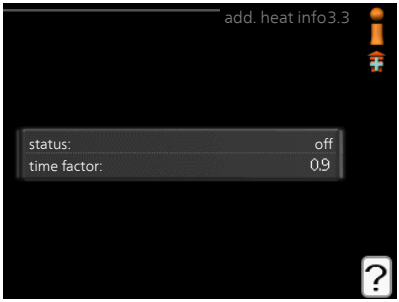


Menu 3.3

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.

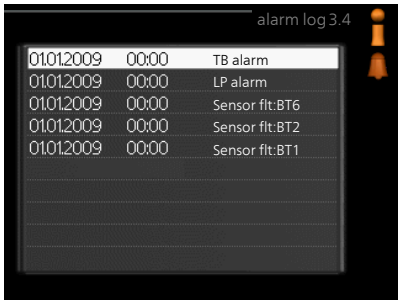


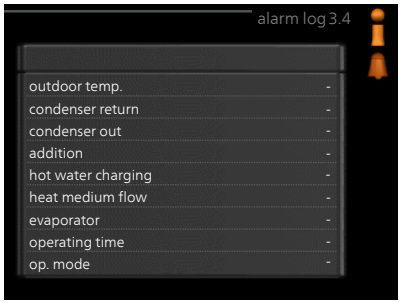
Menu 3.4

ALARM LOG

To facilitate fault-finding the installation's 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.

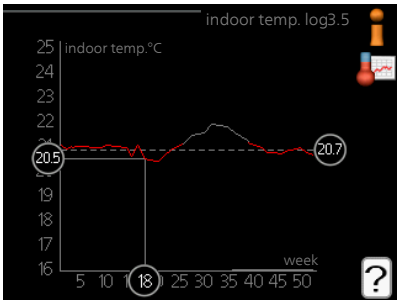




Information about an alarm.

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.

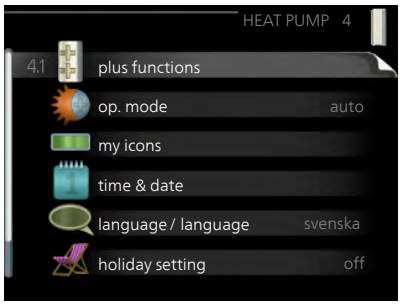
To read off an average temperature

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

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

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

my icons Settings regarding which icons in the control module's user interface that are to appear on the hatch when the door is closed.

time & date Setting current time and date.

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

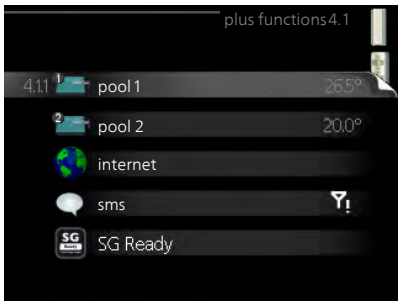
holiday setting Vacation scheduling heating, hot water and ventilation. Status information "set" is displayed if you set a vacation schedule but it is not active at the moment, "active" is displayed if any part of the vacation schedule is active, otherwise it displays " off".

advanced Settings of control module work mode.

Menu 4.1

PLUS FUNCTIONS

Settings for any additional functions installed in SMO 40 can be made in the sub menus.



Menu 4.1.1 - 4.1.2

POOL 1 - POOL 2 (ACCESSORY IS REQUIRED)

start temp

Setting range: 5.0 - 80.0 °C

Default value: 22.0 °C

stop temperature

Setting range: 5.0 - 80.0 °C

Default value: 24.0 °C

maximum number of compr.

Setting range: 1 – 8

Factory setting: 8

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

Maximum number gives the possibility of restricting the number of compressors that are permitted to work with pool heating. The setting can be adjusted if requirements other than pool heating must be prioritised for example.

When the pool temperature drops below the set start temperature and there is no hot water or heating requirement, SMO 40 starts pool heating.

Untick "activated" to switch off the pool heating.

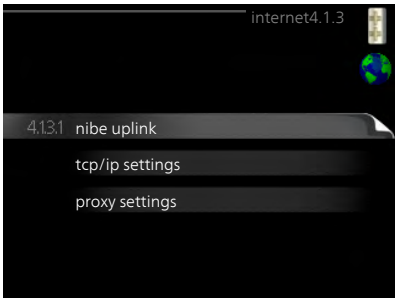
Caution

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

Menu 4.1.3

INTERNET

Here you make the settings for connecting SMO 40 via NIBE Uplink, which uses the Internet.



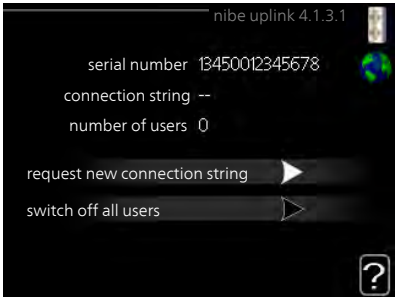
> *NOTE*
>
> For these functions to work the network cable must be connected.

Menu 4.1.3.1

NIBE UPLINK

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

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



Request new connection string

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

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

Disconnect all users

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

NOTE

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

Menu 4.1.3.8

TCP/IP SETTINGS

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

Automatic setting (DHCP)

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

Manual setting

1. Untick "automatic", you now have access to several setting options.
2. Mark “ip-address" and press the OK button.
3. Enter the correct details via the virtual keypad.
4. Select "OK" and press the OK button.
5. Repeat 1 - 3 for "net mask", "gateway" and "dns".
6. Mark “confirm" and press the OK button.

Caution

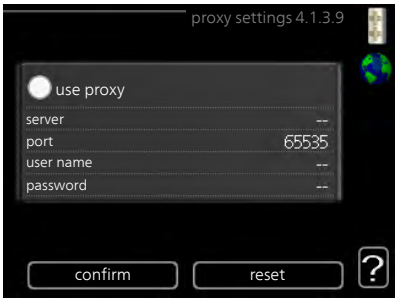
The installation cannot connect to the internet without the correct TCP/IP settings. If unsure about applicable settings use the automatic mode or contact your network administrator (or similar) for further information.

TIP

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

Menu 4.1.3.9

PROXY SETTINGS



You can set proxy settings for your installation here.

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

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

Setting

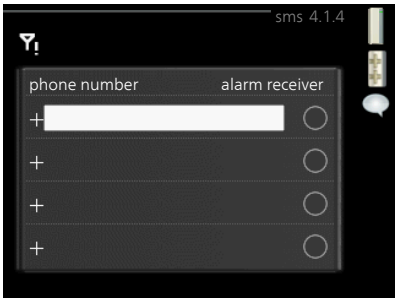
1. Tick “use proxy" if you do not want to use a proxy.
2. Mark “server" and press the OK button.
3. Enter the correct details via the virtual keypad.
4. Select "OK" and press the OK button.
5. Repeat 1 - 3 for "port", "user name" and "password".
6. Mark “confirm" and press the OK button.

TIP

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

Menu 4.1.4

SMS (ACCESSORY IS REQUIRED)



Make settings for the accessory SMS 40 here.

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

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

NOTE

Telephone numbers provided must be able to receive SMS messages.

Menu 4.1.5

SG READY

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

Make settings for the function "SG Ready" here.

affect room temperature

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

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

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

affect hot water

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

With low price mode on "SG Ready", the stop temperature 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).

affect cooling (accessory required)

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

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

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

affect pool temperature (accessory is required)

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

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

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

> *NOTE*
>
> The function must be connected and activated in your SMO 40.

Menu 4.1.6

SMART PRICE ADAPTION™

affect room temperature

Setting range: 1 - 10

Factory setting: 5

affect hot water

Setting range: 1 - 4

Factory setting: 2

affect pool temperature

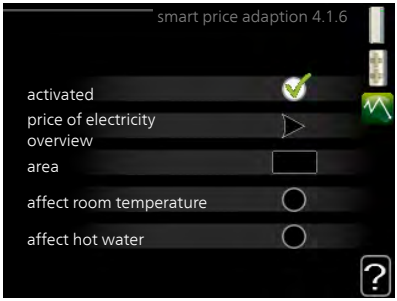
Setting range: 1 - 10

Factory setting: 2

affect cooling

Setting range: 1 - 10

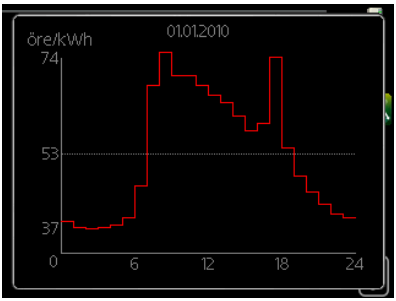
Factory setting: 3



area

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

price of electricity overview



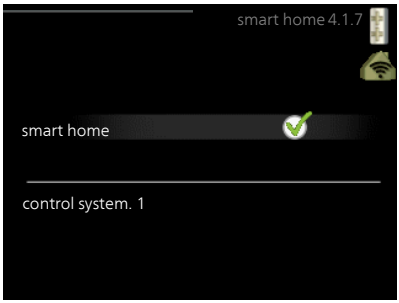
Here you can obtain information on how the electricity price varies over up to three days.

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

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

Menu 4.1.7

SMART HOME (ACCESSORY IS REQUIRED)



When you have a smart home system that can speak to NIBE Uplink, by activating the smart home function in this menu you can control the SMO 40 via an app.

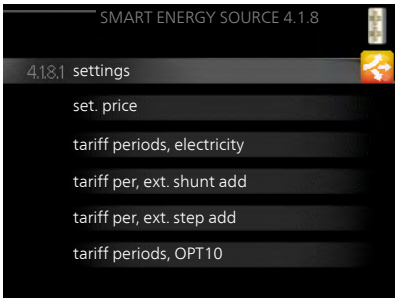
By allowing connected units to communicate with NIBE Uplink, your heating system becomes a natural part of your homesmart home and gives you the opportunity to optimise the operation.

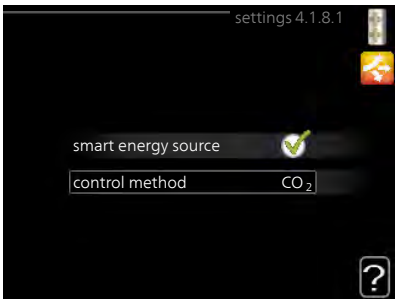
Caution

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

Menu 4.1.8

SMART ENERGY SOURCE™





settings

set. price

*CO2 impact**

tariff periods, electricity

tariff per, ext. shunt add

tariff per, ext. step add

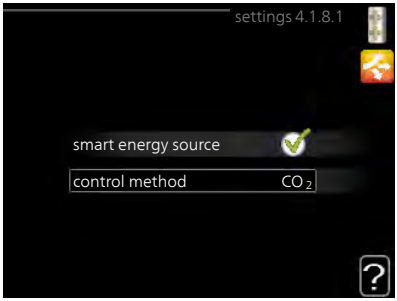
tariff periods, OPT10

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

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

Menu 4.1.8.1

SETTINGS



smart energy source™

Setting range: Off/On

Factory setting: Off

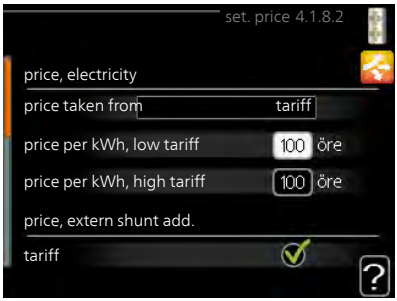
control method

Setting range: Price / CO_2

Factory setting: Price

Menu
4.1.8.2

SET. PRICE



price, electricity

Setting range: spot, tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, extern shunt add.

Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, extern step add.

Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

price, OPT addition.

Setting range: tariff, fixed price

Factory setting: fixed price

Setting range fixed price: 0–100,000*

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

*The currency varies depending on the country selected.

Menu 4.1.8.3

CO2 IMPACT

CO2, electricity

Setting range: 0–5

Default value: 2.5

CO2, ext. shunted contr. add.

Setting range: 0–5

Default value: 1

CO2, ext. step contr. add.

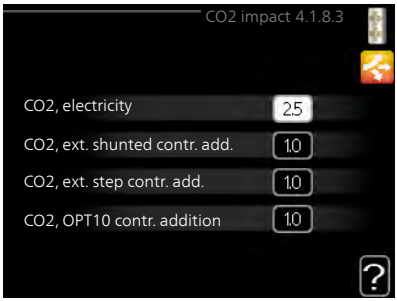
Setting range: 0–5

Default value: 1

CO2, OPT10 contr. addition

Setting range: 0–5

Default value: 1



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

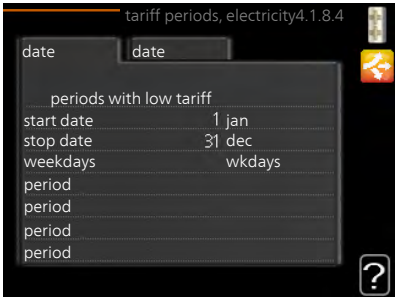
The carbon footprint is different for different energy sources. For example, the energy from solar cells and wind turbines can be considered carbon dioxide neutral and, therefore, has a low CO_2 impact. Energy from fossil fuels can be considered to have a higher carbon footprint and, therefore, has a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

Menu 4.1.8.4

TARIFF PERIODS, ELECTRICITY

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

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



Menu 4.1.8.6

TARIFF PER, EXT. SHUNT ADD

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

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

Menu 4.1.8.7

TARIFF PER, EXT. STEP ADD

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

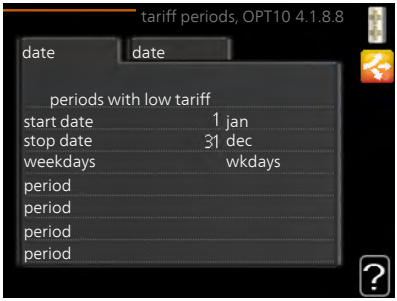
Set the lower tariff periods. It is possible to set two different date periods per year. Within these periods, it is possible to set up to four different periods on weekdays (Monday to Friday) or four different periods on weekends (Saturdays and Sundays).

Menu 4.1.8.8

TARIFF PERIODS, OPT10

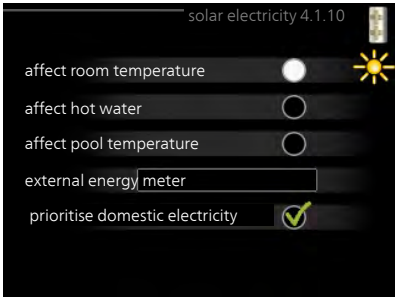
Here you can use tariff control for the OPT 10 controlled additional heat.

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



Menu 4.1.10

SOLAR ELECTRICITY (ACCESSORY IS REQUIRED)



affect room temperature

Setting range: on/off

Factory setting: off

affect hot water

Setting range: on/off

Factory setting: off

affect pool temperature

Setting range: on/off

Factory setting: off

3-phase (EME 10)

Setting range: on/off

Factory setting: off

prioritise domestic electricity (EME 20)

Setting range: on/off

Factory setting: off

This is where you set which part of your installation (room temperature, hot water temperature, pool temperature) is to benefit from the solar electricity surplus.

When the solar panels produce more electricity than SMO 40 requires, the temperature in the property is adjusted and/or the temperature of the hot water is increased.

EME

In this menu you can also make settings that are specific for your EME.

For EME 10, you enter if it is connected as 3-phase.

For EME 20, you can select whether you want domestic electricity to be prioritised ahead of room temperature and hot water, provided that SMO 40 is equipped with an external energy meter.

Menu 4.2

OP. MODE

op. mode

Setting range: auto, manual, add. heat only

Default value: auto

functions

Setting range: compressor, addition, heating, cooling

The control module operating mode is usually set to "auto". It is also possible to set the control module to "add. heat only", when only additional heat is used, or "manual" and then select 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 in the control module is permitted (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 control module 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.

Caution

You cannot change from only additional heat if you do not have a heat pump connected.

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.

"cooling" means that you obtain cooling in the home in hot weather. This alternative requires an accessory for cooling, or for the air/water heat pump to have a built-in function for cooling, and is activated in the menu. You can deselect this function when you do not wish to have cooling in operation.

Menu 4.3

MY ICONS

You can select what icons should be visible when the door to SMO 40 is closed. You can select up to 3 icons. If you select more, the ones you selected first will disappear. The icons are displayed in the order you selected them.

Menu 4.4

TIME & DATE

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

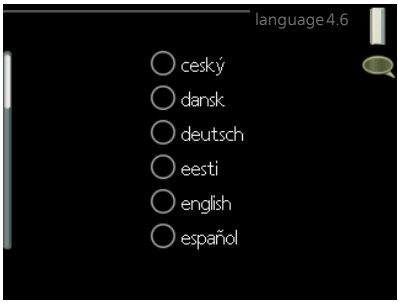
TIP

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

Menu 4.6

LANGUAGE

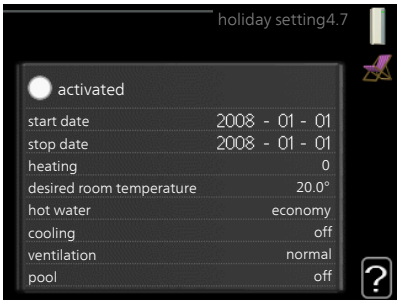
Choose the language that you want the information to be displayed in here.



Menu 4.7

HOLIDAY SETTING

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



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

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

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

TIP

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

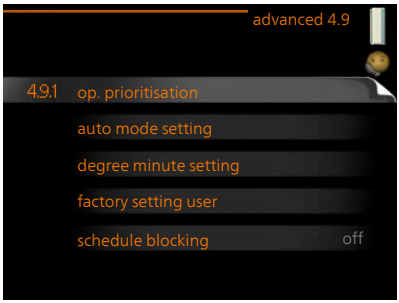
TIP

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

Menu 4.9

ADVANCED

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



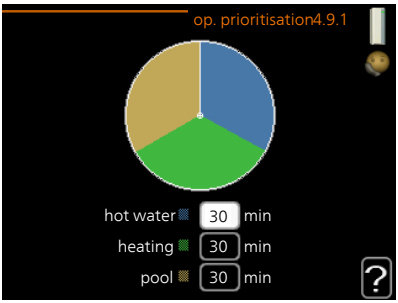
Menu 4.9.1

OP. PRIORITISATION

op. prioritisation

Setting range: 0 to 180 min

Default value: 30 min



Choose here how long the installation should work with each requirement if there are several requirements at the same time. If there is only one requirement the installation only works with that requirement.

The indicator marks where in the cycle the installation is.

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

Menu 4.9.2

AUTO MODE SETTING

start cooling

Setting range: -20 – 40 °C

Factory setting: 25

stop heating

Setting range: -20 – 40 °C

Default values: 17

stop additional heat

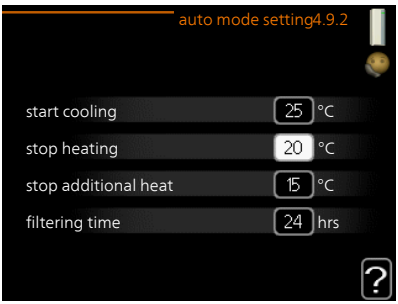
Setting range: -25 – 40 °C

Factory setting: 5

filtering time

Setting range: 0 – 48 h

Default value: 24 h



When the operating mode is set to "auto", the control module selects when start and stop of additional heat and heat production is permitted, depending on the average outdoor temperature. If the heat pump has the integrated cooling function and it is activated in the menu you can also select the start temperature for cooling.

Select the average outdoor temperatures in this menu.

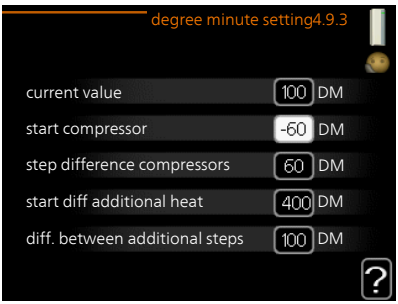
Caution

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

step difference compressors

Setting range: 10 – 2000

Default value: 60

start diff additional heat

Setting range: 100 – 2000

Factory setting: 400

diff. between additional steps

Setting range: 10 – 1000

Factory setting: 30

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

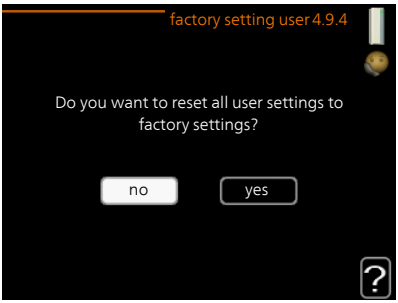
Caution

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

Menu 4.9.4

FACTORY SETTING USER

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



Caution

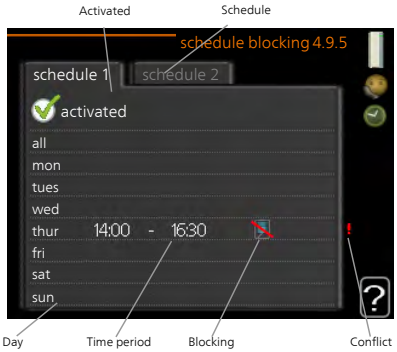
After factory setting, personal settings such as heating curves must be reset.

Menu 4.9.5

SCHEDULE BLOCKING

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

When scheduling is active the relevant blocking symbol is shown in the main menu on the symbol for the control module.



Schedule: The period to be changed is selected here.

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

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

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

Blocking: The desired blocking is selected here.

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

Blocking the compressor in the outdoor module.

Blocking additional heat.

TIP

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

TIP

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

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

Caution

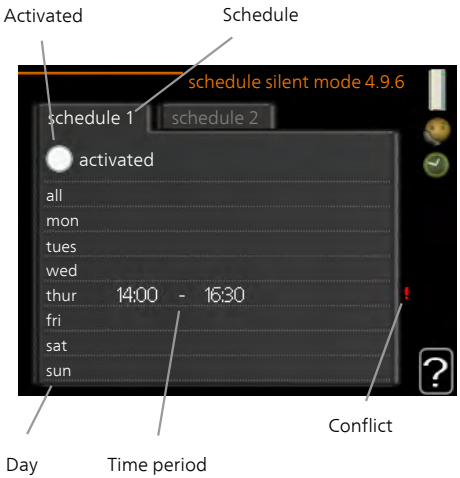
Long term blocking can cause reduced comfort and operating economy.

Menu 4.9.6

SCHEDULE SILENT MODE

Here you can schedule whether the heat pump is to be set to "quiet mode" (the heat pump must support this) for up to two different time periods and two different max. frequencies. In this way, you can reduce the sound during the day and also reduce it further at night.

When scheduling is active the "quiet mode" symbol is shown in the main menu on the symbol for the control module.



Schedule: The period to be changed is selected here.

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

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

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

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

TIP

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

TIP

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

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

Caution

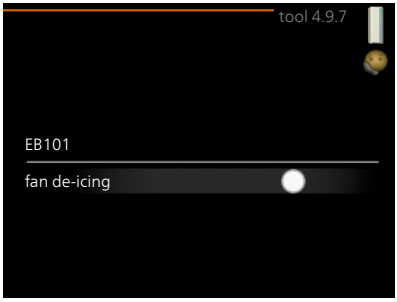
Long term scheduling of "quiet mode" can cause reduced comfort and operating economy.

Menu 4.9.7

TOOLS

This function ensures that any ice on the fan or fan grille is removed.

In the event of a heavily iced outdoor module, "de-icing fan" may need to be run as a complement to defrosting, which is performed automatically. Activation takes place by ticking "de-icing fan" in the menu, after which de-icing is performed once.



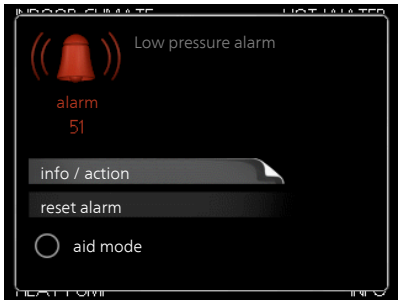
4 Disturbances in comfort

In most cases, SMO 40 notes a malfunction (a malfunction can lead to disruption in comfort) and indicates this with alarms, and instructions for action, in the display.

Info-menu

All the installation's measurement values are gathered under menu 3.1 in the control module's menu system. Examining the values in this menu can often make it easier to identify the source of the fault.

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 and/or control module 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 installation 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 installation produces heat and/or hot water even if there is some kind of problem. This could mean that the heat pump’s compressor is not in operation. In this case, any electric additional heat 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.

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.
- Correctly set load monitor (if installed).

LOW HOT WATER TEMPERATURE OR A LACK OF HOT WATER

This part of the fault-tracing chapter only applies if the water heater is installed in the system.

- Closed or choked filling valve for the hot water.
  - Open the valve.
- Mixing valve (if there is one installed) set too low.
  - Adjust the mixer valve.
- SMO 40 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.
- Low hot water access with the "Smart Control" function active.
  - If the hot water usage has been low, the installation will produce less hot water than normal. Restart the installation
- 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.
- "Holiday mode" activated in menu 4.7.
  - Enter menu 4.7 and select "Off".

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.

- SMO 40 in incorrect operating mode.
  - Enter menu 4.2. If mode "auto" is selected, select a higher value on "stop heating" in menu 4.9.2.
  - If mode "manual" is selected, select "heating". If this is not enough, select "addition".
- Too low set value on the automatic heating control.
  - Enter menu 1.1 "temperature" and adjust the offset heating curve up. If the room temperature is only low in cold weather the curve slope in menu 1.9.1 "heating curve" needs adjusting up.
- Too low or no operating prioritisation of heat.
  - Enter menu 4.9.1 and increase the time for when heating is to be prioritised. 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.
- "Holiday mode" activated in menu 4.7.
  - Enter menu 4.7 and select "Off".
- External switch for changing the room heating activated.
  - Check any external switches.
- Air in the climate system.
  - Vent the climate system.
- Closed valves to the climate system or heat pump.
  - Open the valves (contact your installer for assistance in finding them).

HIGH ROOM TEMPERATURE

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

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.

THE AIR/WATER HEAT PUMP'S COMPRESSOR DOES NOT START

- There is no heating requirement.
  - SMO 40 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.

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 the heat pump in "add. heat only". This means that additional heating only is used to heat the house.

SET THE INSTALLATION 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.

Caution

When commissioning without NIBE air/water heat pump, the "communication error" alarm may appear in the display.

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, 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 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.: 7 / 45 where 7 stands for the outdoor temperature and where 45 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".

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

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).

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.

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 40.

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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