

Split system

NIBE SPLIT SVM S332 / AMS 20



Quick guide

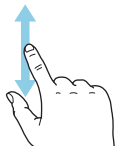
NAVIGATION

Select



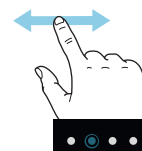
Most options and functions are activated by lightly pressing on the display with your finger.

Scroll



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

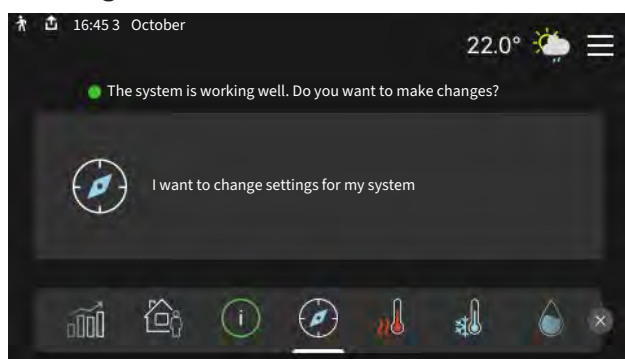
Browse



The symbols at the bottom edge show if there are more pages.

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

Smartguide



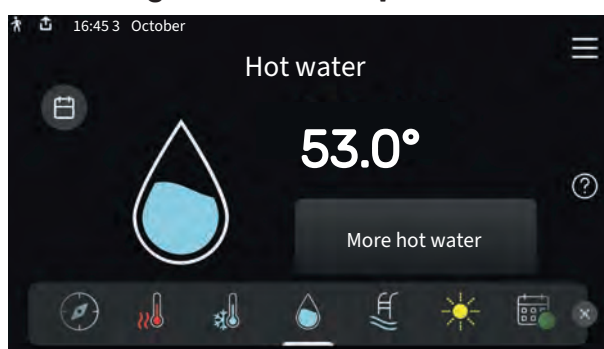
Smartguide helps you both to view information about the current status and to make the most common settings easily. The information that you see depends on the product you have and the accessories that are connected to the product.

Setting the indoor temperature.



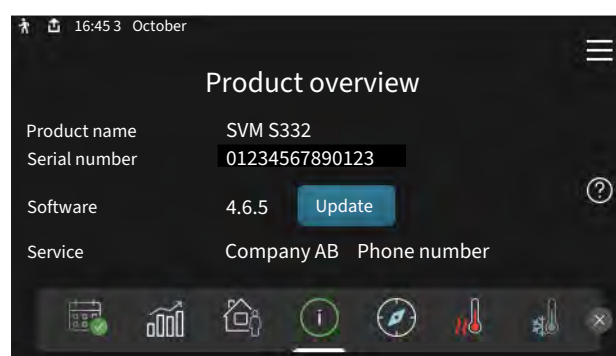
Here, you can set the temperature in the installation's zones.

Increasing hot water temperature



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

Product overview



Here, you can find information about the product name, the product's serial number, the version of the software, and the contact details of the company that provides service. When there is new software to download, you can do it here (provided that SVM S332 is connected to myUplink).

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Important information

Safety information

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

The manual must be left with the customer.

For the latest version of the product's documentation, see nibe.eu.



CAUTION!

Also read the enclosed Safety Manual before starting the installation.

Symbols

Explanation of symbols that may be present in this manual.



CAUTION!

This symbol indicates danger to person or machine.



NOTE!

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

Explanation of symbols that may be present on the product's label(s).



Fire hazard!



Flammable.



Dangerous voltage.



Danger to person or machine.



Read the User Manual.



Read the User Manual.



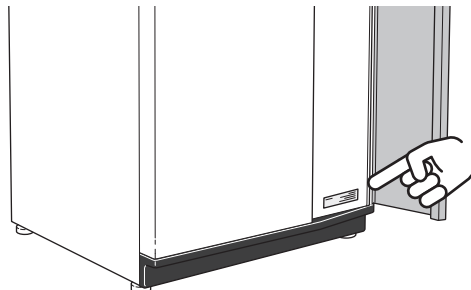
Read the Installer Manual.



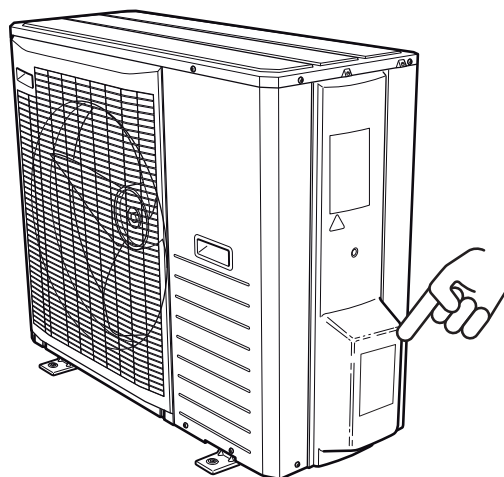
Disconnect the voltage supply before starting work.

Serial number

The serial number can be found at the bottom right on SVM S332, in the display on the home screen "Product overview" and on the type plate (PZ1).



You can find the service code and the serial number on the right-hand side of AMS 20.



NOTE!

You need the product's service code and serial number for servicing and support.

Inspection of the installation

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

Connection of, and other work on, the refrigerant circuit may only be carried out by an accredited technician with the correct qualifications.

INSTALLATION INSPECTION INDOOR UNIT

✓	Description	Notes	Signature	Date
	Cold and hot water			
	Shut off valves			
	Mixing valve			
	Safety valve			
	Cooling circuit (section "Pipe connections")			
	Leak testing			
	Pipe insulation			
	Electrical connections			
	Connected communication			
	Circuit fuses			
	Fuses property			
	Outside sensor			
	Room sensor			
	Current sensor			
	Safety breaker			
	Earth circuit-breaker			
	Setting emergency mode			
	Cooling			
	Pipe system, condensation insulation			

INSTALLATION INSPECTION OUTDOOR UNIT

✓	Description	Notes	Signature	Date
	Cooling circuit (section "Pipe connections")			
	System flushed			
	System evacuated			
	Vacuum attained			
	Single pipe length			
	Additional filling			
	Height difference			
	Pressurization test			
	Leak testing			
	Pipe insulation			
	Electricity (section "Electrical connections")			
	Group fuse			
	Safety breaker			
	Earth circuit-breaker			
	Heating cable type/effect			
	Communication cable connected			
	Miscellaneous			
	Condensation water pipe KVR			
	Cooling			
	Pipe system, condensation insulation			

Compatibility NIBE SPLIT

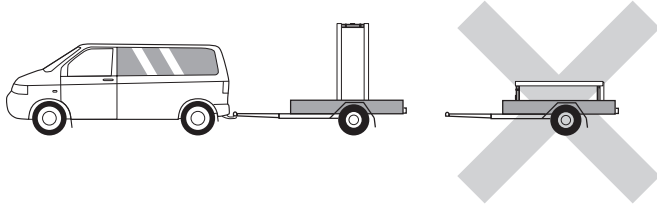
NIBE Indoor unit	NIBE Outdoor unit
SVM S332-6	AMS 20-6
SVM S332-10	AMS 20-10

Delivery and handling

Transport indoor unit

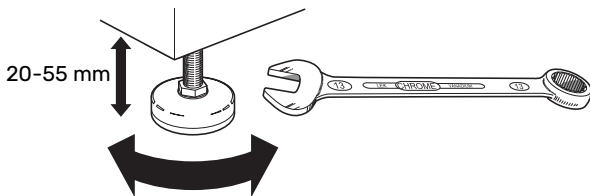
SVM S332 should be transported and stored vertically in a dry place.

However, the SVM S332 can be carefully laid on its back when being moved into the building.



Set-up indoor unit

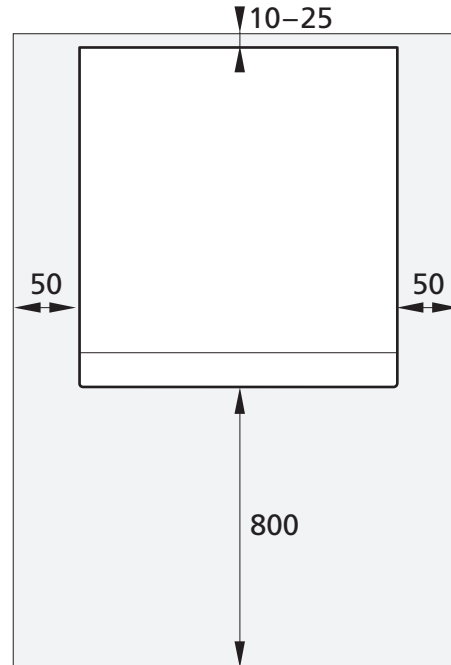
- Position SVM S332 on a solid foundation indoors that withstands water and the weight of the product.
- Use the product's adjustable feet to attain a horizontal and stable set-up.



- The space where SVM S332 is located must be frost-free.
- Since water comes from SVM S332, the area where SVM S332 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 and 400 mm above the product. All service on SVM S332 can be carried out from the front and above.



CAUTION!

Leave 10 – 25 mm free space between SVM S332 and the wall behind for routing cables and pipes.

REQUIREMENTS FOR INSTALLATION SPACE

For systems with a total refrigerant amount less than 1.84 kg R32, there is no space requirement.

AMS 20-6

AMS 20-6 is filled with 1.3 kg of refrigerant from the factory and therefore has no specific requirements regarding installation space. When the pipe length is max. 30 m, the refrigerant must be filled with max. 0.3 kg. The total refrigerant amount is always below the limit value of 1.84 kg.

AMS 20-10

AMS 20-10 is filled with 1.84 kg of refrigerant from the factory. When the pipe length is longer than 15 m, the refrigerant must be filled to max. 0.02 kg/ m. This because the total amount of refrigerant then exceeds 1.84 kg, the accessory AGS 10 (automatic gas separator) must be installed and consideration must be given to the size of the installation space with regard to the total amount of refrigerant. A total refrigerant amount exceeding 2.54 kg R32 is not permitted in the system.

Minimum floor area SVM S332-10

Pipe length (m)	Filling amount (kg)	m _c (kg) ¹	Floor area m ²
≤15	0.00	1.84	
16	0.02	1.86	4.50
17	0.04	1.88	4.55
18	0.06	1.90	4.60
19	0.08	1.92	4.65
20	0.10	1.94	4.70
21	0.12	1.96	4.74
22	0.14	1.98	4.79
23	0.16	2.00	4.84
24	0.18	2.02	4.89
25	0.20	2.04	4.94
26	0.22	2.06	4.99
27	0.24	2.08	5.04
28	0.26	2.10	5.08
29	0.28	2.12	5.13
30	0.30	2.14	5.18
31	0.32	2.16	5.23
32	0.34	2.18	5.28
33	0.36	2.20	5.33
34	0.38	2.22	5.37
35	0.40	2.24	5.42
36	0.42	2.26	5.47
37	0.44	2.28	5.52
38	0.46	2.30	5.57
39	0.48	2.32	5.62
40	0.50	2.34	5.66
41	0.52	2.36	5.71
42	0.54	2.38	5.76
43	0.56	2.40	5.81
44	0.58	2.42	5.86
45	0.60	2.44	5.91
46	0.62	2.46	5.95
47	0.64	2.48	6.00
48	0.66	2.50	6.05
49	0.68	2.52	6.10
50	0.70	2.54	6.15

¹ Total refrigerant amount

Transport outdoor unit

AMS 20 should be transported and stored vertically in a dry place.



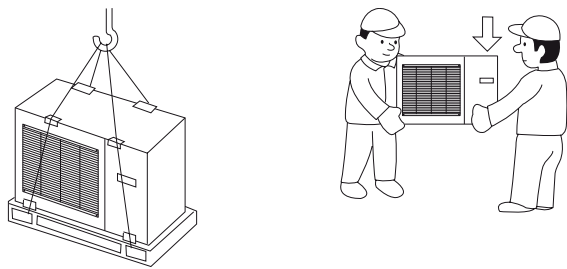
CAUTION!

Ensure that the outdoor unit cannot fall over during transport.

Check that AMS 20 has not been damaged during transport.

LIFT FROM THE STREET TO THE SET UP LOCATION

If the surface allows, the easiest method is to use a pallet truck to move the outdoor unit to the installation area.



If the outdoor unit needs to be transported across soft ground, such as a lawn, we recommend using a crane truck that can lift it to the installation location. When lifting the outdoor unit with a crane, the packaging must be intact.

If a crane truck cannot be used, the outdoor unit can be transported on an extended sack truck. The outdoor unit must be taken hold of from its heaviest side and lifting it needs two people.

LIFT FROM THE PALLET TO FINAL POSITIONING

Before lifting remove the packaging and the securing strap to the pallet.

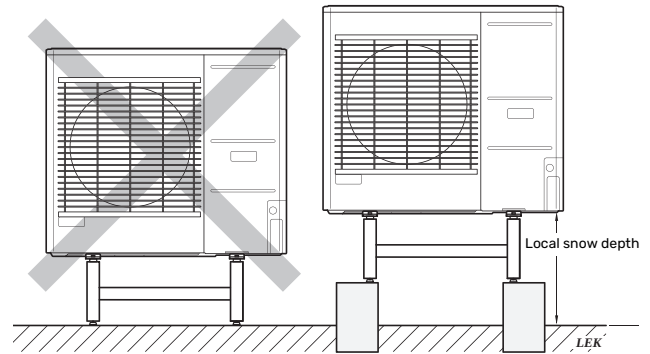
Place lifting straps around each foot. It is recommended that two people perform the lift from the pallet to the base.

SCRAPPING

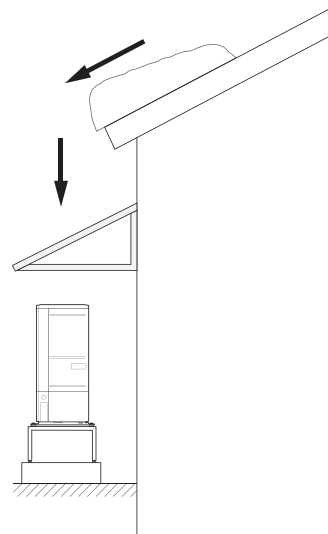
When scrapping, remove the outdoor unit in reverse order. In this case, lift by the base plate rather than the pallet!

Set-up outdoor unit

- Place AMS 20 outdoors on a solid level base that can take the weight, preferably a concrete foundation. If concrete slabs are used they must rest on asphalt or shingle.
- The concrete foundation or slabs must be positioned so that the lower edge of the evaporator is at the level of the average local snow depth, however a minimum of 300 mm.
- Do not place AMS 20 directly on the lawn or other non solid surface.



- AMS 20 should not be positioned next to noise sensitive walls, for example, next to a bedroom.
- Also ensure that the placement does not inconvenience the neighbours.
- AMS 20 must not be placed so that recirculation of the outdoor air can occur. This causes lower output and impaired efficiency.
- The evaporator should be sheltered from direct wind, which negatively affects the defrosting function. Place AMS 20 protected from wind against the evaporator.
- If there is a risk of snow sliding off the roof a protective canopy or similar should be installed over the outdoor unit, pipes and wiring.



- Large amounts of condensation water, as well as melt water from defrosting, can be produced. Condensation water must be led off to a drain or equivalent.
- Take care to prevent scratching the outdoor unit during installation.

INSTALLATION AREA

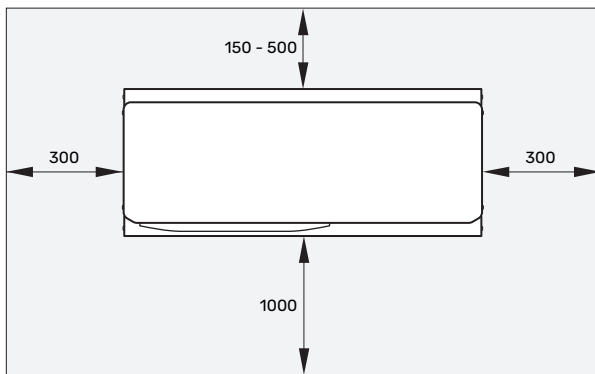
Leave a free space of at least 150 mm between SVM S332 and the house wall, but not more than 500 mm in windy locations.

Leave a free space of 1,000 mm in front of, and 1,000 mm above, the product.

Approx. 300 mm free space is needed on the right-hand side to allow the front panel to be removed.

The lower edge of the evaporator must not be lower than the level of the average local snow depth, or at least 300 mm above ground level. The base should be at least 70 mm tall.

AMS 20



CONDENSATION

Condensation runs out on to the ground below AMS 20. To avoid damage to the house and outdoor unit, the condensation must be collected and drained away.



CAUTION!

It is important for the outdoor unit's function that the condensation water is led away and that the outlet for the condensation water pipe is positioned so as to prevent damage to the building.

Pipe with heating cable (KVR), for draining the condensate drip tray, is not included. To guarantee this function, the accessory KVR should be used.

- The condensation water (up to 50 litres / 24 hrs) must be routed away by a pipe to an appropriate drain, it is recommended that the shortest outdoor length possible is used.
- The section of the pipe that can be affected by frost must be heated by the heating cable to prevent freezing.
- Route the pipe downward from the outdoor unit.
- The outlet of the condensation water pipe must be at frost free depth.
- Use a water trap for installations where air circulation may occur in the condensation water pipe.
- The insulation must seal against the bottom of the condensation water trough.

Condensate drip tray heater, control

The condensate drip tray heater starts when the following conditions are met:

1. The compressor has been in operation for at least 30 minutes after last start.
2. The ambient temperature is lower than 1 °C.

Drainage of condensation

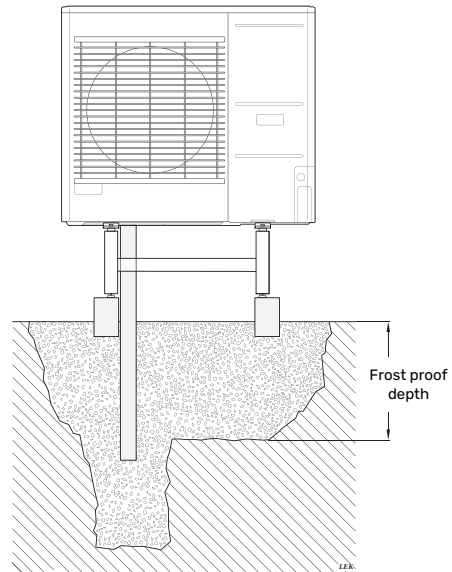


NOTE!

If none of the following recommended alternatives is used, good drainage of condensation must be provided.

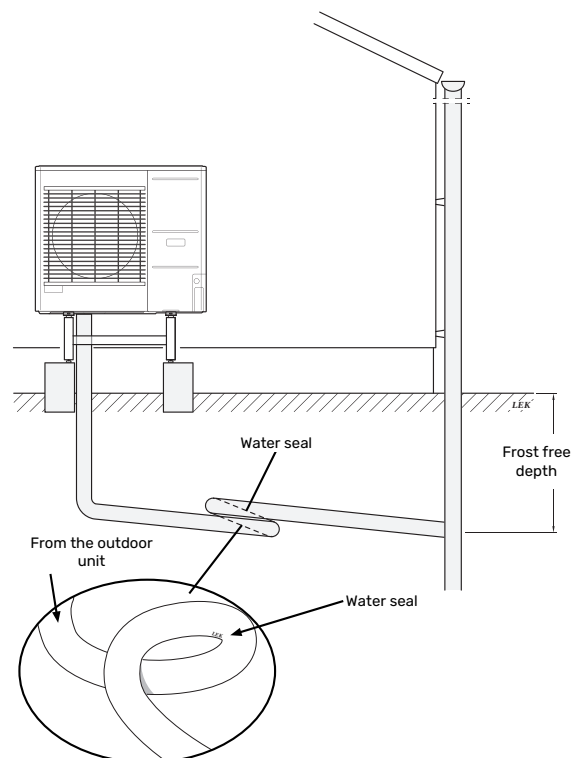
Stone caisson

If the house has a cellar, the stone caisson must be positioned to prevent the condensation water from affecting the house. Otherwise, the stone caisson can be positioned directly under the outdoor unit.



Gutter drainage

Route the pipe sloping down from the outdoor unit. The condensation water pipe must have a water seal to prevent air circulation in the pipe. The installation length can be adjusted by the size of the water seal.



Supplied components



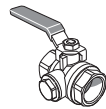
Outdoor temperature sensor
(BT1)
1 x



Room sensor(BT50)
1 x



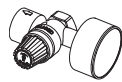
Current sensor¹
3 x



Filterball valve for the climate
system (G1") (QZ2.2)
1 x



Filterball valve for incoming
cold water (QZ2.1)
1 x



Combined safety valve
(FL2)/pressure gauge, heat-
ing medium (BP5)
1 x



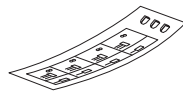
Vent hose
2 x



Clips
1 x



O-ring
8 x



Label for external control
voltage for the control sys-
tem
1 x

¹ Only SVM S332 3x400 V.

LOCATION

The kit of enclosed items is placed on top of the indoor module.

Handling the panels, indoor unit

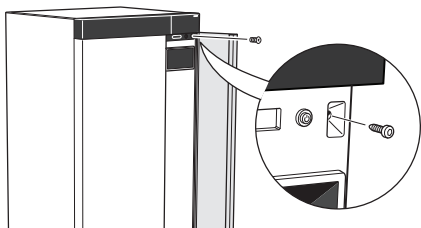
OPEN FRONT HATCH

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

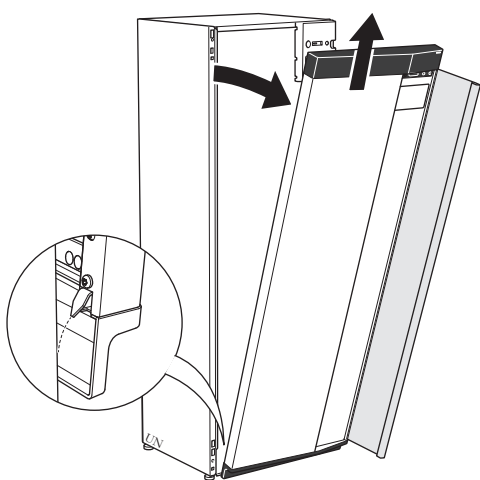


REMOVE THE FRONT

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

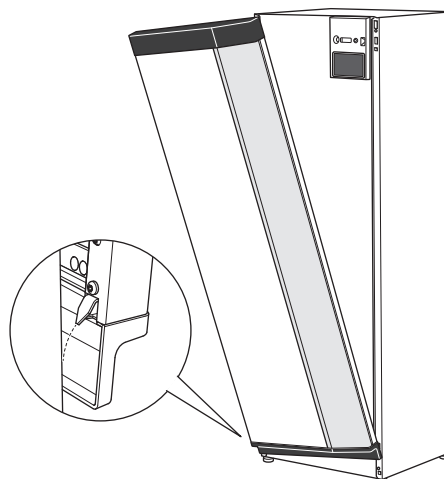


2. Pull the panel's top edge towards you and lift diagonally upwards to remove it from the frame.

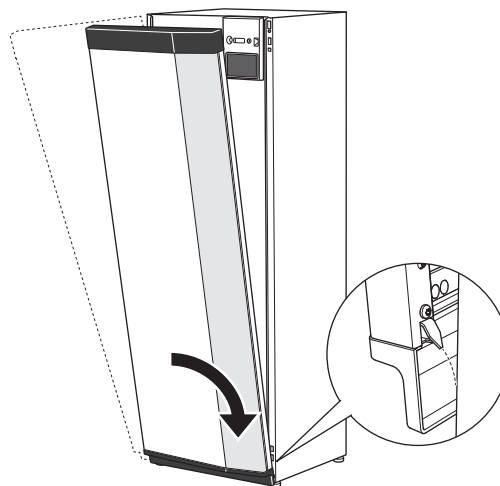


ASSEMBLE THE FRONT

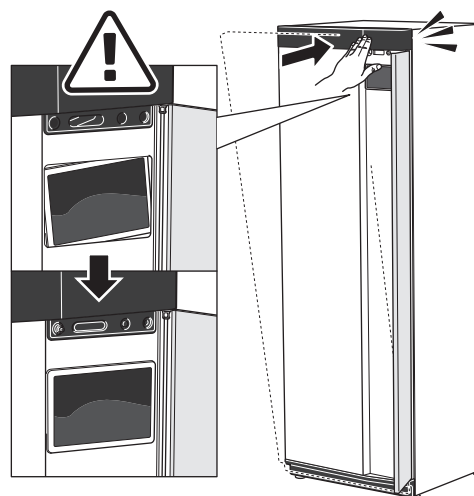
1. Hook one bottom corner of the front onto the frame.



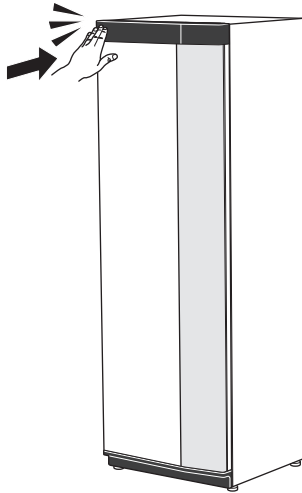
2. Hook the other corner in place.



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



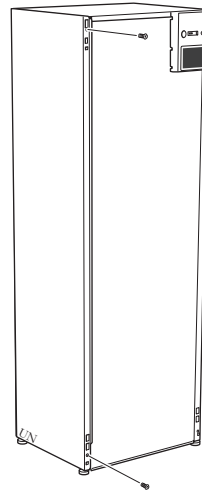
4. Press the top of the front section against the frame and screw it into place.



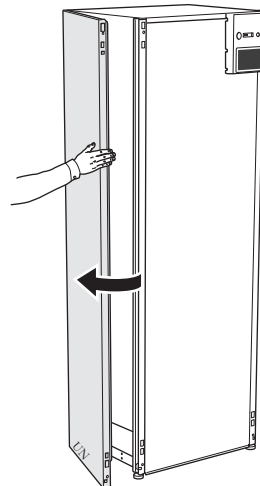
REMOVE SIDE PANEL

The side panels can be removed to facilitate the installation.

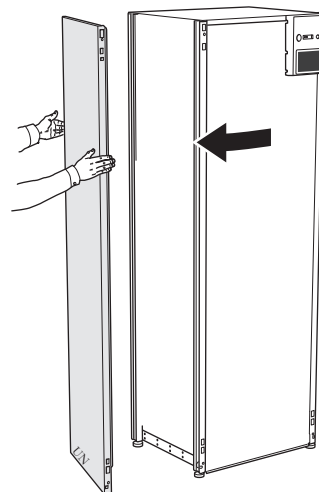
1. Remove the screws from the upper and lower edges.



2. Turn the panel outwards slightly.



3. Move the panel outwards and backwards.

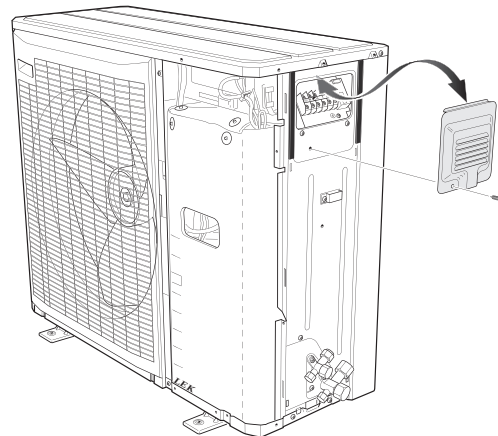
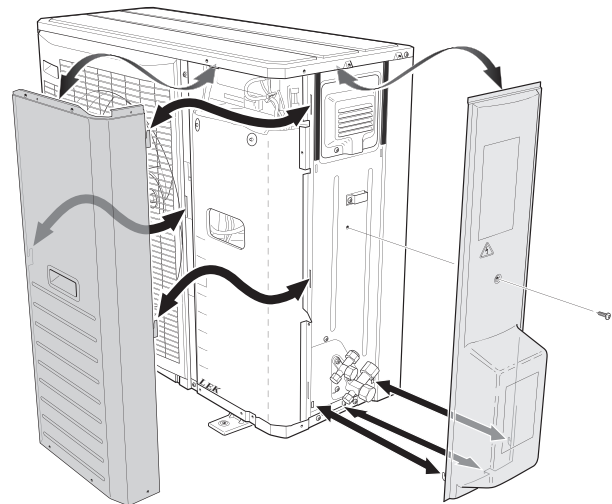
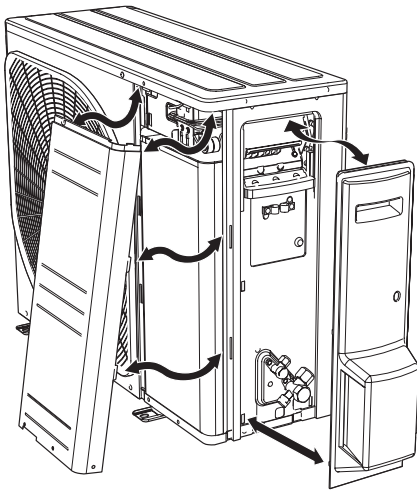
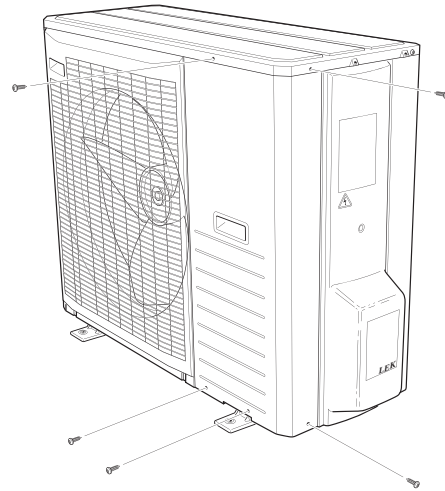
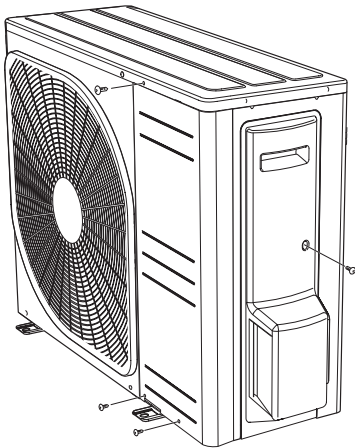


4. Assembly takes place in the reverse order.

Handling the panels, outdoor unit

AMS 20-10

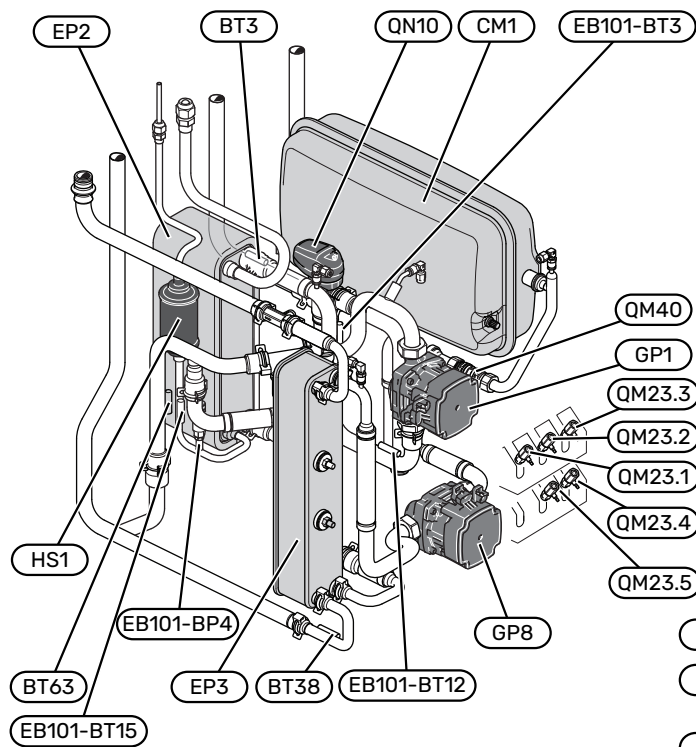
AMS 20-6



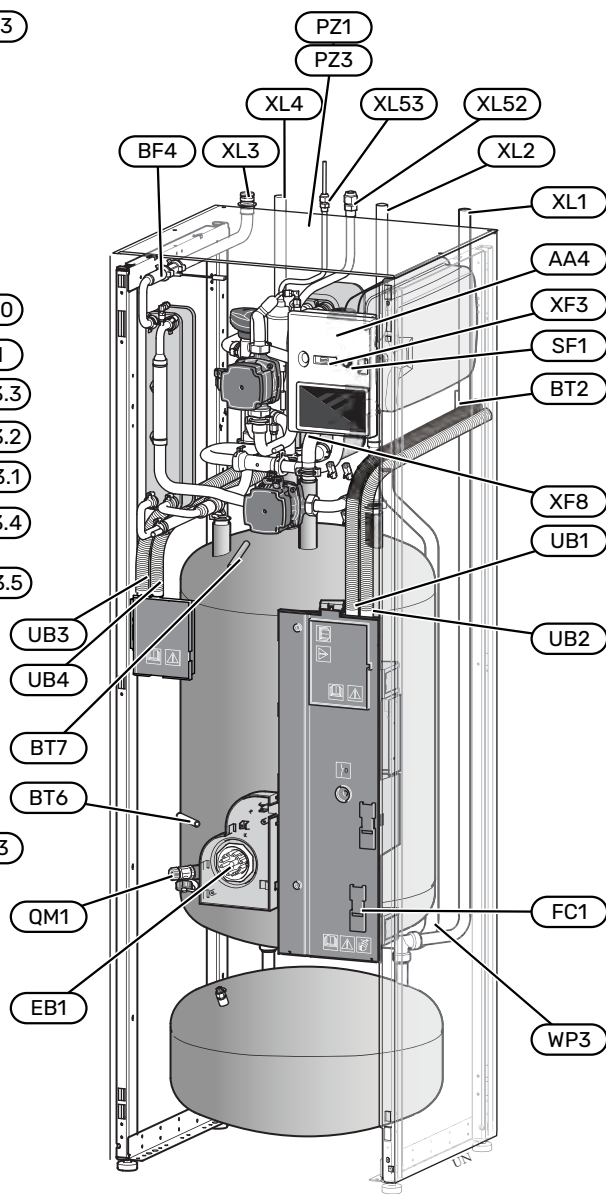
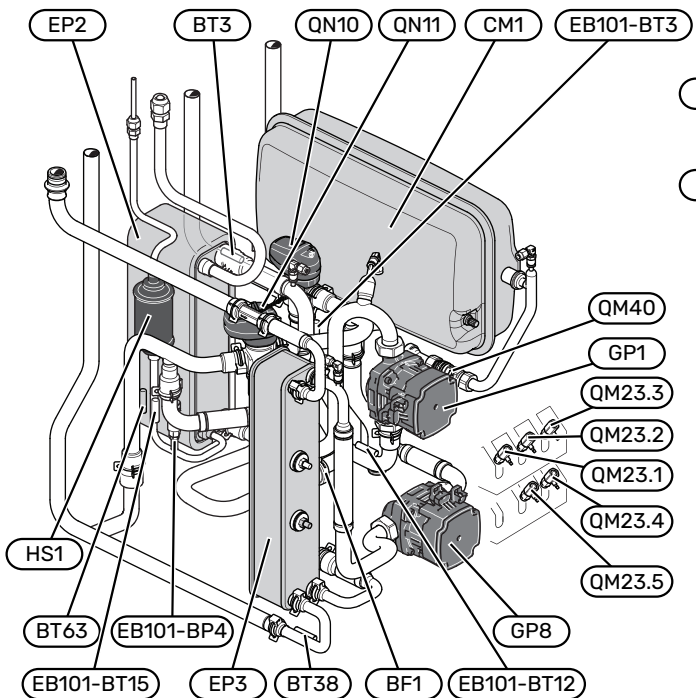
The split system's design

Indoor module's design

1x230 V



3x400 V



Pipe connections

XL1	Heating medium connection, supply
XL2	Heating medium connection, return
XL3	Cold water connection
XL4	Hot water connection
XL52	Gas line connection, supply, from outdoor unit
XL53	Liquid line connection, return, to outdoor unit

HVAC components

CM1	Expansion vessel, climate system
EP3	Hot water heat exchanger
GP1	Circulation pump
GP8	Charge pump hot water
QM1	Drain valve, heating medium
QM23.1	Vent valve, buffer vessel
QM23.2	Vent valve, expansion vessel
QM23.3	Vent valve, hot water heat exchanger
QM23.4	Vent valve, heating medium pump
QM23.5	Vent valve, condenser
QM40	Shut-off valve
QN10	Diverter valve, heating/hot water
QN11	Shunt valve ¹
WP3	Overflow pipe for condensation

¹ Only SVM S332 3x400 V.

Sensors etc.

BF1	Flow meter ¹
BF4	Flow meter hot water
EB101-BP4	Pressure sensor, condenser
BT2	Flow line sensor
EB101-BT3	Return line sensor (connected to AA23)
BT6	Controlling hot water sensor
BT7	Display hot water sensor
EB101-BT12	Supply temperature sensor after condenser
EB101-BT15	Fluid line sensor
BT38	Hot water sensor, outgoing hot water
BT63	Supply temperature sensor after additional heat

¹ Only SVM S332 3x400 V.

Electrical components

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

¹ Only SVM S332 1x230 V

Cooling components

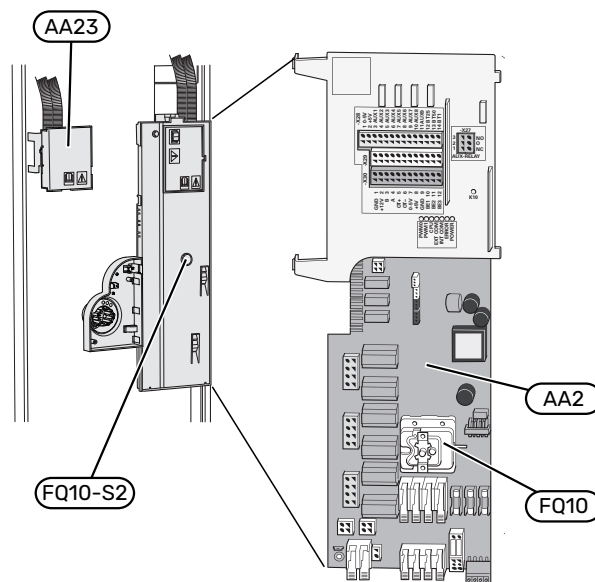
EP2	Condenser
HS1	Drying filter

Miscellaneous

PZ1	Rating plate
PZ3	Serial number
UB1-UB4	Cable gland

Designations according to standard EN 81346-2.

DISTRIBUTION BOXES

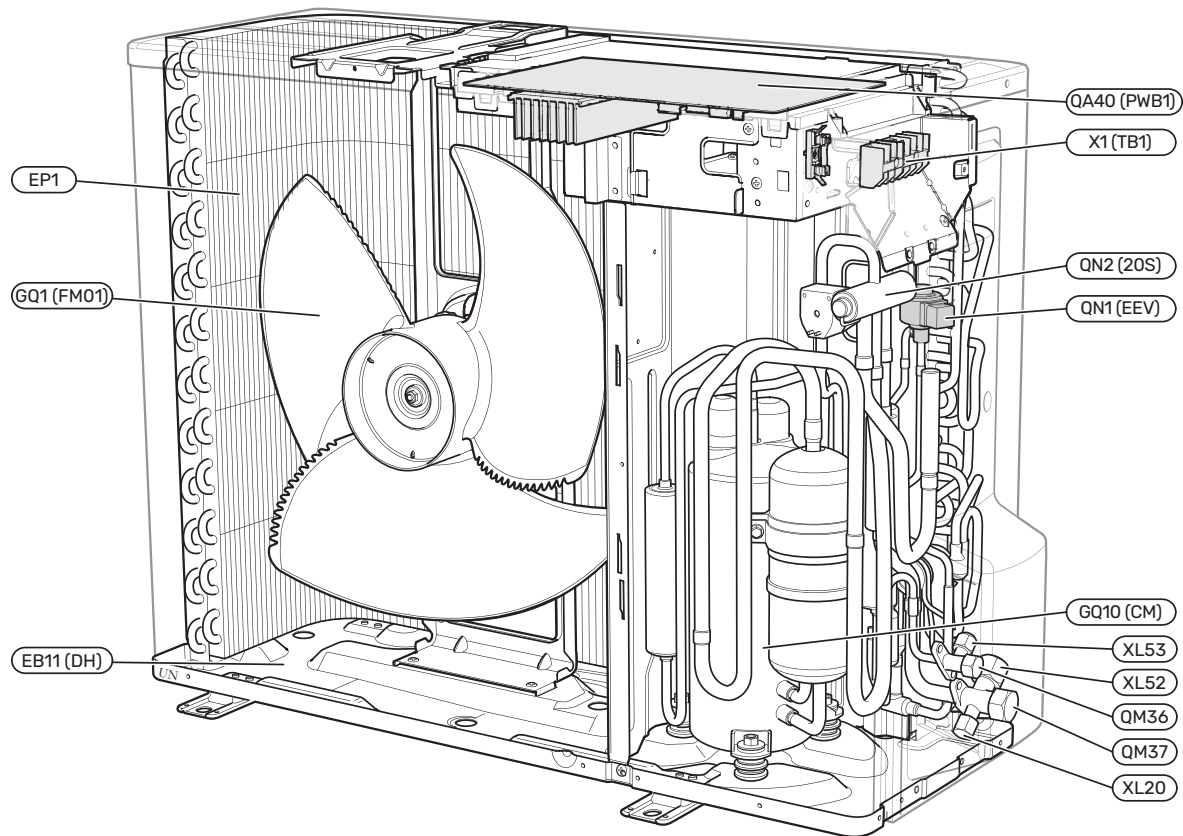


Electrical components

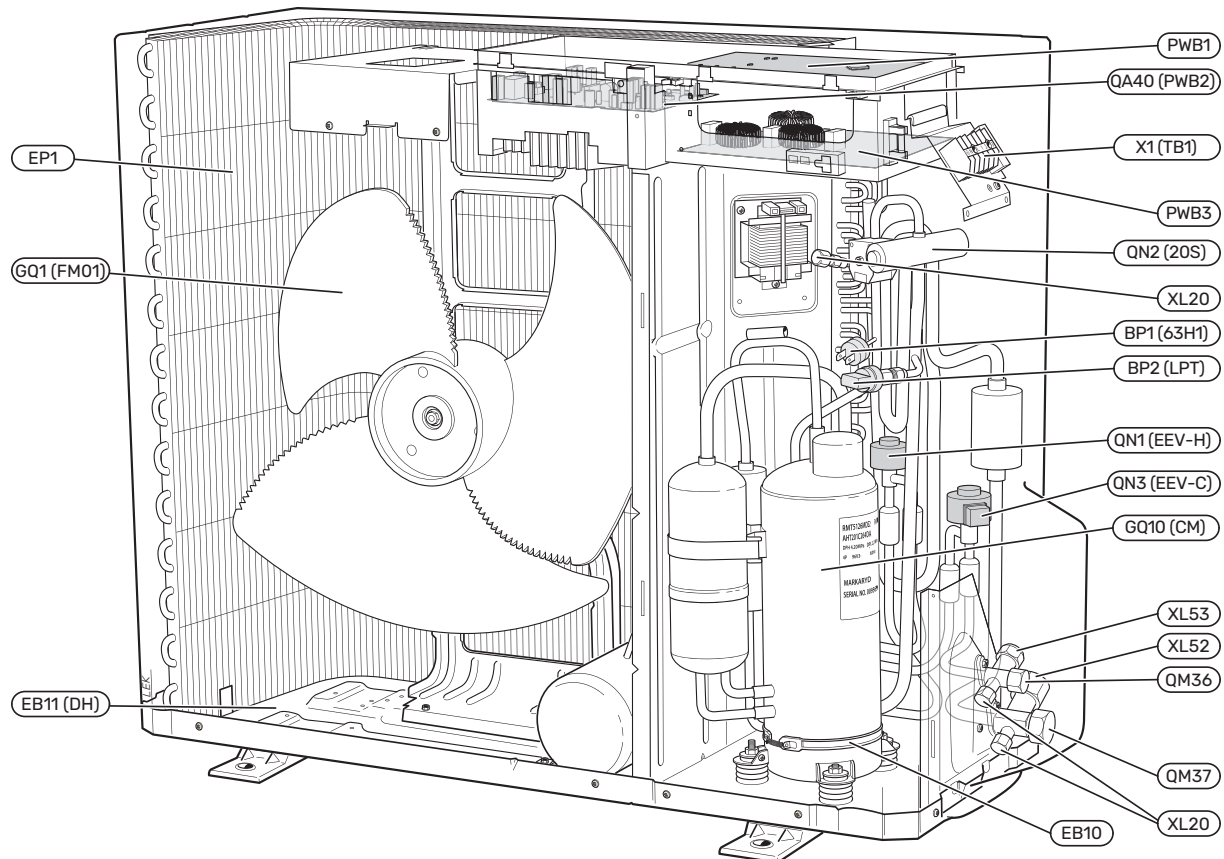
AA2	Base card
FQ10	Temperature limiter
	FQ10-S2 Reset button for temperature limiter
AA23	Communication board

The outdoor unit's design

AMS 20-6



AMS 20-10



Pipe connections

XL20	Service connection, high pressure
XL52	Gas line connection
XL53	Liquid line connection

Sensors etc.

BP1 (63H1)	High pressure switch
------------	----------------------

Electrical components

EB10 (CH)	Compressor heater
EB11 (DH)	Condensation water trough heater
GP1	Circulation pump
GQ1 (FM01)	Fan
QA40 (PWB1)	Control board with inverter unit
QA40 (PWB2)	Inverter module
(PWB3)	Filter board
X1 (TB)	Terminal block, incoming supply and communication

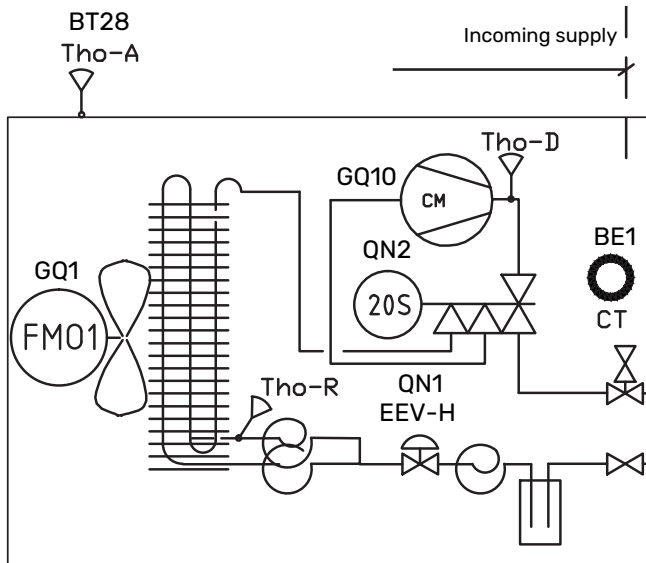
Cooling components

EP1	Evaporator
GQ10 (CM)	Compressor
QM36	Shut-off valve, liquid line
QM37	Shut-off valve, gas line
QN1 (EEV-H)	Expansion valve, heating
QN2 (20S)	Reversing valve
QN3 (EEV-C)	Expansion valve, cooling

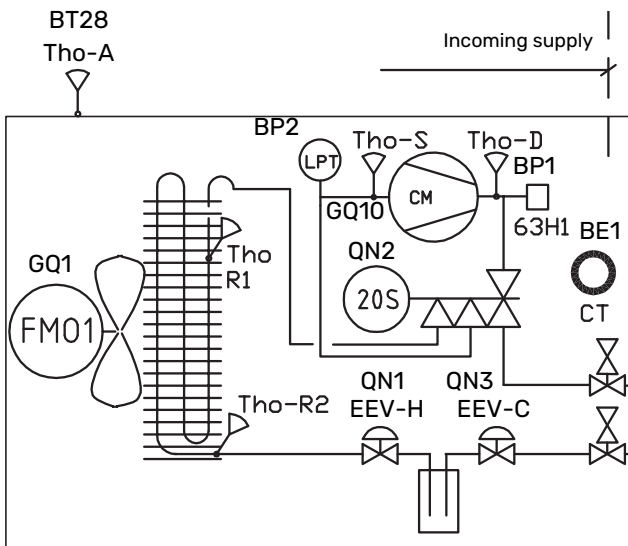
Designations within brackets according to the supplier's standard.

SENSOR PLACEMENT AMS 20

Outdoor module AMS 20-6



Outdoor module AMS 20-10



BE1 (CT)	Current sensor
BT28 (Tho-A)	Ambient sensor
BP1 (63H1)	High pressure switch
BP2 (LPT)	Low-pressure sensor
GQ1 (FM01)	Fan
GQ10 (CM)	Compressor
QN1 (EEV-H)	Expansion valve, heating
QN2 (20S)	Reversing valve
QN3 (EEV-C)	Expansion valve, cooling
Tho-D	Hot gas sensor
Tho-R	Evaporator sensor, out
Tho-R2	Evaporator sensor, in
Tho-S	Suction gas sensor

Designations within brackets according to the supplier's standard.

Pipe connections

General

Pipe installation must be carried out in accordance with current norms and directives.

The system requires the dimensions of the radiator circuit to be designed for a low temperature heating medium. At the lowest dimensioned outdoor temperature (DOT), the highest recommended temperatures are 55 °C on the supply line and 45 °C on the return line, but SVM S332 can handle up to 70 °C.



NOTE!

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.



CAUTION!

The pipe systems need to be flushed out before the indoor module is connected so that any debris cannot damage component parts.



CAUTION!

Water may drip from the safety valve's overflow pipe. The overflow pipe must be routed to a suitable drain, to prevent hot water splashes from causing harm. The overflow pipe must be inclined along its entire length to prevent pockets where water can accumulate, and must 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 placed close to electrical components.

MINIMUM SYSTEM FLOW DEFROSTING



CAUTION!

An undersized climate system can result in damage to the product and lead to malfunctions.

The dimensions of the pipes between the indoor module and the heat pump should not be less than the recommended pipe diameter. However, each climate system must be dimensioned individually to provide the recommended system flows.

The installation must be dimensioned to provide the minimum defrosting flow at 100 % circulation pump operation.

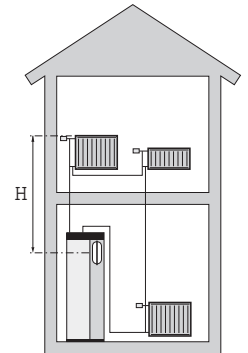
SYSTEM VOLUME

SVM S332 is equipped with an expansion vessel (CM1).

The volume of the expansion vessel is 13 litres and it is pre-pressurised as standard to 0.5 bar. As a result, the maximum permitted height "H" between the expansion vessel and the highest installed radiator is 5 m, see figure.

If the pre-pressure is not high enough, it can be increased by filling with air via the valve in the expansion vessel. Any change in the pre-pressure affects the ability of the expansion vessel to handle the expansion of the water.

The maximum system volume, excluding SVM S332, is 60 litres at the above-mentioned pre-pressure.



SYMBOL KEY

Symbol	Meaning
	Unit box
	Shut-off valve
	Tapping valve
	Non-return valve
	Mixing valve
	Circulation pump
	Immersion heater
	Expansion vessel
	Filterball
	Safety valve
	Temperature sensor
	Trim valve
	Diverter valve/shunt
	Heat exchanger
	Overflow valve
	Indoor module
	Air/water heat pump
	Domestic hot water
	Hot water circulation
	Heating system
	Heating system with lower temperature

SYSTEM DIAGRAM

SVM S332 consists of hot water heat exchanger storage tank, hot water expansion vessel, immersion heater, circulation pumps, buffer vessel and control system. SVM S332 connects to the climate system. Hot water is produced via the hot water heat exchanger.

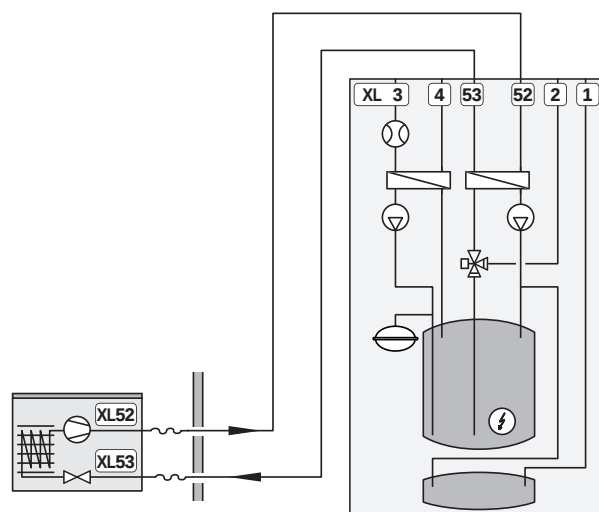
SVM S332 is designed for connection and communication with AMS 20, which together make up a complete heating installation.

When it is cold outdoors, the outdoor unit works with the indoor module, and if the outdoor air temperature falls below the outdoor unit's working range, all heating is performed by the immersion heater¹.

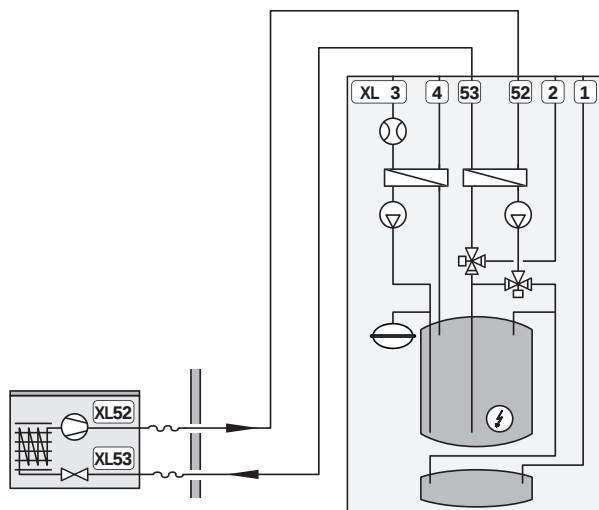
¹ Only SVM S332 3x400 V.

The indoor unit can produce hot water with the integrated immersion heater at the same time as the outdoor unit produces cooling with the compressor.

1x230 V



3x400 V



- XL1 Connection, heating medium flow line
- XL2 Connection, heating medium return line
- XL3 Connection, cold water
- XL4 Connection, hot water
- XL52 Gas line connection
- XL53 Liquid line connection

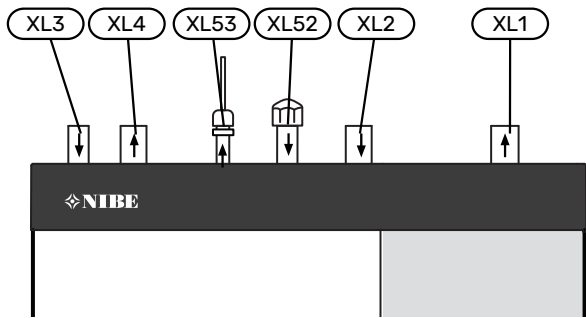


NOTE!

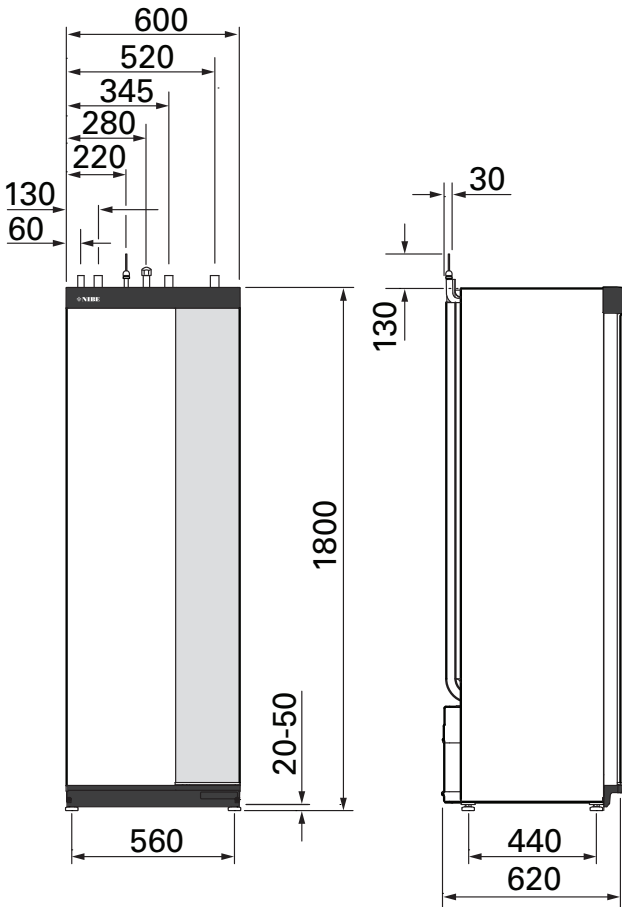
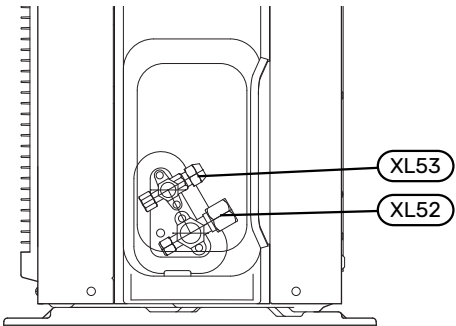
This is a principle of operation. For more detailed information about SVM S332, see section "The split system's design".

Dimensions and pipe connections

INDOOR MODULE



OUTDOOR MODULE



PIPE DIMENSIONS AND MATERIALS

Connection			SVM S332	
			6	10
XL1/XL2	Heating medium supply/re-turn Ø	mm	22 (7/8")	
XL3/XL4	Cold/hot water Ø	mm	22 (7/8")	
XL52	Gas line connection, supply, from outdoor unit Ø ¹	mm	12.7 (1/2")	15.88 (5/8")
XL53	Liquid line connection, return, to outdoor unit Ø ²	mm	6.35 (1/4")	

- ¹ Copper grade SS-EN 12735-1 or C1220T, JIS H3300. Minimum material thickness 1.0 mm.
- ² Copper grade SS-EN 12735-1 or C1220T, JIS H3300. Minimum material thickness 0.8 mm.

Connection of outdoor unit

Install refrigerant pipes between the outdoor unit and indoor unit.

LIMITATIONS, OUTDOOR UNIT

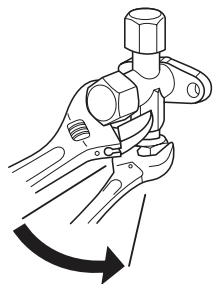
		SVM S332	
		6	10
Max. length, refrigerant pipe, one-way ¹	m	30	50
Max height difference, when SVM S332 is placed higher than outdoor unit	m	20	15
Max height difference, when SVM S332 is placed lower than outdoor unit	m	20	30

¹ If the length of the refrigerant pipes exceeds 15 metres, extra refrigerant must be added at 0.02 kg/m.

PIPE CONNECTION, REFRIGERANT PIPE

- Carry out the pipe installation, on the refrigerant side between the outdoor unit (AMS 20) and the indoor module (SVM S332), with the shut-off valves (QM36, QM37) closed.
- Connect refrigerant pipes between the shut-off valves (QM36 and QM37) on the outdoor unit (AMS 20) and the connections (XL52 and XL53) on the indoor module (SVM S332).
- Ensure that water or dirt does not enter the pipes.
- Bend the pipes with as large a radius as possible (at least 4 times the pipe diameter). Do not bend a pipe repeatedly. Use a bending tool.
- Connect the flare connector and tighten to the following torque. Use the "Tightening angle" if a torque wrench is not available.

Outer diameter, copper pipe (mm)	Tightening torque (Nm)	Tightening angle (°)	Recommended tool length (mm)
Ø6.35 (1/4")	14~18	45~60	150
Ø9.52 (3/8")	34~42	30~45	200
Ø12.7 (1/2")	49~61	30~45	250
Ø15.88 (5/8")	68~82	15~20	300

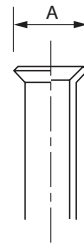


CAUTION!

Gas shielding must be used when soldering.

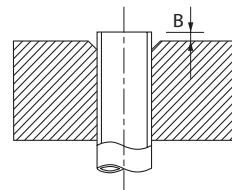
Flare connections

Expansion:



Outer diameter, copper pipe (mm)	A (mm)
Ø6.35 (1/4")	9.1
Ø9.52 (3/8")	13.2
Ø12.7 (1/2")	16.6
Ø15.88 (5/8")	19.7

Ejection:



Outer diameter, copper pipe (mm)	B, with a R32/410A tool (mm)	B, with a conventional tool (mm)
Ø6.35 (1/4")	0.0~0.5	1.0~1.5
Ø9.52 (3/8")	0.0~0.5	0.7~1.3
Ø12.7 (1/2")	0.0~0.5	1.0~1.5
Ø15.88 (5/8")	0.0~0.5	0.7~1.3

(Follow instructions for the tool used.)

Use without outdoor unit

The indoor module can be used without an outdoor unit, i.e. solely as an electric boiler, to produce heat² and hot water, for example before the outdoor unit is installed.

In order to use the indoor module alone, you need to adjust the software settings according to section "Commissioning without outdoor unit".

Climate system

A climate system is a system that regulates the indoor temperature with the help of the control system in SVM S332 and, for example, radiators, underfloor heating, underfloor cooling, fan coils, etc.

CONNECTING THE CLIMATE SYSTEM

Install as follows:

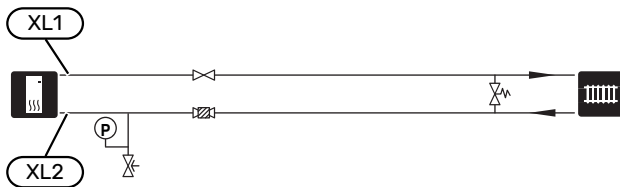
- enclosed combined safety valve (FL2) / pressure gauge (BP5)
- enclosed filterball (QZ2.2)

Install the filterball as close to SVM S332 as possible. The filterball must be accessible for cleaning the filter and magnet.

- shut-off valve

Install the shut-off valve as close to SVM S332 as possible.

- When connecting to a system with thermostats, either a bypass valve must be fitted or, alternatively, some of the thermostats must be removed to ensure there is sufficient flow and heat emission.



² Only SVM S332 3x400 V with shunt valve QN11.

COOLING

Cooling is produced by the outdoor unit and then passes through the indoor module and is distributed in the property using, for example, fan coils or under floor cooling.

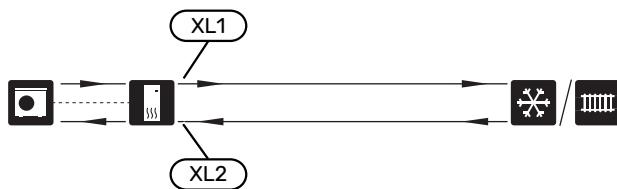
Condensation insulation

Effective insulation of cold pipes (down to 7 °C) requires the installation of insulation and vapour barriers, in order to avoid energy losses and the risk of damage to surrounding parts of the building or other problems due to condensation.

Take the necessary steps (e.g. adapt the supply temperature according to the property's conditions) to ensure that any condensation does not give rise to moisture damage in the property.

Heating and cooling in the same system

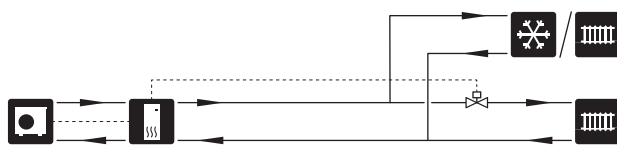
In installations where heat and cooling can be required at different times, heat and cooling can be distributed via the same climate system.



Separate systems for heating and cooling with shut-off valve

In installations where some climate systems are not protected against condensation, the flow to these climate systems can be shut off with a shut-off valve (QM31) during cooling operation.

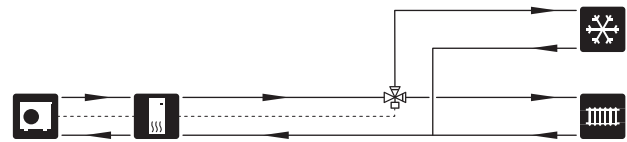
1. Connect in the shut-off valve to the AUX output in SVM S332.
2. In menu 7.4 - "Selectable in/outputs" select "Cooling mode indication".



Separate systems for heating and cooling with diverter valve

In installations where you want to heat and cool in separate climate systems, e.g. heating via under floor heating and cooling via fan coils, a diverter valve (QN12) is installed.

1. Connect the diverter valve on the AUX output in SVM S332.
2. In menu 7.4 - "Selectable in/outputs" select "Cooling mode indication".



Cold and hot water

The settings for hot water are made in menu 7.1.1 - "Hot water".

CONNECTING COLD AND HOT WATER

Install as follows:

- non-return valve

- enclosed filterball (QZ2.1)

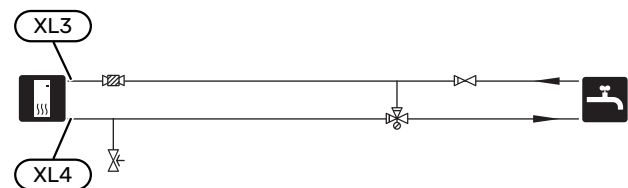
Install the filterball as close to SVM S332 as possible.

- pressure relief valve

The safety valve must have an opening pressure of max. 1.0 MPa (10.0 bar).

- mixing valve

A mixer valve must also be installed, if the factory setting for hot water is changed. National regulations must be observed.



Installation alternative

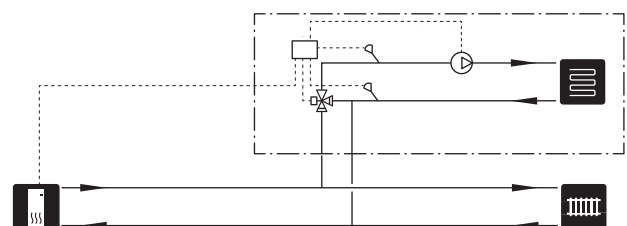
SVM S332 can be installed in several different ways, some of which are shown here.

Further option information is available at nibe.eu and in the respective assembly instructions for the accessories used. See page 78 for a list of the accessories that can be used with SVM S332.

EXTRA CLIMATE SYSTEM

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.



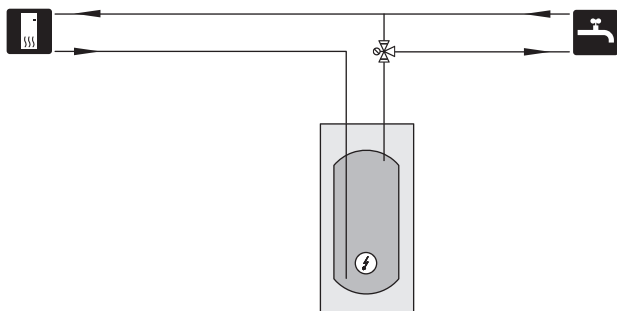
EXTRA HOT WATER HEATERS

The system should be supplemented with an extra water heater, if a large bath tub or other significant consumer of hot water is installed.

Water heater with immersion heater

In a water heater with an immersion heater, the water is initially heated by the heat pump. The immersion heater in the water heater is used for keeping warm and when the heat pump does not have sufficient power.

The water heater's flow is connected after SVM S332.



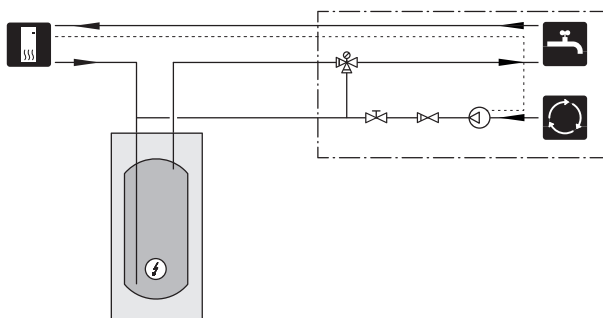
HOT WATER CIRCULATION

A circulation pump can be controlled by SVM S332 to circulate the hot water. The circulating water must have a temperature that prevents bacterial growth and scalding, and national standards must be satisfied.

The HWC return is connected to a freestanding water heater.

The circulation pump is activated via the AUX output in menu 7.4 - "Selectable in/outputs".

HWC can be supplemented with a hot water sensor for HWC (BT70) and (BT82), which is connected via the AUX input and activated in menu 7.4 - "Selectable in/outputs".



DELAYED SUPPLY LINE FOR COOLING

When the installation switches to cooling production e.g. from hot water production, a certain amount of heat escapes into the cooling system. To avoid this, a diverter valve is installed (QN44) in the system.

Via the diverter valve, the supply line circulates back to the indoor unit until the temperature in the charge circuit starts to approach the desired supply temperature, at which point the valve switches to the climate system. The temperature is measured with an internal sensor in the outdoor unit, no additional sensor is needed.

The diverter valve is activated via the AUX output in menu 7.4 - "Selectable in/outputs", "Cool. mode ind. w delay".

