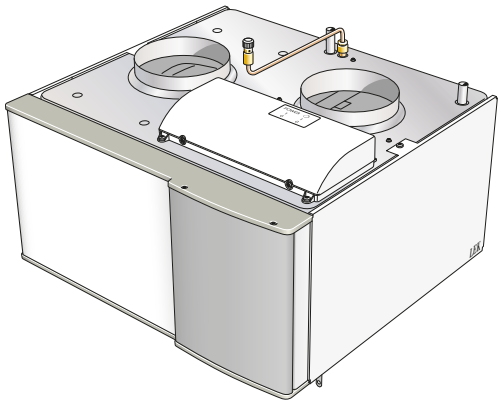
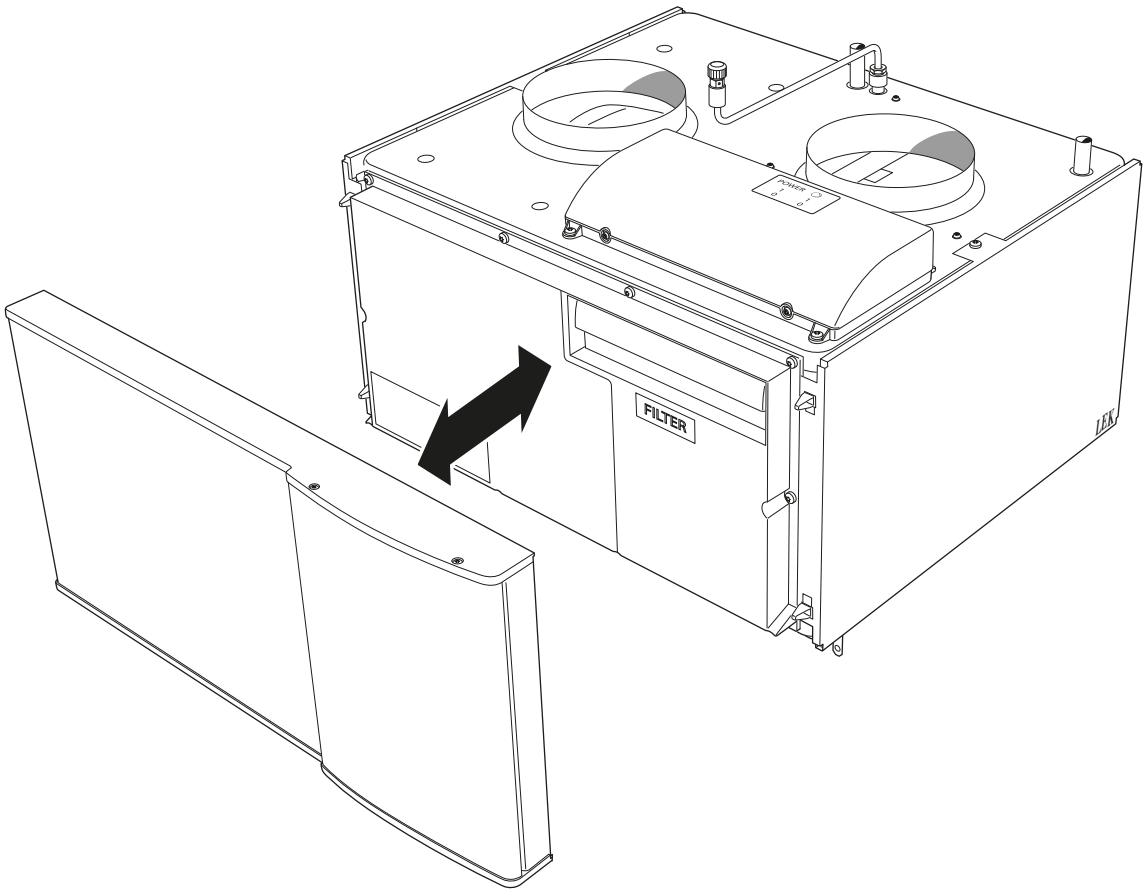


Installer manual

NIBE FLM

Exhaust air module

IHB GB 1414-4
031375


POWER
FILTER
LEK

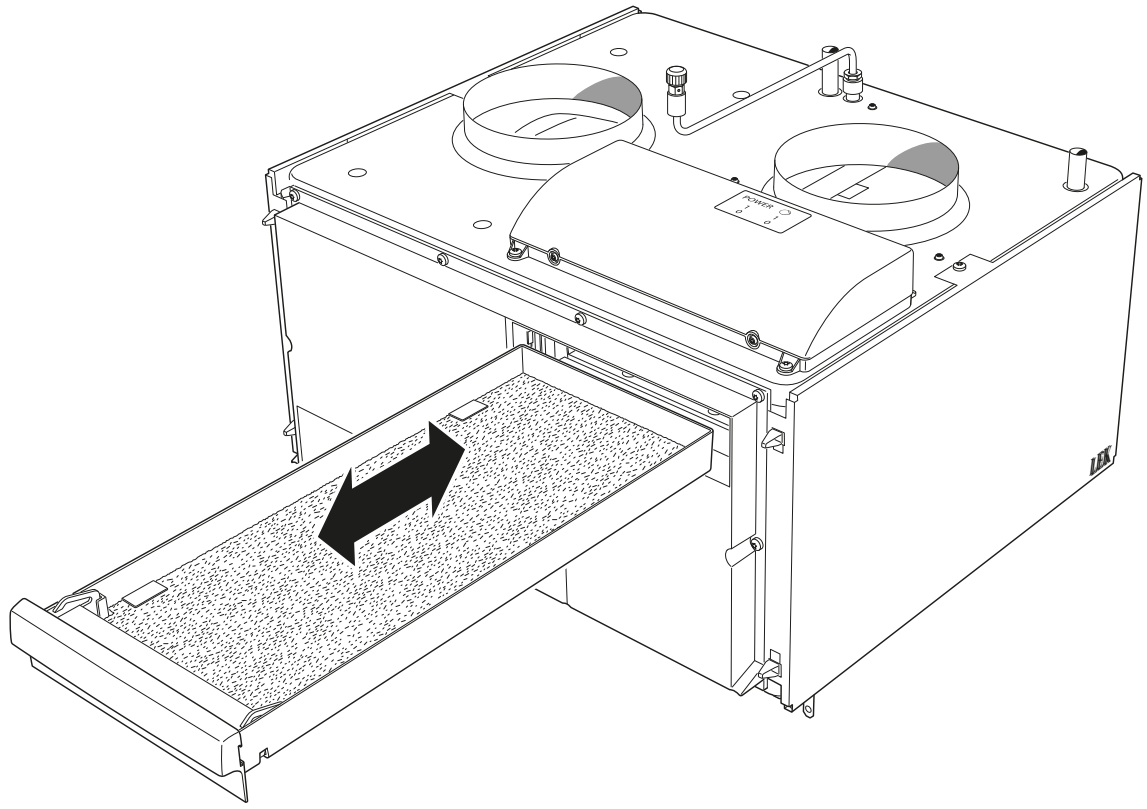

POWER
LEK

Table of Contents

1 Important information

Safety information

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

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

Rights to make any design or technical modifications are reserved.

Symbols

NOTE

This symbol indicates danger to machine or person.

Caution

This symbol indicates important information about what you should observe when maintaining your installation.

TIP

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

Marking

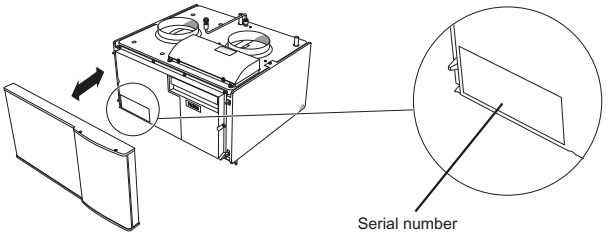
NIBE FLM is CE marked and fulfils IP21.

The CE marking means that NIBE ensures that the product meets all regulations that are placed on it based on relevant EU directives. The CE mark is obligatory for most products sold in the EU, regardless where they are made.

IP21 means that the product can be touched by hand, that objects with a diameter larger than or equivalent to 12.5 mm cannot penetrate and cause damage and that the product is protected against vertically falling drops.

Serial number

The serial number can be found at the bottom left inside the front cover.



Caution

Always give the product's serial number (14 digits) when reporting a fault.

Country specific information

Installer manual

This installer manual must be left with the customer.

Passive cooling

For passive cooling, minimum software version 5539R5 is required.

Inspection of the installation

Fill in the page for information about installation data in the User manual.

Current regulations require the heating installation to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person. Current regulations require the exhaust air module to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person. Fill in the page for information about installation data in the User manual.

✔	Description	Notes	Signature	Date
Ventilation (page 12)				
	Setting the ventilation flow			
Brine (page 9)				
	Non-return valve			
	System flushed			
	System vented			
	Antifreeze			
	Expansion vessel			
	Particle filter			
	Safety valve			
	Shut off valves			
	Circulation pump setting			
	Checking the condensation water seal			
	Trim valve			
Electricity (page 14)				
	Supply connected 230 V			
	Circuit fuses			

Contact information

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

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

CH **NIBE Wärmetechnik AG**, Winterthurerstrasse 710, CH-8247 Flurlingen

Tel: (52) 647 00 30 Fax: (52) 647 00 31 E-mail: info@nibe.ch www.nibe.ch

CZ **Druzstevni zavody Drazice s.r.o**, Drazice 69, CZ - 294 71 Benatky nad Jizerou

Tel: +420 326 373 801 Fax: +420 326 373 803 E-mail: nibe@nibe.cz www.nibe.cz

DE **NIBE Systemtechnik GmbH**, Am Reiherpfahl 3, 29223 Celle

Tel: 05141/7546-0 Fax: 05141/7546-99 E-mail: info@nibe.de www.nibe.de

DK **Vølund Varmeteknik A/S**, Member of the Nibe Group, Brogårdsvej 7, 6920 Videbæk

Tel: 97 17 20 33 Fax: 97 17 29 33 E-mail: info@volundvt.dk www.volundvt.dk

FI **NIBE Energy Systems OY**, Juurakkotie 3, 01510 Vantaa

Puh: 09-274 697 0 Fax: 09-274 697 40 E-mail: info@nibe.fi www.nibe.fi

FR **AIT France,** 10 rue des Moines, 67000 Haguenau

Tel : 03 88 06 24 10 Fax : 03 88 06 90 15 E-mail: info@nibe.fr www.nibe.fr

GB **NIBE Energy Systems Ltd**, 3C Broom Business Park, Bridge Way, Chesterfield S41 9QG

Tel: 0845 095 1200 Fax: 0845 095 1201 E-mail: info@nibe.co.uk www.nibe.co.uk

NL **NIBE Energietechniek B.V.**, Postbus 634, NL 4900 AP Oosterhout

Tel: 0168 477722 Fax: 0168 476998 E-mail: info@nibenl.nl www.nibenl.nl

NO **ABK AS**, Brobekkveien 80, 0582 Oslo, Postadresse: Postboks 64 Vollebekk, 0516 Oslo

Tel. sentralbord: +47 23 17 05 20 E-mail: post@abkklima.no www.nibeenergysystems.no

PL **NIBE-BIAWAR Sp. z o. o.** Aleja Jana Pawła II 57, 15-703 BIAŁYSTOK

Tel: 085 662 84 90 Fax: 085 662 84 14 E-mail: sekretariat@biawar.com.pl www.biawar.com.pl

RU © **"EVAN"** 17, per. Boynovskiy, Nizhny Novgorod

Tel./fax +7 831 419 57 06 E-mail: info@evan.ru www.nibe-evan.ru

SE **NIBE AB Sweden**, Box 14, Hannabadsvägen 5, SE-285 21 Markaryd

Tel: +46-(0)433-73 000 Fax: +46-(0)433-73 190 E-mail: info@nibe.se www.nibe.se

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

2 Delivery and handling

Transport

The exhaust air module should be transported and stored in the dry.

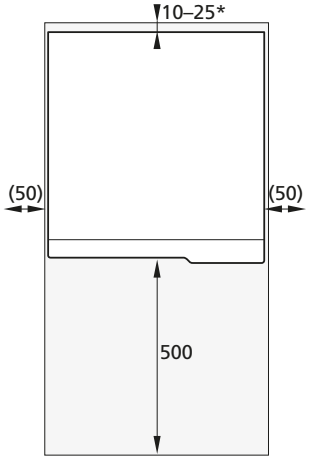
Assembly

NIBE FLM is installed on top of the ground heat pump or freestanding on brackets. Noise from the circulation pump or fan can be transferred to the brackets.

- 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 space of 500 mm in front of the exhaust air module. Approximately 50 mm free space is required on each side in order to open the side hatches. The hatches do not need to be opened during service, all service on NIBE FLM can be carried out from the front.

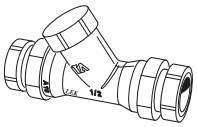


*Depending on routing of supply cables and pipes.

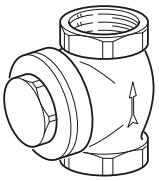
NOTE

Ensure that there is sufficient space (300 mm) above the exhaust air module for installing ventilation hoses.

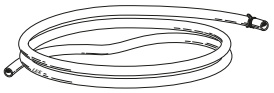
Supplied components



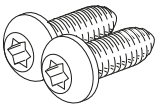
Trim valve Ø 15 mm



Non-return valve Ø 32 mm



Condensation water hose Ø 20 mm



2 x screws (T25) for installing NIBE FLM on F1145/F1155/F1245/F1255/F1345

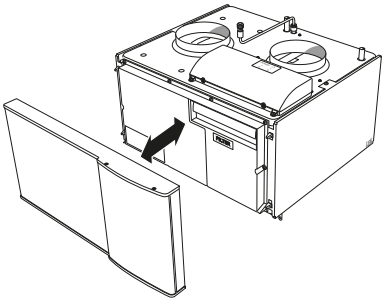
Location

The bag of supplied items is placed on top of NIBE FLM.

Removing the covers

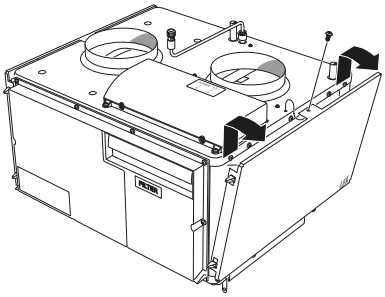
Front cover

1. Remove the service cover by pulling it straight out.

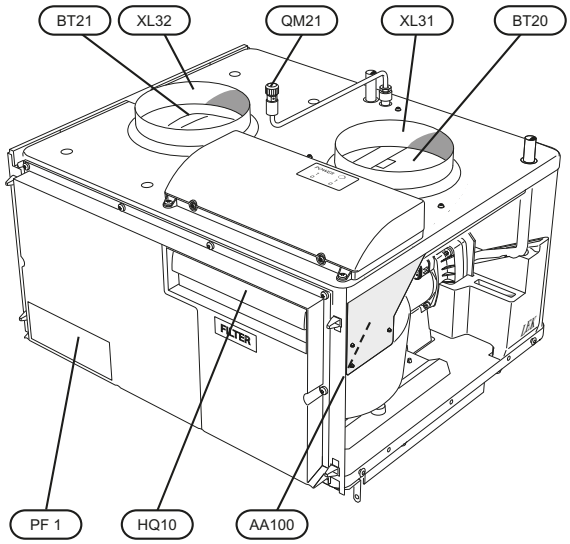


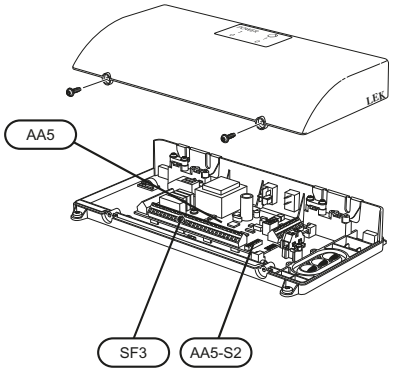
Side covers

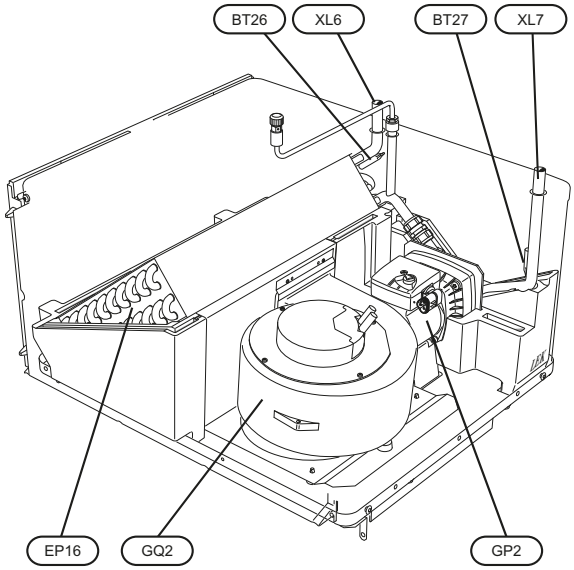
1. Undo the screws at the upper edge
2. Lift the side hatches upwards and twist the cover outwards slightly.
3. Assembly takes place in the reverse order.

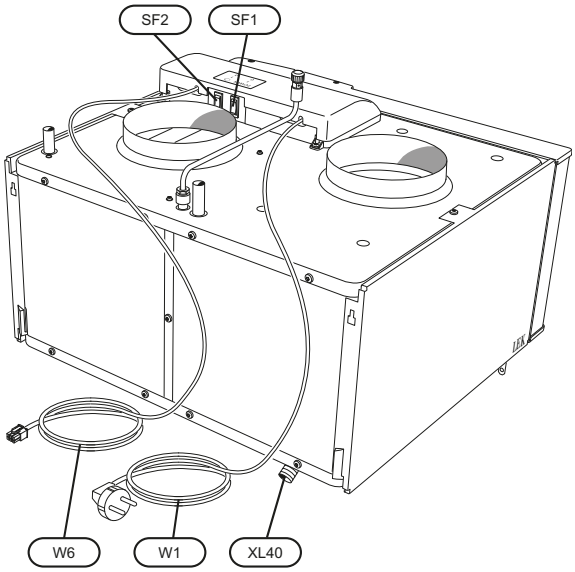


3 The design of the exhaust air module









Exhaust air module

AZ	NIBE FLM

Pipe connections

XL6	Connection, brine in, compression ring Ø 15 mm
XL7	Connection, brine out, compression ring Ø 15 mm
XL31	Ventilation connection exhaust air, Ø 160 mm
XL32	Ventilation connection extract air, Ø 160 mm
XL40	Drip-pan drain

HVAC components

QM21	Venting brine
GP2	Circulation pump
EP16	Heat exchanger

Sensors etc.

BT20	Temperature sensor, exhaust air
BT21	Temperature sensor, extract air
BT26	Temperature sensor, collector in
BT27	Temperature sensor, collector out

Electrical components

AA5	Accessory card
AA5-S2	Dip switch
AA100	Joint card
SF1	Switch, position 0 - 1, main switch
SF2	Switch, position 0 - 1, circulation pump
SF3	Potentiometer
W1	Cord with connection plug
W6	Control cable

Ventilation

GQ2	Fan
HQ10	Air filter

Miscellaneous

PF1	Type plate

Designations in component locations according to standard IEC 81346-1 and 81346-2.

4 Pipe and ventilation connections

General pipe connections

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

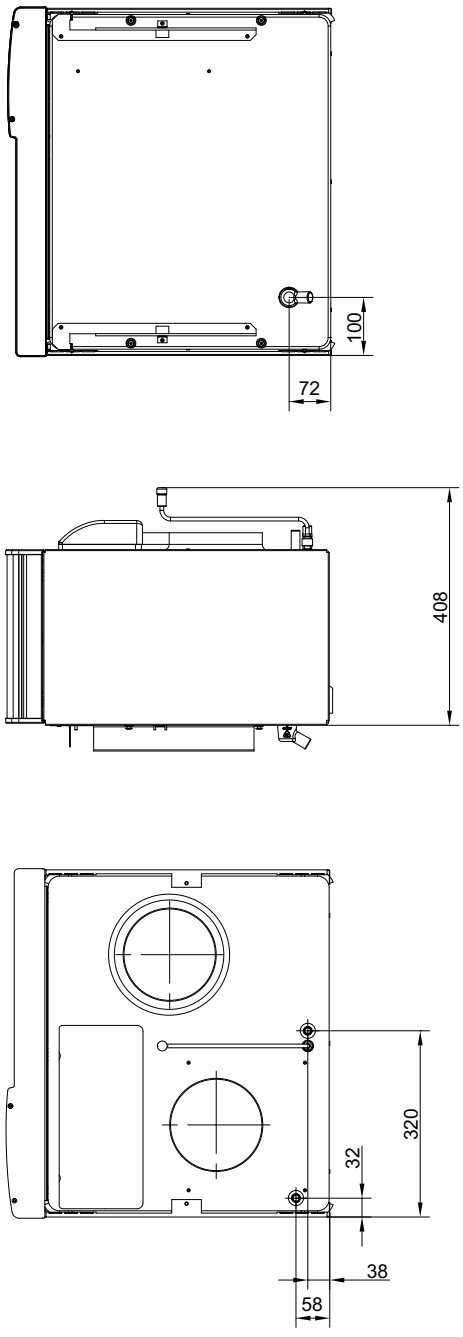
Lowest permitted temperature on incoming brine is -8 °C.

Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.

Symbol key

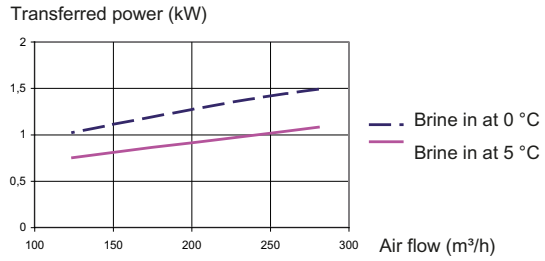
Symbol	Meaning
	Venting valve
	Shut-off valve
	Non-return valve
	Control valve
	Shunt / shuttle valve
	Safety valve
	Temperature sensor
Ⓟ	Pressure gauge
	Circulation pump
	Particle filter
	Compressor
	Heat exchanger

Dimensions and pipe connections



Brine side

Output transfer to brine

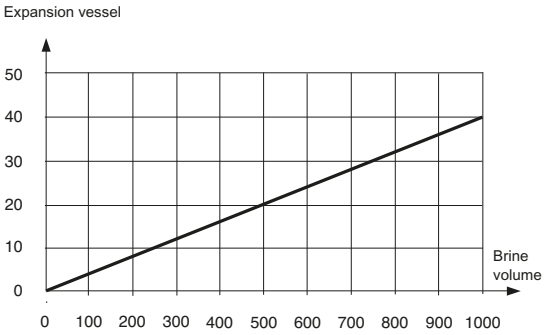


The diagram shows the effect transferred from the ventilation air to the brine and applies to an air temperature of +20°C and 50% relative air humidity.

Expansion vessel

The brine circuit must be supplied with a pressure expansion vessel (CM3). If there is already a level vessel (CM2) installed this should be replaced. The brine side must be pressurised to at least 0.5 bar.

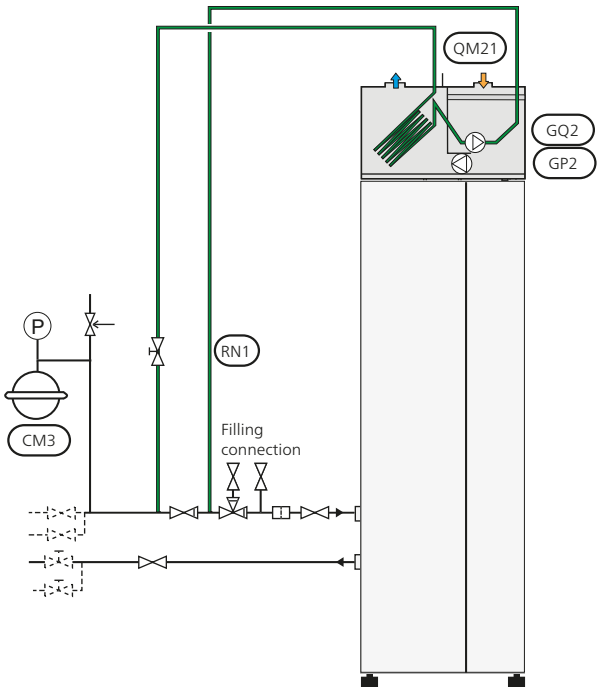
The pressure expansion vessel should be dimensioned as set out in the diagram, to prevent operating disturbances. The pressure expansion vessel covers the temperature range from -10 °C to +20 °C for the brine at a pre-pressure of 0.5 bar and the safety valve's opening pressure of 3 bar.



Trim valve

The brine circuit is supplied with trim valve (RN1). This is necessary for adjusting the brine flow.

Pipe connection standard (cooling medium)

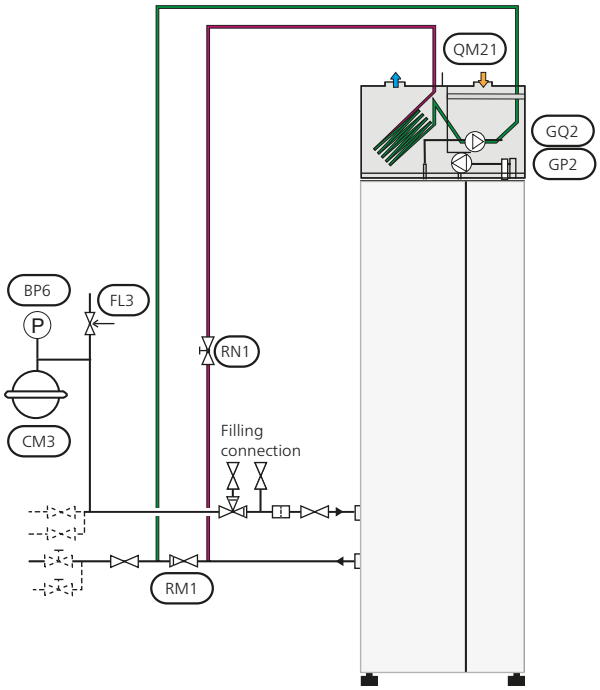


NOTE

Venting may be necessary at installation and after a period of use. Vent through venting valve (QM21). When venting, the switch for the circulation pump (SF2) must be set to "0".

This pipe routing applies for passive cooling

FLM can be installed i in the brine circuit after the heat pump in the direction of flow where passive cooling can be prioritised.

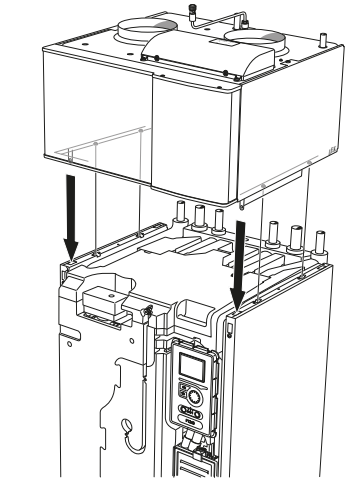


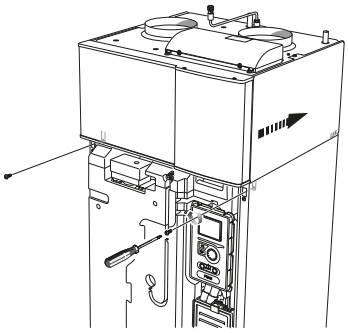
BP6	Pressure gauge
CM3	Pressure expansion vessel (According to recommendations).
FL3	Safety valve, collector side
GP2	Circulation pump, brine 1
GQ2	Exhaust air fan
HQ2	Particle filter
QM21	Venting, brine
RM1	Non-return valve (Included in NIBE FLM)
RN1	Trim valve (Included in NIBE FLM)

Connecting to F1145/F1155/F1245/F1255

1. Remove the front cover from the heat pump.
2. Remove the top panel from the heat pump (installed with 6 x screws).
3. Install NIBE FLM from the top and slide into position.
4. Secure NIBE FLM with the 2 supplied screws.
5. Connect brine and ventilation pipes.
6. Reinstall the front cover on the heat pump.

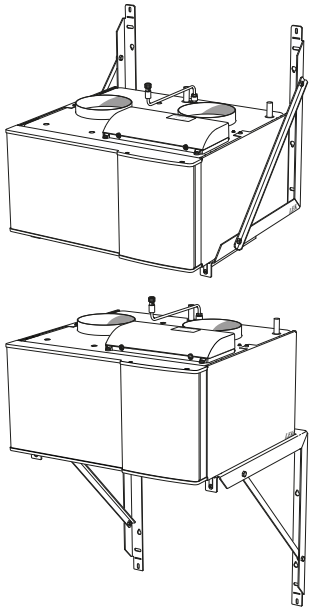
NIBE FLM can also be installed freestanding on brackets.





Connecting to another heat pump

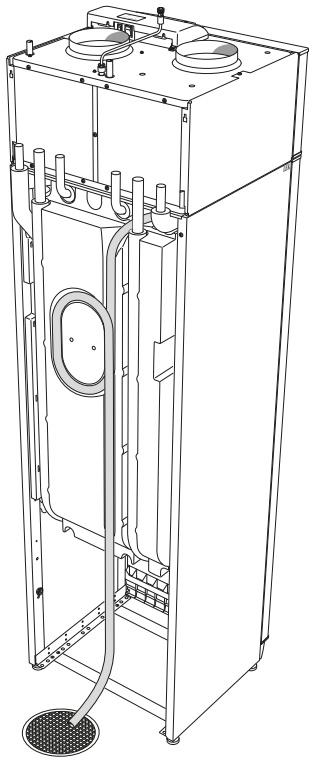
1. Install NIBE FLM on brackets.
2. Connect brine and ventilation pipes.



Condensation water hose

1. Connect the condensation water hose to the drip-pan drain (XL40).
2. Shape the hose into a water seal (see image). If NIBE FLM is connected to F1245/F1255 there is space for the hose and the water seal in the heat pump's insulation.
3. Route the hose to a floor drain or similar.
4. Refill the water seal with water.

Ensure that the end of the hose runs out above the water level in the floor drain. The hose must be easily accessible for future cleaning.



General ventilation connection

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

To prevent fan noise being transferred to the ventilation devices, it may be a good idea to install a silencer in the duct. This is especially important if there are ventilation devices in bedrooms.

Connections must be made via flexible hoses, which must be installed so that they are easy to replace. The extract air duct must be provided with diffusion-tight insulation (PE30) over its entire length. Ensure that the condensation insulation is sealed at any joints and/or at lead in nipples, silencers, roof cowls or similar. Provision must be made for inspection and cleaning of the duct. Make sure that there are no reductions of cross-sectional area in the form of creases, tight bends etc, since this will reduce the ventilation capacity. The air duct system must be a minimum of air tightness class B.

Exhaust air duct/kitchen fan

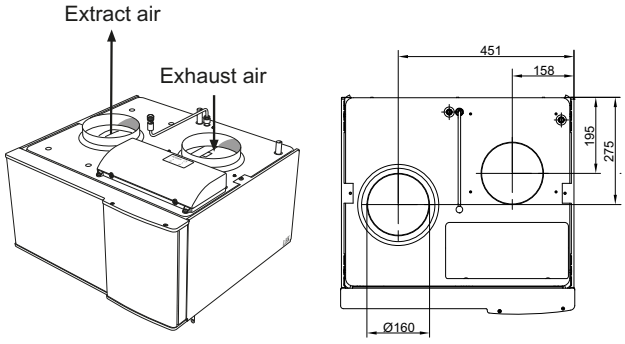
Exhaust air duct (kitchen fan) must not be connected to NIBE FLM.

To prevent cooking odours being led to the NIBE FLM the distance between the kitchen fan and the exhaust air valve must be observed. The distance must not be below 1.5 m, but may vary between different installations.

Always use a kitchen fan when cooking.

NOTE

A duct in a masonry chimney stack must not be used for extract air.



Ventilation flow

Connect NIBE FLM so that all exhaust air except exhaust air duct air (kitchen fan) passes the heat exchanger (EP16) in the exhaust air module. The lowest ventilation flow according to current standards is 0.35 l/s per m^2 floor area. For optimum exhaust air module performance the ventilation flow should not be less than 31 l/s (110 m^3/h).

Ensure that the ventilation openings are not blocked. If the exhaust air module is connected to F1145/F1155/F1245/F1255 set the ventilation capacity in the heat pump's menu system (menu 5.1.5). Otherwise the ventilation capacity is set via potentiometer (AA5-SF3).

Adjusting ventilation

To obtain the necessary air exchange in every room of the house, the exhaust air devices must be correctly positioned and adjusted and the fan in the exhaust air module adjusted.

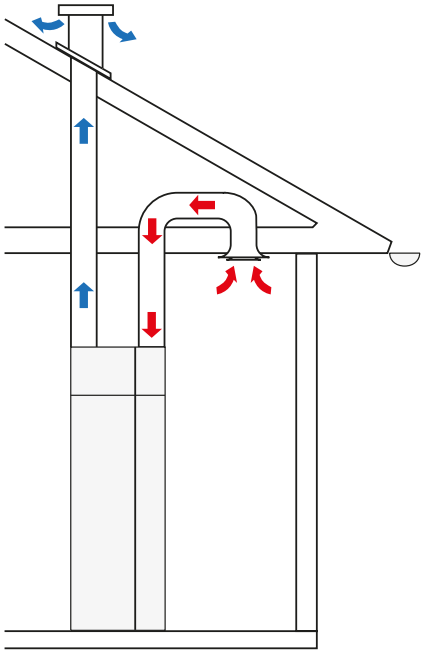
Immediately after installation adjust the ventilation so that it is set according to the projected value of the house.

A defective ventilation installation may lead to reduced installation efficiency and thus poorer operating economy, and may result in moisture damage to the house.

Installation alternative

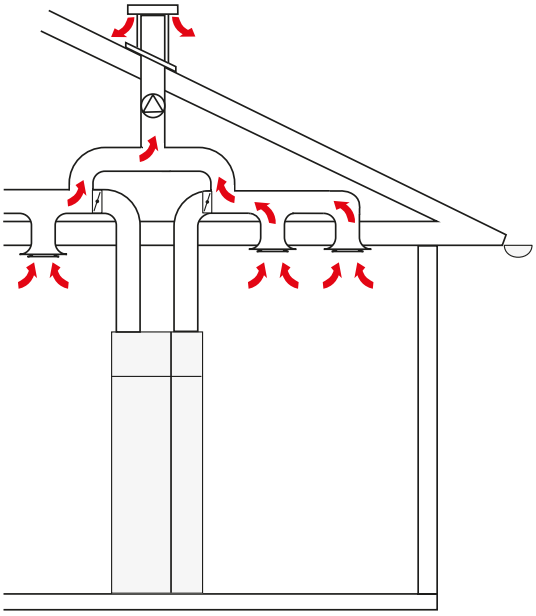
Standard installation

Standard installation, where ventilation air is led to FLM and then out of the house.

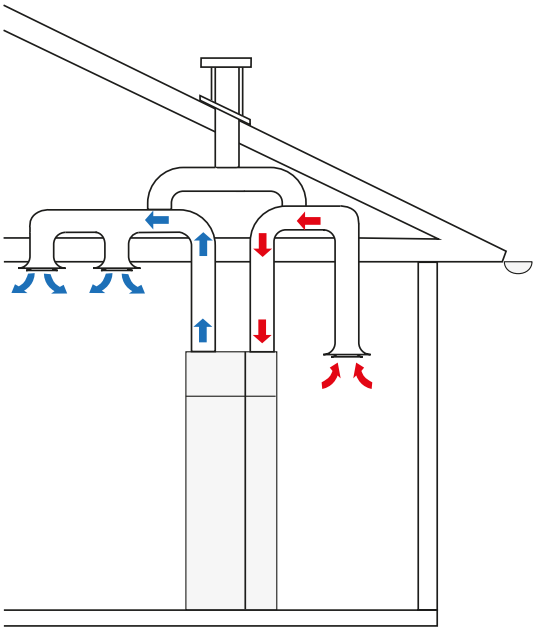


Passive cooling

An external fan has taken over ventilation, which is led out of the house without recovery.



At the same time, FLM circulates air from a substantial exhaust air valve in, for example, a hall to the other rooms where cooling is required, normally two to three bedrooms.



Passive cooling requires room sensors in the rooms where cooling is to be maintained.

NOTE

The supply air ducts must be insulated for passive cooling using diffusion-proof material (PE30) along their entire lengths.

5 Electrical connections

General

All electrical equipment is connected at the factory.

- Disconnect NIBE FLM before insulation testing the house wiring.
- For the exhaust air module wiring diagram, see page 29.
- Signal cables to external connections must not be laid close to high current cables.
- 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

Electrical installation and service must be carried out under the supervision of a qualified electrician. Electrical installation and wiring must be carried out in accordance with the stipulations in force.

Connections

Connecting to F1145/F1155/F1245/F1255/F1345

Connecting the supply to NIBE FLM no. 1

In cases where NIBE FLM is installed together with F1145/F1155/F1245/F1255/F1345 it is possible to connect the supply for NIBE FLM no. 1 on the terminal block in the heat pump. If this is the case, remove the plug on the connection cable (W1) and then connect the cable to the base board (AA2) terminal block X1:4-6 in F1145/1155/F1245/1255 or on terminal blocks X2:6-9 and X2:11 in F1345.

F1145/F1155/F1245/F1255

X1:4 Yellow/green

X1:5 Blue

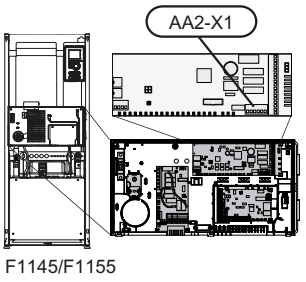
X1:6 Brown

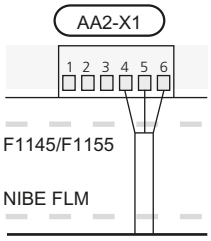
F1345

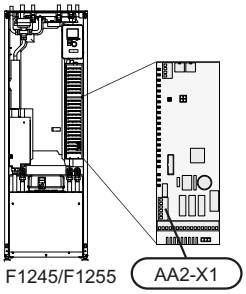
X2:6or X2:7 Brown

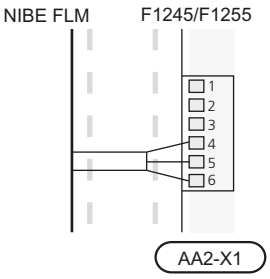
X2:8 or X2:9 Blue

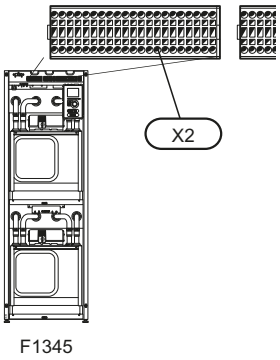
X2:11 Yellow/green

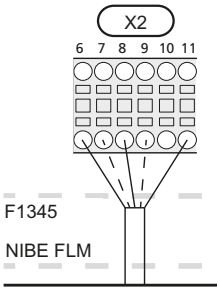












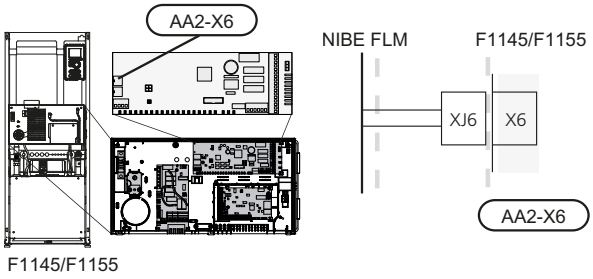
Connecting the supply to NIBE FLM no. 2-4

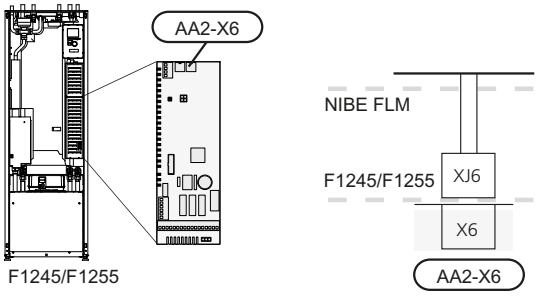
NIBE FLM no. 2-4 is connected to a grounded single phase wall socket or a permanent installation. For permanent installations, NIBE FLM must be preceded by an isolator switch with at least a 3 mm breaking gap.

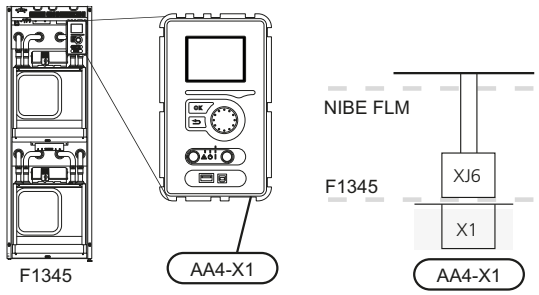
Connecting the communication to NIBE FLM no. 1

F1145/F1155/F1245/F1255: Control cable (W6) with connector XJ6 is connected to connection X6 on the base card(AA2).

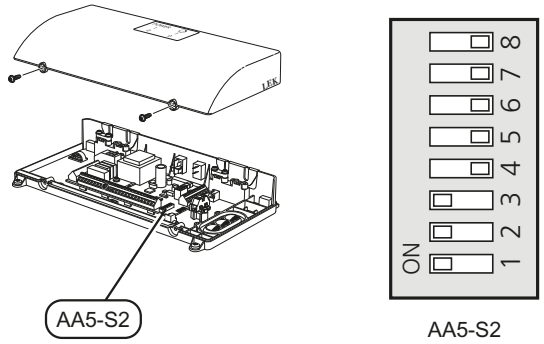
F1345: Control cable (W6) with connector XJ6 is connected to connection X1 on the display card(AA4).







The DIP switch (AA5-S2) must be set as follows.



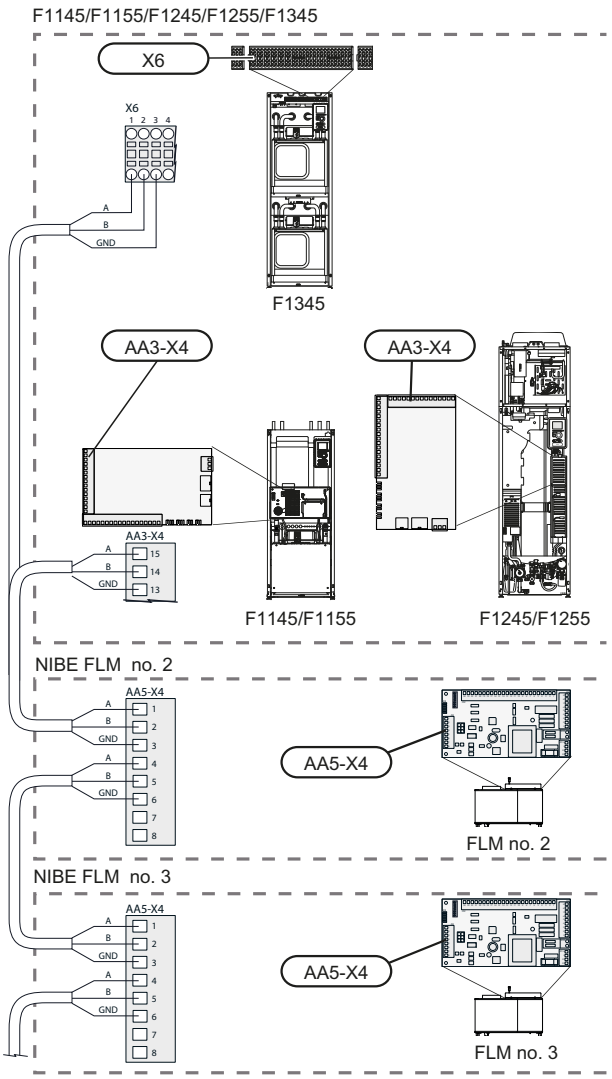
Connecting the communication to NIBE FLM no. 2-4

NIBE FLM no 2 is connected directly to the heat pump on the input card (terminal block AA3-X4) in F1145/F1155/F1245/F1255 or on terminal block X6 in F1345.

NIBE FLM no. 3 is connected to the accessory card's terminal block (AA5-X4) in NIBE FLM no. 2.

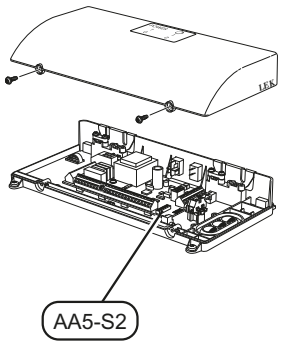
NIBE FLM no. 4 is connected in a similar way in NIBE FLM no. 3.

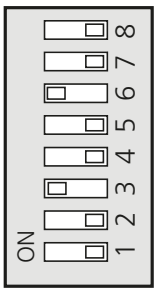
Use cable type LiYY, EKKX or similar.



NIBE FLM 2-4 can be connected in a similar way to a previously installed accessory and its accessory card.

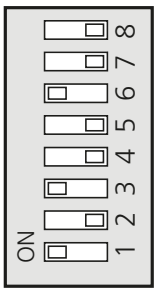
The DIP switch (AA5-S2) must be set as follows.





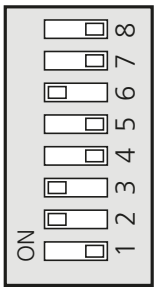
AA5-S2

NIBE FLM no. 2



AA5-S2

NIBE FLM no. 3



AA5-S2

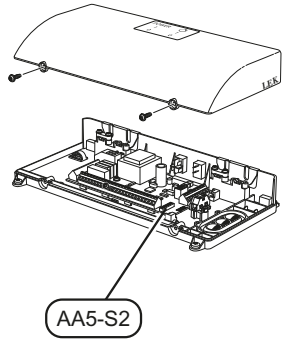
NIBE FLM no. 4

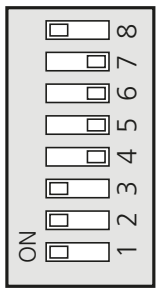
Connecting to another heat pump

In cases where NIBE FLM is installed together with another heat pump, connect the exhaust air module to a grounded single phase wall socket or through a permanent installation. For permanent installations, NIBE FLM must be preceded by an isolator switch with at least a 3 mm breaking gap.

For installations with another heat pump do not connect control cable (W6).

The DIP switch (AA5-S2) must be set as follows.





AA5-S2

Optional connections

Connection of extra room sensor for passive cooling

The room temperature sensor has up to three functions:

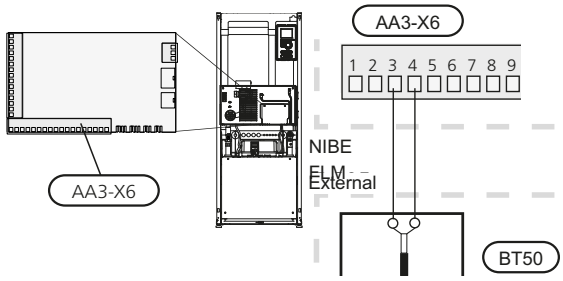
1. Show current room temperature in the display on the heat pump.
2. Option of changing the room temperature in °C.
3. Makes it possible to change/stabilise the room temperature.

Install the sensor in a neutral position where the set temperature is required. 1.5 m above floor. It is important that the sensor is not prevented from measuring the correct room temperature by being located, for example, in a recess, between shelves, behind a curtain, above or close to a heat source, in a draft from an external door or in direct sunlight. Closed radiator thermostats can also cause problems.

Connect the room sensor to X6:3 and X6:4 on the input card (AA3).

If the sensor is to be used to change the room temperature in °C, the sensor must be activated in the menu.

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

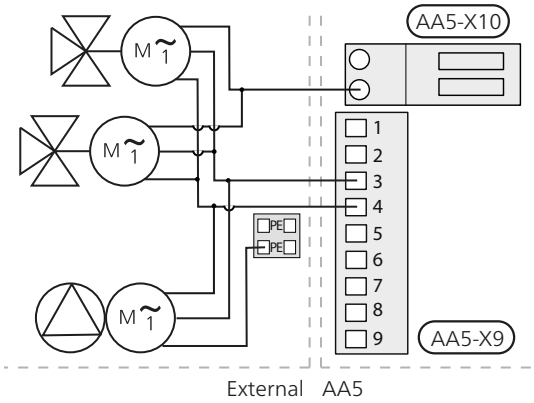


Caution

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.

Connection of duct fan and damper

Connect to motor to AA5-X9:4 (signal), AA5-X9:3 (N) and AA5-X10:2 (230V). Connections on AA5-X10 and PE are occupied and these must be spliced with some sort of clamp.



6 Commissioning and adjusting

Preparations

1. Check that the switch (SF1) in F1145/F1155/F1245/F1255/F1345 is in position "O".
2. Check that the filling valves are fully closed (see image below).

Filling and venting

Caution

Insufficient venting can damage internal components in NIBE FLM.

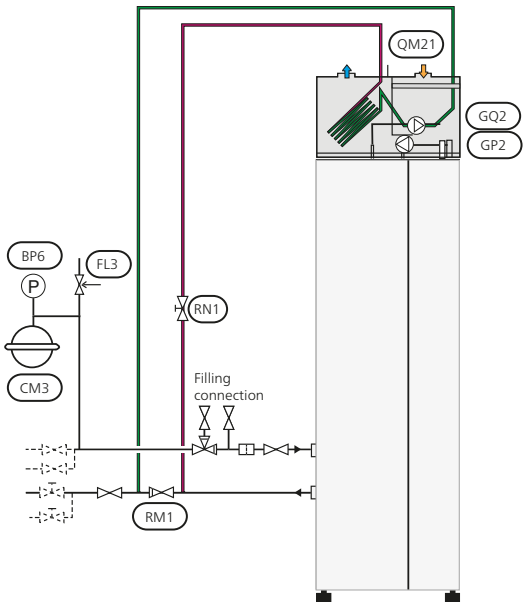
Filling and venting the brine system

NOTE

Insufficient venting can cause damage to the brine pump.

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 filled by connecting a filling pump.

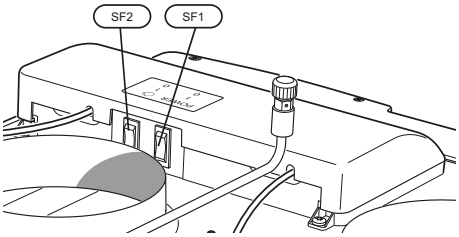
1. Check that the level vessel (CM2) is replaced with expansion vessel (CM3).
2. Check the brine system for leakage.
3. Connect the filling pump and return line on the brine system's filler connector as illustrated.
4. Close the three way valve in the filler connector (accessory).
5. Open the valves on the filler connector.
6. Start the filling pump.
7. Fill until liquid enters the return pipe.
8. Vent the brine system with venting valve (QM21) on NIBE FLM.
9. Close the valves on the filler connector.
10. Open the three way valve in the filler connector.



NOTE

Venting may be necessary at installation and after a period of use. Vent through venting valve (QM21). When venting, the switch for the circulation pump (SF2) must be set to ”0”.

Start-up and inspection



Start-up with F1145/F1155/F1245/F1255/F1345

1. Set the main switch (SF1) and the switch for circulation pump (SF2) on NIBE FLM to mode "1".
2. Check that the fan (GQ2) and circulation pump (GP2) are running.
3. Turn the heat pump's switch (SF1) to "I".
4. Follow the instructions in the start guide in the heat pump display. If the start guide does not start when you start the heat pump, start it manually in menu 5.7.

Starting-up with ventilation only

In cases where NIBE FLM is to be run with ventilation only, e.g. before the brine side is ready for connection. In this mode the circulation pump must be switched off.

1. Follow points 1-4 under "Starting with F1145/F1155/F1245/F1255/F1345", but leave the switch for circulation pump (SF2) in "0" mode.
2. When the brine side is connected the switch, circulation pump (SF2) is set to mode "1".

Commissioning with F1145/F1155/F1245/F1255/F1345

The first time the heat pump 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 heat pump's basic settings.

The start guide ensures that the start-up is carried out correctly and cannot be bypassed. The start guide can be started later in menu 5.7.

The brine flow over NIBE FLM is regulated by the circulation pump (GP2) and trim valve (RN1) so that the temperature difference on brine in and out from NIBE FLM becomes 2–4 degrees. The temperature is measured using external test equipment.

Adjustments are made when the heat pump is running. Temperature difference applies at 20 °C room temperature and 0 °C in the brine.

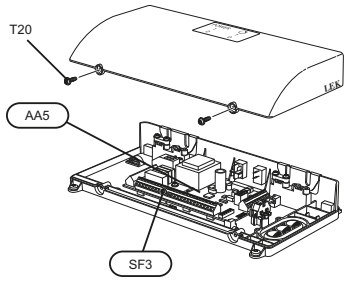
The brine flow through NIBE FLM will be from 0.1 l/s (360 l/h) to 0.15 l/s (540 l/h) at the above temperature differences, depending on the ventilation flow.

When the heat pump is at a standstill the internal circulation pump in NIBE FLM gives from 0.085 l/s (306 l/h) to 0.125 l/s (450 l/h) in the return charging flow to the collector. This applies to a heat heat pump with approximately 4 kW rated output. For a 15 kW heat pump the corresponding flow is from 0.09 l/s (324 l/h) to 0.14 l/s (504 l/h).

Caution

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

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



Starting-up with another heat pump

1. Set main switch (SF1) and the switch for circulation pump (SF2) to mode "0".
2. Set the main switch (SF1) and the switch for circulation pump (SF2) on NIBE FLM to mode "1".
3. Check that the fan (GQ2) and circulation pump (GP2) are running.
4. If necessary, set the speed on the fan using the potentiometer (SF3).
5. Start the heat pump.

Starting-up with ventilation only

In cases where NIBE FLM is to be run with ventilation only, e.g. before the brine side is ready for connection. In this mode the circulation pump must be switched off.

1. Follow points 1-6 under "Starting with another heat pump", but leave the switch for circulation pump (SF2) in "0" mode.
2. When the brine side is connected, the switch for circulation pump (SF2) is set to mode "1".

Starting-up with another heat pump

Start the brine pump in the heat pump (see your heat pump's handbook).

The brine flow over NIBE FLM is regulated by the circulation pump (GP2) and trim valve (RN1) so that the temperature difference on brine in and out from NIBE FLM becomes 2–4 degrees. The temperature is measured using external test equipment.

Adjustments are made when the heat pump is running. Temperature difference applies at 20 °C room temperature and 0 °C in the brine.

The brine flow through NIBE FLM will be from 0.1 l/s (360 l/h) to 0.15 l/s (540 l/h) at the above temperature differences, depending on the ventilation flow.

When the heat pump is at a standstill the internal circulation pump in NIBE FLM gives from 0.085 l/s (306 l/h) to 0.125 l/s (450 l/h) in the return charging flow to the collector. This applies to a heat heat pump with approximately 4 kW rated output. For a 15 kW heat pump the corresponding flow is from 0.09 l/s (324 l/h) to 0.14 l/s (504 l/h).

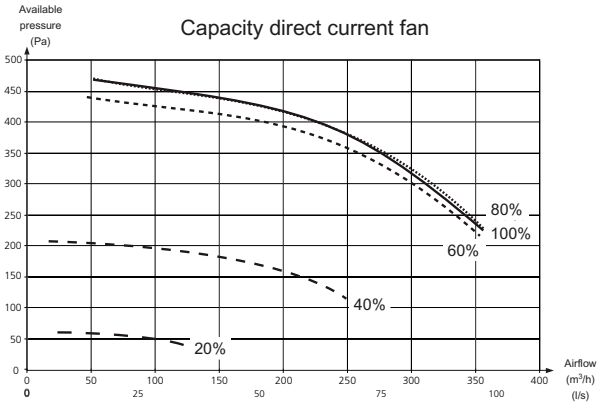
Setting the ventilation

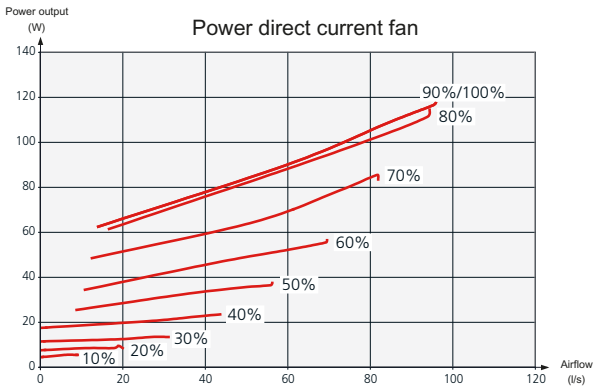
Ventilation must be set according to applicable norms. If NIBE FLM is connected to F1145/F1155/F1245/F1255/F1345 make the setting in menu 5.1.5. Otherwise ventilation is set via potentiometer (AA5-SF3).

Even if ventilation is roughly set at installation it is important that a ventilation adjustment is ordered and permitted.

NOTE

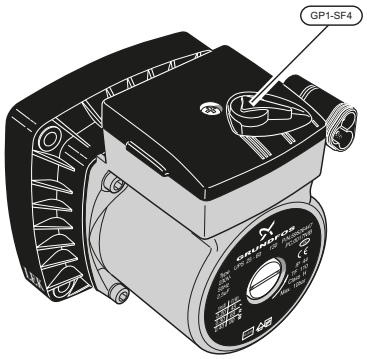
Order a ventilation adjustment to complete the setting.

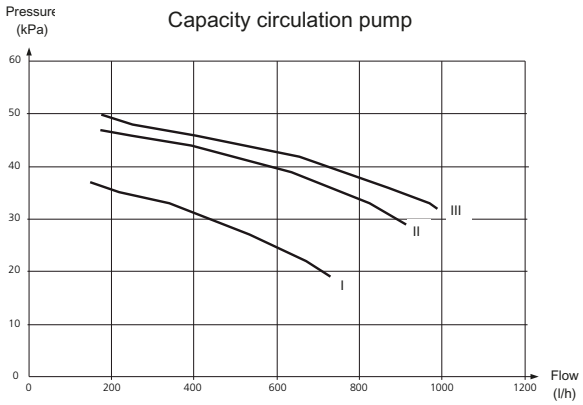


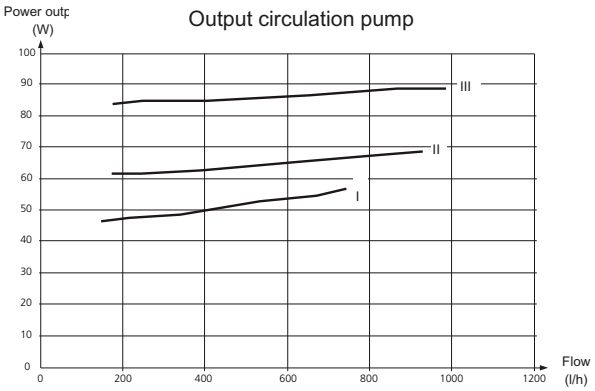


Setting the pump speed

The speed of the circulation pump (GP2) is set using the switch (GP2-SF4) on the pump so that it achieves the projected flow for the house.







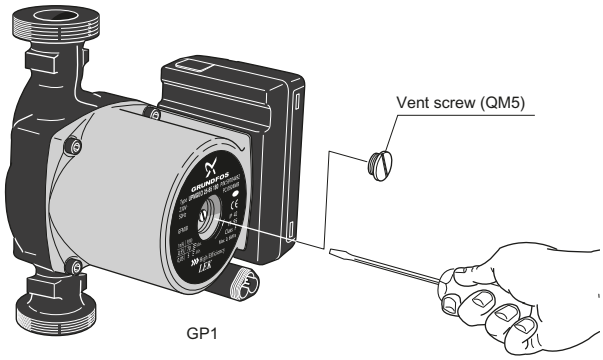
7 Service

Service actions

Helping the circulation pump to start

1. Shut off NIBE FLM by setting the switch (SF1) to "0".
2. Open the service cover.
3. Remove the fan.
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 NIBE FLM by setting the switch (SF1) to "1" and check whether the circulation pump works.

It is usually easier to start the circulation pump with NIBE FLM running, switch (SF1) set to " 1". Helping the circulation pump to start is performed with NIBE FLM running, be prepared for the screwdriver to jerk when the pump starts.



8 Disturbances in comfort

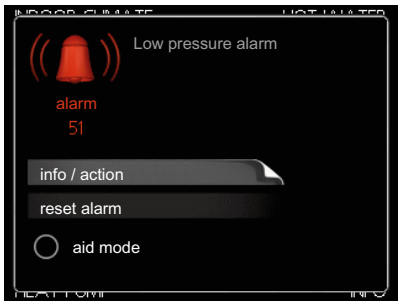
If NIBE FLM is not installed together with F1145/F1155/F1245/F1255/F1345, go directly to section Troubleshooting.

In most cases, the heat pump F1145/F1155/F1245/F1255/F1345 notes operational interference (operational interference can lead to disturbance in comfort) and indicates this with alarms and shows action instructions in the display.

Info-menu (F1145/F1155/F1245/F1255/F1345)

All the heat pump measurement values are gathered under menu 3.1 in the heat pump menu system. Looking through the values in this menu can often simplify finding the fault source.

Manage alarm (F1145/F1155/F1245/F1255/F1345)



In the event of an alarm, some kind of malfunction has occurred, which is indicated by the status lamp changing from green continuously to red continuously. In addition, an alarm bell appears in the information window.

Alarm

In the event of an alarm with a red status lamp a malfunction has occurred that the heat pump cannot remedy itself. In the display, by turning the control knob and pressing the OK button, you can see the type of alarm it is and reset it. You can also choose to set the heat pump to aid mode.

info / action Here you can read what the alarm means and receive tips on what you can do to correct the problem that caused the alarm.

reset alarm In most cases it is enough to select "reset alarm" to correct the problem that caused the alarm. If a green light illuminates after selecting "reset alarm" the alarm has been remedied. If a red light is still visible and a menu called "alarm" is visible in the display, the problem that caused the alarm remains. If the alarm disappears and then returns, see the troubleshooting section (page 24).

aid mode "aid mode" is a type of emergency mode. This means that the heat pump produces heat and/or hot water despite there being some kind of problem with the heat pump. This can mean that the heat pump's compressor is not running. In this case the immersion heater produces heat and/or hot water.

Problems withNIBE FLM do not affect heat pump operation. You do not need to select "aid mode" in event of problems with NIBE FLM.

Caution

Selecting "aid mode" is not the same as correcting the problem that caused the alarm. The status lamp will therefore continue to be red.

Troubleshooting

If the malfunction does not appear in the display or NIBE FLM is not connected to F1145/F1155/F1245/F1255/F1345, the following tips can be used:

Basic actions

Start by checking the following possible fault sources:

- That the heat pump is running or that the supply cable to NIBE FLM is connected.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.
- The heat pump's miniature circuit breaker (FA1).
- Correctly set load monitor (if installed).

Low or a lack of ventilation

- The ventilation is not adjusted.
  - Order/implement ventilation adjustment.
- Filter (HQ10) blocked.
  - Clean or replace the filter.
- Exhaust air device blocked or throttled down too much.
  - Check and clean the exhaust air devices.
- Fan speed in reduced mode.
  - If NIBE FLM is connected to F1145/F1155/F1245/F1255/F1345: Enter menu 1.2 and select "normal".

    If NIBE FLM is connected to another heat pump: Check the potentiometer (SF3).
- External switch for changing the fan speed activated.
  - Check any external switches.

High or distracting ventilation

- The ventilation is not adjusted.
  - Order/implement ventilation adjustment.
- Fan speed in forced mode.
  - If NIBE FLM is connected to F1145/F1155/F1245/F1255/F1345: Enter menu 1.2 and select "normal".

    If NIBE FLM is connected to another heat pump: Check the potentiometer (SF3).
- External switch for changing the fan speed activated.
  - Check any external switches.
- Filter (HQ10) blocked.
  - Clean or replace the filter.

Gurgling sound

- Not enough water in the water seal.

- Refill the water seal with water.
- Choked water seal.
  - Check and adjust the condensation water hose.

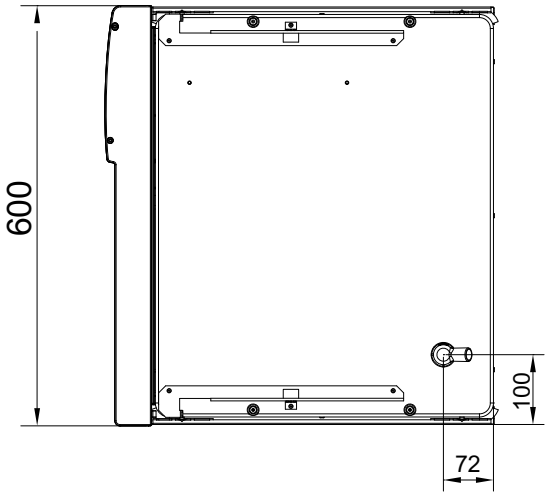
9 Accessories

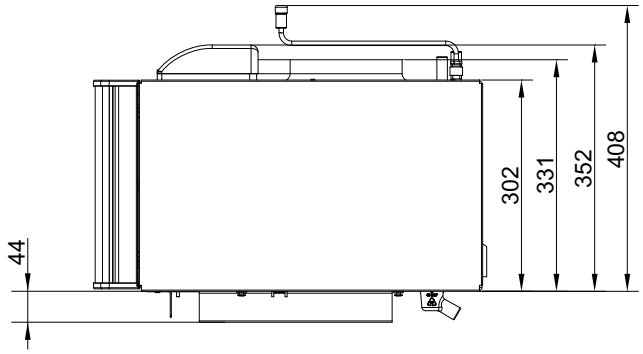
Brackets

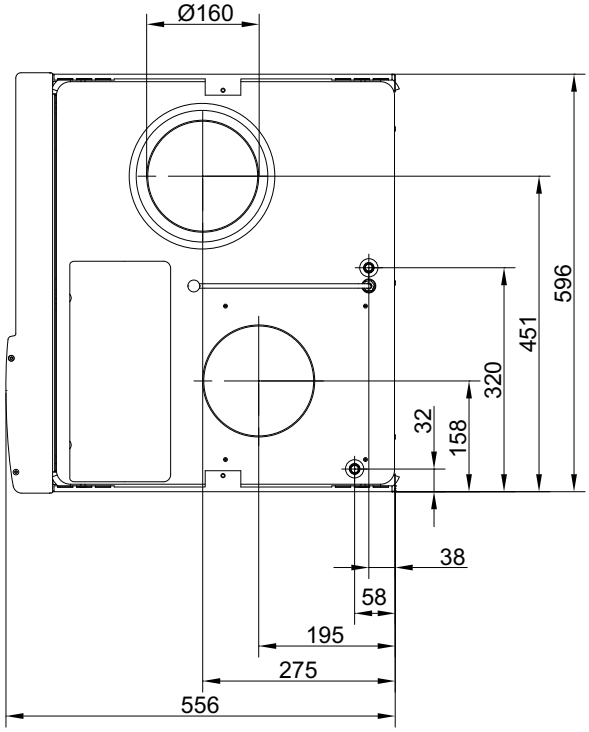
Wall mounting of NIBE FLM
Part no. 067 083

10 Technical data

Dimensions and setting-out coordinates





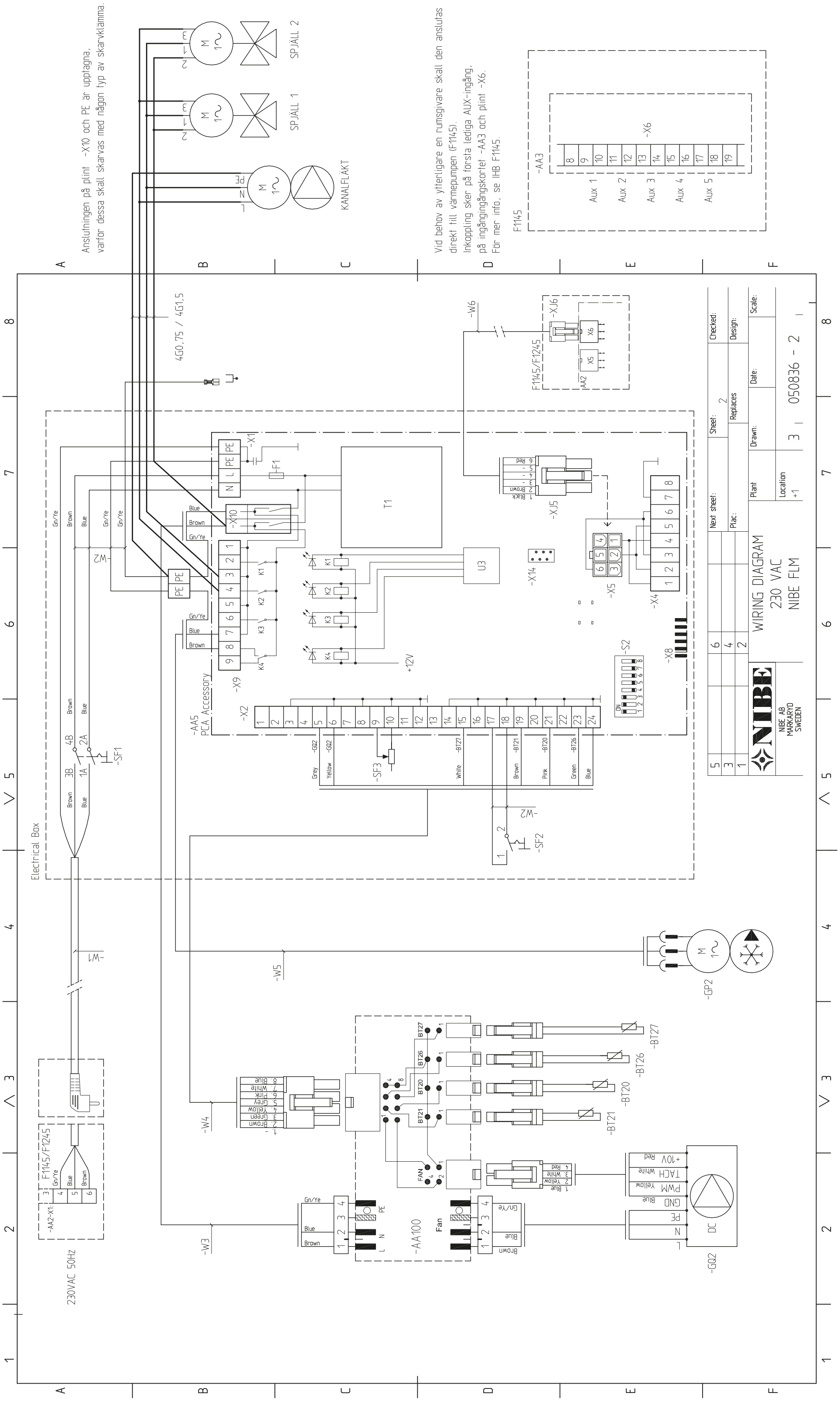


Technical specifications

Electrical data		
Supply voltage	V	230 V NAC 50 Hz
Max driving power circulation pump	W	75
Driving power fan	W	175
Enclosure class		IP 21
Ventilation		
Max airflow	m^3/h	350
Brine circuit		
Minimum incoming brine temperature	°C	-8
Maximum recommended incoming brine temperature	°C	15
Maximum outgoing brine temperature	°C	30
Min pressure brine	MPa/bar	0.02/0.2
Maximum pressure brine	MPa/bar	0.3/3
Sound power level according to EN 12,102		
Sound power level ($L_{W(A)}$)[1]	dB(A)	36-46
Dimensions and weight		
Width	mm	600
Depth	mm	556
Height	mm	396
Weight	kg	35
Part No.		067 011

[1] The value varies with the selected fan curve.

Electrical circuit diagram



11 Item register

Item register

NIBE AB Sweden
Hannabadsvägen 5
Box 14
SE-285 21 Markaryd
info@nibe.se
www.nibe.eu

031375