IHB EN 2001-2
531201

INSTALLER MANUAL

Ground source heat pump
NIBE S1155PC

NIBE

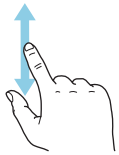
Quick guide

NAVIGATION

Select

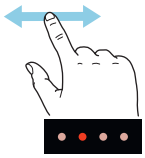
Most options and functions are activated by lightly pressing on the display with your finger.

Scroll



If the menu has several sub-menus, you can see more information by dragging up or down with your finger.

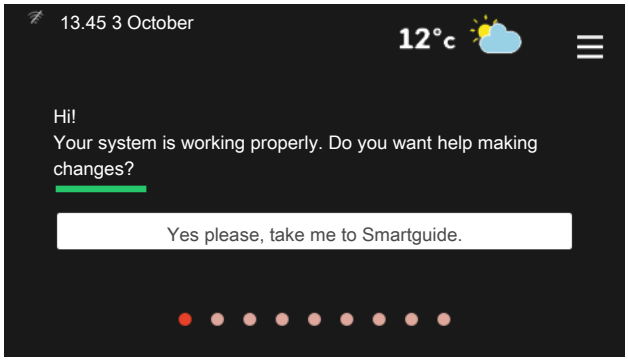
Browse



The dots at the bottom edge show that there are more pages.

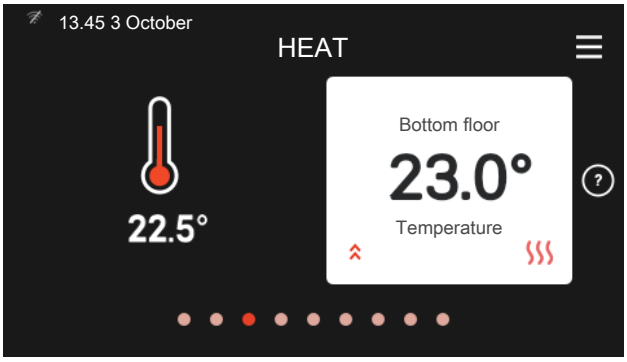
Drag to the right or left with your finger to browse between the pages.

Smartguide



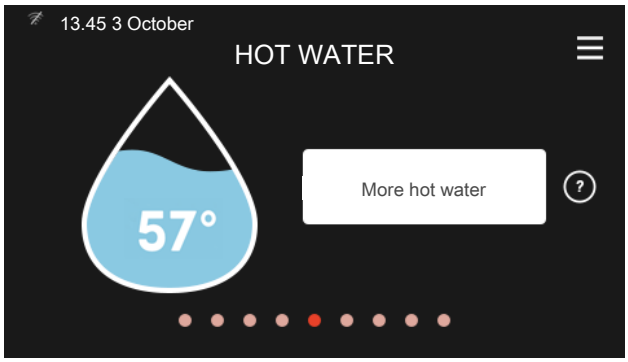
Smartguide helps you both to view information about the current status and to make the most common settings easily. The information that you see depends on the product you have and the accessories that are connected to the product.

Setting the indoor temperature.



You can set the temperature for your installation's climate system here.

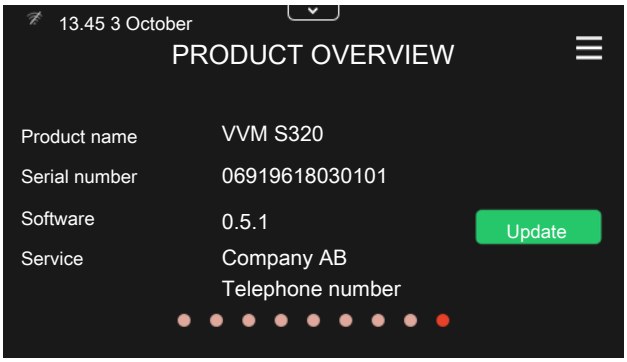
Increasing hot water temperature



Here, you can start or stop a temporary increase in the hot water temperature.

This function page is only visible in installations with a water heater.

Product overview



Here, you can find information about product name, the product's serial number, the version of the software and service. When there is new software to download, you can do it here (provided that S1155PC is connected to myUplink).

Table of Contents

1 Important information 4
Safety information 4
Symbols 4
Marking 4
Serial number 4
Inspection of the installation 5

2 Delivery and handling 6
Transport 6
Assembly 6
Supplied components 7
Handling panels 7

3 The heat pump design 10
General 10
Distribution boxes 11
Cooling sections 11

4 Pipe connections 12
General 12
Dimensions and pipe connections 13
Brine side 14
Heating medium side 14
Cold and hot water 15
Docking alternatives 15

5 Electrical connections 17
General 17
Connections 19
Settings 24

6 Commissioning and adjusting 26
Preparations 26
Filling and venting 26
Start-up and inspection 27
Setting the cooling/heating curve 29

7 myUplink 31
Specification 31
Connection 31
Range of services 31
Mobile apps for myUplink 31

8 Control - Introduction 32
Display unit 32
Navigation 33
Menu types 33

9 Control - Menus 36
Menu 1 – Indoor climate 36
Menu 2 – Hot water 41
Menu 3 - Info 42
Menu 4 - My system 43
Menu 5 - Connection 47
Menu 6 - Scheduling 48
Menu 7 - Service 49

10 Service 57
Service actions 57

11 Disturbances in comfort 63
Info-menu 63
Manage alarm 63
63

12 Accessories 65

13 Technical data 67
Dimensions and setting-out coordinates 67
Electrical data 68
Technical specifications 69
Energy labelling 72

Item register 76

Contact information 82

1 Important information

Safety information

This manual describes installation and service procedures for implementation by specialists.

The manual must be left with the customer.

Symbols

NOTE

This symbol indicates danger to person or machine .

Caution

This symbol indicates important information about what you should consider when installing or servicing the installation.

TIP

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

Marking

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

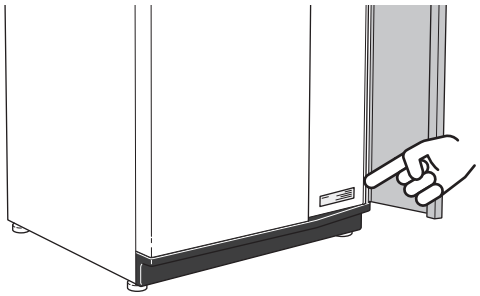
IPx1B Classification of enclosure of electro-technical equipment.

Read the User Manual.

Read the Installer Manual.

Serial number

The serial number can be found at the bottom right on S1155PC, in the display on the home screen "Product overview" and on the type plate (PZ1).



Caution

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

Inspection of the installation

Current regulations require the heating installation to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person. In addition, fill in the page for the installation data in the User Manual.

✔	*Description*	*Notes*	*Signature*	*Date*
Brine side				
	System flushed			
	System vented			
	Antifreeze			
	Level/Expansion vessel			
	Filterball (particle filter)			
	Safety valve			
	Shut off valves			
	Circulation pump setting			
Heating medium side				
	System flushed			
	System vented			
	Expansion vessel			
	Filterball (particle filter)			
	Safety valve			
	Shut off valves			
	Circulation pump setting			
Electricity				
	Connections			
	Main voltage			
	Phase voltage			
	Fuses heat pump			
	Fuses property			
	Outside sensor			
	Room sensor			
	Current sensor			
	Safety breaker			
	Earth circuit-breaker			
	Set emergency mode in menu 7.1.8.2			

2 Delivery and handling

Transport

S1155PC should be transported and stored vertically in a dry place. When being moved into a building, S1155PC may be leant back 45 °.

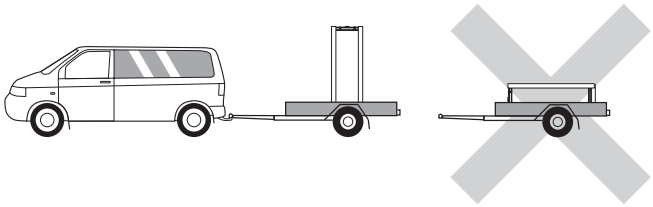
Ensure that S1155PC has not been damaged during transport.

Caution

The product can be tail heavy.

If the cooling module is pulled out and transported upright, S1155PC can be transported on its back.

Remove the outer panels in order to protect them when moving in confined spaces inside buildings.



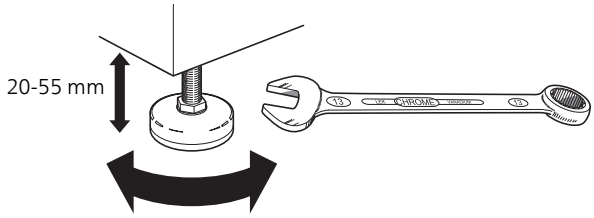
EXTRACTING THE COOLING MODULE

To simplify transport and service, the heat pump can be separated by pulling the cooling module out from the cabinet.

See page 59 for instructions about the separation.

Assembly

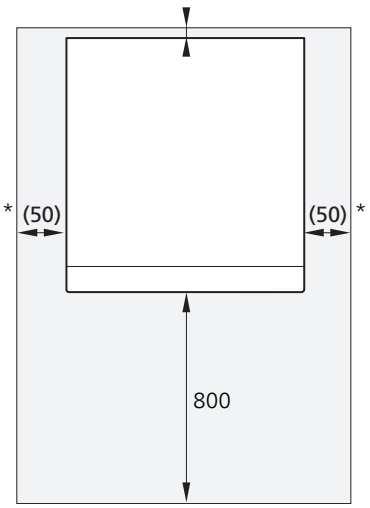
- Place S1155PC on a solid foundation indoors that can take the heat pump's weight. Use the product's adjustable feet to obtain a horizontal and stable set-up.



- Because water comes from S1155PC, the area where the heating pump is located must be equipped with floor drainage.
- Install with its back to an outside wall, ideally in a room where noise does not matter, in order to eliminate noise problems. If this is not possible, avoid placing it against a wall behind a bedroom or other room where noise may be a problem.
- Wherever the unit is located, walls to sound sensitive rooms should be fitted with sound insulation.
- Route pipes so they are not fixed to an internal wall that backs on to a bedroom or living room.

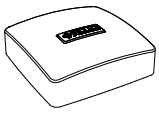
INSTALLATION AREA

Leave a free space of 800 mm in front of the product. Approx. 50 mm free space is required on each side, to remove the side panels (see image). The panels do not need to be removed during service. All service on S1155PC can be carried out from the front. Leave space between the heat pump and the wall behind (and any routing of supply cables and pipes) to reduce the risk of any vibration being propagated.



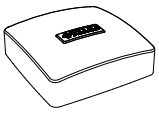
* A normal installation needs 300 – 400 mm (any side) for connection equipment, i.e. level vessel, valves and electrical equipment.

Supplied components



Outside sensor

1 x



Room sensor

1 x

Current sensor [1]

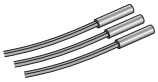
3 x

Safety valve
0.3 MPa (3 bar)[1]

1 x

O-rings

8 x

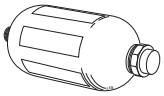


Temperature sensor

3 x

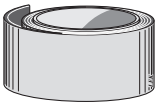
Tubes for sensors

3 x



Level vessel[1]

1 x

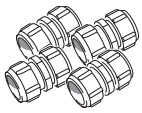


Insulation tape

1 x

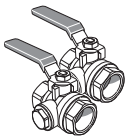
Aluminium tape

1 x



Compression ring couplings

2 x (ø28 x G25)
3 x (ø22 x G20



Filterball

1 x G1
1 x G3/4

[1] Not Italy and the DACH countries.

LOCATION

The kit of supplied items is placed in packaging on top of the heat pump.

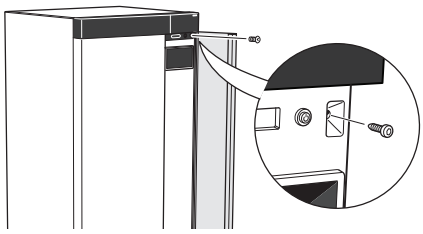
Handling panels

OPEN FRONT HATCH

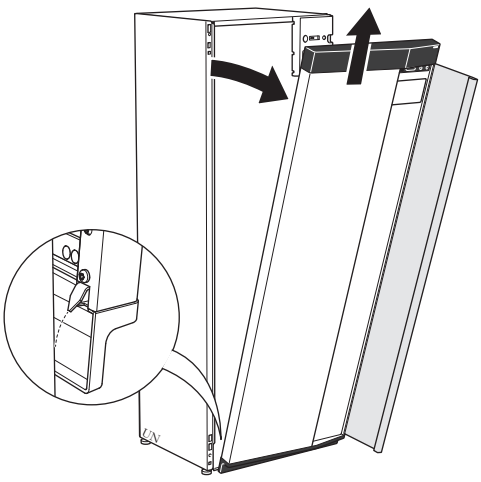
Press the hatch's top left corner to open it.

REMOVE THE FRONT

1. Remove the screw in the hole next to the on/off button (SF1).

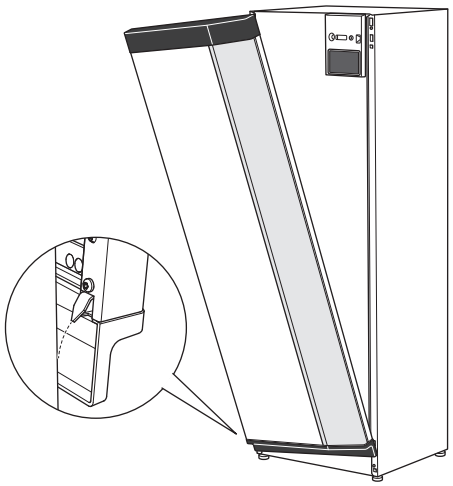


2. Pull the panel's top edge towards you and lift diagonally upwards to remove it from the frame.

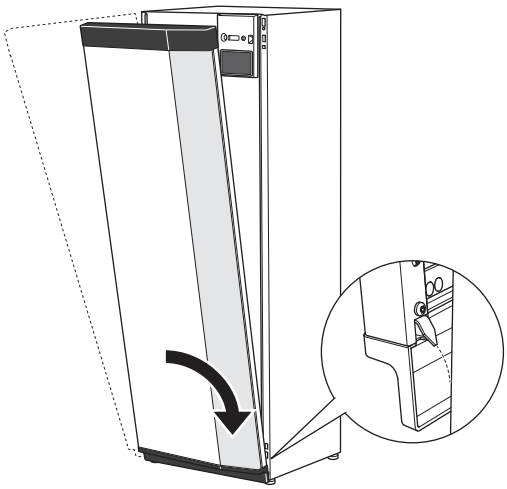


ASSEMBLE THE FRONT

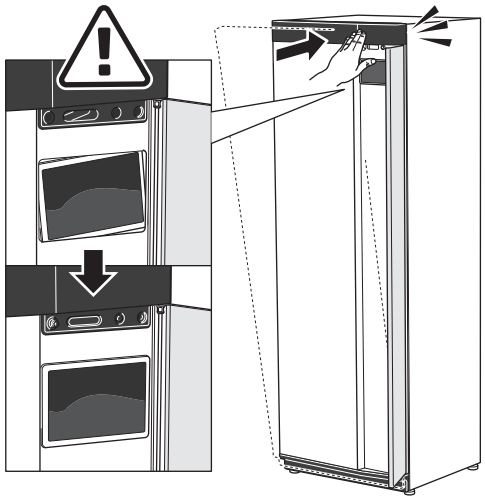
1. Hook one bottom corner of the front onto the frame.



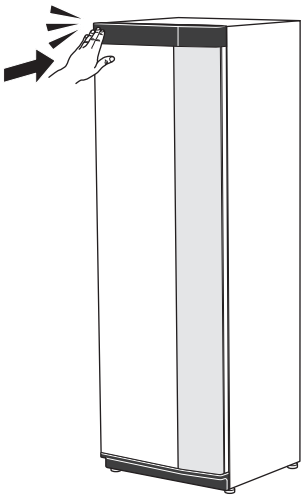
2. Hook the other corner in place.



3. Check the display is straight. Adjust if necessary.



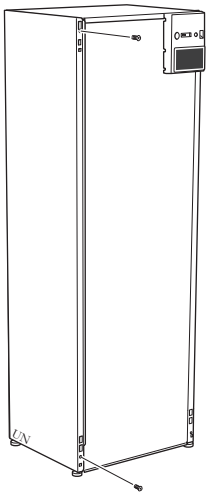
4. Press the top of the front section against the frame and screw it into place.



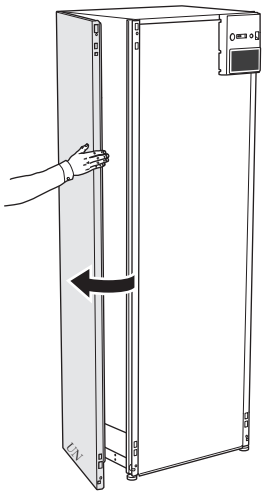
REMOVE SIDE PANEL

The side panels can be removed to facilitate the installation.

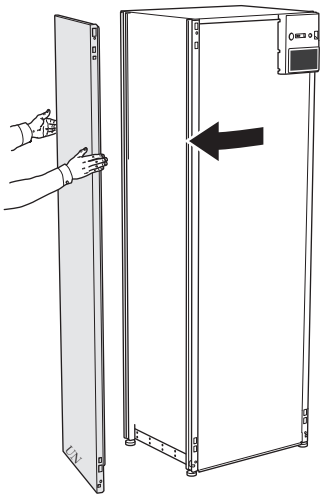
1. Remove the screws from the upper and lower edges.



2. Twist the panel slightly outwards.



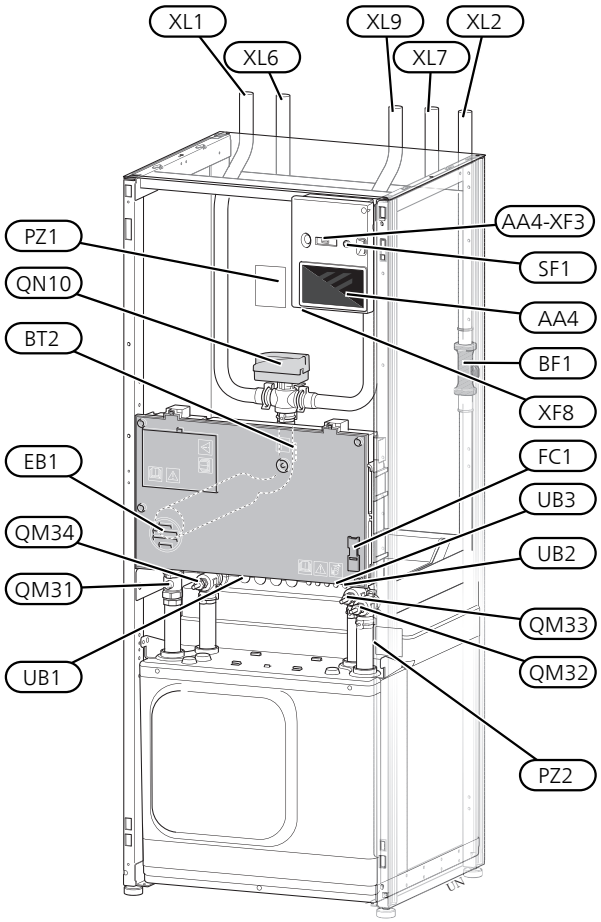
3. Move the panel outwards and backwards.



Assembly takes place in the reverse order.

3 The heat pump design

General



PIPE CONNECTIONS

XL1	Connection, heating medium flow
XL2	Connection, heating medium return
XL6	Connection, brine in
XL7	Connection, brine out
XL9	Connection, hot water heater

HVAC COMPONENTS

QM31	Shut-off valve, heating medium flow
QM32	Shut off valve, heating medium return
QM33	Shut off valve, brine out
QM34	Shut-off valve, brine in
QN10	Shuttle valve, climate system/water heater

SENSORS ETC.

BF1	Flow meter
BT2	Temperature sensors, heating medium flow

ELECTRICAL COMPONENTS

AA4	Display unit
	AA4-XF3 USB port
EB1	Immersion heater
FC1	Miniature circuit breaker[1]
SF1	On/off button
XF8	Network connection for myUplink

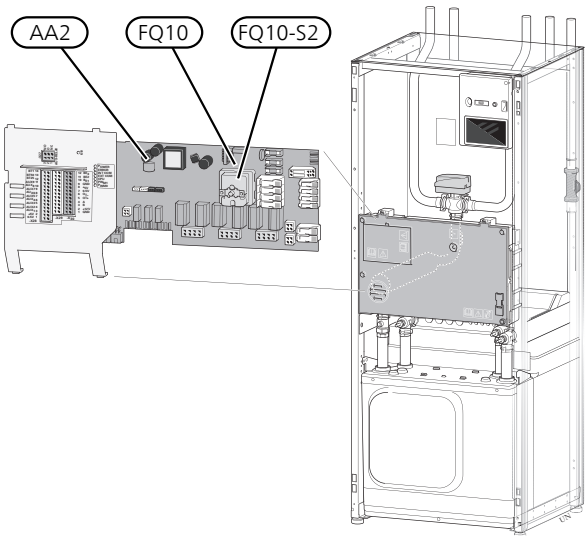
1 S1155PC-6 3x400 V is not equipped with miniature circuit breakers (FC1).

MISCELLANEOUS

PZ1	Rating plate
PZ2	Identification plate, cooling module
UB1	Cable gland
UB2	Cable gland
UB3	Cable gland, rear side, sensor

Designations according to standard EN 81346-2.

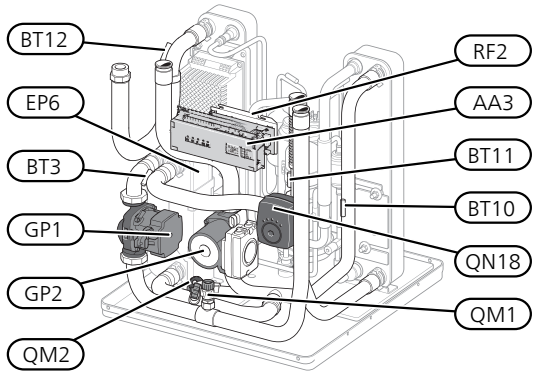
Distribution boxes

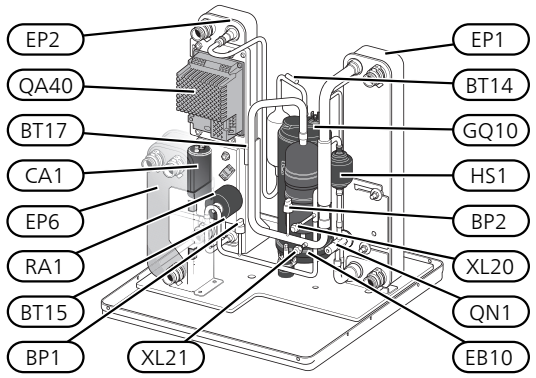


ELECTRICAL COMPONENTS

AA2 Base card
FQ10 Temperature limiter
FQ10-S2 Reset button for temperature limiter

Cooling sections





PIPE CONNECTIONS

XL20 Service connection, high pressure
XL21 Service connection, low pressure

HVAC COMPONENTS

GP1 Circulation pump
GP2 Brine pump
QM1 Drainage, climate system
QM2 Draining, brine side
QN18 Mixing valve, cooling

SENSORS ETC.

BP1 High pressure pressostat
BP2 Low pressure pressostat
BT3 Temperature sensors, heating medium return
BT10 Temperature sensor, brine in
BT11 Temperature sensor, brine out
BT12 Temperature sensor, condenser supply line
BT14 Temperature sensor, hot gas
BT15 Temperature sensor, fluid pipe
BT17 Temperature sensor, suction gas

ELECTRICAL COMPONENTS

AA3 Input circuit board
EB10 Compressor heater
QA40 Inverter
RF2 EMC-filter

COOLING COMPONENTS

EP1 Evaporator
EP2 Condenser
EP6 Heat exchanger, cooling
GQ10 Compressor
HS1 Drying filter
QN1 Expansion valve

4 Pipe connections

General

Pipe installation must be carried out in accordance with current norms and directives. S1155PC can operate with a return temperature of up to 58 °C and an outgoing temperature from the heat pump of 70 (65 °C with only the compressor).

S1155PC is not equipped with external shut off valves; these must be installed to facilitate any future servicing.

Caution

Ensure that incoming water is clean. When using a private well, it may be necessary to supplement with an extra water filter.

Caution

Any high points in the climate system, must be equipped with air vents.

NOTE

The pipe systems need to be flushed out before the heat pump is connected so debris cannot damage component parts.

NOTE

Water may drip from the safety valve's overflow pipe. The entire length of the overflow water pipe must be routed to a suitable drain and be inclined to prevent water pockets, and must also be frost-proof. The overflow pipe must be at least the same size as the safety valve. The overflow pipe must be visible and its mouth must be open and not located close to electrical components.

NOTE

The climate system must be adjusted for both heating and cooling operation.

SYMBOL KEY

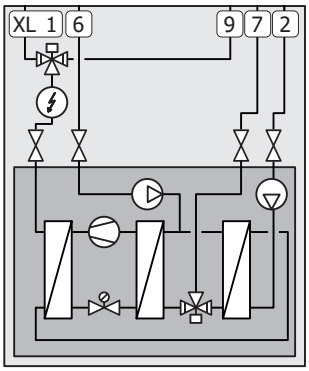
Symbol	*Meaning*
	Unit box
	Shut-off valve
	Non-return valve
	Circulation pump
	Expansion vessel
	Filterball
	Fan
	Pressure gauge
	Level vessel
	Particle filter
	Safety valve
	Temperature sensor
	Reversing valve/shunt
	Manual reversing valve/shunt
	Heat exchanger
	Overflow valve
	Bore hole
	Ground collector
	Under floor heating systems
	Heat pump
	Pool
	Radiator system
	Domestic hot water

SYSTEM DIAGRAM

S1155PC consists of heat pump, immersion heater, circulation pumps and control system. S1155PC is connected to the brine and heating medium circuits.

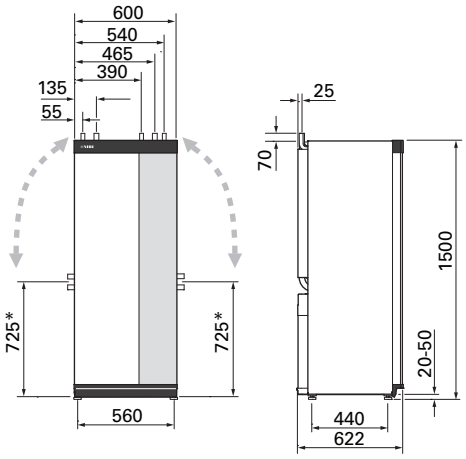
In the heat pump evaporator, the brine (water mixed with anti-freeze, glycol or ethanol) releases its energy to the refrigerant, which is vaporised in order to be compressed in the compressor. The refrigerant, of which the temperature has now been raised, is passed to the condenser where it gives offits energy to the heating medium circuit and, if necessary, to any docked water heater. If there is a greater need for heating/hot water than the compressor can provide there is an integrated immersion heater.

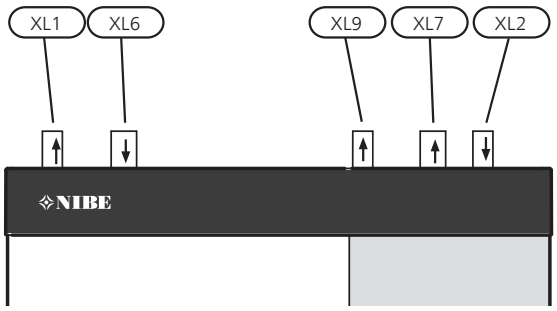
The brine can also be circulated via a mixing valve to a heat exchanger. There the brine cools the heating system's water so that comfort cooling can be maintained during the hotter periods of the year.



XL1	Connection, heating medium flow
XL2	Connection, heating medium return
XL6	Connection, brine in
XL7	Connection, brine out
XL9	Connection, hot water heater

Dimensions and pipe connections





PIPE DIMENSIONS

Connection		*6 kW*
(XL1)/(XL2) Heating medium supply/return ext. Ø	(mm)	22
(XL9) Connection water heater ext. Ø	(mm)	22
(XL6)/(XL7) Brine in/out ext. Ø	(mm)	28

* Can be angled for side connection.

Brine side

COLLECTOR

Caution

The length of the collector hose varies depending on the rock/soil conditions, climate zone and on the climate system (radiators or underfloor heating) and the heating requirement of the building Each installation must be sized individually.

Max. length per coil for the collector should not exceed 400 m.

In those cases where it is necessary to have several collectors, these should be connected in parallel with the possibility for adjusting the flow of the relevant coil.

For surface soil heat, the hose should be buried at a depth determined by local conditions and the distance between the hoses should be at least 1 metre.

For several bore holes, the distance between the holes must be determined according to local conditions.

Ensure the collector hose rises constantly towards the heat pump to avoid air pockets. If this is not possible, airvents should be used.

Because the temperature of the brine system can fall below 0 °C, it must be protected against freezing down to -15 °C. When making the volume calculation, use 1 litres of ready mixed brine per metre of collector hose (applies when using PEM-hose 40x2.4 PN 6.3) as a guide value.

SIDE CONNECTION

It is possible to angle the brine connections, for connection to the side instead of top connection.

To angle out a connection:

1. Disconnect the pipe at the top connection.
2. Angle the pipe in the desired direction.
3. If necessary, cut the pipe to the desired length.

CONNECTING THE BRINE SIDE

- Insulate all indoor brine pipes against condensation.
- The level vessel must be installed as the highest point in the brine system on the incoming pipe before the brine pump (Alt. 1).

  If the level vessel cannot be placed at the highest point, an expansion vessel must be used (Alt. 2).

NOTE

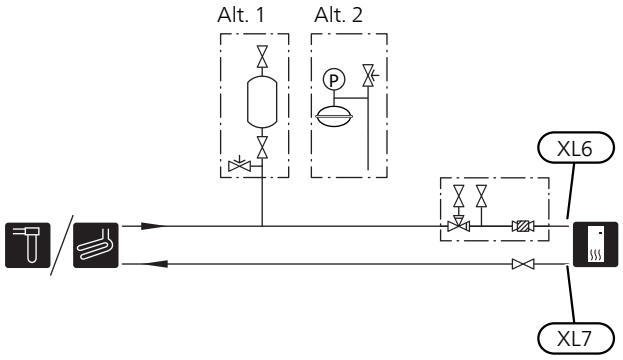
Note that condensation may drip from the level vessel. Position the vessel so that this does not harm other equipment.

- Details of the antifreeze used must be shown on the level vessel.
- Install the enclosed safety valve below the level vessel as illustrated.
- Install a shut off valve for outgoing brine as close to the heat pump as possible.
- Fit the enclosed filterball on the incoming brine.

TIP

If filling connection KB25/KB32 is used, the enclosed filterball does not need to be fitted.

In the case of connection to an open groundwater system, an intermediate frost-protected circuit must be provided, because of the risk of dirt and freezing in the evaporator. This requires an extra heat exchanger.



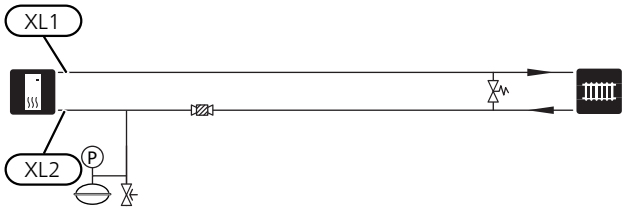
Heating medium side

CONNECTING THE CLIMATE SYSTEM

A climate system is a system that regulates indoor comfort with the help of the control system in S1155PC and for example radiators, underfloor heating/cooling, fan convectors etc.

- Install all necessary safety devices, shut-off valves (as close to the heat pump as possible) and the enclosed filterball.

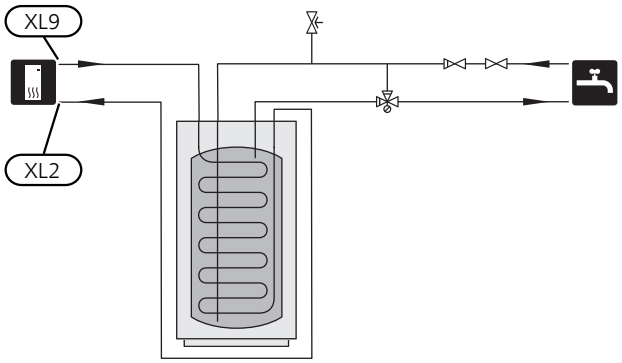
- Fit safety valve on heating medium return as illustrated. Recommended opening pressure is 0.25 MPa (2.5 bar). For information about max opening pressure, see technical specifications.
- When connecting to a system with thermostats on all radiators (or underfloor heating coils), either a bypass valve must be fitted or some of the thermostats must be removed to ensure there is sufficient flow.



Cold and hot water

CONNECTING COLD AND HOT WATER

- Fit shut-off valve, non-return valve and safety valve as illustrated.
- A mixer valve must also be installed, if the factory setting for hot water is changed. National regulations must be observed.
- The safety valve must have a maximum 1.0 MPa (10.0 bar) opening pressure and be installed on the incoming domestic water line as shown.
- The settings for hot water are made in menu 7.1.1.



CONNECTING THE HOT WATER HEATER

NOTE

If S1155PC is not docked to a water heater or if it is to work with fixed condensing, the connection for the water heater (XL9) must be plugged.

- Any docked hot water heater must be fitted with necessary set of valves.
- A mixing valve must be installed if the setting is changed so that the temperature can exceed 60°C.
- The safety valve must have a maximum 1.0 MPa (10.0 bar) opening pressure and be installed on the incoming domestic water line as illustrated. The entire length of the overflow water pipe from the safety valves must be inclined to prevent water pockets and must also be frost proof.

Caution

Hot water production is activated in the start guide or in menu 7.1.1.

FIXED CONDENSING

If S1155PC is to work towards a water heater with fixed condensing, you must connect external supply temperature sensor (BT25) according to the description on page 20. In addition, you must make the following menu settings.

Menu	*Menu setting (local variations may be required)*
1.30.4 - min. flow line temp. heating	Desired temperature in the tank.
1.30.6 - max flow line temperature	Desired temperature in the tank.
7.1.2.1 - op. mod heat med pump	intermittent
4.1 - op. mode	manual

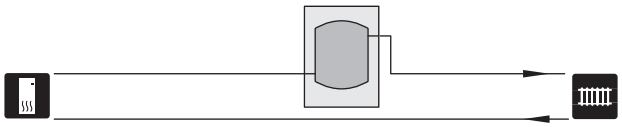
Docking alternatives

S1155PC can be connected in several different ways, some of which are shown below.

Further option information is available at nibe.eu/ODM and in the respective assembly instructions for the accessories used. See page 65 for a list of the accessories that can be used with S1155PC.

BUFFER VESSEL

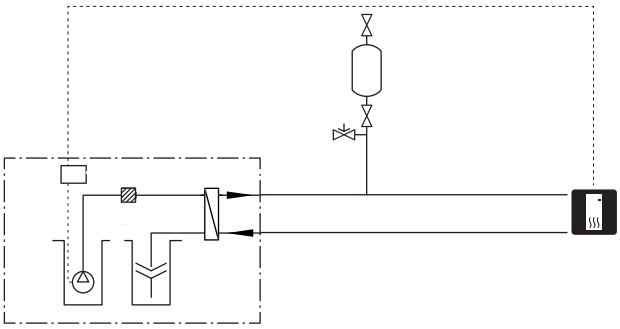
If the climate system volume is too small for the heat pump output, the radiator system can be supplemented with a buffer vessel, for example NIBE UKV.



GROUND WATER SYSTEM

An intermediate heat exchanger is used to protect the heat pump's exchanger from dirt. The water is released into a buried filtration unit or a drilled well. See page 24 for more information about connecting a ground water pump.

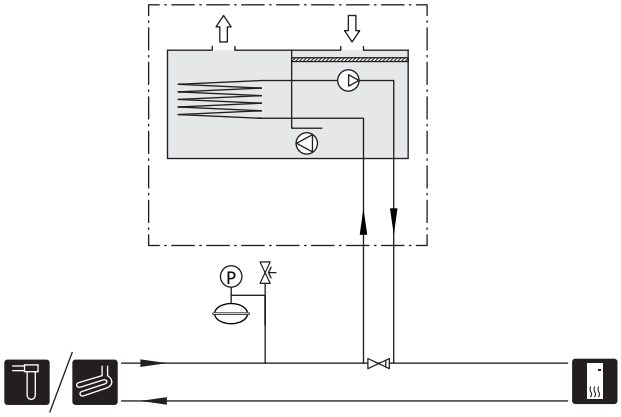
If this docking alternative is used, "min. brine out" in menu 7.1.2.8 "br pmp al set." must be changed to a suitable value to prevent freezing of the heat exchanger.



VENTILATION RECOVERY

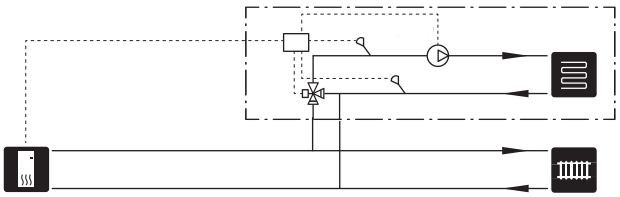
The installation can be supplemented with the exhaust air module NIBE FLM S45 to provide ventilation recovery.

- Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.
- The brine system must be supplied with a pressure expansion vessel. If there is a level vessel this should be replaced.



TWO OR MORE CLIMATE SYSTEMS

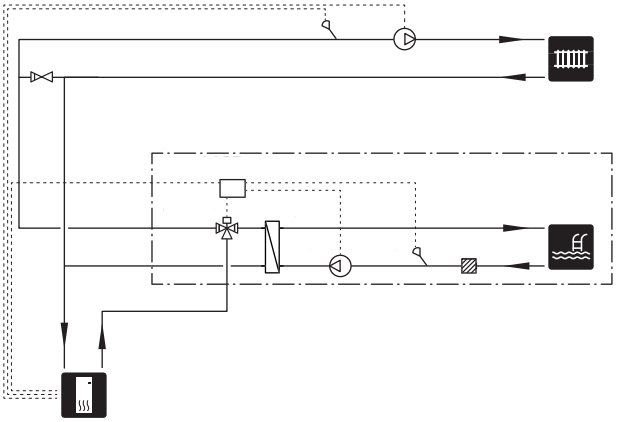
In buildings with several climate systems that require different supply temperatures, the accessory ECS 40/ECS 41 can be connected. A shunt valve then lowers the temperature to the underfloor heating system, for example.



POOL

With the POOL 40 accessory, you can heat the pool with your heat pump.

During pool heating, the heating medium circulates between the S1155PC and the pool exchanger using the heat pump’s internal circulation pump.

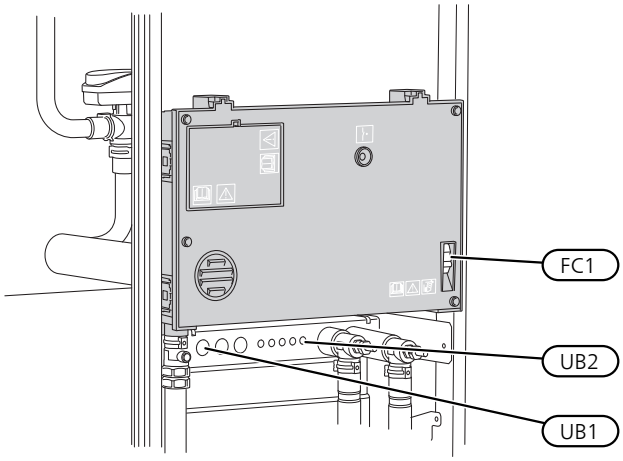


5 Electrical connections

General

All electrical equipment, except the outdoor sensors, room sensors and the current sensors are ready connected at the factory.

- Electrical installation and wiring must be carried out in accordance with the stipulations in force.
- Disconnect S1155PC before insulation testing the house wiring.
- If the building is equipped with an earth-fault breaker, S1155PC should be equipped with a separate one.
- S1155PC must be installed via an isolator switch. The cable area has to be dimensioned based on the fuse rating used.
- If a miniature circuit breaker is used, this must have motor characteristic "C" as a minimum. See section "Technical specifications" for fuse size.
- To prevent interference, sensor cables to external connections must not be laid close to high voltage cables.
- The minimum area of communication and sensor cables to external connections must be 0.5 mm² up to 50 m, for example EKKX, LiYY or equivalent.
- Electrical wiring diagram for the heat pump, see separate Installer Manual.
- When cable routing in S1155PC, the cable grommets (UB1 and UB2) must be used.



NOTE

Electrical installation and any servicing must be carried out under the supervision of a qualified electrician. Disconnect the current using the circuit breaker before carrying out any servicing.

NOTE

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

NOTE

Check the connections, main voltage and phase voltage before the machine is started, to prevent damage to the heat pump electronics.

NOTE

Do not start the system before filling up with water. Components in the system could be damaged.

MINIATURE CIRCUIT-BREAKER

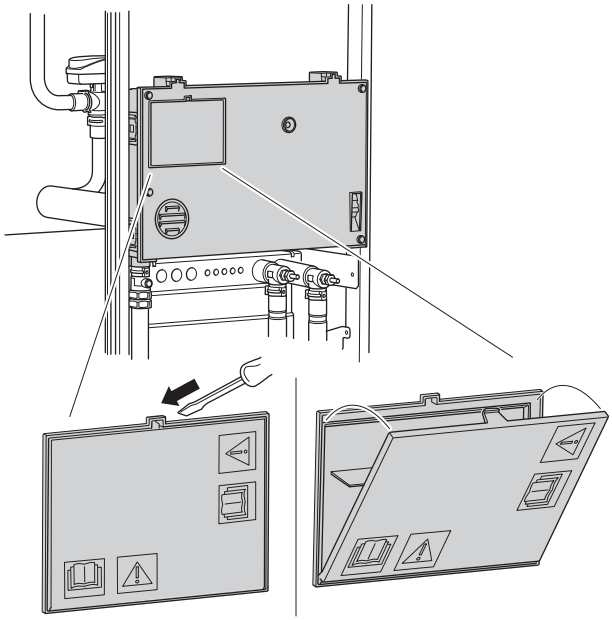
The operating circuit in S1155PC and some of its internal components are fused internally by a miniature circuit breaker (FC1).

S1155PC-6 3x400 V is not equipped with miniature circuit breakers (FC1).

ACCESSIBILITY, ELECTRICAL CONNECTION

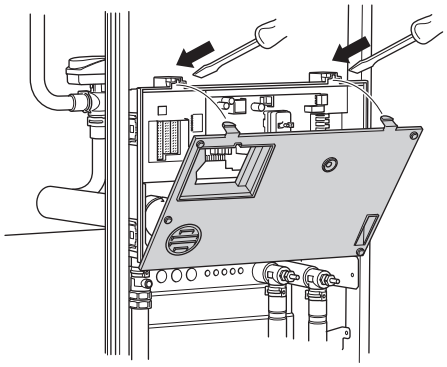
Removing the cover

The cover is opened using a screwdriver.



Removing the covers

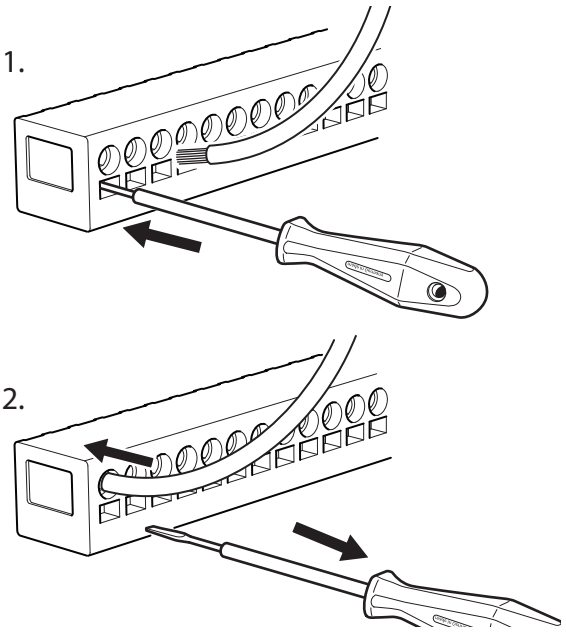
The cover is opened using a screwdriver.



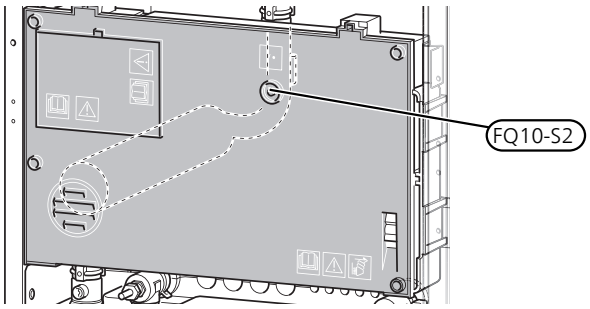
CABLE LOCK

Use a suitable tool to release/lock cables in the heat pump terminal blocks.

Terminal block



TEMPERATURE LIMITER



The temperature limiter (FQ10) cuts the power supply to the electrical additional heat if the temperature rises above 89 °C and it is reset manually.

Resetting

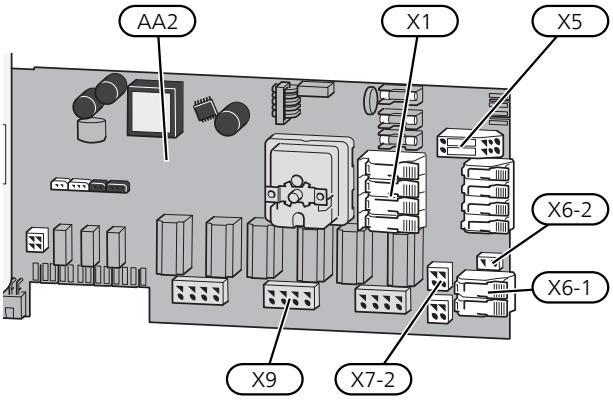
The temperature limiter (FQ10) can be accessed behind the front cover. Reset the temperature limiter by pressing its button (FQ10-S2).

Connections

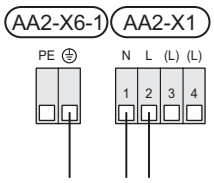
POWER CONNECTION

Supply voltage

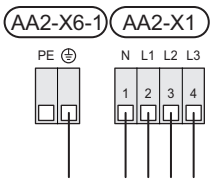
Enclosed cable for incoming supply electricity is connected to terminal block X1 and X6-1 on the PCB AA2.



Connection 1x230V



Connection 3x400V



If separate supply to the compressor and electric heater is required, see section "External blocking of functions".

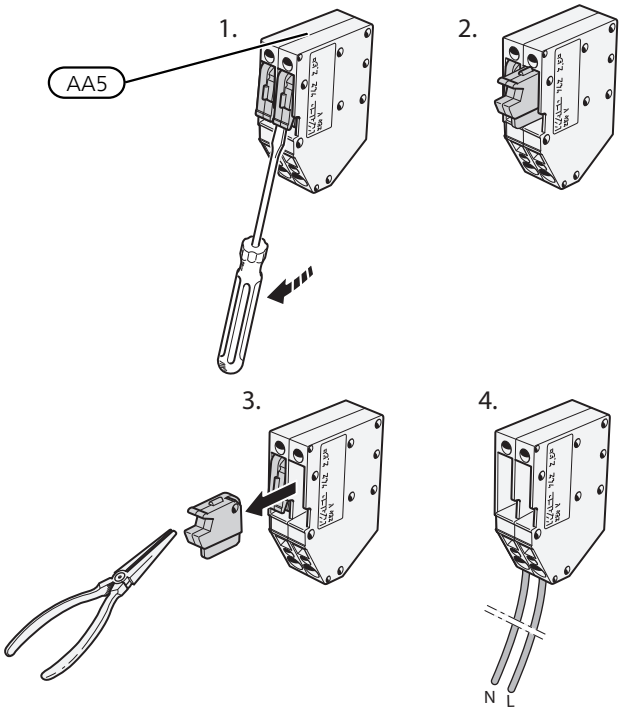
External control voltage for the control system

> ⚠ *NOTE*
>
> Only applies to power connection 3x400 V.

> ⚠ *NOTE*
>
> Mark up any junction boxes with warnings for external voltage.

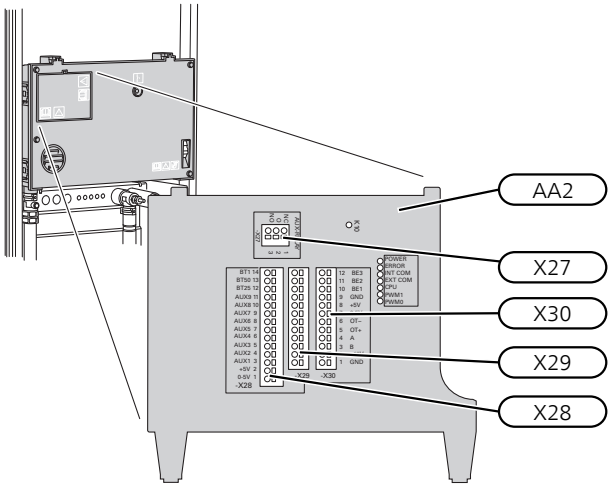
Control voltage (230 V ~ 50Hz) connects to AA2:X5:N, X5:L and X6-2 (PE).

When connecting external control voltage, remove the bridges from terminal block X5.



EXTERNAL CONNECTIONS

External connections are connected on terminal blocks X28, X29 and X30 on the PCB (AA2).



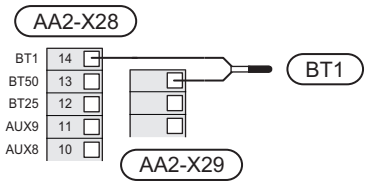
Sensors

Outside sensor

The outdoor sensor (BT1) is placed in the shade on a wall facing north or north-west, so it is unaffected e.g. by the morning sun.

The outdoor sensor is connected to terminal block AA2-X28:14 and to any input on terminal block AA2-X29.

If a conduit is used it must be sealed to prevent condensation in the sensor capsule.

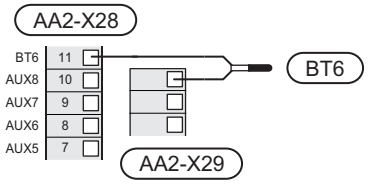


Temperature sensor, hot water charging

The temperature sensor, hot water charging (BT6) is placed in the submerged tube on the water heater.

Connect the sensor to terminal block AA2-X28:11 (or to one of the other selectable AUX inputs) and to any input on terminal block AA2-X29.

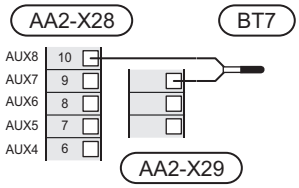
Settings for hot water are made in menu 2 "Hot water".



Temperature sensor, hot water top

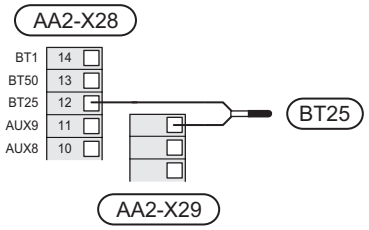
A temperature sensor for hot water top (BT7) can be connected to S1155PC to show the water temperature at the top of the tank (if it is possible to install a sensor at the top of the tank).

Connect the sensor to terminal block X28:10 (or to one of the other selectable AUX inputs) and to any input on terminal block AA2-X29.



Temperature sensor, external flow line

Connect temperature sensor, external supply line (BT25) to terminal block AA2-X28:12 and to any input on terminal block AA2-X29.



Room sensor

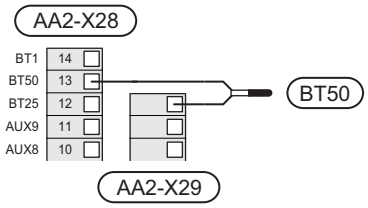
S1155PC is supplied with an enclosed room sensor (BT50) that makes it possible to display and control the room temperature in the display on S1155PC.

Fit the room sensor in a neutral position where a set temperature is required. A suitable location might be, for example, on a free inner wall in a hall approx. 1.5 m above the floor. It is important that the room sensor is not obstructed from measuring the correct room temperature, for example by being located in a recess, between shelves, behind a curtain, above or close to a heat source, in a draught from an external door or in direct sunlight. Closed radiator thermostats can also cause problems.

S1155PC operates without room sensor, but if you want to read the home's indoor temperature from the display on S1155PC, the room sensor must be fitted. The room sensor is connected on terminal block X28:13 and to any input on terminal block AA2-X29.

If a room sensor is to be used to change the room temperature in °C and/or to fine-tune the room temperature, the sensor must be activated in menu 1.3 "Room sensor settings".

If a room sensor is used in a room with underfloor heating, it should only have an indicatory function, not control of the room temperature.

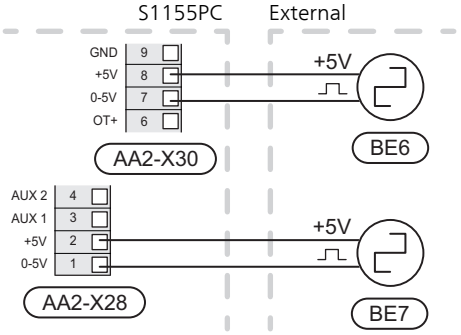


Caution

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.

External energy meter

One or two energy meters (BE6, BE7) are connected to AA2-X28:1-2 or AA2-X30:7-8.



Activate the energy meter(s) in menu 7.2 and then set the desired value (energy per pulse) in menu 7.2.19.

Load monitor

Integrated load monitor

S1155PC is equipped with a simple form of integrated load monitor, which limits the power steps for the electric additional heat by calculating whether future power steps can be connected to the relevant phase without exceeding the specified main fuse. If the current would exceed the specified main fuse, the power step is not permitted. The size of the property's main fuse is specified in menu 7.1.9.

Load monitor with current sensor

When many power-consuming products are connected in the property at the same time as the electric additional heat is operating, there is a risk of the property's main fuses tripping. S1155PC is equipped with a load monitor which, with the aid of a current sensor, controls the power steps for the electric additional heat by redistributing the power between the different phases or by disengaging the electric additional heat in event of an overload in a phase. If the overload remains despite the electric additional heat being disengaged, the compressor winds down. Reconnection occurs when the other current consumption drops.

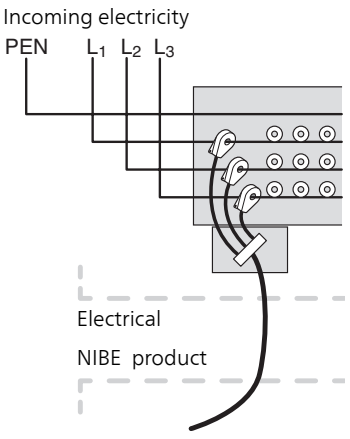
Caution

Activate phase detection in menu 7.1.9 for full functionality.

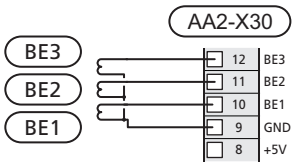
Connecting current sensors

A current sensor should be installed on each incoming phase conductor in to the distribution box to measure the current. The distribution box is an appropriate installation point.

Connect the current sensors to a multi-core cable in an enclosure directly adjacent to the electrical distribution unit. The multi-core cable between the enclosure and S1155PC must have a cable area of at least 0.5 mm².



Connect the cable to terminal block AA2-X30:9-12, where X30:9 is the common terminal block for the three current sensors.



COMMUNICATION

Multi-installation

Several heat pumps can be interconnected by selecting one heat pump as the main unit and the others as subordinate heat pumps. Ground source heat pump models with multi-installation functionality from NIBE can be connected to S1155PC.

A further eight heat pumps can be connected to the main unit. In systems with several heat pumps, each pump must have a unique name. Only one heat pump can be "Main unit" and only one can be e.g. "Heat pump 5". Main unit/heat pump are set in menu 7.3.1.

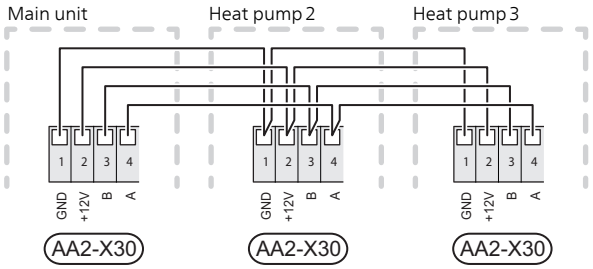
External temperature sensors and control signals must only be connected to the main unit, except for external control of the compressor module.

> ⚠ *NOTE*
>
> When several heat pumps are connected together, an external supply temperature sensor (BT25) and an external return line sensor (BT71) must be used.

Connect the communication cables between the heat pumps as illustrated in series to terminal block X30:1 (GND), X30:2 (+12V), X30:3 (B) and X30:4 (A) on the PCB (AA2).

Use cable type LiYY, EKKX or similar.

The example shows the connection of several S1155PC .



Connecting accessories

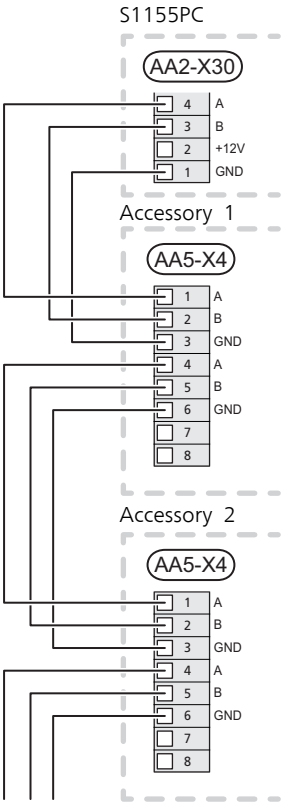
Instructions for connecting accessories are provided in the manual accompanying the accessory. See section "Accessories" for a list of the accessories that can be used with S1155PC. Connection for communication with the most common accessories is shown here.

Accessories with accessory board (AA5)

Accessories with accessory board (AA5) connect to terminal block AA2-X30:1,3,4 in S1155PC. Use cable type LiYY, EKKX or equivalent.

If several accessories are to be connected, connect the first accessory board directly to the terminal block in S1155PC. Other accessory boards are connected to the first in series.

Because there can be different connections for accessories with accessory board (AA5), you should always read the instructions in the manual for the accessory that is to be installed.

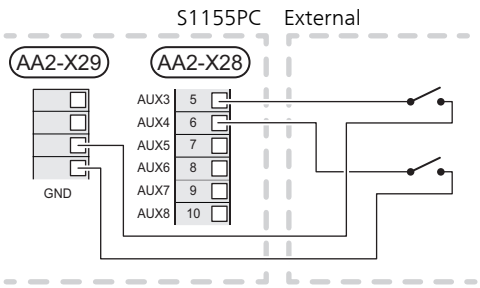


SELECTABLE OUTPUTS/INPUTS

On the PCB (AA2), S1155PC has software-controlled AUX inputs and outputs for connecting the external switch function (contact has to be potential free) or sensor.

Go into menu 7.4 "Selectable in/outputs" on the display to select to which AUX connection each function connects.

Selectable inputs for these functions are AA2-X28:3-11. Each function connects to any input and GND (AA2-X29).



The example above uses the inputs AUX1 (AA2-X28:3) and AUX2 (AA2-X28:4).

A selectable output is AA2-X27.

For certain functions, accessories may be required.

TIP

Some of the following functions can also be activated and scheduled via menu settings.

Possible selection for AUX inputs

Temperature sensor

Temperature sensor can be connected to S1155PC. Use a 2-core cable of at least 0.5 mm² cable area.

Available options are:

- hot water top (BT7) (shows the water temperature at the top of the tank. The temperature sensor is placed in the submerged tube on the water heater.)
- Boiler (BT52) (only shown if shunt-controlled additional heat is selected in menu 7.2.1)
- cooling/heating (BT74), determines when it is time to switch between cooling and heating operation.

Monitor

Available options are:

- alarm from external units. The alarm is connected to the control, which means that the malfunction is presented as an information message in the display. Potential-free signal of type NO or NC.
- level (accessory NV10)/, pressure/flow monitor for the brine (NC).

External activation of functions

An external switch function can be connected to S1155PC to activate various functions. The function is activated during the time the switch is closed.

Possible functions that can be activated:

- forced control of brine pump
- hot water demand mode "more hot water"
- hot water demand mode "small"
- "External adjustment"

To change the supply temperature and in doing so change the room temperature, an external switch function can be connected to S1155PC.

When the switch is closed, the temperature is changed in °C (if a room sensor is connected and activated). If a room sensor is not connected or not activated, the desired change of "Temperature" (heating curve offset) is set with the number of steps selected. The value is adjustable between -10 and +10. External adjustment of climate systems 2 to 8 requires accessories.

– *climate system 1 to 8*

The value for the change is set in menu 1.30.3, "External adjustment".

- activation of one of four fan speeds.

(Can be selected if ventilation accessory is activated.)

The following five options are available:

– 1-4 is normally open (NO)

– 1 is normally closed (NC)

The fan speed is activated during the time the switch is closed. Normal speed is resumed when the switch is opened again.

- SG ready

Caution

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

"SG Ready" requires two AUX inputs.

In cases where this function is wanted, it must be connected to terminal block X28 on the PCB (AA2).

"SG Ready" is a smart form of tariff control, through which your electricity supplier can affect the indoor, hot water and/or pool temperatures (if applicable) or simply block the additional heat and/or compressor in the heat pump at certain times of the day (can be selected in menu 4.2.3 after the function is activated). Activate the function by connecting potential-free switch functions to two inputs selected in menu 7.4 (SG Ready A and SG Ready B).

Closed or open switch means one of the following:

– *Blocking (A: Closed, B: Open)*

"SG Ready" is active. The compressor in S1155PC and additional heat are blocked in the same way as today's tariff blocking.

– *Normal mode (A: Open, B: Open)*

"SG Ready" is not active. No effect on the system.

– *Low price mode (A: Open, B: Closed)*

"SG Ready" is active. The system focuses on costs savings and can for example exploit a low tariff from the electricity supplier or over-capacity from any own power source (effect on the system can be adjusted in the menu 4.2.3).

– *Overcapacity mode (A: Closed, B: Closed)*

"SG Ready" is active. The system is permitted to run at full capacity at over capacity (very low price) with the electricity supplier (effect on the system is settable in menu 4.2.3).

(A = SG Ready A and B = SG Ready B)

External blocking of functions

An external switch function can be connected to S1155PC for blocking various functions. The switch must be potential-free and a closed switch results in blocking.

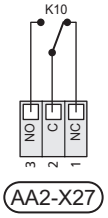
> *NOTE*
>
> Blocking entails a risk of freezing.

Functions that can be blocked:

- heating (blocking of heating demand)
- heating/cooling (production and distribution)
- hot water (hot water production). Any hot water circulation (HWC) remains in operation.
- compressor
- internally controlled additional heat
- tariff blocking (additional heat, compressor, heating, cooling and hot water are disconnected)

Possible selection for AUX output (potential free variable relay)

It is possible to have an external connection by means of a relay function via a potential-free switching relay (max 2 A) on the PCB (AA2), terminal block X27:NO,C,NC. The function must be activated in menu 7.4.



The picture shows the relay in the alarm position.

If S1155PC is switched off or in emergency mode, the relay is in alarm position.

> *Caution*
>
> The relay outputs may be subjected to a max load of 2 A at resistive load (230V AC).

> *TIP*
>
> The AXC accessory is required if more than one function is to be connected to the AUX output.

Optional functions for external connection:

Indications

- alarm indication
- indication of common alarm
- cooling mode indication
- holiday indication
- away mode for "smart home" (complement to the functions in menu 5.3)

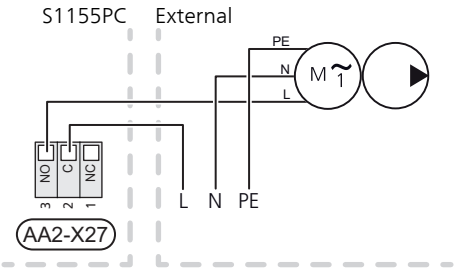
Control

- control of circulation pump for hot water circulation
- control of external circulation pump (for heating medium)

> *NOTE*
>
> The relevant distribution box must be marked with a warning about external voltage.

Connecting external circulation pump

An external circulation pump is connected to the AUX output, as illustrated below.



Settings

ELECTRICAL ADDITION - MAXIMUM OUTPUT

Number of steps, maximum electrical output and supply on connection for the immersion heater varies depending on model. See tables.

The electric additional heat may be restricted depending on the selected country.

Setting maximum output in the electric additional heat is done in menu 7.1.5.1.

Power steps of the immersion heater

The tables display the total phase current for the immersion heater at start up. If an immersion heater has already been started, and is not being used to its full capacity, the values in the table can be changed because the control initially uses this immersion heater.

3x400 V

Max electrical addition (kW)	*Max phase current L1(A)*	*Max phase current L2(A)*	*Max phase current L3(A)*
0.0	–	–	–
0.5	2.2	–	–
1.0	–	4.3	–
1.5	2.2	4.3	–
2.0	–	–	8.7
2.5	2.2	–	8.7
3.0	–	4.3	8.7
3.5	2.2	4.3	8.7
4.0	–	11.5	7.5
4.5	2.2	11.5	7.5
5.0	–	7.5	15.6
5.5	2.2	7.5	15.6
6.0	–	11.5	15.6
6.5[1]	2.2	11.5	15.6

1 Factory setting

1x230 V

Max electrical addition (kW)	*Max phase current L1(A)*
0.0	–
0.5	2.2
1.0	4.3
1.5	6.5
2.0	8.7
2.5	10.9
3.0	13.0
3.5	15.2
4.0	17.4
4.5[1]	19.6

1 Factory setting

If the current sensors are connected, S1155PC monitors the phase currents and allocates the power steps automatically to the least loaded phase.

NOTE

If the current sensors are not connected, S1155PC calculates how high the currents will be if the relevant power steps are added. If the currents are higher than the set fuse size, the power step is not allowed to cut in.

EMERGENCY MODE

When S1155PC is put into emergency mode, the system works as follows:

- S1155PC prioritises heating production.
- Hot water is produced if possible.
- The load monitor is not connected.
- The immersion heater is stepped according to the setting in menu 7.1.8.2 - Emergency mode.
- Fixed supply temperature if the system has no value from the outdoor sensor (BT1).

You can activate the emergency mode both when S1155PC is running and when it is switched off.

When the emergency mode is active, the status lamp turns yellow.

To activate when S1155PC is running: press and hold the on/off button (SF1) for 2 seconds and select "emergency mode" from the shutdown menu.

To activate when S1155PC is switched off: press and hold the on/off button (SF1) for 5 seconds. (Deactivate the emergency mode by pressing once.)

6 Commissioning and adjusting

Preparations

1. Check for water in any hot water heater and climate system.

> *Caution*
>
> Check the miniature circuit-breaker and the motor protection breakers. They may have tripped during transportation.

> *NOTE*
>
> Do not start S1155PC if there is a risk that the water in the system has frozen.

Filling and venting

> *Caution*
>
> Insufficient venting can damage internal components in S1155PC.

FILLING AND VENTING THE CLIMATE SYSTEM

Filling

1. Open the filling valve (external, not included in the product). Fill the climate system with water.
2. Open the vent valve.
3. When the water that exits the vent valve is not mixed with air, close the valve. After a while the pressure starts to rise.
4. Close the filling valve when the correct pressure is obtained.

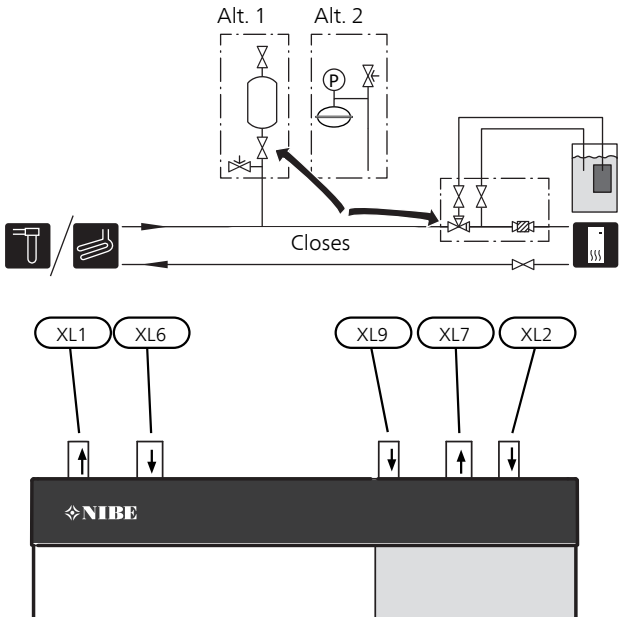
Venting

1. Bleed the heat pump via a vent valve and the rest of the climate system via their relevant vent valves.
2. Keep topping up and venting until all air has been removed and the pressure is correct.

FILLING AND VENTING THE BRINE SYSTEM

When filling the brine system, mix the water with anti-freeze in an open container. The mixture should be protected against freezing down to about -15°C. The brine is topped up by connecting a filling pump.

1. Check the brine system for leakage.
2. Connect the filling pump and return line on the brine system's filling connection (accessory).
3. If alternative 1 is used (level vessel), close the valve under the level vessel.
4. Close the reversing valve in the filling connection.
5. Open the valves on the filler connector.
6. Start the filling pump.
7. Fill until liquid enters the return pipe.
8. Close the valves on the filler connector.
9. Open the reversing valve in the filling connection.
10. If alternative 1 (level vessel) is used, open the valve under the level vessel (CM2).



Start-up and inspection

START GUIDE

NOTE

There must be water in the climate system before S1155PC is started.

NOTE

With several heat pumps connected, the start guide must first be run in the subordinate heat pumps.

In the heat pumps that are not the main unit, you can only make settings for each heat pump's circulation pumps. Other settings are made and controlled by the main unit.

1. Start S1155PC by pressing the on/off button once (SF1).
2. Follow the instructions in the display's start guide. If the start guide does not start when you start the S1155PC, start it manually in menu 7.7.

TIP

See the section "Control – Introduction" for a more detailed introduction to the installation's control system (operation, menus, etc.).

If the building is cooled when S1155PC starts, the compressor may not be able to meet the entire demand without having to use additional heating.

Commissioning

The first time the installation is started a start guide is started. The start guide instructions state what needs to carried out at the first start together with a run through of the installation's basic settings.

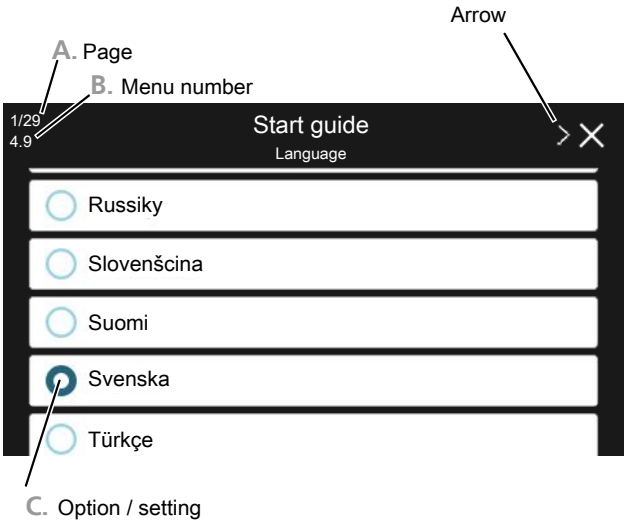
The start guide ensures that the start-up is carried out correctly and, for this reason, cannot be skipped.

Caution

As long as the start guide is active, no function in the installation will start automatically.

The start guide will appear at each restart of the installation, until it is deselected on the last page.

Operation in the start guide



A. Page

Here you can see how far you have come in the start guide.

Drag to the right or left with your finger to browse between the pages.

You can also press the arrows in the top corners to browse.

B. Menu number

Here, you can see which menu in the control system this page of the start guide is based on.

If you want to read more about the affected menu, either consult its help menu or read the Installer Manual.

C. Option / setting

Make settings for the system here.

POST ADJUSTMENT AND VENTING

Pump adjustment, automatic operation

Brine side

To set the correct flow in the brine system, the brine pump must run at the correct speed. S1155PC has a brine pump that is controlled automatically in standard mode. Certain functions and accessories may demand that it be run manually, in which case the correct speed must be set.

If several S1155PC are installed in a multi-installation, all S1155PC must be the same size (for example 12 kW) for the automatic control to function. Should the installation contain, for example, a 6 kW and a 12 kW, adjustment must be carried out according to manual operation.

This automatic control occurs when the compressor is running and sets the speed of the brine pump so that the optimum temperature difference between the supply and return lines is attained.

Heating medium side

To set the correct flow in the heating medium system, the heating medium pump must run at the correct speed. S1155PC has a heating medium pump that can be automatically controlled in standard mode. Certain functions and accessories may require it to run manually and the correct speed must then be set.

This automatic control occurs when the compressor is running and sets the speed of the heating medium pump, for the present operating mode, so the optimum temperature difference between the supply and return lines is achieved. During heating operation, the set DOT (dimensioned outdoor temperature) and temperature differential in menu 7.1.6.2 are used. If necessary, the maximum speed of the circulation pump can be limited in menu 7.1.2.2.

Pump adjustment, manual operation

Brine side

S1155PC has a brine pump that can be controlled automatically. For manual operation: deactivate "Auto" in menu 7.1.2.7 and then set the speed according to the diagram below.

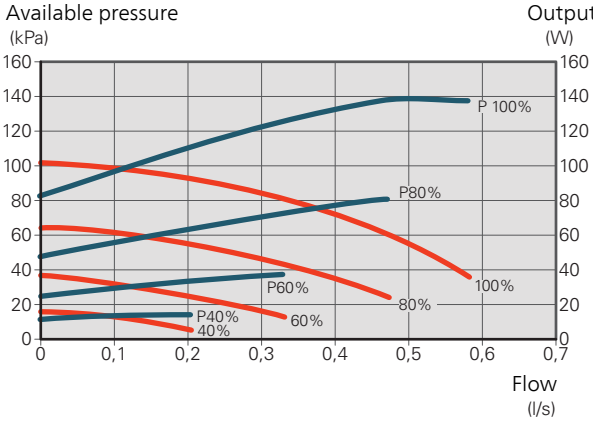
> ***Caution***
>
> When passive cooling is used, the brine pump speed must be set in menu 7.1.2.7.

Set the pump speed when the system has come into balance (ideally 5 minutes after compressor start).

Adjust the flow so that the temperature difference between brine out (BT11) and brine in (BT10) is between 2 - 5 °C. Check these temperatures in menu 3.1 "Operating info" and adjust the brine pump's (GP2) speed until the temperature difference is attained. A high difference indicates a low brine flow and a low difference indicates a high brine flow.

Available pressure, kPa
p Electrical output, W

S1155PC 6 kW



Heating medium side

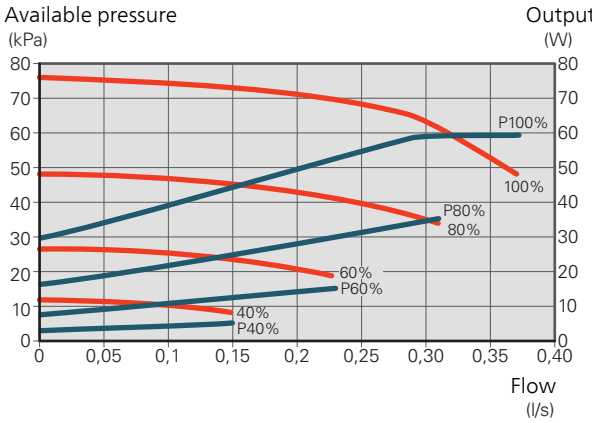
S1155PC has a heating medium pump that can be controlled automatically. For manual operation, deactivate "Auto" in menu 7.1.2.2 and then set the speed according to the diagrams below.

The flow must have a suitable temperature difference for the operating case (heating operation: 5 - 10 °C, hot water generation: 5 - 10 °C, pool heating: approx. 15 °C) between controlling supply temperature sensor and return line sensor. Check these temperatures in menu 3.1 "Operating info" and adjust the heating medium pump (GP1) speed until the temperature difference is attained. A high difference indicates a low heating medium supply and a low difference indicates a high heating medium supply.

Read off what speed the heating medium pump should have during manual operation from the diagrams below.

Available pressure, kPa
p Electrical output, W

S1155PC 6 kW

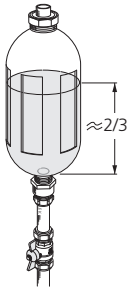


Readjusting, venting, heat medium side

Air is initially released from the hot water and venting may be necessary. If gurgling sounds can be heard from the heat pump or climate system, the entire system will require additional venting.

Readjusting, venting, collector side

Level vessel

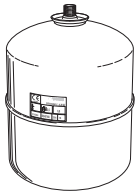


Check the fluid level in the level vessel (CM2). If the fluid level has dropped, top up the system.

1. Close the valve under the vessel.
2. Disconnect the connection on top of the vessel.
3. Fill with brine until approx 2/3 of the vessel is full.
4. Reconnect the connector at the top of the vessel.
5. Open the valve under the vessel.

If the pressure in the system needs to be raised, this is done by closing the valve on the outgoing main line when the brine pump (GP2) is in operation and the level vessel (CM2) is open, so that liquid is drawn down from the vessel.

Expansion vessel



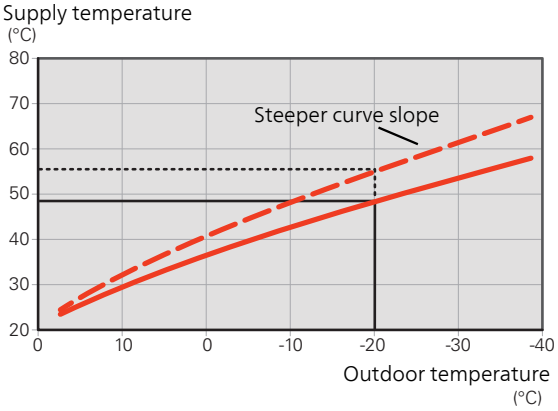
If a pressure expansion vessel (CM3) is used instead of a level vessel, the pressure level is checked. If the pressure drops, the system should be replenished.

Setting the cooling/heating curve

In the menus Curve, heating and Curve, cooling, you can see the heating and cooling curves for your house. The task of the curves is to give an even indoor temperature, regardless of the outdoor temperature, and thereby energy-efficient operation. It is from these curves that the S1155PC determines the temperature of the water to the climate system (the supply temperature) and thus the indoor temperature.

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.

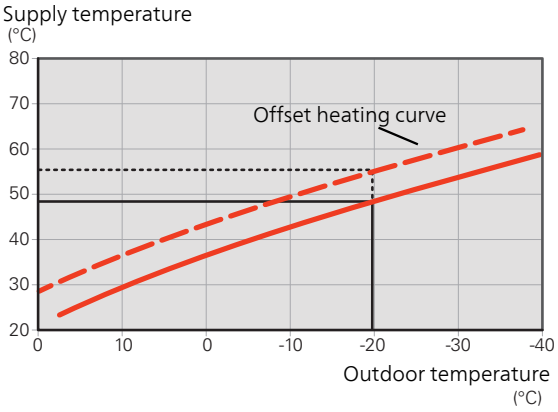


The optimum curve slope depends on the climate conditions in your location, whether the house has radiators, fan coils or underfloor heating and how well insulated the house is.

The heating/cooling curves are set when the heating/cooling system is installed, but may need adjusting later. Thereafter, the curves should not need further adjustment.

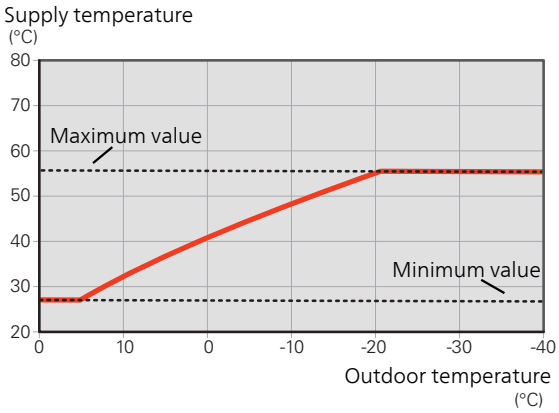
CURVE OFFSET

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 lowering of the supply temperature.



SUPPLY 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

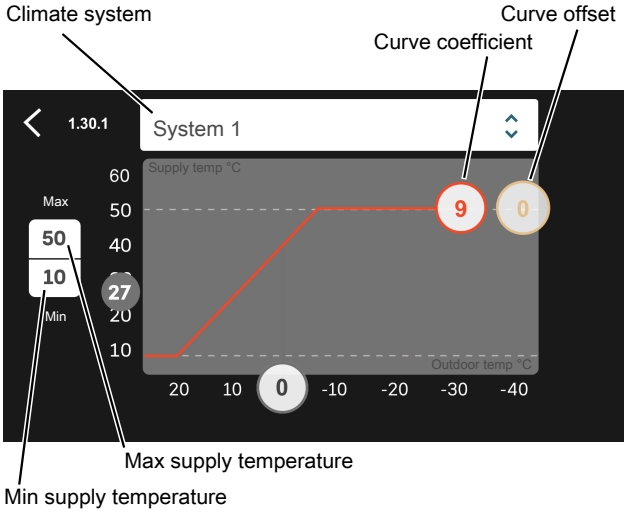
With underfloor heating systems, the maximum supply temperature is normally set between 35 and 45 °C.

Check the max floor temperature with your floor supplier.

Caution

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

ADJUSTMENT OF CURVE



1. Select the climate system (if more than one) for which the curve is to be changed.
2. Select curve slope and curve offset.
3. Select max and min supply temperature.

Caution

Curve 0 means that own curve is used.

Settings for own curve are made in menu 1.30.7.

TO READ OFF A HEATING CURVE

1. Drag in the circle on the axis with outdoor temperature.
2. Read off the value for supply temperature in the circle on the other axis.

7 myUplink

With myUplink you can control the installation – where and when you want. In the event of any malfunction, you receive an alarm directly to your e-mail or a push notification to the myUplink app, which allows you to take prompt action.

Visit myuplink.com for more information.

Specification

You need the following in order for myUplink to be able to communicate with your S1155PC:

- wireless network or network cable
- Internet connection to which S1155PC can be connected
- account on myuplink.com

We recommend our mobile apps for myUplink.

For more information, visit myuplink.com.

Connection

If you do not already have an account, register in the mobile app or on myuplink.com.

CONNECT SYSTEM

Caution

Before you can connect to myUplink, you must select connection type (wired/wifi) in menu 5.2.1 or 5.2.2.

When you have logged in for the first time, you must connect your system to your registered account via the mobile app or myuplink.com. Here, you can also invite and/or add further users.

DISCONNECT USERS

You can choose to disconnect the users who are connected to your system:

You do this by going to menu 5.1 - myUplink.

NOTE

Once you have disconnected all users, no one can monitor or control your system via myUplink without being connected to it again.

Range of services

myUplink gives you access to various levels of service. The base level is included and, apart from this, you can choose two premium services for a fixed annual fee (the fee varies depending on the functions selected).

The base level allows you to monitor the system, manage alarms and read diagrams containing information for the last month.

If you want to read older information, as well as receive information based on more parameters and/or change settings, choose a premium service.

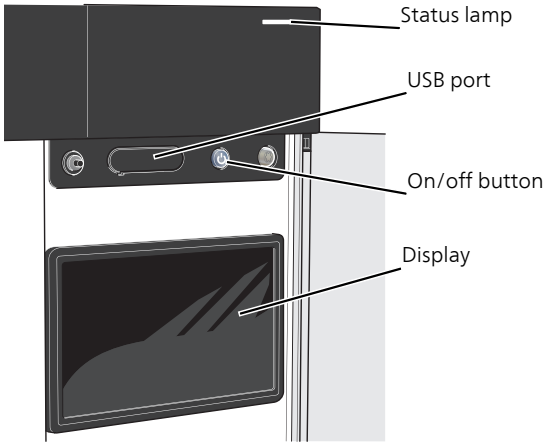
Service level	*Basic*	*Premium extended history*	*Premium change settings*
Viewer	X	X	X
Alarm	X	X	X
History	X	X	X
Extended history	-	X	-
Manage	-	-	X

Mobile apps for myUplink

The mobile apps can be downloaded free of charge from where you usually download your mobile apps. Logging into the mobile app is performed using the same account details as on myuplink.com.

8 Control - Introduction

Display unit



THE STATUS LAMP

The status lamp indicates current operating status. It:

- lights up white during normal operation.
- lights yellow in emergency mode.
- lights red in the event of a deployed alarm.
- is blue when S1155PC is switched off.
- flashes white during active notice.

If the status lamp is red, you receive information and suggestions for suitable actions on the display.

TIP

You also receive this information via myUplink.

THE USB PORT

Above the display, there is a USB port that can be used e.g. for updating the software. Visit myuplink.com and click the "Software" tab to download the latest version of the software for your installation.

TIP

If you connect the product to the network, you can update the software without using the USB port. See section "myUplink".

THE ON/OFF BUTTON

The on/off button (SF1) has three functions:

- start
- switch off
- activate emergency mode

To start: press the on/off button once.

To switch off or restart: press the on/off button once. This brings up a menu with various options.

For hard switch off: press and hold the on/off button for 5 seconds.

You can activate the emergency mode both when S1155PC is running and when it is switched off.

To activate when S1155PC is running: press and hold the on/off button (SF1) for 2 seconds and select "emergency mode" from the shutdown menu.

To activate when S1155PC is switched off: press and hold the on/off button (SF1) for 5 seconds. (Deactivate the emergency mode by pressing once.)

THE DISPLAY

Instructions, settings and operational information are shown on the display.

Navigation

S1155PC has a touchscreen where you simply navigate by pressing and dragging with your finger.

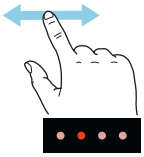
SELECT

Most options and functions are activated by lightly pressing on the display with your finger.

BROWSE

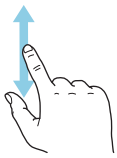
The dots at the bottom edge show that there are more pages.

Drag to the right or left with your finger to browse between the pages.



SCROLL

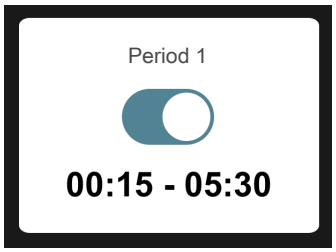
If the menu has several sub-menus, you can see more information by dragging up or down with your finger.



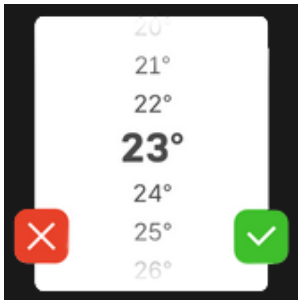
CHANGE A SETTING

Press the setting you want to change.

If it is an on/off setting, it changes as soon as you press it.



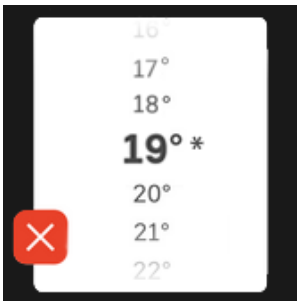
If there are several possible values, a spinning-wheel appears that you drag up or down to find the desired value.



Press to save your change, or if you don't want to make a change.

FACTORY SETTING

Factory set values are marked with *.



HELP MENU

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

Press the symbol to open the help text.

You may need to drag with your finger to see all text.

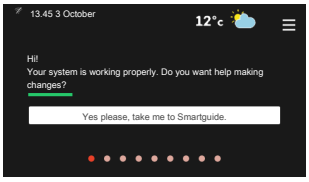
Menu types

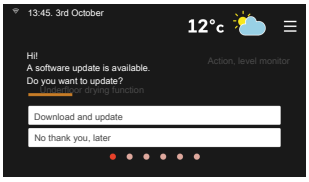
HOME SCREENS

Smartguide

Smartguide helps you both to view information about the current status and to make the most common settings easily. The information that you see depends on the product you have and the accessories that are connected to the product.

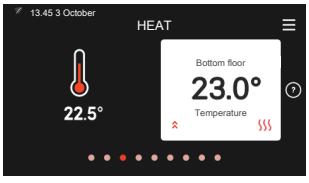
Select an option and press it to proceed. The instructions on the screen help you to choose correctly or give you information about what is happening.

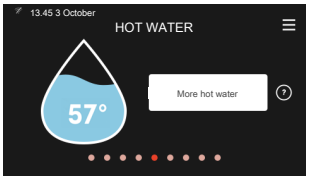




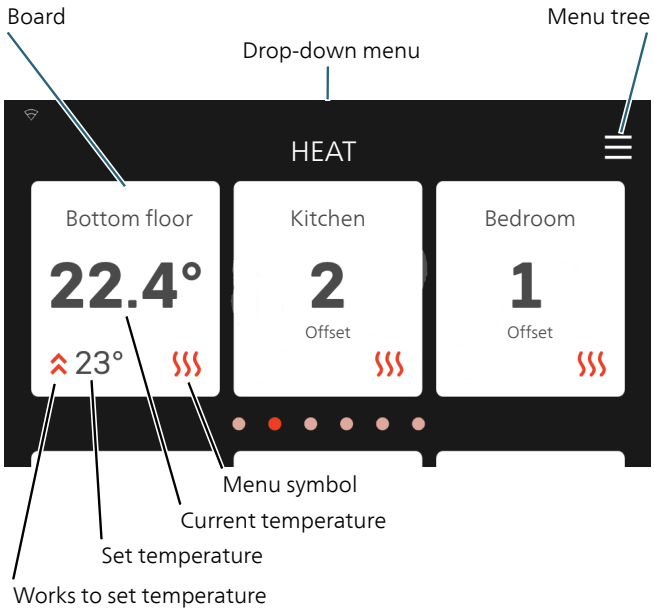
Function pages

On the function pages, you can both view information about the current status and easily make the most common settings. The function pages that you see depend on the product you have and the accessories that are connected to the product.





Drag to the right or left with your finger to browse between the function pages.



Press the boards to adjust desired value. On certain function pages, you use your finger to drag up or down to obtain more cards.

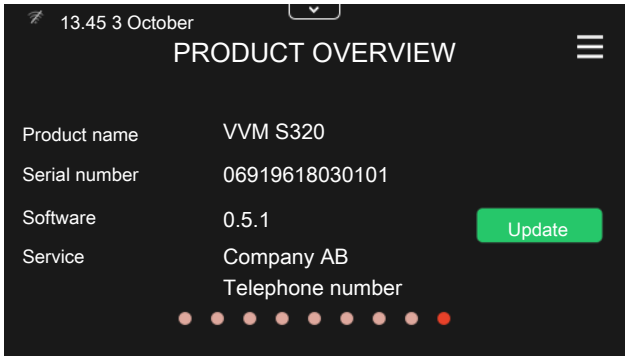
Product overview

It can be a good idea to have the product overview open during any service cases. You can find it among the function pages.

Here, you can find information about product name, the product's serial number, the version of the software and service. When there is new software to download, you can do it here (provided that S1155PC is connected to myUplink).

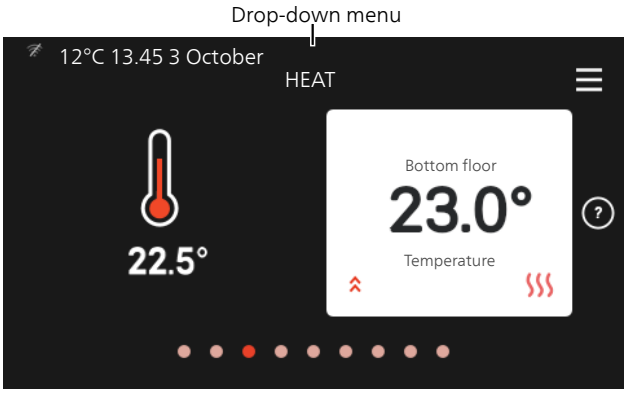
TIP

You enter the service details in menu 4.11.1.

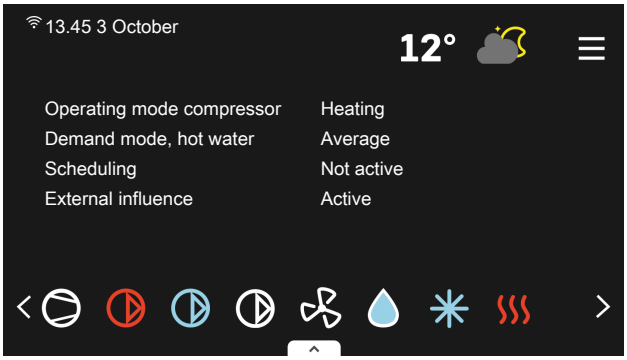


Drop-down menu

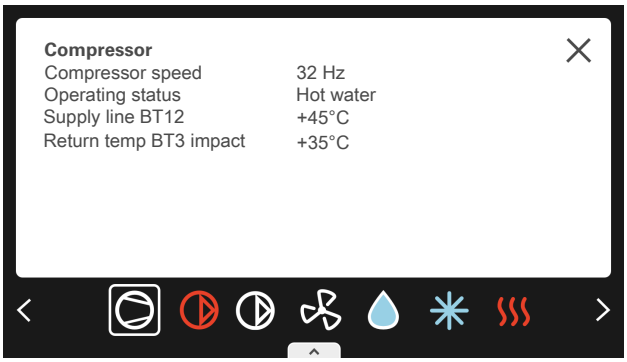
From the home screens, you can reach a new window containing further information by dragging down a drop-down menu.



The drop-down menu shows the current status for S1155PC, what is in operation and what S1155PC is doing at the moment.

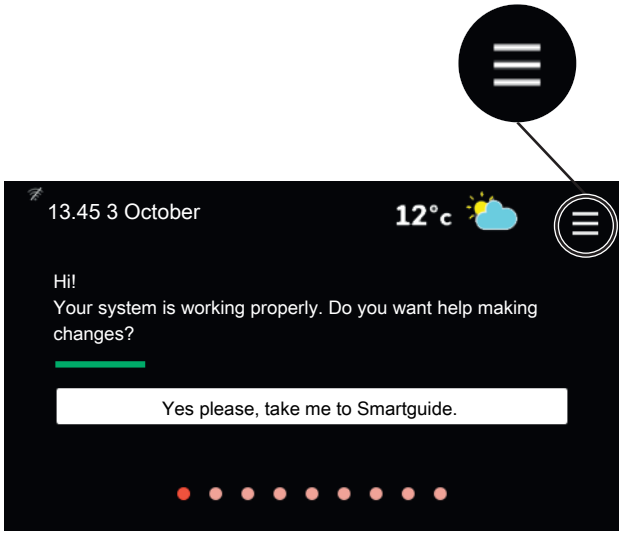


Press the icons on the menu's lower edge for more information about each function.

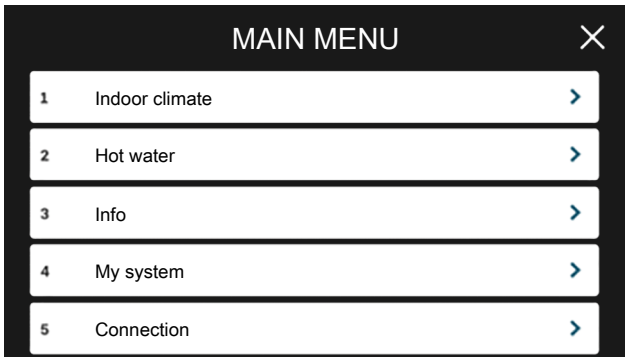


MENU TREE

In the menu tree, you can find all menus and can make more advanced settings.



You can always press "X" to return to the home screens.



9 Control - Menus

In multi-installations with several heat pumps, some menus are also visible in the display on the heat pumps that are not the main unit.

Menu 1 – Indoor climate

OVERVIEW

1.1 - Temperature	1.1.1 - Heating
	1.1.2 - Cooling[1]
	1.1.3 - Humidity[1]
1.2 - Ventilation[1]	1.2.1 - Fan speed[1]
	1.2.2 - Night cooling[1]
	1.2.3 - FLM cooling[1]
	1.2.4 - Demand-controlled ventilation[1]
	1.2.5 - Fan return time[1]
	1.2.6 - Filter cleaning interval[1]
1.3 - Room sensor settings	
1.5 - Climate system name	
1.30 - Advanced	1.30.1 - Curve, heating
	1.30.2 - Curve, cooling
	1.30.3 - External adjustment
	1.30.4 - Lowest supply heating
	1.30.5 - Lowest supply cooling
	1.30.6 - Highest supply heating
	1.30.7 - Own curve
	1.30.8 - Point offset

1 Consult the accessory's Installer Manual.

MENU 1.1 TEMPERATURE

You make temperature settings for S1155PC here.

In installations with several climate systems, temperature settings can be made for each system.

MENU 1.1.1, 1.1.2 - HEATING AND COOLING

Heating and cooling

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

Heating

Setting range: 5 – 30 °C

Cooling

Setting range: 5 – 35°C

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

Caution

A slow climate system, such as underfloor heating, may be unsuitable for controlling with room sensors.

Setting the temperature (without room sensors activated):

Setting range: -10 to +10

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

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

Set the desired value. The new value is shown on the right-hand side of the symbol on home screen heating/home screen cooling.

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 1.30.1 by one increment.

If it is cold outdoors and the room temperature is too high, reduce the curve slope in menu 1.30.1 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 1.3 - ROOM SENSOR SETTINGS

Name room sensor

Setting range: a-z

Control room sensor

Setting range: on/off

Coefficient of performance system

Setting range: 0.0 - 6.0

Cooling factor system

Setting range: 0.0 - 6.0

Activate room sensors to control the room temperature here.

You can connect up to four room sensors to each climate system, and you can give each sensor a unique name.

The sensor in each climate system that is furthest from the set temperature has control; S1155PC tries to keep the temperature up in the room whose sensor is furthest from the set value.

Caution

A slow heating system such as underfloor heating may be inappropriate for controlling with room sensors.

Factor system

Caution

Too high a set value for "factor system" can result in an uneven room temperature.

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

MENU 1.5 - CLIMATE SYSTEM NAME

You can give the installation's climate system a name here.

MENU 1.30 - ADVANCED

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

Curve, heating Setting the heating curve slope.

Curve, cooling Setting the curve slope for cooling.

External adjustment Setting the heating curve offset when an external contact is connected.

Lowest supply heating Setting minimum permitted supply temperature during heating operation.

Lowest supply cooling Setting minimum permitted supply temperature when cooling.

Highest supply heating Setting maximum permitted supply temperature for the climate system.

Own curve You can create your own heating curve here, if there are special requirements, by setting the desired supply temperatures for different outdoor temperatures.

Point offset 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.

MENU 1.30.1 - CURVE, HEATING

Curve, heating

Setting range: 0 - 15,0

In menu "Curve, heating" you can view the heating curve for your house. The task of the heating curve is to provide an even indoor temperature, regardless of the outdoor temperature. It is from this heating curve that S1155PC determines the temperature of the water to the climate system, the supply temperature, and therefore the indoor temperature. Here, you can select heating curve and read off how the supply temperature changes at different outdoor temperatures.

TIP

It is also possible to create your own curve. This is done in menu 1.30.7.

Caution

With underfloor heating systems, the maximum supply temperature is normally set between 35 and 45 °C.

Check the max floor temperature with your floor supplier.

TIP

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

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

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

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

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

MENU 1.30.2 - CURVE, COOLING

Curve, cooling

Setting range: 0 – 9

In the "Curve, cooling" menu you can view the cooling curve for your house. The task of the cooling curve is, together with the heating curve, to provide a uniform indoor temperature, regardless of the outdoor temperature, and thereby energy-efficient operation. It is from these curves that S1155PC determines the temperature of the water to the heating system, the supply temperature, and consequently the indoor temperature. Here, you can select the curve and read how the supply temperature changes at different outdoor temperatures. The number to the right of "system" shows the system for which you have selected the curve.

Caution

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

Cooling in 2-pipe system

In order for operating mode “cooling” to be permitted, the average temperature must be above the setting value for “start cooling” in menu 7.1.10.2 "Auto mode setting".

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

MENU 1.30.3 - EXTERNAL ADJUSTMENT

Climate system

Setting range: -10 to +10

Setting range (if room sensor is installed): 5 - 30°C

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

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

MENU 1.30.4 - LOWEST SUPPLY HEATING

heating

Setting range: 5 - 80 °C

Set the minimum temperature on the supply temperature to the climate system. This means that S1155PC 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.

MENU 1.30.5 - LOWEST SUPPLY COOLING

cooling

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

Setting range 7 – 30 °C

Alarm, room sensor during cooling operation

Setting range: on/off

Set the minimum temperature on the supply temperature to the climate system. This means that S1155PC 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.

Here, you can receive alarms during cooling operation, for example if a room sensor malfunctions.

NOTE

Cooling flow line must be set with regard to which climate system is connected. For example, floor cooling with too low cooling flow line can cause condensation precipitation, which in the worst instance could lead to moisture damage.

MENU 1.30.6 - HIGHEST SUPPLY HEATING

climate system

Setting range: 5 - 80°C

Here, you set the highest supply temperature for the climate system. This means that S1155PC never calculates a temperature higher than the one set here. If the installation has multiple climate systems, the highest supply temperature can be set for each system. Climate systems 2 – 8 cannot be set to a higher max supply temperature than climate system 1.

Caution

With underfloor heating systems, "Maximum supply temperature for heating" should normally be set between 35 and 45°C.

Check the max floor temperature with your floor supplier.

MENU 1.30.7 - OWN CURVE

Own curve, heating

Caution

Curve 0 must be selected for own curve to apply.

You can create your own heating curve here, if there are special requirements, by setting the desired supply temperatures for different outdoor temperatures.

Supply temp

Setting range: 5 – 80 °C

Own curve, cooling

Caution

Curve 0 must be selected for own curve to apply.

You can create your own cooling curve here, if there are special requirements, by setting the desired supply temperatures for different outdoor temperatures.

Supply temp

Setting range: -5 – 40 °C

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

MENU 1.30.8 - POINT OFFSET

Outdoor temp. point

Setting range: -40 – 30 °C

Change in curve

Setting range: -10 – 10 °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 heating 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 feels cold in the house at e.g. -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 2 – Hot water

OVERVIEW

Hot water settings require S1155PC to be docked to a water heater.

2.1 - More hot water
2.2 - Hot water demand
2.4 - Periodic increase
2.5 - Hot water circulation

MENU 2.1 - MORE HOT WATER

Setting range: 3, 6 and 12 hours, as well as the modes "Off" and "One-time increase".

When there is a temporary increase in hot water demand, this menu can be used to select an increase in the hot water temperature for a selectable time.

Caution

If demand mode "Large" is selected in menu 2.2, no further increase can be made.

The function is activated directly when a time period is selected. The remaining time for the selected setting is shown to the right.

When the time has run out, S1155PC returns to the set demand mode.

Select "Off" to switch off "More hot water".

MENU 2.2 - HOT WATER DEMAND

Alternative: Smart control, Small, Medium, Large

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: With Smart control activated, S1155PC continuously learns the previous hot water consumption and thereby adapts the temperature in the water heater for minimum energy consumption. If the hot water demand is greater, there is a certain additional amount of hot water available.

Small: This mode gives less hot water at a lower temperature than the other alternatives. This mode can be used in smaller households with a small hot water requirement.

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

Large: This mode gives the most hot water at a higher temperature than the other alternatives. In this mode, the immersion heater may be used in part to heat hot water. In this mode, hot water production is prioritised.

MENU 2.4 - PERIODIC INCREASE

Period

Setting range: 1 - 90 days

Start time

Setting range: 00:00 - 23:59

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

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

MENU 2.5 - HOT WATER CIRCULATION

Run time

Setting range: 1 – 60 min

Downtime

Setting range: 0 – 60 min

Set 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." determines how long the hot water circulation pump will run per operation.

"Downtime" determines how long the hot water circulation pump will be stationary between operations.

NOTE

Hot water circulation is activated in menu 7.4 "Selectable in/outputs".

Menu 3 - Info

OVERVIEW

3.1 - Operating info[1]
3.2 - Temperature log
3.3 - Energy log
3.4 - Alarm log
3.5 - Product info, summary
3.6 - Licences

1 This menu is also shown in the subordinate heat pump's limited menu system.

MENU 3.1 - OPERATING INFO

Information about the heat pump's current operating status (e.g. current temperatures) can be obtained here. In multi-installations with several interconnected heat pumps, information about these is also shown in this menu. No changes can be made.

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

MENU 3.2 - TEMPERATURE LOG

Here you can see the average temperature indoors week by week over the past year.

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

In installations with ventilation accessories, the exhaust temperature is also shown.

MENU 3.3 - ENERGY LOG

Number of months

Setting range: 1 – 24 months

Number of years

Setting range: 1 – 5 years

Here, you can see a diagram showing how much energy S1155PC supplies and consumes. You can select which parts of the installation will be included in the log. It is also possible to activate display of indoor and/or outdoor temperature.

Number of months: Select how many months to show in the diagram here.

Number of years: Select how many years to show in the diagram here.

MENU 3.4 - ALARM LOG

To facilitate troubleshooting, the installation's operating status at the time of an alarm is stored here. You can see information for the 10 most recent alarms.

To view operating status in the event of an alarm, select the relevant alarm from the list.

MENU 3.5 - PRODUCT INFO, SUMMARY

Here, you can see general information about your system, such as software versions.

MENU 3.6 - LICENCES

You can view licences for open source code here.

Menu 4 - My system

OVERVIEW

4.1 - Operating mode	
4.2 - Plus functions	4.2.2 - Solar electricity[1]
	4.2.3 - SG Ready
	4.2.5 - Smart Price Adaption™
4.4 - Weather control	
4.5 - Away mode	
4.6 - Smart Energy Source	
4.7 - Energy price	4.7.1 - Electricity price
	4.7.2 - Fixed electricity price
	4.7.3 - Shunt valve-controlled additional heat
	4.7.4 - Step-controlled additional heat
	4.7.6 - External additional heat
4.8 - Time and date	
4.9 - Language	
4.10 - Country	
4.11 - Tools	4.11.1 - Installer details
	4.11.2 - Audio
4.30 - Advanced	4.30.4 - Factory setting, user

1 Consult the accessory's Installer Manual.

MENU 4.1 - OPERATING MODE

Operating status

Alternative: auto, manual, add. heat only

Manual

Alternative: Additional heat, heating, Cooling

Add. heat only

Alternative: Heating

The operating mode for S1155PC is normally set to "Auto". It is also possible to use additional heat only. Select "Manual" to choose which functions are permitted.

If "Manual" or "Additional heat only" is selected, selectable options are shown further down. Tick the functions you want to permit.

Operating mode auto

In this operating mode, S1155PC automatically selects which functions are permitted.

Operating mode manual

In this operating mode, you can select the functions that 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.

Manual

"Compressor" is the unit that produces heating and hot water for the home. You cannot deselect "compressor" in manual mode.

"Additional heat" 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. You can deselect this function when you do not wish to have cooling in operation.

"Cooling" means that you obtain cooling in the home in hot weather. You can deselect this function when you do not wish to have cooling in operation.

Caution

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

MENU 4.2 - PLUS FUNCTIONS

Settings for any additional functions installed in S1155PC can be made in the sub menus.

MENU 4.2.3 - SG READY

Here, you set which part of your climate system (e.g. room temperature) will be affected on activation of "SG Ready". The function can only be used in mains networks that support the "SG Ready" standard.

Affect room temperature

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

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).

In the case of overcapacity mode on "SG Ready", the hot water is set to large demand mode (immersion heater permitted).

Affect cooling

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

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

NOTE

The function must be connected to two AUX inputs and be activated in menu 7.4 "Selectable in/outputs".

MENU 4.2.5 - SMART PRICE ADAPTION™

Range

Here you select where (which zone) S1155PC is installed.

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

Affect room temperature

Setting range: 1 - 10

Affect hot water

Setting range: 1 - 4

Affect cooling

Alternative: on/off

Degree of effect

Setting range: 1 - 10

This function can only be used if your electricity supplier supports Smart price adaption, if you have an hourly tariff agreement and an active myUplink account.

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 myUplink and therefore an internet connection and an account for myUplink are required.

You can choose which parts of the installation are to be affected by the electricity price and to what extent; the higher value you select, the greater the effect the electricity price has.

NOTE

A value that is set high may result in increased savings, but may also affect the comfort.

MENU 4.4 - WEATHER CONTROL

Activate weath. contr.

Setting range: on/off

Factor

Setting range: 0 – 10

You can select whether you want S1155PC to adjust the indoor climate based on the weather forecast here.

You can set factor for outdoor temperature. The higher the value, the greater the effect from the weather forecast.

Caution

This menu is only visible if the installation is connected to myUplink.

MENU 4.5 - AWAY MODE

When away mode is activated, the following functions are affected:

- the setting for heating is lowered slightly
- the setting for cooling is raised slightly
- the hot water temperature is lowered if demand mode "large" or "medium" is selected
- The AUX function "Away mode" is activated.

If you want, you can select for the following functions to be affected:

- ventilation (accessory is required)
- hot water circulation (accessory is required)

MENU 4.6 - SMART ENERGY SOURCE™

Smart energy source™

Alternative: on/off

Control method

Alternative: Price / CO_2

If Smart Energy Source™ is activated S1155PC prioritises how / to what extent each docked energy source will be used. Here you can select whether the system will use the energy source that is cheapest at the time or the one that is most carbon dioxide neutral at the time.

Caution

Your choices in this menu affect menu 4.7 - Energy price.

MENU 4.7 - ENERGY PRICE

Here you can use tariff control for your additional heat.

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.

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 4.7.1 - ELECTRICITY PRICE

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 4.8 - TIME AND DATE

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

TIP

Time and date are set automatically if connected to myUplink. To obtain the correct time, the time zone must be set.

MENU 4.9 - LANGUAGE

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

MENU 4.10 - COUNTRY

Select here the country in which the product was installed. This allows access to country-specific settings in your product.

Language settings can be made regardless of this selection.

NOTE

This option locks after 24 hours, restart of display or program updating.

MENU 4.11 - TOOLS

Here, you can find tools for use.

MENU 4.11.1 - INSTALLER DETAILS

The installer's name and telephone number are entered in this menu.

Afterwards, the details are visible in home screen, product overview.

MENU 4.11.2 - AUDIO

Setting range: on/off

Here you choose if you want to hear a sound when you press buttons on the display.

MENU 4.30 - ADVANCED

Menu Advanced is intended for advanced users.

MENU 4.30.4 - 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 5 - Connection

OVERVIEW

5.1 - myUplink	
5.2 - Network settings	5.2.1 - wifi
	5.2.2 - Ethernet
5.3 - Smart home[1]	

1 Accessory needed.

MENU 5.1 - MYUPLINK

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

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

Request new connection string

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

1. Select "Request new connection string"
2. The installation now communicates with myUplink to create a connection code.
3. When a connection string has been produced, it is shown in this menu and is valid for 60 minutes.

Disconnect all users

To disconnect the users who are connected to the installation via myUplink, select "Disconnect all users".

NOTE

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

MENU 5.2 - NETWORK SETTINGS

Here, you choose whether your system connects to the Internet via wifi (menu 5.2.1) or via a network cable (Ethernet) (menu 5.2.2). From each menu, you can make settings for TCP/IP.

TCP/IP settings

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

Automatic setting (DHCP)

Activate "Automatic". The installation now receives the TCP/IP settings using DHCP.

Manual setting

Select "IP address" and enter correct address using the keyboard.

Repeat the procedure for "Network mask", "Gateway" and "DNS".

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 selecting "Reset".

MENU 5.3 - SMART HOME (ACCESSORY REQUIRED)

If you have a Smart home system that can communicate with myUplink, you activate these functions in this menu.

Caution

The Smart Home function requires myUplink in order to work.

Menu 6 - Scheduling

OVERVIEW

6.1 - Holiday
6.2 - Scheduling

MENU 6.1 - HOLIDAY

In this menu, you schedule longer changes in heating and hot water temperature.

You can also schedule settings for certain installed accessories.

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

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.

TIP

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

Caution

Holiday settings finish on the selected date. If you want to repeat the holiday setting once the end date has passed, go into the menu and change the date.

MENU 6.2 - SCHEDULING

In this menu, you schedule repeated changes in heating and hot water.

You can also schedule settings for certain installed accessories.

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

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.

Caution

A schedule repeats according to the selected setting (e.g. every Monday) until you go into the menu and switch it off.

Menu 7 - Service

OVERVIEW

7.1 - Operating settings[1]	7.1.1 - Hot water	7.1.1.1 - Temperature setting
		7.1.1.2 - Operating settings
	7.1.2 - Circulation pumps	7.1.2.1 - Operating mode, heating medium pump[1]
		7.1.2.2 - Pump speed, heating medium[1]
		7.1.2.6 - Operating mode, brine pump[1]
		7.1.2.7 - Pump speed brine[1]
		7.1.2.8 - Brine alarm settings
	7.1.3 - Compressor	7.1.3.1 - Block freq
	7.1.4 - Ventilation [2]	7.1.4.1 - Fan speed, exhaust air[2]
		7.1.4.2 - Fan speed, supply air[2]
		7.1.4.3 - Ventilation adjustment [2]
	7.1.5 - Additional heat	7.1.5.1 - Internal electric additional heat
		7.1.5.2 - Max. installed electrical power/BBR
	7.1.6 - Heating	7.1.6.1 - Max diff. supply temperature
		7.1.6.2 - Flow setting, climate system
		7.1.6.3 - Power at DOT
	7.1.7 - Cooling	
	7.1.8 - Alarm	7.1.8.1 - Alarm actions
		7.1.8.2 - Emergency mode
	7.1.9 - Load monitor	
	7.1.10 - System settings	7.1.10.1 - Operating priority
		7.1.10.2 - Auto mode setting
		7.1.10.3 - Degree minutes setting
7.2 - Accessory settings[2]	7.2.1 - Add/remove accessories	
	7.2.19 - External energy meter	
7.3 - Multi-installation	7.3.1 - Configure	
	7.3.2 - Installed heat pump	
	7.3.3 - Name heat pump	
	7.3.4 - Docking	
7.4 - Selectable in/outputs		
7.5 - Tools	7.5.1 - Heat pump, test	7.5.1.1 - Test mode
	7.5.2 - Underfloor drying function	
	7.5.3 - Forced control	
	7.5.6 - Inverter replacement	
	7.5.8 - Screen lock	
	7.5.9 - Modbus TCP/IP	
7.6 - Factory setting service		
7.7 - Start guide		
7.8 - Quick start		
7.9 - Logs	7.9.1 - Change log	
	7.9.2 - Extended alarm log	
	7.9.3 - Black box	

1 This menu is also shown in the subordinate heat pump's limited menu system.

2 Consult the accessory's Installer Manual.

MENU 7.1 - OPERATING SETTINGS

Make operating settings for the system here.

MENU 7.1.1 - HOT WATER

This menu contains advanced settings for hot water operation.

MENU 7.1.1.1 - TEMPERATURE SETTING

Start temperature

Demand mode, small/medium/large

Setting range: 5 – 70 °C

Stop temperature

Demand mode, small/medium/large

Setting range: 5 – 70 °C

Stop temperature periodic increase

Setting range: 55 – 70 °C

Manual power

Setting range: on/off

Here you set the start and stop temperature of the hot water for the different demand modes in menu 2.2 as well as the stop temperature for periodic increase (menu 2.4).

With "Manual power" activated, you can adjust the charge power depending on the hot water tank that is docked.

MENU 7.1.1.2 - OPERATING SETTINGS

Step diff. compressor

Setting range: 0.5 – 4.0 °C

Charge method

Alternative: Target temp, Delta temp.

If several compressors are available, set the difference between their engagement and disengagement during hot water charging.

The charge method for hot water mode is selected here. "Delta temp." is recommended for water heaters with charge coil, "Target temp." for double-jacketed heaters and heaters with hot water coil.

MENU 7.1.2 - CIRCULATION PUMPS

This menu contains sub-menus where you can make advanced circulation pump settings.

MENU 7.1.2.1 - OPERATING MODE HEATING MEDIUM PUMP GP1

Operating status

Alternative: Auto, intermittent

Auto: The heating medium pump runs according to the current operating mode for S1155PC.

Intermittent: The heating medium pump starts approx. 20 seconds before and stops 20 seconds after the compressor.

MENU 7.1.2.2 - PUMP SPEED HEATING MEDIUM GP1

Make settings here for the heating medium pump's speed in the current operating mode, for example in heating or hot water operation. Which operating modes can be changed depends on which accessories are connected.

Heating, auto

Alternative: on/off

Minimum permitted speed

Setting range: 1 - 50 %

Speed in standby mode

Setting range: 1 - 100 %

Highest permitted speed

Setting range: 50 - 100 %

Heating, auto: Here, you set whether the heating medium pump is to be regulated automatically or manually.

Minimum permitted speed: Here, you can restrict the pump speed so that the heating medium pump is not allowed to operate at a lower speed in auto mode than the set value.

Heating, manual: If you have opted to control the heating medium pump manually, you set the desired pump speed here.

Speed in standby mode: The speed the heating medium pump is to have in standby mode is set here. Standby mode occurs when heating or cooling operation is permitted at the same time as there is no need for either compressor operation or electric additional heat.

Maximum permitted speed: Here you can restrict the pump speed so that the heating medium pump is not allowed to operate at a higher speed than the set value.

MENU 7.1.2.6 - OPERATING MODE BRINE PUMP

Operating status

Alternative: Intermittent, Continuously, 10 days continuously

Intermittent: The brine pump starts approx. 20 seconds before or after the compressor. For a ground water system, the brine pump starts and stops 2 minutes before and after the compressor respectively.

Continuous: Continuous operation.

10 days continuous: Continuous operation for 10 days. The pump then changes to intermittent operation.

TIP

You can use “10 days continuous" at start-up to obtain continuous circulation during a start-up time in order to make it easier to bleed the system.

MENU 7.1.2.7 - PUMP SPEED BRINE

Make settings for the brine pump's speed here.

Operating status

Setting range: Fixed delta, Auto, manual

Delta-T

Setting range: 2 - 10 °C

Manual

Setting range: 1 - 100 %

Operating mode: Here you set whether the brine pump is to be regulated automatically, manually or with fixed delta.

Fixed delta: Here you set whether the brine pump will be controlled with fixed delta, e.g. for ground water systems.

Manual: If you have opted to control the brine pump manually, you set the desired pump speed here.

Speed in passive cooling: Here you set the speed at which the brine pump is to operate during passive cooling.

Delta-T cooling Here, you set whether the brine pump is to be regulated with fixed delta during cooling operation.

MENU 7.1.2.8 - BRINE ALARM SETTINGS

Automatic reset

Setting range: on/off

Minimum brine temperature out

Setting range: -12 – 15°C

Maximum brine temperature in

Setting range: 10 – 30 °C

Automatic reset

Select "automatic reset" if you want S1155PC to start automatically after brine alarm.

Minimum brine temperature out

Set the temperature at which the heat pump is to activate the alarm for low temperature in outgoing brine.

If "Automatic reset" is selected, the alarm resets when the temperature has increased by 1 °C above the set value.

Maximum brine temperature in

Set the temperature at which the heat pump is to activate the alarm for high temperature in incoming brine.

Select "Alarm activated" to activate the alarm.

MENU 7.1.3 - COMPRESSOR

This menu contains sub-menus where you can make advanced compressor settings.

MENU 7.1.3.1 BLOCK FREQ

Block freq 1 and 2

Setting range start: 20 – 115 Hz

Setting range stop: 22 – 120 Hz

Maximum setting range: 50 Hz.

Here you can set a frequency range where the compressor is blocked. The limits for the setting range can differ depending on model of heat pump.

NOTE

A large blocked frequency range can cause the compressor to run jerkily.

MENU 7.1.5 - ADDITIONAL HEAT

This menu contains sub-menus where you can make advanced additional heat settings.

MENU 7.1.5.1 - INTERNAL ELECTRIC ADDITIONAL HEAT

Max connected electrical power 3x400V, S1155PC-12 / -16

Setting range: 7 / 9 kW

Max set electrical power

Setting range S1155PC-6 1x230 V: 0 - 4.5 kW

Setting range S1155PC-6 3x230 V: 0 - 4.5 kW

Setting range S1155PC-6 3x400 V: 0 - 6.5 kW

Setting range S1155PC-12 & -16 3x400 V: 0 - 9 kW

Here you set the max electrical power for the internal electric additional heat in S1155PC, during normal operation and in overcapacity mode (SG Ready).

MENU 7.1.5.2 - MAX. INSTALLED ELECTRICAL POWER (BBR)

Max. installed power

Setting range: 0.000 – 30.000 kW

If the above building regulations are not applicable, do not use this setting.

In order to meet certain building regulations, it is possible to lock the device's maximum power output. In this menu, you can set the value corresponding to the heat pump's maximum power connection for heating, hot water and cooling, if applicable Note whether there are also external electrical components that are to be included. After the value has been locked, a weeks cooling-off period starts. After this period, parts in the machine must be replaced in order to obtain greater power.

MENU 7.1.6 - HEATING

This menu contains sub-menus where you can make advanced settings for heating operation.

MENU 7.1.6.1 - MAX DIFFERENCE SUPPLY TEMPERATURE

Max difference compressor

Setting range: 1 – 25 °C

Max difference additional heat

Setting range: 1 – 24 °C

BT12 offset

Setting range: -5 – 5°C

Here you set the maximum permitted difference between the calculated and actual supply temperature in the event of compressor or additional heat mode respectively. Max difference additional heat can never exceed max difference compressor

Max. difference, compressor: If the current supply temperature *exceeds* the calculated supply by the set value, the degree minute value is set to +1. The compressor in the heat pump stops if there is only a heating demand.

Max difference additional heat: If "Additional heat" is selected and activated in menu 4.1 and the current supply temperature *exceeds* the calculated temperature by the set value, the additional heat is forced to stop.

BT12 offset: If there is a difference between temperature sensor, heating medium supply (BT25), and temperature sensor, condenser supply (BT12), you can set a fixed offset here to compensate for the difference.

MENU 7.1.6.2 - FLOW SETTING, CLIMATE SYSTEM

Setting

Alternative: radiator, floor heat., rad. + floor heat., Own setting

Setting range DOT: -40.0 – 20.0 °C

Own setting

Setting range dT at DOT 0.0 – 25.0

Setting range DOT: -40.0 – 20.0°C

The type of heating distribution system the heating medium pump works towards is set here.

dT at DOT is the difference in degrees between supply and return temperatures at design outdoor temperature.

MENU 7.1.6.3 - POWER AT DOT

Alternative: Manually selected power at DOT, Power at DOT

Manually selected power at DOT

Setting range: on/off

Power at DOT

Setting range: 1 – 100 kW

Here, you set the power the property requires at DOT (dimensioned outdoor temperature).

If you choose not to activate "Manually selected power at DOT", the setting is made automatically, i.e. S1155PC selects suitable power at DOT.

MENU 7.1.7 - COOLING

Heating/cooling sensor

Alternative: Which sensors can be selected differs depending on the installation.

Set point value, heating/cooling sensor

Setting range: 5 – 40 °C

Heating at room sub temp

Setting range: 0.5 – 10.0 °C

Cooling at room over temp

Setting range: 0.5 – 10.0 °C

Time between cooling and heating

Setting range: 0 – 48 h

You can use S1155PC to cool the house during hot periods of the year.

Caution

When heating/cooling sensors BT74) have been connected and activated in menu 7.4, no other sensor can be selected.

Heating/cooling sensor

An extra temperature sensor can be connected to S1155PC in order to determine when it is time to switch between heating and cooling operation.

When several heating/cooling sensors have been installed, you can select which sensor should be in control. If BT74 is installed, this is always in control and no setting can be made.

Set point value, heating/cooling sensor

Here you can set at which indoor temperature S1155PC is to shift between heating respectively cooling operation.

Heating at room sub temp

Here you can set how far the room temperature can drop below the desired temperature before S1155PC switches to heating operation.

Cooling at room over temp

Here you can set how high the room temperature can increase above the desired temperature before S1155PC switches to cooling operation.

Time between heating and cooling

Here you can set how long S1155PC is to wait before it returns to heating mode when the cooling demand has ceased or vice versa.

MENU 7.1.8 - ALARM

In this menu, you make settings for the safety measures that S1155PC will implement in the event of any operational disruption.

MENU 7.1.8.1 - ALARM ACTIONS

Reduce room temperature

Setting range: on/off

Stop producing HW

Setting range: on/off

Audio signal in event of alarm

Setting range: on/off

Select how you want the S1155PC to alert you that there is an alarm in the display here.

The different alternatives are that S1155PC stops producing hot water and/or reduces the room temperature.

Caution

If no alarm action is selected, this can result in higher energy consumption in the event of a malfunction.

MENU 7.1.8.2 - EMERGENCY MODE

Immersion heater output

Setting range 1X230V: 4 – 7 kW

Setting range 3X400V: 4 – 9 kW

Settings are made in this menu for how the additional heat will be controlled in emergency mode.

Caution

In emergency mode, the display is switched off. If you feel the selected settings are insufficient, you will not be able to change these.

MENU 7.1.9 - LOAD MONITOR

Fuse size

Setting range: 1 – 400 A

Transformer ratio

Setting range: 300 – 3,000

Detect phase sequence

Setting range: on/off

Here, you set fuse size and transformer ratio for the system. The transformer ratio is the factor that is used to convert the metered voltage to current.

Here you can also check which current sensor is installed on which incoming phase to the property (this requires the current sensors to be installed). Perform the check by selecting "Detect phase sequence".

MENU 7.1.10 - SYSTEM SETTINGS

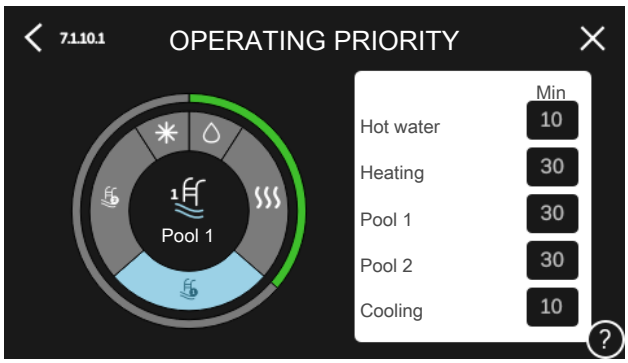
You make your various system settings for your installation here.

MENU 7.1.10.1 - OPERATING PRIORITY

Setting range: 0 – 180 minutes

Select 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.

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



MENU 7.1.10.2 - AUTO MODE SETTINGS

Start cooling

Setting range: 15 – 40 °C

Stop heating

Setting range: -20 – 40°C

Stop additional heat

Setting range: -25 – 40°C

Filtering time

Setting range: 0 – 48 h

Filtering time, cooling

Setting range: 0 – 48 h

Stop heating, Stop additional heat: In this menu, you set the temperatures that the system is to use for control in auto mode.

> *Caution*
>
> In systems where heating and cooling share the same pipes, "Stop heating" cannot be set higher than "Start cooling" if there is no cooling/heating sensor.

MENU 7.1.10.3 - DEGREE MINUTES SETTING

Cooling auto

Setting option: on/off

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

MENU 7.2 - ACCESSORY SETTINGS

The operating settings for accessories that are installed and activated are made in the sub-menus for this.

MENU 7.2.1 - ADD/REMOVE ACCESSORIES

Here, you tell S1155PC which accessories are installed.

To identify connected accessories automatically, select "Search for accessories". It is also possible to select accessories manually from the list.

MENU 7.2.19 - EXTERNAL ENERGY METER

Here, you make settings for the energy meter.

Pulsed energy meter

Set mode

Setting range: energy per pulse / pulses per kWh

Energy per pulse

Setting range: 0 – 10000 Wh

Pulses per kWh

Setting range: 1 – 10000

Pulsed energy meter

The energy meter(s) is used to send pulse signals every time a certain amount of energy has been consumed.

energy per pulse: Here you set the amount of energy to which each pulse will correspond.

pulses per kWh: Here, you set the number of pulses per kWh that are sent to S1155PC.

MENU 7.3 - MULTI-INSTALLATION

In the sub-menus here, you make settings for the heat pumps that are connected to S1155PC.

MENU 7.3.1 - CONFIGURE

Multi-installation

Alternative: on/off

System settings

Alternative: Main Unit / Heat Pump 1 – 8

Multi-installation: Here you specify whether S1155PC is part of a multi-installation (one installation with several connected heat pumps).

System settings: Here, you specify whether S1155PC is the multi-installation's main unit. In systems with only one heat pump, S1155PC will be the main unit. If there is another main unit in the installation, you enter the ID that S1155PC will have.

Search installed heat pumps: Here, you can search for, activate or deactivate connected heat pumps.

> *Caution*
>
> In multi-installations, each heat pump must have a unique ID. You enter this for each heat pump that is connected to S1155PC.

MENU 7.3.2 - INSTALLED HEAT PUMPS

Here, you select the settings that you want to make for each heat pump.

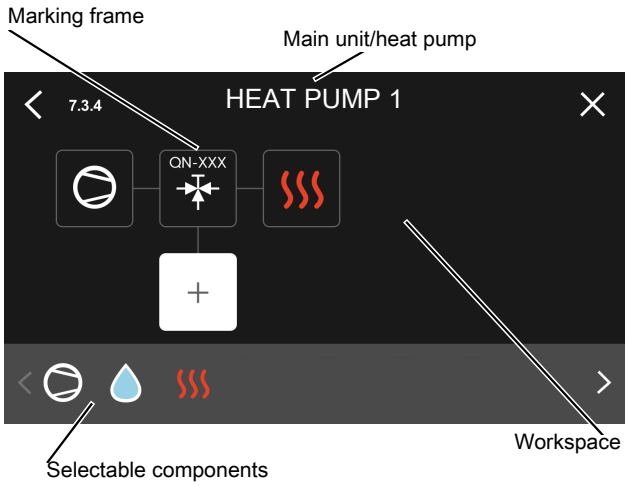
MENU 7.3.3 - NAME HEAT PUMPS

Here, you can name the heat pumps that are connected to S1155PC.

MENU 7.3.4 - DOCKING

Here you set how your system is docked in respect of pipes, in relation to heating the property and any accessories.

This menu has a docking memory which means that the control system remembers how a particular reversing valve is docked and automatically enters the correct docking the next time you use the same reversing valve.



Main unit/heat pump: Here, you select the heat pump for which the docking setting is to be made (if the heat pump is solitary in the system, only the main unit is shown).

Workspace for docking: The system docking is drawn here.

Compressor: Select here if the compressor in the heat pump is blocked (factory setting), externally controlled via a selectable input or standard (docked to hot water charging and heating the building, for example).

Marking frame: Press the marking frame you want to change. Select one of the selectable components.

Symbol	*Description*
	Blocked
	Compressor (standard)
	Compressor (externally controlled)
	Compressor (blocked)

Symbol	*Description*
	Shuttle valve The designations above the reversing valve indicate where it is electrically connected (EB100 = Main unit, EB101 = Heat pump 1, etc.).
	Hot water charging. For a multi-installation: hot water with the main unit and/or shared hot water from several different heat pumps.
	Hot water charging with subordinate heat pump in multi-installation.
	Pool 1
	Pool 2
	Heating (heating the building, includes any extra climate system)

MENU 7.4 - SELECTABLE IN/OUTPUTS

Here, you state where the external switch function has been connected, either to one of the AUX inputs on terminal block X28 or to the AUX output on terminal block X27.

MENU 7.5 - TOOLS

Here, you can find functions for maintenance and service work.

MENU 7.5.1 - HEAT PUMP, TEST

NOTE

This menu and its sub-menus are intended for testing the heat pump.

Use of this menu for other reasons may result in your installation not functioning as intended.

MENU 7.5.2 - UNDERFLOOR DRYING FUNCTION

Length period 1 – 7

Setting range: 0 – 30 days

Temperature period 1 – 7

Setting range: 15 – 70 °C

Set the function for under floor drying here.

You can set up to seven period times with different calculated flow temperatures. If less than seven periods are to be used, set the remaining period times to 0 days.

When the underfloor drying function has been activated, a counter is displayed showing the number of full days the function has been active. The function counts degree minutes in the same way as during normal heating operation, but for the supply temperatures that are set for the respective period.

NOTE

During active underfloor drying, the heating medium pump runs at 100 %, regardless of the setting in menu 7.1.2.2.

TIP

If the operating mode "Additional heat only" is to be used, select this in menu 4.1.

For a more even supply temperature, the additional heat can be started earlier by setting "relative DM start additional heat" in menus 7.1.10.3 to -80. When set underfloor drying periods have finished, reset the menus 4.1 and 7.1.10.3 as per previous settings.

MENU 7.5.3 - FORCED CONTROL

Here you can force control the various components in the installation. The most important safety functions remain active however.

NOTE

Forced control is only intended to be used for troubleshooting purposes. Using the function in any other way may cause damage to the components in your climate system.

MENU 7.5.6 - INVERTER REPLACEMENT

This menu includes a guide that simplifies inverter replacement.

The menu is only visible when communication with the inverter is lost.

MENU 7.5.8 - SCREEN LOCK

Here, you can choose to activate the screen lock for S1155PC. During activation, you will be asked to enter the required code (four digits). The code is also used to deactivate the screen lock as well as when changing code.

MENU 7.5.9 - MODBUS TCP/IP

Setting range: on/off

You activate Modbus here.

MENU 7.6 - FACTORY SETTING SERVICE

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

Also new parametrisation of the inverter can be done here.

NOTE

When resetting, the start guide is displayed the next time S1155PC restarts.

MENU 7.7 - START GUIDE

When S1155PC is started for the first time, the start guide is automatically activated. From this menu, you can start it manually.

MENU 7.8 - QUICK START

You can quick start the compressor here.

Caution

One of the following demands for the compressor must exist for quick start:

- heating
- hot water
- cooling
- pool (accessory is required)

Caution

Too many quick starts in a short space of time may damage the compressor and its auxiliary equipment.

MENU 7.9 - LOGS

Under this menu, there are logs that collect information about alarms and changes made. The menu is intended to be used for troubleshooting.

MENU 7.9.1 - CHANGE LOG

Read off any previous changes to the control system here.

NOTE

The change log is saved at restart and remains unchanged after factory setting.

MENU 7.9.2 - EXTENDED ALARM LOG

This log is intended to be used for troubleshooting.

MENU 7.9.3 - BLACK BOX

Via this menu, it is possible to export all logs (Change log, Extended alarm log) to USB. Connect a USB memory and select the log(s) you want to export.

10 Service

Service actions

> *NOTE*
>
> Servicing should only be carried out by persons with the necessary expertise.
>
> When replacing components on S1155PC only replacement parts from NIBE may be used.

EMERGENCY MODE

> *NOTE*
>
> Do not start the system before filling up with water. Components in the system could be damaged.

Emergency mode is used in event of operational interference and in conjunction with service.

You can activate the emergency mode both when S1155PC is running and when it is switched off.

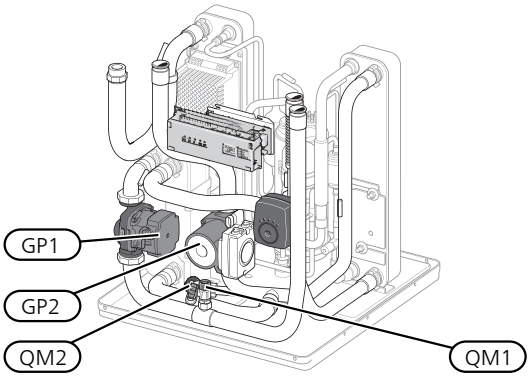
When the emergency mode is active, the status lamp turns yellow.

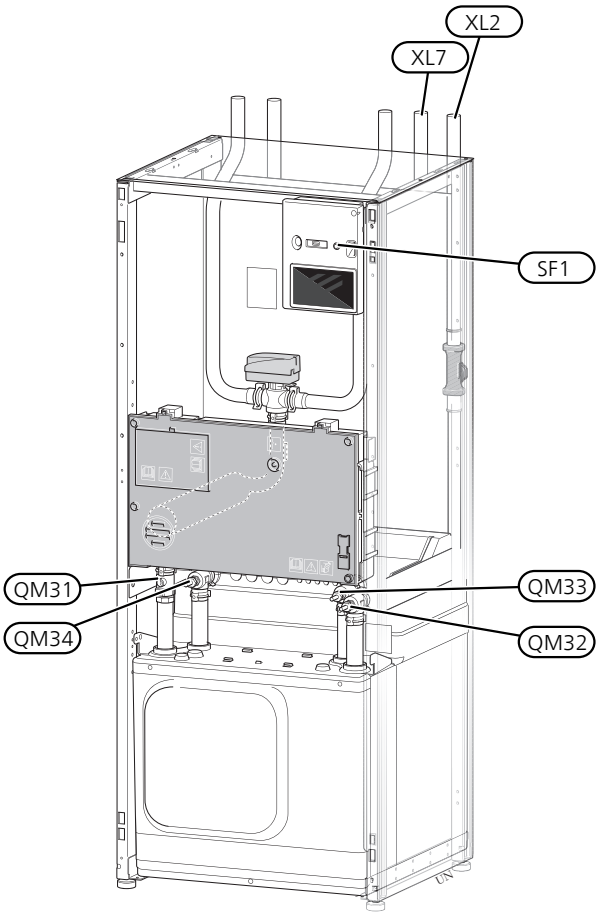
To activate when S1155PC is running: press and hold the on/off button (SF1) for 2 seconds and select "emergency mode" from the shutdown menu.

To activate when S1155PC is switched off: press and hold the on/off button (SF1) for 5 seconds. (Deactivate the emergency mode by pressing once.)

When S1155PC is put in emergency mode, the display is switched off and the most basic functions are active:

- The immersion heater works to maintain the calculated supply temperature. If there is no outdoor sensor (BT1), the immersion heater works to maintain the maximum supply temperature, set in menu 1.30.6.
- The compressor and the brine pump are off and only the heating medium pump and the electric additional heat are active. The immersion heater is stepped according to the setting in menu 7.1.8.2 - Emergency mode.





DRAINING THE CLIMATE SYSTEM

In order to carry out service on the climate system, it may be easier to drain the system first. This can be done in different ways depending on what needs doing:

> *NOTE*
>
> There may be some hot water when draining the heating medium side/climate system. There is a risk of scalding.

Draining the heating medium side in the cooling module

If, for example, the heating medium pump requires replacing or the cooling module requires servicing, drain the heating medium side as follows:

1. Close the shut-off valves to heating medium side (QM31) and (QM32).
2. Connect a hose to the bleed valve (QM1) and open the valve. Some liquid will run out.
3. Air must get into the system for the remaining liquid to run out. To let in air, slacken off the connection slightly at the shut-off valve (QM32) that joins the heat pump with the cooling module.

When the heating medium side is empty, the required service can be carried out and/or replacement of any components carried out.

Draining the heating medium system in the heat pump

If S1155PC requires servicing, drain the heating medium side as follows:

1. Close the shut-off valves outside the heat pump for the heating medium side (return and flow line).
2. Connect a hose to the bleed valve (QM1) and open the valve. Some liquid will run out.
3. Air must get into the system for the remaining liquid to run out. To let in air, slacken off the connection slightly at the shut-off valve that joins the heat pump with the cooling module (XL2).

When the heating medium side is empty, the required service can be carried out.

Draining the entire climate system

If the entire climate system requires draining, do this as follows:

1. Connect a hose to the bleed valve (QM1) and open the valve. Some liquid will run out.
2. Air must get into the system for the remaining liquid to run out. To allow air in, unscrew the bleed screw on the highest radiator in the house.

When the climate system is empty, the required service can be carried out.

EMPTYING THE BRINE SYSTEM

In order to service the brine system it may be easier to drain the system first. This can be done in different ways depending on what needs doing:

Draining the brine system in the cooling module

If, for example, the brine pump requires replacing or the cooling module requires servicing, drain the brine system by:

1. Close the shut-off valves to brine system (QM33) and (QM34).
2. Connect a hose to the drain valve (QM2), place the other opening of the hose in a container and open the valve. A small amount of brine will flow into the container.
3. Air must get into the system in order for the remaining brine to run out. To let in air, slacken off the connection slightly at the shut-off valve (QM33) that joins the heat pump with the cooling module.

When the brine system is empty, the required service can be carried out.

Draining the brine system in the heat pump

If the heat pump requires servicing, drain the brine system by:

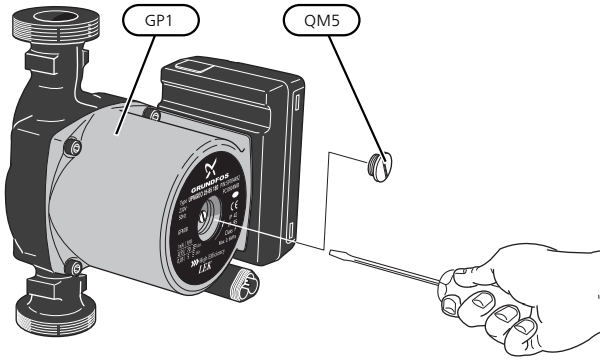
1. Close the shut-off valve outside the heat pump for the brine system.
2. Connect a hose to the drain valve (QM2), place the other opening of the hose in a container and open the valve. A small amount of brine will flow into the container.
3. Air must get into the system for the remaining brine to run out. To let in air, slacken off the connection slightly at the shut-off valve that joins the brine side with the heat pump at connection (XL7).

When the brine system is empty, the required service can be carried out.

HELPING THE CIRCULATION PUMP TO START

1. Shut off S1155PC.
2. Remove the front cover
3. Remove the cover for the cooling module.
4. Loosen the venting screw (QM5) with a screwdriver. Hold a cloth around the screwdriver blade as a small amount of water may run out.
5. Insert a screwdriver and turn the pump motor around.
6. Screw in the venting screw (QM5).
7. Start S1155PC and check that the circulation pump is working.

It is often easier to start the circulation pump with S1155PC running. If the circulation pump is helped to start with S1155PC running, be prepared for the screwdriver to jerk when the pump starts.



The image shows an example of what a circulation pump can look like.

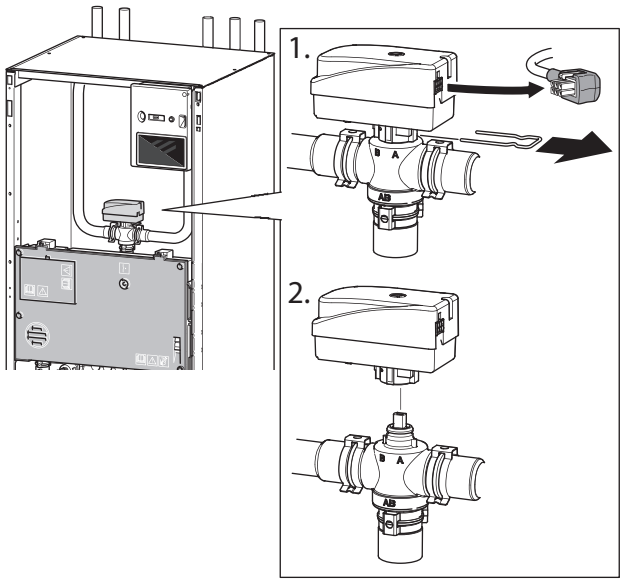
TEMPERATURE SENSOR DATA

Temperature (°C)	*Resistance (kOhm)*	*Voltage (VDC)*
-40	351.0	3.256
-35	251.6	3.240
-30	182.5	3.218
-25	133.8	3.189
-20	99.22	3.150
-15	74.32	3.105
-10	56.20	3.047
-5	42.89	2.976
0	33.02	2.889
5	25.61	2.789
10	20.02	2.673
15	15.77	2.541
20	12.51	2.399
25	10.00	2.245
30	8.045	2.083
35	6.514	1.916
40	5.306	1.752
45	4.348	1.587
50	3.583	1.426
55	2.968	1.278
60	2.467	1.136
65	2.068	1.007
70	1.739	0.891
75	1.469	0.785
80	1.246	0.691
85	1.061	0.607
90	0.908	0.533
95	0.779	0.469
100	0.672	0.414

REMOVE THE MOTOR ON THE SHUTTLE VALVE

The motor on the shuttle valve can be removed to facilitate servicing.

- Disconnect the cable from the motor and remove the motor from the shuttle valve as illustrated.



PULLING OUT THE COOLING MODULE

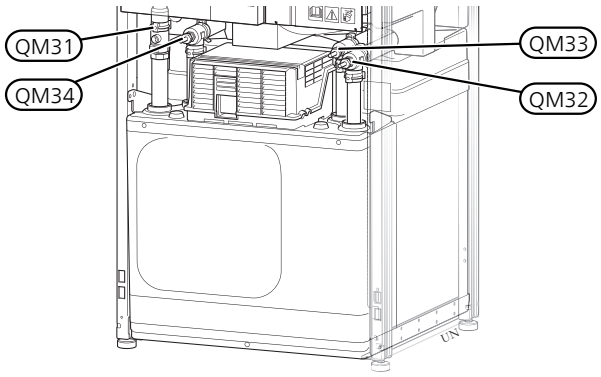
The cooling module can be pulled out for service and transport. [1]

> *NOTE*
>
> Switch off the heat pump and cut the power with the safety switch.

> *Caution*
>
> Remove the front cover according to the description on page 7.

1. Close the shut-off valves (QM31), (QM32), (QM33) and (QM34).

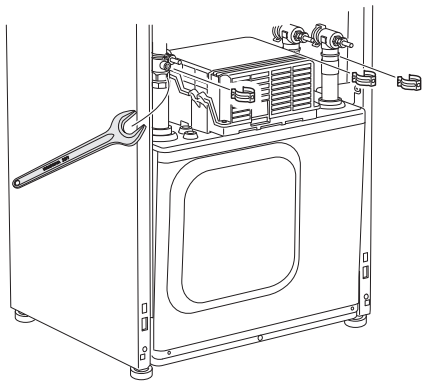
   Drain the compressor module according to the instructions on page 58



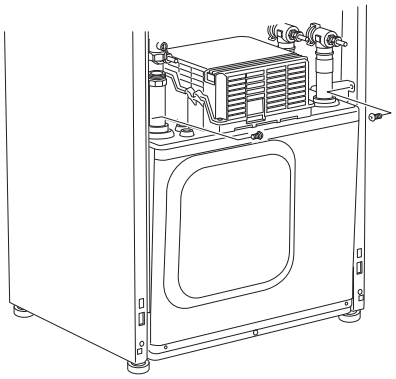
2. Pull off the lock catches.

[1] The images show examples of what a cooling module could look like.

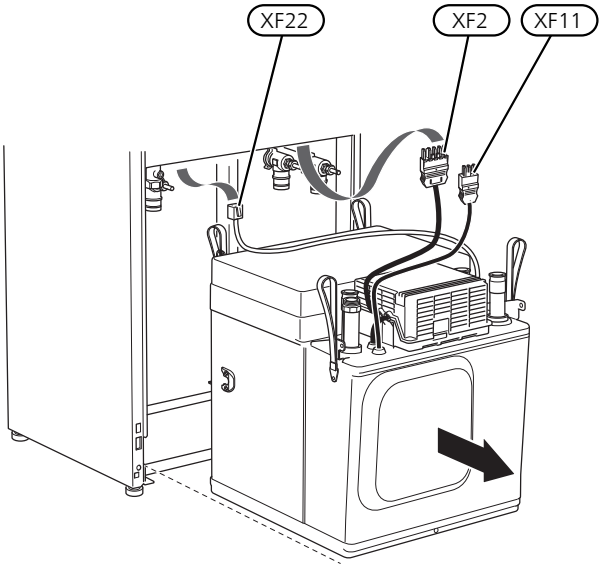
3. Disconnect the pipe connection under the shut-off valve (QM31).



4. Remove the two screws.



5. Disconnect the connectors (XF2), (XF11) and (XF22).
6. Carefully pull out the cooling module.



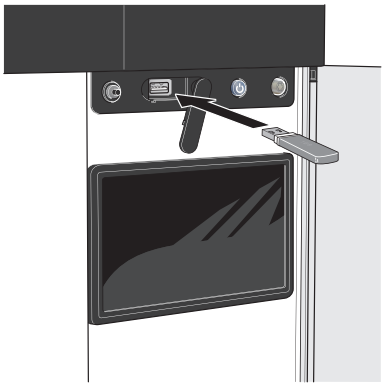
TIP

The cooling module is installed in reverse order.

NOTE

During reassembly, the enclosed O-rings should replace the existing ones on the shut-off valves (QM32), (QM33) and (QM34).

USB SERVICE OUTLET



If you connect the product to the network, you can upgrade the software without using the USB port. See section "myUplink".

The display unit is equipped with a USB socket that can be used to update the software and save logged information in S1155PC.

When a USB memory is connected, a new menu (menu 8) appears in the display.

Update the software

You can update the software with a USB memory in menu 8.1.

> *NOTE*
>
> In order to update using a USB memory, the memory must contain a file with software for S1155PC from NIBE.

One or more files are shown in the display. Select a file and press "OK".

> *TIP*
>
> A software update does not reset the menu settings in S1155PC.

> *Caution*
>
> If the update is interrupted before it is complete (e.g. in the event of a power cut etc.) the software is automatically restored to the previous version.

Menu 8.2 - Logging

Setting range: 1 s – 60 min

Here you can choose how current measurement values from S1155PC should be saved onto a log file on the USB memory.

1. Set the desired interval between loggings.
2. Select "Start logging".
3. The relevant measurement values from S1155PC are now saved in a file on the USB memory at the set interval until you select "Stop logging".

> *Caution*
>
> Select "Stop logging" before removing the USB memory.

Logging floor drying

Here you can save a floor drying log on the USB memory and in this way see when the concrete slab reached the correct temperature.

- Make sure that "floor drying function" is activated in menu 7.5.2.
- A log file is now created, where the temperature and the immersion heater output can be read off. Logging continues until "logging floor drying activated" is deselected or until "floor drying function" is stopped.

> *Caution*
>
> Deselect "logging floor drying activated" before you remove the USB memory.

Menu 8.3 - Manage settings

Here you can manage (save as or retrieve from) all the menu settings (user and service menus) in S1155PC with a USB memory.

The menu settings can be saved to the USB memory using "Save settings", in order to restore them later or to copy the settings to another S1155PC.

> *Caution*
>
> When you save the menu settings to the USB memory you replace any previously saved settings on the USB memory.

Via "recover settings" you reset all menu settings from the USB memory.

> *Caution*
>
> Reset of the menu settings from the USB memory cannot be undone.

Manual restoring of software

If you want to restore the software to the previous version:

1. Switch off S1155PC via the shutdown menu. The status lamp turns blue.
2. Press the on/off button once.
3. When the status button changes colour from blue to white, press and hold the on/off button.
4. When the status lamp changes to green, release the on/off button.

> *Caution*
>
> If the status lamp should turn yellow at any time, S1155PC has ended up in emergency mode and the software has not been restored.

> *TIP*
>
> If you have a previous version of the software on your USB memory, you can install that instead of manually restoring the version.

11 Disturbances in comfort

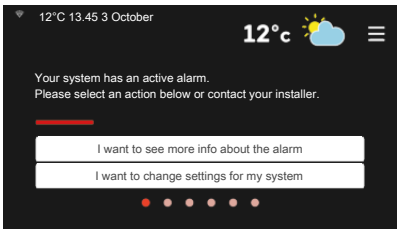
In most cases, S1155PC notes a malfunction (a malfunction can lead to disruption in comfort) and indicates this with alarms, and instructions for action, in the display.

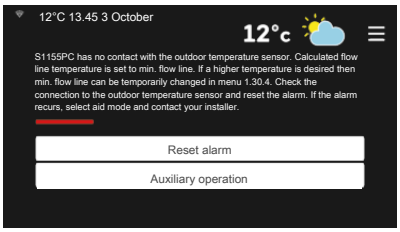
Info-menu

All the heat pump's measurement values are gathered under menu 3.1 (Operating info) in the heat pump' 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, a malfunction has occurred and the status lamp shines with a steady red light. You receive information about the alarm in the smart-guide on the display.





ALARM

In the event of an alarm with a red status lamp, a malfunction has occurred that S1155PC cannot remedy itself. On the display, you can see what type of alarm it is and reset it.

In many cases, it is sufficient to select "Reset alarm" for the installation to revert to normal operation.

If a white light comes on after selecting "Reset alarm", the alarm has been remedied.

It the red light is still on or if the alarm recurs, the cause of the problem remains.

"Auxiliary operation" is a type of emergency mode. This means that the installation attempts to produce heat and/or hot water, even though 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 "Auxiliary operation", an alarm action must be selected in menu 7.1.8.1 – "Alarm actions".

Caution

Selecting "Auxiliary operation" is not the same as correcting the problem that caused the alarm. The status lamp will therefore remain red.

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

BASIC ACTIONS

Start by checking the following items:

- Group and main fuses of the accommodation.
- The property's earth circuit breaker.
- Miniature circuit breaker for S1155PC (FC1).
- The temperature limiter in S1155PC (FQ10).
- Correctly set load monitor (if installed).

LOW HOT WATER TEMPERATURE OR A LACK OF HOT WATER

- 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.
- S1155PC in incorrect operating mode.
  - Enter menu 4.1. ("Operating mode"). If "auto" mode is selected, select a higher value for "stop additional heat" in menu 7.1.10.2.
  - If "manual" mode is selected, select "additional heat".
- Large hot water consumption.
  - Wait until the hot water has heated up. Temporarily increased hot water capacity can be activated in home screen "hot water" or in menu 2.1.
- Too low hot water setting.

– Enter menu 2.2 and select a higher demand mode.

- Low hot water access with the "Smart Control" function active.
  – If the hot water usage has been low for an extended period of time, S1155PC will produce less hot water than normal. Activate "More hot water" in menu 2.1.
- Too low or no operating prioritisation of hot water.
  – Enter menu 7.1.10.1 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" activated in menu 6.1.
  – Enter menu 6.1 and deactivate.

LOW ROOM TEMPERATURE

- Closed thermostats in several rooms.
  – Set the thermostats to max in as many rooms as possible. Adjust the room temperature via home screen heating, rather than choking the thermostats.
- S1155PC in incorrect operating mode.
  – Enter menu 4.1 ("Operating mode"). If "auto" mode is selected, select a higher value for "stop heating" in menu 7.1.10.2.
  – If "manual" mode is selected, select "heating". If this is not enough, then also select "additional heat".
- Too low set value on the automatic heating control.
  – Go to home screen heating or menu 1.30.1 (Curve, heating) and adjust the heating curve offset upwards. If the room temperature is only low in cold weather, the curve slope in menu 1.30.1 (Curve, heating) may need to be adjusted upwards.
- Too low or no operating prioritisation of heat.
  – Enter menu 7.1.10.1 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 6.1.
  – Enter menu 6.1 and deactivate.
- External switch for changing room temperature activated.
  – Check any external switches.
- Air in the climate system.
  – Vent the climate system.
- Closed valves to the climate system.
  – Open the valves.

HIGH ROOM TEMPERATURE

- Too high set value on the automatic heating control.
  – Go to home screen heating or menu 1.30.1 (Curve, heating) and adjust the heating curve offset downwards. If the room temperature is only high in cold weather, the curve slope in menu 1.30.1 (Curve, heating) may need to be adjusted downwards.
- External switch for changing the room temperature activated.
  – Check any external switches.

UNEVEN ROOM TEMPERATURE.

- Incorrectly set heating curve.
  – Fine-tune the heating curve in menu 1.30.1.
- Too high set value on "dT at DOT"..
  – Go to menu 7.1.6.2 (flow set. climate system) and reduce the value of "DOT".
- Uneven flow over the radiators.
  – Adjust the flow distribution between the radiators.

LOW SYSTEM PRESSURE

- Not enough water in the climate system.
  – Fill the climate system with water and check for leaks.

THE COMPRESSOR DOES NOT START

- There is no heating or cooling demand.
  – S1155PC does not call on heating, cooling 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.

WHINING NOISE IN THE RADIATORS

- Closed thermostats in the rooms and incorrectly set heating curve.
  – Set the thermostats to max in as many rooms as possible. Fine-tune the heating curve via home screen heating, rather than choking the thermostats.
- Circulation pump speed set too high.
  – Go to menu 7.1.2.2 (Pump speed heating medium GP1) and reduce the speed of the circulation pump.
- Uneven flow over the radiators.
  – Adjust the flow distribution between the radiators.

12 Accessories

Some accessories manufactured before 2019 may need to have their circuit board updated in order to be compatible with S1155PC. For more information, see the Installer Manual for the relevant accessory.

ACCESSORY CARD AXC 40

This accessory is used to enable connection and control of shunt controlled additional heat, step controlled additional heat, external circulation pump or ground water pump.

Part no. 067 060

AUXILIARY RELAY HR 10

Auxiliary relay HR 10 is used to control external 1 to 3 phase loads such as oil burners, immersion heaters and pumps.

Part no 067 309

BASE EXTENSION EF 45

This accessory is used to create a larger connection area under S1155PC.

Part no. 067 152

COMMUNICATION MODULE FOR SOLAR ELECTRICITY EME 20

EME 20 is used to enable communication and control between inverters for solar cells from NIBE and S1155PC.

Part no. 057 188

DOCKING KIT PVT 40

PVT 40 enables S1155PC to use PVT-panels as brine-source.

Part no. 057 245

DOCKING KIT SOLAR 40

Solar 40 means that S1155PC (together with VPAS) can be connected to thermal solar heating.

Part no 067 084

DOCKING KIT SOLAR 42

Part no 067 153

EXHAUST AIR MODULE FLM S45

FLM S45 is an exhaust air module designed to combine recovery of mechanical exhaust air with ground source heating.

FLM S45

Part no. 067 627

Bracket BAU 40

Part no. 067 666

EXTERNAL ELECTRIC ADDITIONAL HEAT ELK

These accessories require accessories card AXC 40 (step controlled addition).

ELK 15

15 kW, 3 x 400 V
Part no. 069 022

ELK 26

26 kW, 3 x 400 V
Part no. 067 074

ELK 42

42 kW, 3 x 400 V
Part no. 067 075

ELK 213

7-13 kW, 3 x 400 V
Part no. 069 500

EXTRA SHUNT GROUP ECS 40/ECS 41

This accessory is used when S1155PC is installed in houses with two or more different heating systems that require different supply temperatures.

ECS 40 (Max 80 m²)

Part no 067 287

ECS 41 (approx. 80-250 m²)

Part no 067 288

FILLING VALVE KIT KB 25/32

Valve kit for filling brine in the collector hose. Includes particle filter and insulation.

KB 25 (max. 12 kW)

Part no 089 368

KB 32 (max. 30 kW)

Part no 089 971

HUMIDITY SENSOR HTS 40

This accessory is used to show and regulate humidity and temperatures during both heating and cooling operation.

Part no. 067 538

LEVEL MONITOR NV 10

Level monitor for extended checks of the brine level.

Part no. 089 315

POOL HEATING POOL 40

POOL 40 is used to enable pool heating with S1155PC.

Part no 067 062

ROOM UNIT RMU S40

The room unit is an accessory that allows the control and monitoring of S1155PC to be carried out in a different part of your home to where it is located.

Part no. 067 650

SOLAR PACKAGE NIBE PV

Solar panel package, 3 - 24 kW, (10 - 80 panels), which is used to produce your own electricity.

VENTILATION HEAT EXCHANGER ERS

This accessory is used to supply the accommodation with energy that has been recovered from the ventilation air. The unit ventilates the house and heats the supply air as necessary.

ERS S10-400

Part no. 066 163

ERS 20-250

Part no. 066 068

Electric air heater EAH

In cold weather, EAH heats the incoming outdoor air slightly to prevent the condensation in ERS from freezing. Used mainly in colder climates.

EAH 20-900 (300-900 W)

Part no. 067 604

EAH 20-1800 (300-1800 W)

Part no. 067 603

WATER HEATER/ACCUMULATOR TANK

AHPS S

Accumulator tank without an immersion heater with solar coil (copper) and a hot water coil (stainless steel).

Part no. 080 136

AHP S

Volume expansion vessel that is primarily used for expanding the volume together with AHPS S.

Part no. 080 134

AHPH S

Accumulator tank without an immersion heater with integrated hot water coil (stainless steel).

Part no. 080 137

VPA

Water heater with double-jacketed vessel.

VPA 200/70

Copper	Part no. 088 650

VPA 300/200

Copper	Part no. 088 710
Enamel	Part no. 088 700

VPA 450/300

Copper	Part no. 088 660
Enamel	Part no. 088 670

VPAS

Water heater with double-jacketed vessel and solar coil.

VPAS 300/450

Copper	Part no. 087 720
Enamel	Part no. 087 710

VPB

Water heater without immersion heater with charging coil.

VPB 500

Copper	Part no. 083 220

VPB 750-2

Copper	Part no. 083 231

VPB 1000

Copper	Part no. 083 240

VPB S

Water heater without immersion heater with charging coil.

VPB S200

Copper	Part no. 081 139
Enamel	Part no. 081 140
Stainless steel	Part no. 081 141

VPB S300

Copper	Part no. 081 142
Enamel	Part no. 081 143
Stainless steel	Part no. 081 144

VPBS S

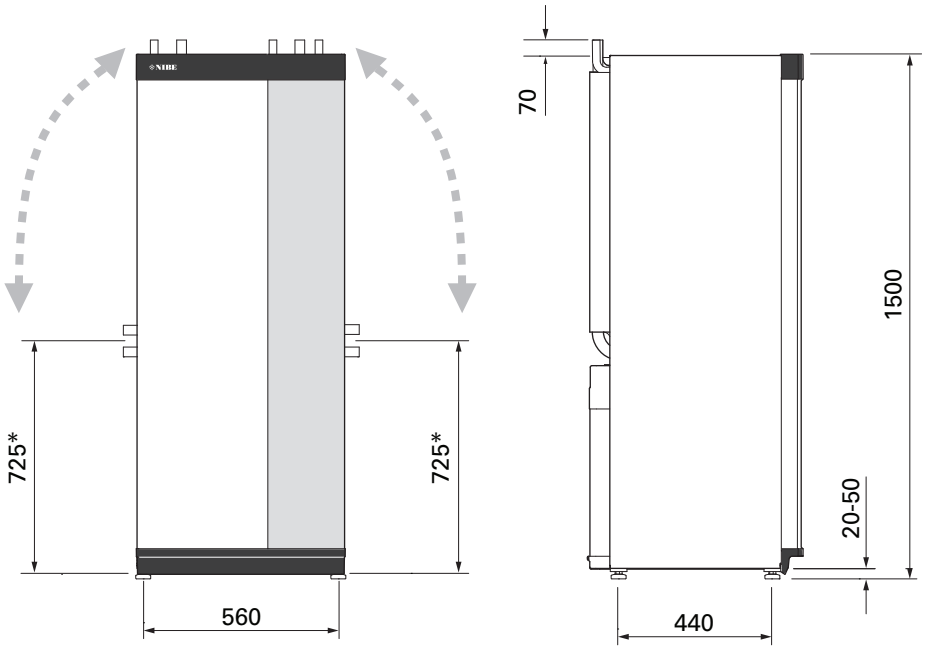
Water heater without immersion heater with charging and solar coil.

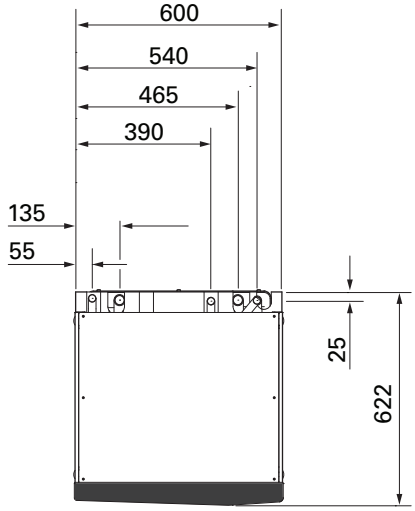
VPBS S300

Copper	Part no. 081 145
Enamel	Part no. 081 146

13 Technical data

Dimensions and setting-out coordinates





* This dimension applies at 90° angle on the brine pipes (side connection). The dimension can vary approx. ±100 mm vertically as the brine pipes consist in part of flexible pipes.

Electrical data

1X230 V

S1155PC-6		
Rated voltage		230V ~ 50Hz
Max operating current including 0 – 0.5 kW immersion heater (Recommended fuse rating).	A_{rms}	15(16)
Max operating current including 1 – 1.5 kW immersion heater (Recommended fuse rating).	A_{rms}	20(20)
Max operating current including 2 – 2.5 kW immersion heater (Recommended fuse rating).	A_{rms}	24(25)
Max operating current including 3 – 4 kW immersion heater (Recommended fuse rating).	A_{rms}	31(32)
Max operating current including 4.5 kW immersion heater (Recommended fuse rating).	A_{rms}	33(40)
Additional power	kW	0.5/1/1.5/2/2.5/3 /3.5/4/4.5

3X400 V

S1155PC-6		
Rated voltage		400V 3N ~ 50Hz
Max operating current including 0 kW immersion heater (Recommended fuse rating).	A_{rms}	12(16)
Max operating current including 0.5 – 6.5 kW immersion heater (Recommended fuse rating).	A_{rms}	16(16)
Additional power	kW	0.5/1/1.5/2/2.5/3 /3.5/4/4.5/5/5.5/6/6.5

Technical specifications

1X230 V, 3X400 V

Model		*S1155PC-6*
Output data according to EN 14511		
Heating capacity (P_H)	kW	1.5 – 6
0/35 nominal		
Heating capacity (P_H)	kW	3.15
Supplied power (P_E)	kW	0.67
COP		4.72
0/45 nominal		
Heating capacity (P_H)	kW	2.87
Supplied power (P_E)	kW	0.79
COP		3.61
10/35 nominal		
Heating capacity (P_H)	kW	4.30
Supplied power (P_E)	kW	0.66
COP		6.49
10/45 nominal		
Heating capacity (P_H)	kW	3.98
Supplied power (P_E)	kW	0.83
COP		4.79
SCOP according to EN 14825		
Rated heating output ($P_{designh}$)	kW	6
SCOP cold climate, 35 °C / 55 °C		5.5 / 4.1
SCOP average climate, 35 °C / 55 °C		5.2 / 4.0
Energy rating, average climate		
The product's room heating efficiency class 35 °C / 55 °C [1]		A+++ / A+++
The system's room heating efficiency class 35 °C / 55 °C [2]		A+++ / A+++
Efficiency class hot water heating / declared tap profile with water heater [3]		A / XL VPB S300
Noise		
Sound power level (L_{WA})$_{EN\ 12102}$ at 0/35	dB(A)	36 – 43
Sound pressure level (L_{PA}) calculated values according to EN ISO 11203 at 0/35 and 1 m range	dB(A)	21 – 28
Electrical data		
Output, Brine pump	W	3 – 140
Output, Heating medium pump	W	2 – 60
Enclosure class		IPx1B
Equipment Compliant with IEC 61000-3-12		
For Connection Design Purposes, Compliant with IEC 61000-3-3 technical requirements		
WLAN		
2.412 - 2.484 GHz max power	dbm	11
Wireless units		
2.405 - 2.480 GHz max power	dbm	4
Refrigerant circuit		
Type of refrigerant		R407C
GWP refrigerant		1,774
Fill amount	kg	1.16
CO_2 equivalent	ton	2.06
Cut-out value pressure switch HP / LP	MPa	3.2 (32 bar) / 0.15 (1.5 bar)
Brine circuit		
Min/max system pressure brine	MPa	0.05 (0.5 bar) / 0.45 (4.5 bar)
Nominal flow	l/s	0.18
Max external avail. press at nom flow	kPa	64
Min/Max incoming Brine temp	°C	see diagram
Min. outgoing brine temp.	°C	-12
Heating medium circuit		

Model		*S1155PC-6*
Min/Max system pressure heating medium	MPa	0.05 (0.5 bar) / 0.45 (4.5 bar)
Nominal flow	l/s	0.08
Max external avail. press at nom flow	kPa	69
Min/max HM-temp	°C	see diagram
Pipe connections		
Brine ext diam. CU pipe	mm	28
Heating medium ext diam. CU pipes	mm	22
Connection, hot water heater ext diam	mm	22
Compressor oil		
Oil type		POE
Oil volume	l	0.68
Dimensions and weight		
Width x Depth x Height	mm	600 x 620 x 1,500
Ceiling height [4]	mm	1,670
Weight complete heat pump	kg	144
Weight only cooling module	kg	95
Substances according to Directive (EG) no. 1907/2006, article 33 (Reach)		Lead in brass components
Part number, 1x230 V		065 451
Part number, 3x400 V		065 450

1 Scale for the product's efficiency class room heating: A+++ to D.

2 Scale for the system's efficiency class room heating: A+++ to G. Reported efficiency for the system takes the product's temperature regulator into account.

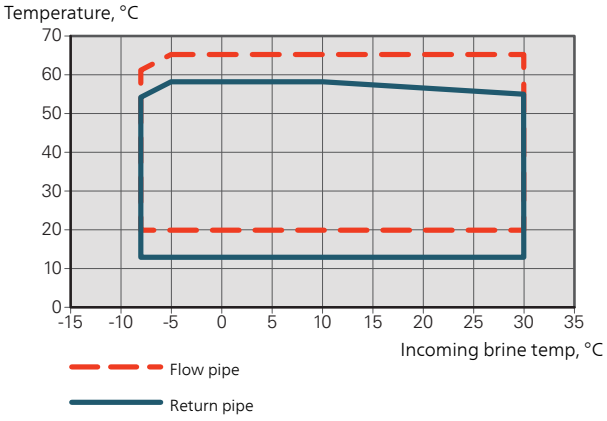
3 Scale for efficiency class hot water: A+ to F.

4 With feet removed, the height is approx. 1,650 mm.

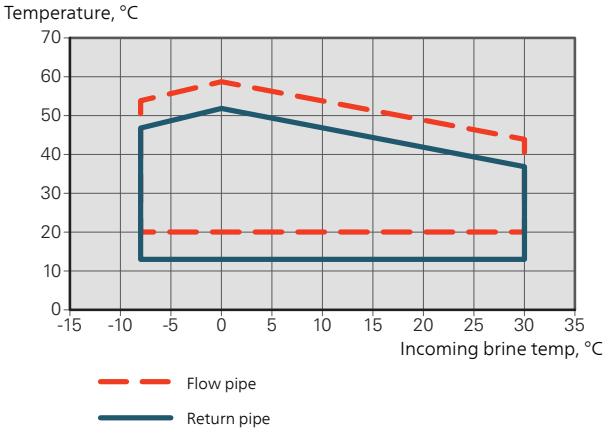
WORKING RANGE HEAT PUMP, COMPRESSOR OPERATION

The compressor provides a supply temperature up to 65 °C at -5 °C incoming brine temperature.

Working range below 75 %.



Working range above 75 %

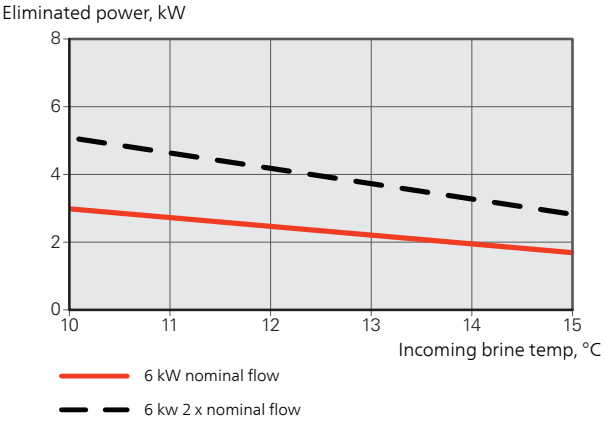


Caution

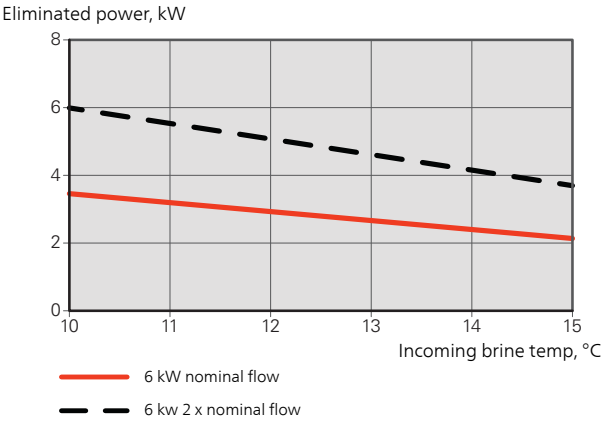
For operation of S1155PC above 75% compressor speed, unlocking in menu 5.1.24 is required. This can produce a louder noise level than the value stated in the technical specifications.

DIAGRAM, PASSIVE COOLING

Passive cooling, 21 °C return temperature nominal flow brine/heating medium



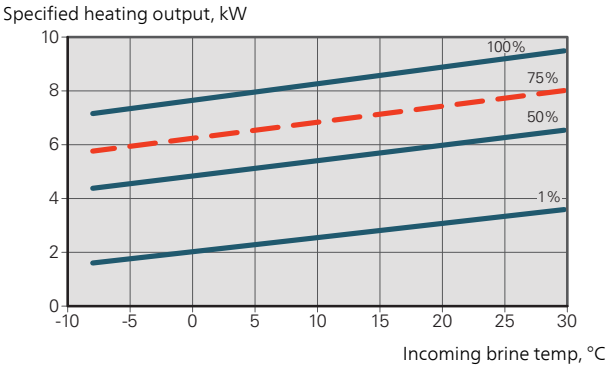
Passive cooling, 23 °C return temperature nominal flow brine/heating medium



DIAGRAM, DIMENSIONING COMPRESSOR SPEED

Heating mode 35 °C

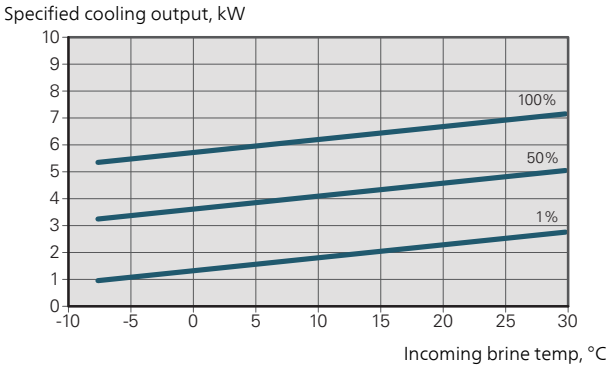
Diagram for dimensioning a heat pump. The percentage shows approximate compressor speed.



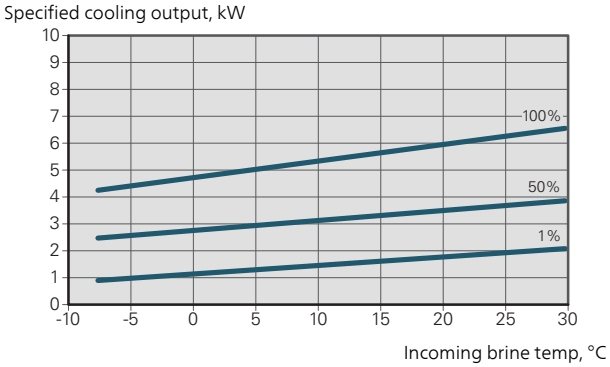
Cooling mode

> **Caution**
>
> To dimension heating dump, see the diagram for heating operation.

Supply temperature, heating medium 35 °°C



Supply temperature, heating medium 50 °°C



Energy labelling

INFORMATION SHEET

Supplier		*NIBE AB*
Model		*S1155PC-6 1x230V*
Model hot water heater		*VPB S300*
Temperature application	*°C*	*35 / 55*
Declared load profile for water heating		**XL**
Seasonal space heating energy efficiency class, average climate		**A++ / A++**
Water heating energy efficiency class, average climate		**A**
Rated heat output ($P_{designh}$), average climate	kW	6
Annual energy consumption space heating, average climate	kWh	2,188 / 2,875
Annual energy consumption water heating, average climate	kWh	1,642
Seasonal space heating energy efficiency, average climate	%	200 / 150
Water heating energy efficiency, average climate	%	102
Sound power level L_{WA} indoors	dB	42
Rated heat output ($P_{designh}$), cold climate	kW	6
Rated heat output ($P_{designh}$), warm climate	kW	6
Annual energy consumption space heating, cold climate	kWh	2,481 / 3,287
Annual energy consumption water heating, cold climate	kWh	1,642
Annual energy consumption space heating, warm climate	kWh	1,408 / 1,852
Annual energy consumption water heating, warm climate	kWh	1,642
Seasonal space heating energy efficiency, cold climate	%	211 / 157
Water heating energy efficiency, cold climate	%	102
Seasonal space heating energy efficiency, warm climate	%	201 / 151
Water heating energy efficiency, warm climate	%	102
Sound power level L_{WA} outdoors	dB	-

Supplier		*NIBE AB*
Model		*S1155PC-6 3x400V*
Model hot water heater		*VPB S300*
Temperature application	*°C*	*35 / 55*
Declared load profile for water heating		**XL**
Seasonal space heating energy efficiency class, average climate		**A++ / A++**
Water heating energy efficiency class, average climate		**A**
Rated heat output ($P_{designh}$), average climate	kW	6
Annual energy consumption space heating, average climate	kWh	2,188 / 2,875
Annual energy consumption water heating, average climate	kWh	1,642
Seasonal space heating energy efficiency, average climate	%	200 / 150
Water heating energy efficiency, average climate	%	102
Sound power level L_{WA} indoors	dB	42
Rated heat output ($P_{designh}$), cold climate	kW	6
Rated heat output ($P_{designh}$), warm climate	kW	6
Annual energy consumption space heating, cold climate	kWh	2,481 / 3,287
Annual energy consumption water heating, cold climate	kWh	1,642
Annual energy consumption space heating, warm climate	kWh	1,408 / 1,852
Annual energy consumption water heating, warm climate	kWh	1,642
Seasonal space heating energy efficiency, cold climate	%	211 / 157
Water heating energy efficiency, cold climate	%	102
Seasonal space heating energy efficiency, warm climate	%	201 / 151
Water heating energy efficiency, warm climate	%	102
Sound power level L_{WA} outdoors	dB	-

DATA FOR ENERGY EFFICIENCY OF THE PACKAGE

Model		*S1155PC-6 1x230V*
Model hot water heater		*VPB S300*
Temperature application	*°C*	*35 / 55*
Controller, class		VI
Controller, contribution to efficiency	%	4
Seasonal space heating energy efficiency of the package, average climate	%	204 / 154
Seasonal space heating energy efficiency class of the package, average climate		A+++
Seasonal space heating energy efficiency of the package, cold climate	%	215 / 161
Seasonal space heating energy efficiency of the package, warm climate	%	205 / 155

Model		*S1155PC-6 3x400V*
Model hot water heater		*VPB S300*
Temperature application	*°C*	*35 / 55*
Controller, class		VI
Controller, contribution to efficiency	%	4
Seasonal space heating energy efficiency of the package, average climate	%	204 / 154
Seasonal space heating energy efficiency class of the package, average climate		A+++
Seasonal space heating energy efficiency of the package, cold climate	%	215 / 161
Seasonal space heating energy efficiency of the package, warm climate	%	205 / 155

The reported efficiency of the package also takes the controller into account. If an external supplementary boiler or solar heating is added to the package, the overall efficiency of the package should be recalculated.

TECHNICAL DOCUMENTATION

Model		*S1155PC-6 1x230V*					
Model hot water heater		*VPB S300*					
Type of heat pump		☐ Air-water ☐ Exhaust-water ☒ Brine-water ☐ Water-water					
Low-temperature heat pump		☐ Yes ☒ No					
Integrated immersion heater for additional heat		☒ Yes ☐ No					
Heat pump combination heater		☒ Yes ☐ No					
Climate		☒ Average ☐ Cold ☐ Warm					
Temperature application		☒ Average (55 °C) ☐ Low (35 °C)					
Applied standards		EN-14825 & EN-16147					
Rated heat output	Prated	5,5	kW	*Seasonal space heating energy efficiency*	η_s	150	%
Declared capacity for space heating at part load and at outdoor temperature Tj				*Declared coefficient of performance for space heating at part load and at outdoor temperature Tj*			
Tj = -7 °C	Pdh	5.0	kW	Tj = -7 °C	COPd	3.06	-
Tj = +2 °C	Pdh	3.0	kW	Tj = +2 °C	COPd	3.97	-
Tj = +7 °C	Pdh	2.0	kW	Tj = +7 °C	COPd	4.63	-
Tj = +12 °C	Pdh	1.2	kW	Tj = +12 °C	COPd	4.86	-
Tj = biv	Pdh	5.4	kW	Tj = biv	COPd	2.84	-
Tj = TOL	Pdh	5.4	kW	Tj = TOL	COPd	2.84	-
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 °C (if TOL < -20 °C)	COPd		-
Bivalent temperature	T_{biv}	-10	°C	Min. outdoor air temperature	TOL	-10	°C
Cycling interval capacity	Pcych		kW	Cycling interval efficiency	COPcyc		-
Degradation coefficient	Cdh	0.99	-	Max supply temperature	WTOL	65	°C
Power consumption in modes other than active mode				*Additional heat*			
Off mode	P_{OFF}	0.002	kW	Rated heat output	Psup	0.1	kW
Thermostat-off mode	P_{TO}	0.007	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.009	kW				
Other items							
Capacity control	Variable			Rated airflow (air-water)			m^3/h
Sound power level, indoors/outdoors	L_{WA}	42 / -	dB	Nominal heating medium flow			m^3/h
Annual energy consumption	Q_{HE}	2,875	kWh	Brine flow brine-water or water-water heat pumps		0.68	m^3/h
For heat pump combination heater							
Declared load profile for water heating	XL			*Water heating energy efficiency*	η_{wh}	102	%
Daily energy consumption	Q_{elec}	7.73	kWh	Daily fuel consumption	Q_{fuel}		kWh
Annual energy consumption	AEC	1,642	kWh	Annual fuel consumption	AFC		GJ
Contact information	*NIBE Energy Systems – Box 14 – Hannabadsvägen 5 – 285 21 Markaryd – Sweden*						

Model		*S1155PC-6 3x400V*					
Model hot water heater		*VPB S300*					
Type of heat pump		☐ Air-water ☐ Exhaust-water ☒ Brine-water ☐ Water-water					
Low-temperature heat pump		☐ Yes ☒ No					
Integrated immersion heater for additional heat		☒ Yes ☐ No					
Heat pump combination heater		☒ Yes ☐ No					
Climate		☒ Average ☐ Cold ☐ Warm					
Temperature application		☒ Average (55 °C) ☐ Low (35 °C)					
Applied standards		EN-14825 & EN-16147					
Rated heat output	Prated	5,5	kW	*Seasonal space heating energy efficiency*	η_s	150	%
Declared capacity for space heating at part load and at outdoor temperature Tj				*Declared coefficient of performance for space heating at part load and at outdoor temperature Tj*			
Tj = -7 °C	Pdh	5.0	kW	Tj = -7 °C	COPd	3.06	-
Tj = +2 °C	Pdh	3.0	kW	Tj = +2 °C	COPd	3.97	-
Tj = +7 °C	Pdh	2.0	kW	Tj = +7 °C	COPd	4.63	-
Tj = +12 °C	Pdh	1.2	kW	Tj = +12 °C	COPd	4.86	-
Tj = biv	Pdh	5.4	kW	Tj = biv	COPd	2.84	-
Tj = TOL	Pdh	5.4	kW	Tj = TOL	COPd	2.84	-
Tj = -15 °C (if TOL < -20 °C)	Pdh		kW	Tj = -15 °C (if TOL < -20 °C)	COPd		-
Bivalent temperature	T_{biv}	-10	°C	Min. outdoor air temperature	TOL	-10	°C
Cycling interval capacity	Pcych		kW	Cycling interval efficiency	COPcyc		-
Degradation coefficient	Cdh	0.99	-	Max supply temperature	WTOL	65	°C
Power consumption in modes other than active mode				*Additional heat*			
Off mode	P_{OFF}	0.002	kW	Rated heat output	Psup	0.1	kW
Thermostat-off mode	P_{TO}	0.007	kW				
Standby mode	P_{SB}	0.007	kW	Type of energy input	Electric		
Crankcase heater mode	P_{CK}	0.009	kW				
Other items							
Capacity control	Variable			Rated airflow (air-water)			m^3/h
Sound power level, indoors/outdoors	L_{WA}	42 / -	dB	Nominal heating medium flow			m^3/h
Annual energy consumption	Q_{HE}	2,875	kWh	Brine flow brine-water or water-water heat pumps		0.68	m^3/h
For heat pump combination heater							
Declared load profile for water heating	XL			*Water heating energy efficiency*	η_{wh}	102	%
Daily energy consumption	Q_{elec}	7.48	kWh	Daily fuel consumption	Q_{fuel}		kWh
Annual energy consumption	AEC	1,642	kWh	Annual fuel consumption	AFC		GJ
Contact information	*NIBE Energy Systems – Box 14 – Hannabadsvägen 5 – 285 21 Markaryd – Sweden*						

Item register

A
Accessories, 65
Alarm, 63
Assembly, 6

B
Brine side, 14

C
Commissioning and adjusting, 26
  Filling and venting, 26
  Post adjustment and bleeding, 27
  Preparations, 26
  Start guide, 27
Connecting accessories, 22
Connecting current sensors, 21
Connecting external operating voltage for the control system, 19
Connecting sensors, 20
Connecting the climate system, 14
Connecting the hot water heater, 15
Connections, 19
Control, 32
  Control - Introduction, 32
Control - Introduction, 32
Control - Menus
  Menu 1 - Indoor climate, 36
  Menu 2 - Hot water, 41
  Menu 3 - Info, 42
  Menu 4 - My system, 43
  Menu 5 - Connection, 47
  Menu 6 - Scheduling, 48
  Menu 7 - Service, 49
Cooling section, 11

D
Data for energy efficiency of the system, 73
Delivery and handling, 6
  Assembly, 6
  Drawing out the cooling module, 6
  Installation area, 6
  Removing the covers, 7
  Supplied components, 7
  Transport, 6
Diagram, dimensioning compressor speed, 71
Diagram, passive cooling output, 71
Dimensions and pipe connections, 13
Dimensions and setting-out coordinates, 67
Disruption to comfort
  Info menu, 63
Disturbances in comfort, 63
  Alarm, 63
  Manage alarm, 63
  Troubleshooting, 63
Docking alternatives
  Ground water system, 16
  Neutralization vessel, 15
  Pool, 16
  Two or more climate systems, 16
  Ventilation recovery, 16
Draining the climate system, 58
Drawing out the cooling module, 6, 59

E
Electrical addition - maximum output, 24
  Power steps of the immersion heater, 25
Electrical cabinets, 11
Electrical connection, 17
  General, 17
Electrical connections
  Connecting accessories, 22
  Connecting external operating voltage for the control system, 19
  Connecting sensors, 20
  Connections, 19
  Electrical addition - maximum output, 24
  External connection options, 22
  External connections, 20
  External energy meter, 21
  Load monitor, 21
  Multi-installation, 22
  Outdoor sensor, 20
  Power connection, 19
  Room sensor, 21
  Settings, 24
  Temperature sensor, external flow line, 20
  Temperature sensor, hot water charging, 20
  Temperature sensor, hot water top, 20
Emptying the brine system, 58
Energy labelling, 72
  Data for energy efficiency of the package, 73
  Information sheet, 72
  Technical documentation, 74–75
External connection options, 22
  Possible selection for AUX inputs, 23

Possible selection for AUX output (potential free variable relay), 24
Possible selections for AUX output, 24
External connections, 20
External energy meter, 21

F

Filling and venting, 26
Filling and venting the brine system, 26
Filling and venting the climate system, 26
Filling and venting the brine system, 26
Filling and venting the climate system, 26

H

Heating medium side, 14
Connecting the climate system, 14
Helping the circulation pump to start, 58
Help menu, 33
Hot water heater, 15
Connecting the hot water heater, 15

I

Important information, 4
Marking, 4
Info menu, 63
Information sheet, 72
Inspection of the installation, 5
Installation area, 6

M

Manage alarm, 63
Marking, 4
Menu 1 - Indoor climate, 36
Menu 2 - Hot water, 41
Menu 3 - Info, 42
Menu 4 - My system, 43
Menu 5 - Connection, 47
Menu 6 - Scheduling, 48
Menu 7 - Service, 49
Multi-installation, 22

N

Navigation
Help menu, 33

O

Outdoor sensor, 20

P

Pipe connections, 12
Brine side, 14
Dimensions and pipe connections, 13
General, 12
Heating medium side, 14
Hot water heater, 15
Pipe dimensions, 13
Symbol key, 12
System diagram, 13
Pipe dimensions, 13
Possible selection for AUX inputs, 23
Possible selection for AUX output (potential free variable relay), 24
Possible selections for AUX output, 24
Post adjustment and bleeding, 27
Pump adjustment, automatic operation, 27
Pump adjustment, manual operation, 28
Pump capacity diagram, brine side, manual operation, 28
Readjusting, venting, heat medium side, 28–29
Power connection, 19
Preparations, 26
Pump adjustment, automatic operation, 27
Brine side, 27
Heating medium side, 28
Pump adjustment, manual operation, 28
Heating medium side, 28
Pump capacity diagram, brine side, manual operation, 28

R

Readjusting, venting, heat medium side, 28–29
Remove the motor on the shuttle valve, 59
Removing the covers, 7
Room sensor, 21

S

Safety information
Inspection of the installation, 5
Marking, 4
Serial number, 4
Symbols, 4
Serial number, 4
Service, 57
Service actions, 57
Service actions, 57
Draining the climate system, 58
Drawing out the cooling module, 59
Emptying the brine system, 58
Helping the circulation pump to start, 58
Remove the motor on the shuttle valve, 59
Temperature sensor data, 59
USB service outlet, 61
Settings, 24
Emergency mode, 25
Standby mode, 25
Start guide, 27
Supplied components, 7
Symbol key, 12
Symbols, 4
System diagram, 13

T

Technical data, 67
Dimensions and setting-out coordinates, 67
Energy labelling, 72
Data for energy efficiency of the system, 73
Information sheet, 72
Technical documentation, 74
Technical Data, 69
Technical Data, 69
Diagram, dimensioning compressor speed, 71
Diagram, passive cooling output, 71
Working range heat pump, 70
Technical documentation, 74
Temperature sensor, external flow line, 20

Temperature sensor, hot water charging, 20
Temperature sensor, hot water top, 20
Temperature sensor data, 59
The heat pump design, 10
  Component list cooling section, 11
  Component list electrical cabinets, 11
  Component location cooling section, 11
  Component location electrical cabinets, 11
  Component locations, 10
  List of components, 10
Transport, 6
Troubleshooting, 63

U

USB service outlet, 61

W

Working range heat pump, 70

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