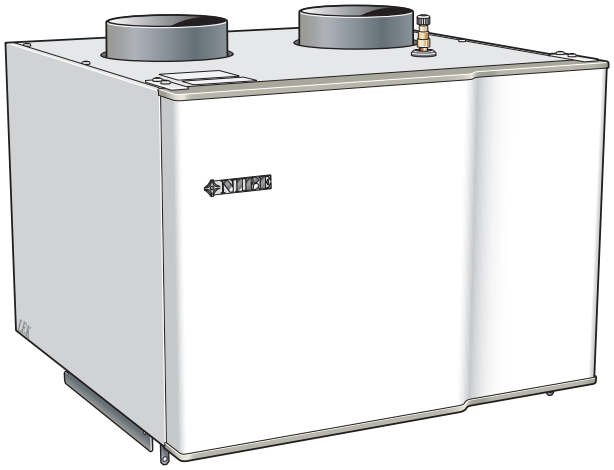
Installation manual

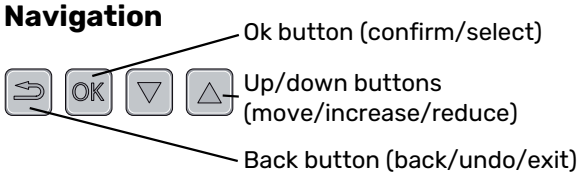
Hot water heat pump
NIBE F130



IHB EN 2442-1
731939

Quick guide

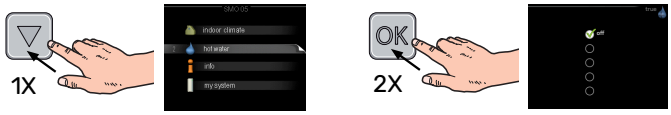
Navigation



A detailed explanation of the button functions can be found on page 23.

How to scroll through menus and make different settings is described on page 24.

Increase hot water volume



To temporarily increase the amount of hot water, first press the down button to mark menu 2 (water droplet) and then press the OK button twice. Read more about the settings on page 26.

In event of disturbances in comfort

If a disturbance in comfort of any type occurs there are some measures that can be taken before you need to contact your installer. See page 32 for instructions.

Table of Contents

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.

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.

This is an original manual. It may not be translated without the approval of NIBE.

Do not start F130 if there is a risk that the water in the system has frozen.

Electrical installation and wiring must be carried out in accordance with national provisions.

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

Symbols

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

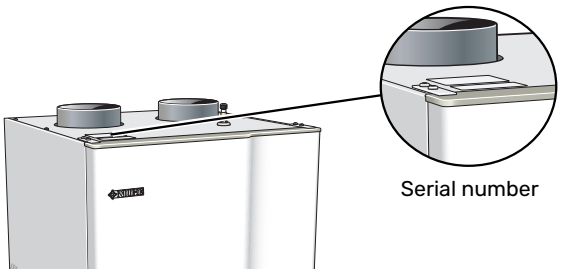
Explanation of symbols that may be present on the product's label(s).

Read the User Manual.

Read the Installer Manual.

Serial number

The serial number can be found to the left, on top of F130.



Serial number

NOTE!

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

Recovery

Leave the disposal of the packaging to the installer who installed the product or to special waste stations.

Do not dispose of used products with normal household waste. It must be disposed of at a special waste station or dealer who provides this type of service.

Improper disposal of the product by the user results in administrative penalties in accordance with current legislation.

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.

✔	Description	Notes	Signature	Date
Ventilation, exhaust air (page 13)				
	Setting the ventilation flow			
	Exhaust air filter			
Ventilation, surrounding air (page 14)				
	Pressure drop in the system			
Hot water				
	System vented			
Electricity (page 17)				
	Supply connected 230 V			
	Circuit fuses			
	Earth circuit-breaker			
Miscellaneous				
	Type of installation			

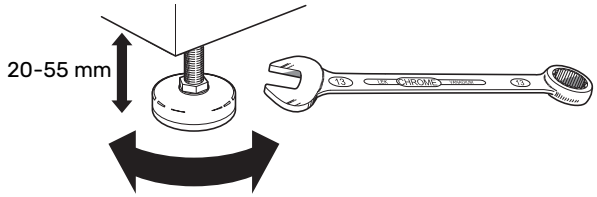
Delivery and handling

Transport

F130 should be transported and stored vertically in a dry place.

Assembly

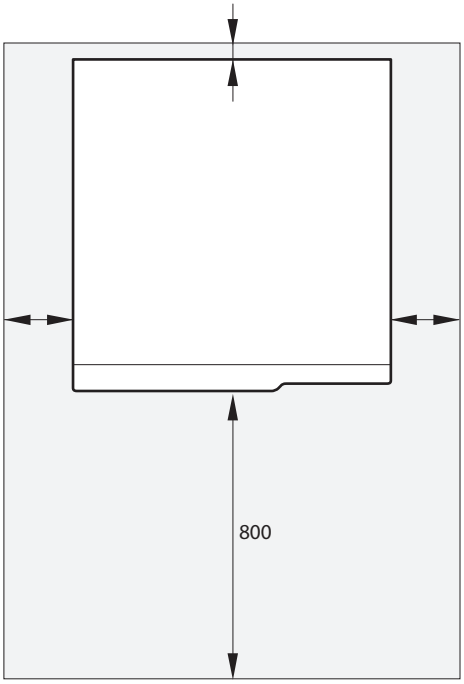
- F130 is installed freestanding on brackets or a suitable flat surface. Noise from the fan and compressor can be transferred to the brackets or the surface that F130 is placed on.
- Use the product's adjustable feet to attain a horizontal and stable set-up.



- Since water comes from F130, the area where F130 is located must be equipped with floor drainage.
- Because water comes from F130, the floor coating is important. A waterproof floor or floor membrane is recommended.
- 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.
- The installation area always has to have a temperature of at least 10 °C and max. 30 °C.

INSTALLATION AREA

Leave a free space of 800 mm in front of the product. Leave free space between F130 and wall/other machinery/fittings/cables/pipes etc. It is recommended that a space of at least 10 mm is left to reduce the risk of noise and of any vibrations being propagated.

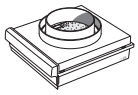


CAUTION!

Ensure that there is sufficient space (300 mm) above F130 for connecting ventilation ducts.

Supplied components

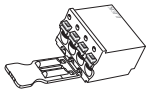
Silencer



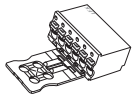
Filter cartridge

Air connection

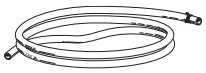
Choke washer Ø 22 mm



4-pin connector



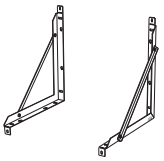
6-pin connector



Drain hose Ø 20 mm
Length 2200 mm

2 x sensors

Display



2 x bracket
6 x screws

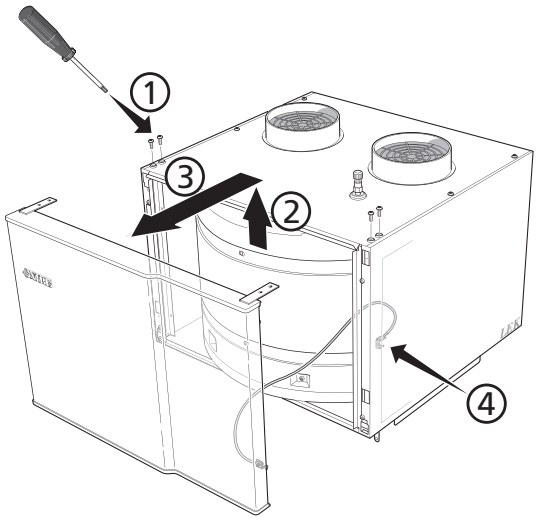
6 x nuts
4 x washers

LOCATION
The kit of supplied items is placed on top of the product.

Handling panels

FRONT HATCH

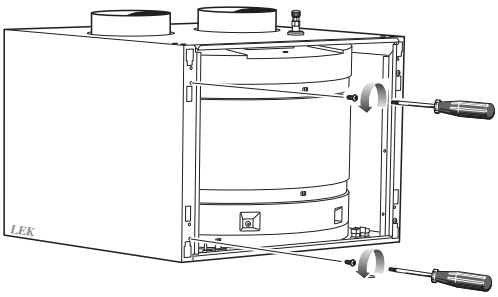
1. Loosen the screws for the securing plates above F130.
2. Slide the hatch upwards.
3. Pull the hatch towards yourself.



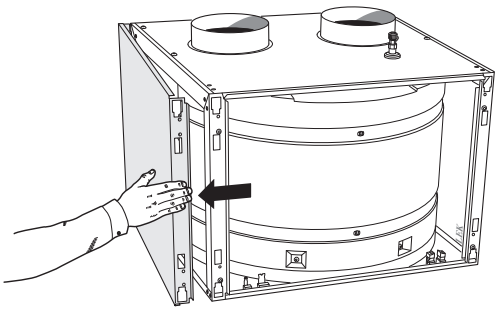
> **CAUTION!**
>
> An earth cable is installed in the hatch, which can therefore only be lifted out 35 cm. If the hatch needs to be removed completely, the cable must be disconnected.

REMOVE SIDE PANELS

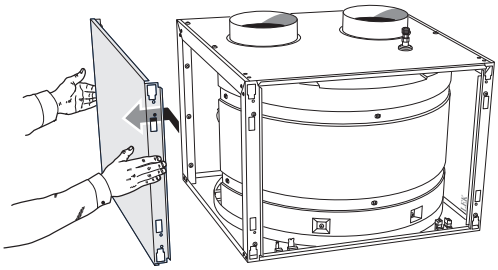
1. Undo the screws at the edge.



2. Twist the panel slightly outwards.



3. Move the panel outwards and backwards.



4. Assembly takes place in the reverse order.

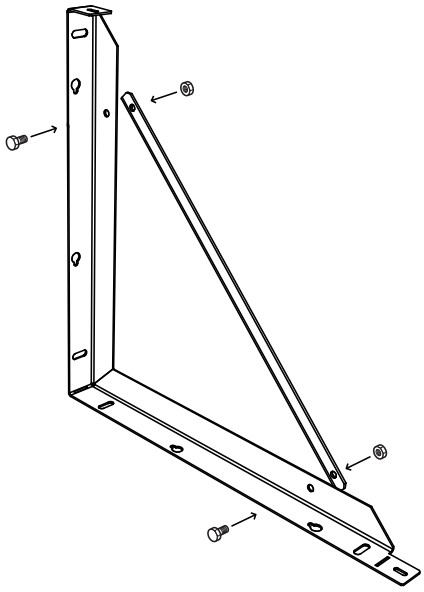
Mounting

The heat pump is wall-mounted using the brackets supplied. The heat pump can also be positioned on a suitable flat surface close to the water heater.

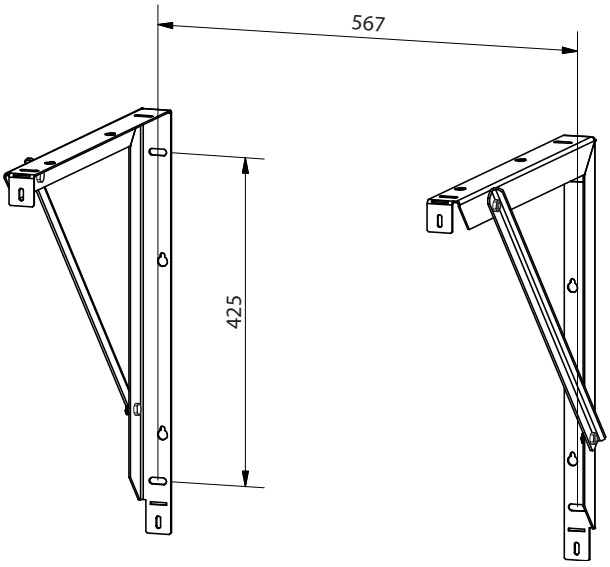
> **CAUTION!**
>
> Check that the mountings are located in their applicable grooves on the heat pump.
>
> Ensure that the heat pump is installed horizontally.

INSTALLING BRACKETS

1. Install the brackets together using the M6 screws and nuts supplied.

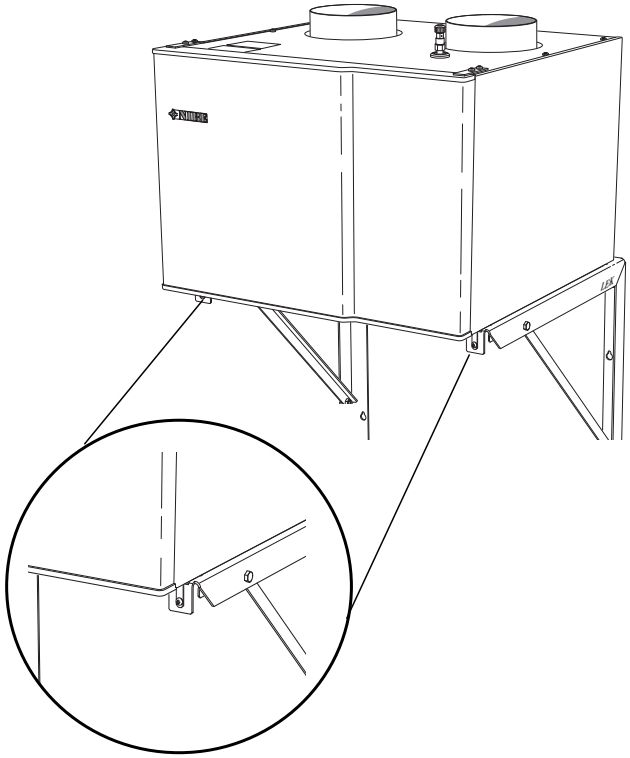


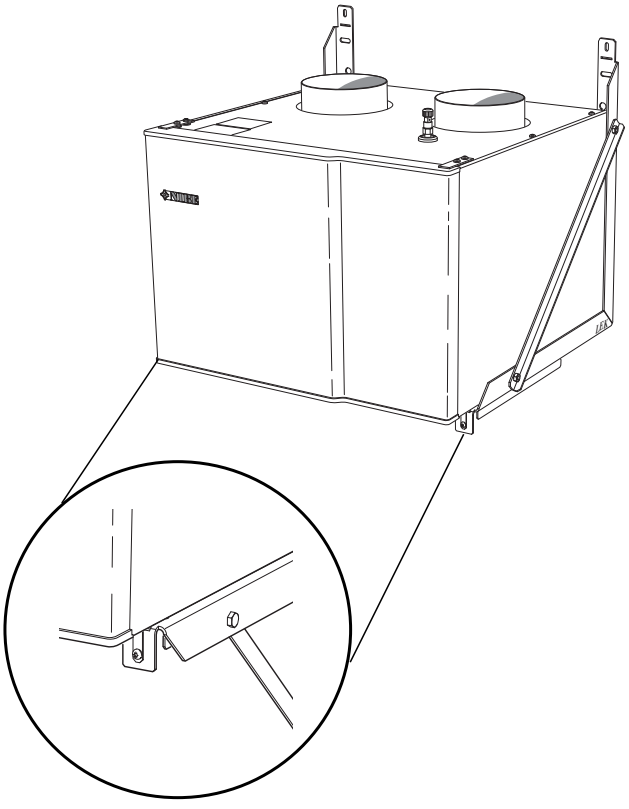
2. Drill holes in the wall as illustrated.



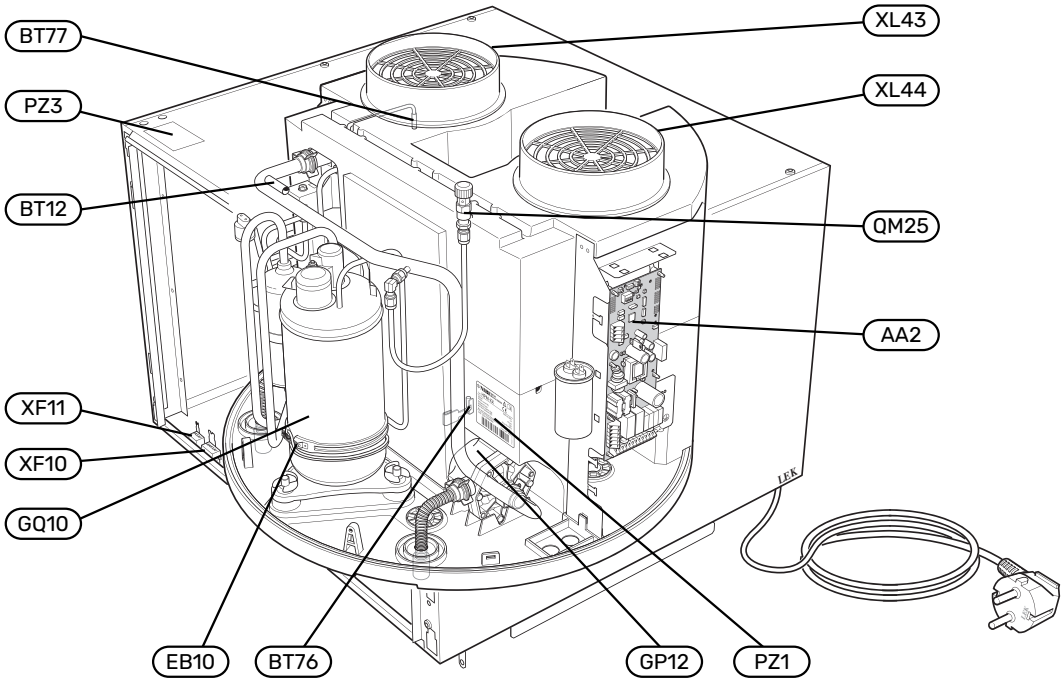
3. Mount the brackets on the wall.

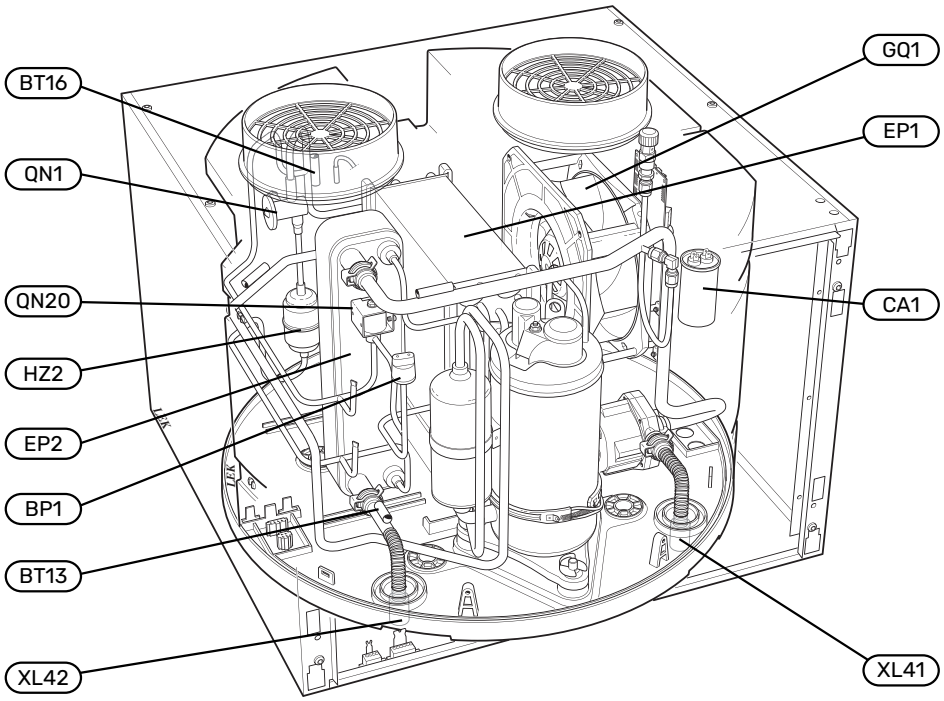
4. Screw F130 into place in the brackets using the M5 screws and nuts supplied.





The Heat pump design





List of components

PIPE CONNECTIONS

XL41	Hot water connection, supply
XL42	Hot water connection, return
XL43	Connecting incoming air
XL44	Connecting outgoing air

HVAC COMPONENTS

GP12	Charge pump
QM25	Vent valve, hot water
WM2	Overflow water discharge[1]

SENSORS

BP1	High pressure pressostat
BT6	Controlling hot water sensor[1]
BT7	Displayed hot water sensor[1]
BT12	Temperature sensor, condenser out
BT13	Condenser sensor, return line
BT16	Temperature sensor, evaporator
BT76	Temperature sensor, defrosting
BT77	Temperature sensor, incoming air

ELECTRICAL COMPONENTS

AA2	Base card
CA1	Capacitor
EB10	Compressor heater
XF10	Sensor switch
XF11	Display switch

COOLING COMPONENTS

EP1	Evaporator
EP2	Condenser
GQ10	Compressor
HZ2	Drying filter
QN1	Expansion valve
QN20	Solenoid valve, defrosting

VENTILATION

GQ1	Fan
HQ12	Air filter [1]

MISCELLANEOUS

PZ1	Rating plate
PZ3	Serial number plate

Designations according to standard EN 81346-2.

1 Not visible in the image.

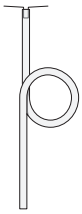
Pipe and air connections

General pipe connections

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

All connections are equipped with smooth pipe for compression ring couplings.

Overflow water from the evaporator's collecting trough is routed via the supplied plastic hose to a drain. Shape the hose into a water seal (see image). The entire length of the overflow water pipe must be inclined to prevent water pockets and must also be frost-proof.



NOTE!

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

To make the installation economical, NIBE recommends that all pipes between F130 and the water heater are insulated. The insulation should be at least 12 mm thick.

CAUTION!

The pipe systems have to be flushed clean before the product is connected, to prevent any contaminants from damaging the components.

SYMBOL KEY

Symbol	Meaning
	Shut-off valve
	Circulation pump
	Fan
	Compressor
	Heat exchanger
	Domestic hot water

SYSTEM DIAGRAM

F130 consists of heat pump module and control system.

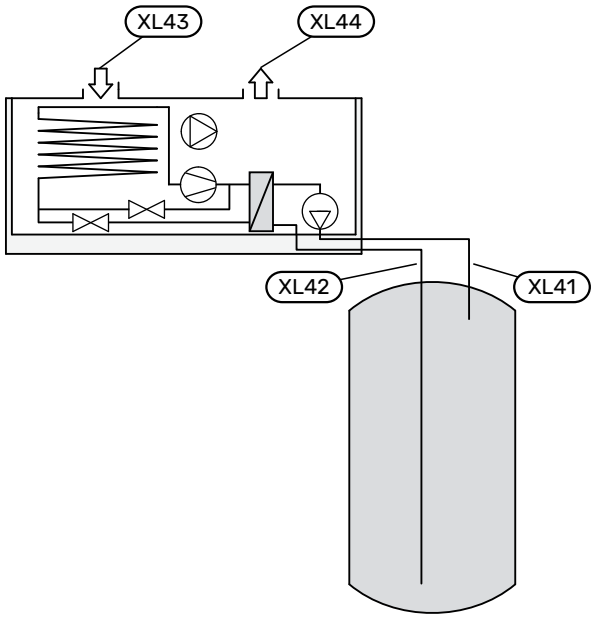
When the air passes through the evaporator, the refrigerant evaporates because of its low boiling point. In this way the energy in the air is transferred to the refrigerant.

The refrigerant is then compressed in the compressor, causing the temperature to rise considerably.

The warm refrigerant is led to the condenser. Here, the refrigerant gives off its energy to the hot water, whereupon the refrigerant changes state from gas to liquid.

The refrigerant then goes via filters to the expansion valve, where the pressure and temperature are reduced.

The refrigerant has now completed its circulation and returns to the evaporator.

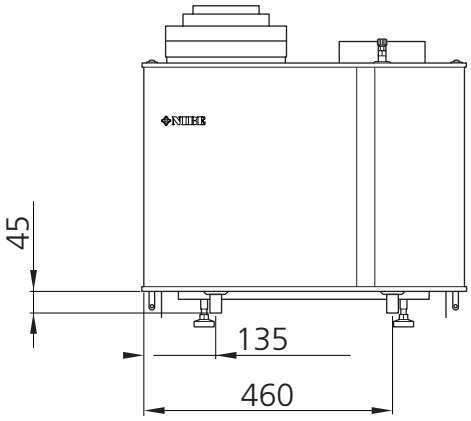


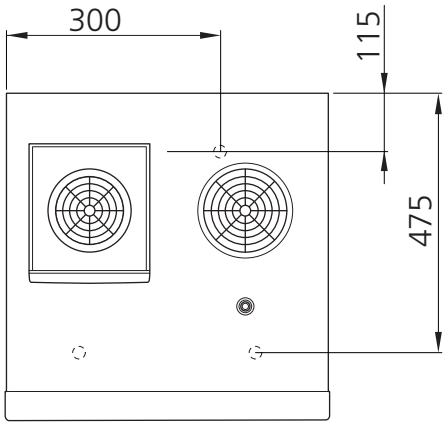
XL41	Hot water connection, supply
XL42	Hot water connection, return
XL43	Connecting incoming air
XL44	Connecting outgoing air

NOTE!

This is a principle of operation. For more detailed information about F130, see section "The Heat pump design".

Dimensions and pipe connections





PIPE DIMENSIONS

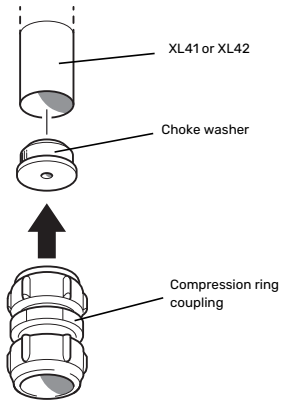
Connection		
XL41 Hot water connection, supply ext Ø	(mm)	22
XL42 Hot water connection, return ext Ø	(mm)	22
WM2 Overflow water discharge int Ø	(mm)	20

Cold and hot water

The settings for hot water are made in menu 5.1.1.

For optimal hot water operation, install the enclosed choke washer. The washer is installed in the connection for outgoing hot water (XL41) or the connection for incoming hot water (XL42) before the compression connection is installed.

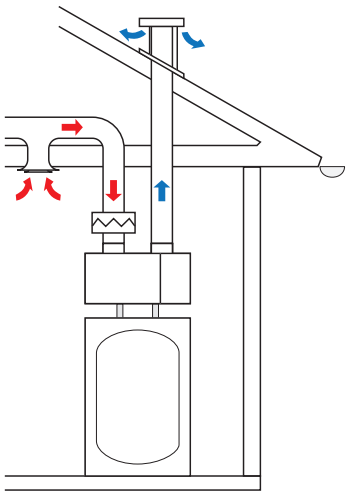
For more information about connection to water heater, see its manual.



Installation alternative

F130 must be connected according to the instructions in this manual.

EXHAUST AIR



Connecting the exhaust air

With an exhaust air connection the heat in the building's ventilation air is used to heat the hot water while the house is ventilated.

The hot air is transferred from the rooms to the heat pump via the house ventilation system.

> **CAUTION!**
>
> Install the enclosed air filter (HQ12) on the exhaust air duct. The filter must be cleaned regularly.

NOTE!

Noise from the fan can be transferred via the ventilation ducts.

SURROUNDING AIR

Connecting surrounding air

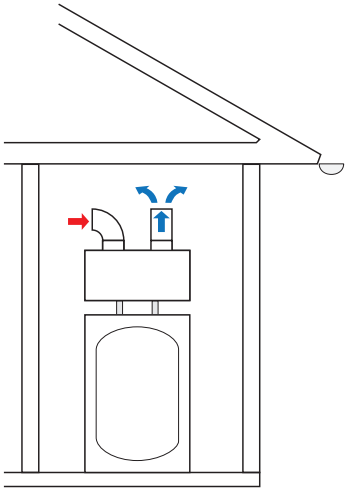
When connected to the surrounding air, the heat surplus that exists in the room is used to heat up the hot water. The outgoing air can be used to cool a room.

In installations where air is taken from one room and released into another, there can be over pressure if the room is not ventilated correctly. This can lead to damp in the building.

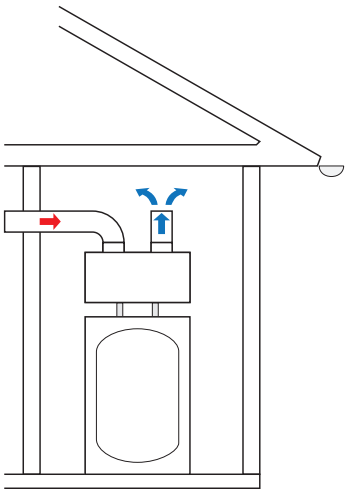
NOTE!

Outgoing air from F130 is cold and can therefore cool the room when it is released.

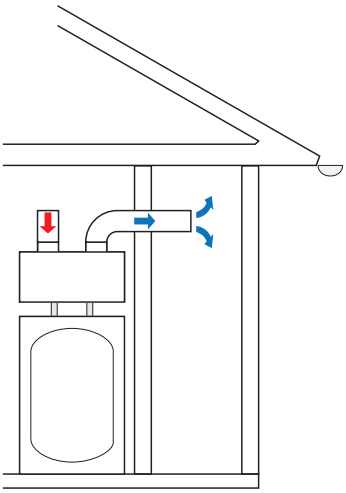
Take incoming air from one room and discharge outgoing air in the same room



Take incoming air in another room and let it out in the installation area



Take incoming air in the installation area and discharge outgoing air in another room



General ventilation connections

- Ventilation installation must be carried out in accordance with current norms and directives.
- Connections must be made via flexible hoses, which should be installed so that they are easy to replace.
- 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.
- To prevent fan noise being transferred to the ventilation devices, install silencers in suitable locations in the duct system.
- For installation with ambient air, the enclosed silencer has to be fitted in F130.
- Ducts that may become cold have to be insulated with diffusion-proof material along their entire length.
- Ensure that the condensation insulation is fully sealed at any joints and/or at lead-in nipples, silencers, roof cowls or similar.
- A duct in a masonry chimney stack must not be used for extract air.
- The heat pump must be provided with the enclosed filter cartridge (HQ12).

EXHAUST AIR DUCT /KITCHEN FAN

Exhaust air duct (kitchen fan) must not be connected to F130.

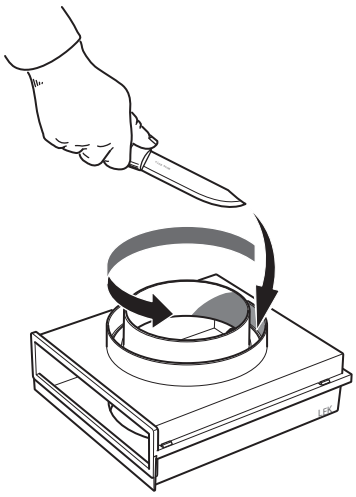
To prevent cooking odours from being led to the F130, the distance between the kitchen fan and the exhaust air valve must be taken into consideration. The distance must not be less than 1.5 m, but may vary between different installations.

Always use a kitchen fan when cooking.

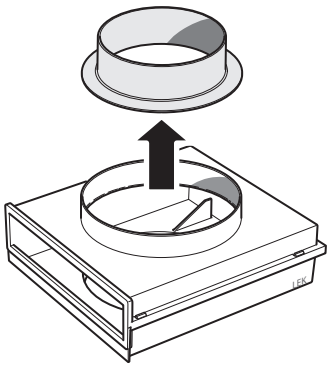
INSTALL THE FILTER CARTRIDGE

The filter cartridge has two sizes of connector, 125 mm or 160 mm.

1. Check the diameter of the air channel for inlet air.
2. When the air duct has a large diameter (Ø 160 mm), the inner ring must be cut out of the upper section of the filter cartridge.
3. Cut just inside the inner edge of the outer ring using a sharp knife. The plastic is prepared for easy cutting.



4. Remove the inner ring.



5. Press the filter cartridge into place in the connection for incoming air (XL43).

INSTALL THE CONNECTOR

If a filter solution other than that enclosed is used, the enclosed coupling must instead be mounted in the connection for incoming air (XL43).

INSTALL THE SILENCER

1. Remove the plugs from the silencer enclosed.
2. Install the silencer in the connection for the outgoing air (XL44).

Ventilation flows (exhaust air)

Connect F130 so that all the exhaust air, except kitchen duct air (kitchen fan), passes through the evaporator (EP1) in the heat pump.

The ventilation flow must comply with the applicable national standards.

For optimum heat pump performance, the ventilation flow must not be less than 20 l/s (73 m³/h) at normal exhaust air temperature. At lower exhaust air temperatures, a higher flow is required.

Set the ventilation capacity in the heat pump's menu system (menu 5.1.5 - "fan sp. exhaust air").

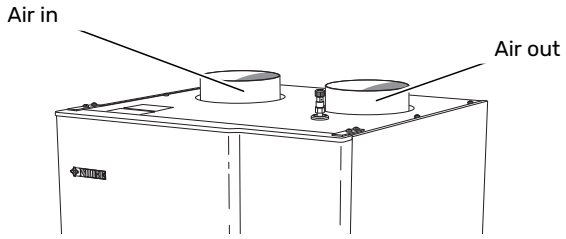
Adjusting ventilation (exhaust air)

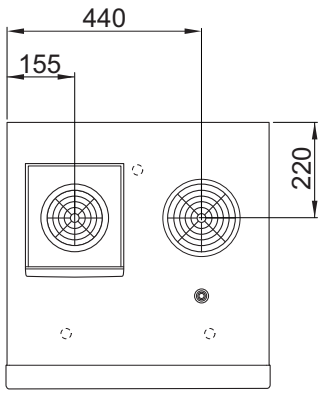
To obtain the necessary air exchange in every room of the house, the exhaust air devices must be correctly positioned and adjusted and the fan in the heat pump adjusted.

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

Incorrect adjustment of the ventilation may lead to reduced installation efficiency and thus poorer operating economy, a poorer indoor climate and moisture damage in the building.

Dimensions and ventilation connections





Electrical connections

General

- Electrical installation and wiring must be carried out in accordance with national provisions.
- Disconnect F130 before insulation testing the house wiring.
- If a miniature circuit breaker is used, this must have at least triggering characteristic "C". See section "Technical specifications" for fuse size.
- To prevent interference, communication cables to external connections must not be laid in the vicinity of 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.
- For an electrical wiring diagram for F130, see the "Technical specifications" section.

> **CAUTION!**
>
> Cut the power before starting working on heat pump. Servicing must be carried out under the supervision of a qualified electrician.

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

> **CAUTION!**
>
> Check the connections, main voltage and phase voltage before the product is started, to prevent damage to the heat pump electronics.

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

Connections

SUPPLY

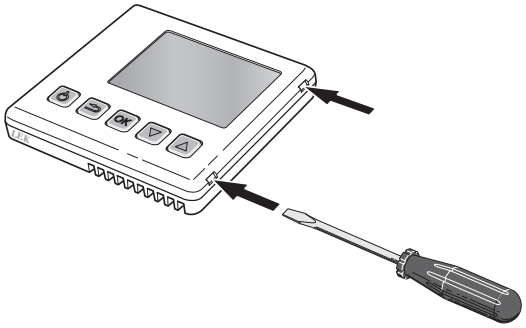
F130 is connected to a earthed single-phase wall socket or a permanent installation. For permanent installations, F130 must be preceded by a circuit breaker with at least a 3 mm breaking gap.

INSTALLING DISPLAY

The display (AA4) cannot be installed directly against a wall because the terminal block protrudes from the back.

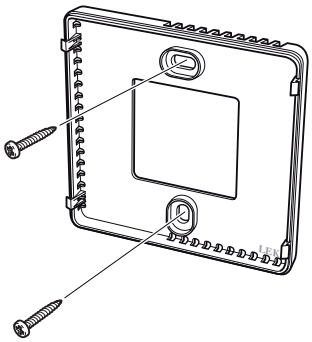
Install the display either in a spare apparatus box or on the plastic spacer supplied.

1. Open the display by inserting a screwdriver in one of the 4mm wide gaps in the edge. Press the screwdriver straight in to open the clip. Repeat for the other three clips.

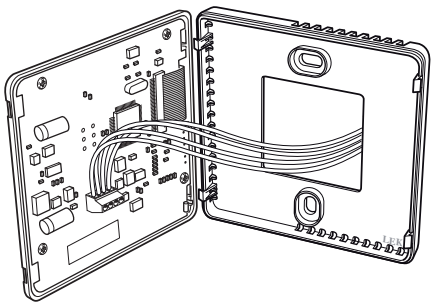


2. Without plastic spacer: Place the rear panel in front of the apparatus box and screw to the wall.

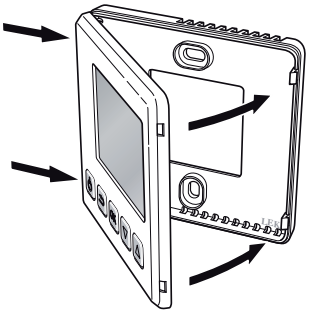
   With plastic spacer: Screw the plastic spacer into the wall. Then screw the the rear panel into the plastic spacer with the two screws supplied.



3. Connect according to section "Display".

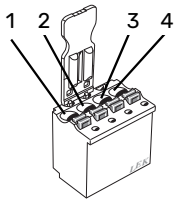


4. Angle the front panel approx. 30° and secure the two clips on one side. Then close the unit and secure the two clips on the other side.

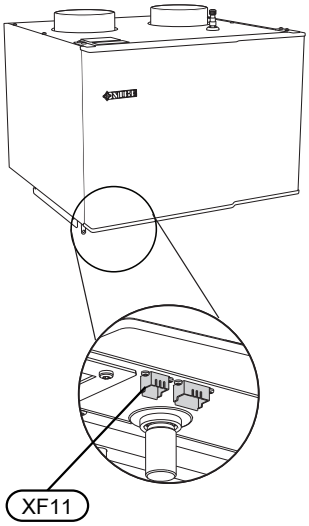


DISPLAY

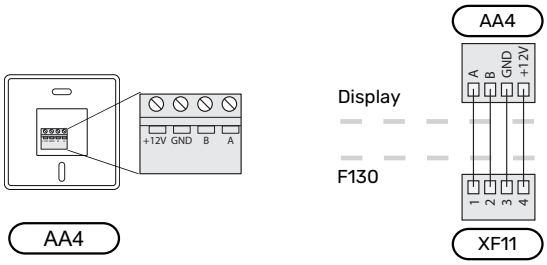
1. Connect the enclosed 4-pin connector to a 4-core cable (maximum cable length 15 m).



2. Connect the 4-pin connector to XF11 in F130.

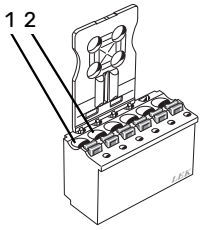


3. Connect the display (AA4) with F130.

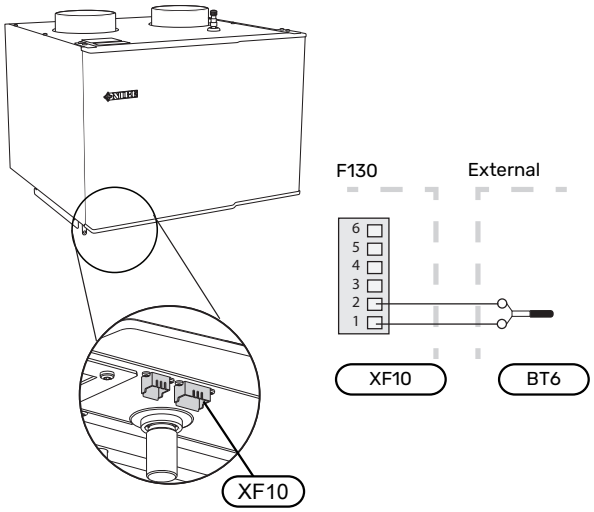


CONTROLLING HOT WATER SENSOR

1. Controlling hot water sensor (BT6) is placed in the submerged tube in the middle of the water heater.
2. Connect the sensor to the enclosed 6-pin connector, position 1 and 2.

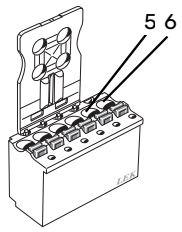


3. Connect the 6-pin connector to XF10 in F130.

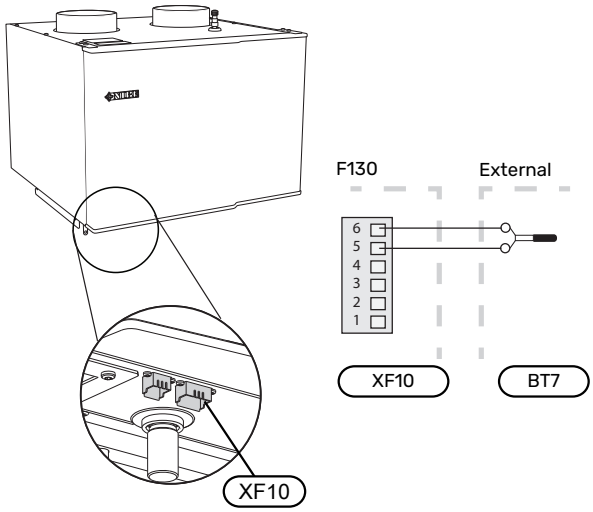


DISPLAY HOT WATER SENSOR

1. Displayed hot water sensor (BT7) is placed in the submerged tube at the top of the water heater.
2. Connect the sensor to the enclosed 6-pin connector, position 5 and 6.



3. Connect the 6-pin connector to XF10 in F130.



Optional connections

EXTERNAL CONNECTION OPTIONS

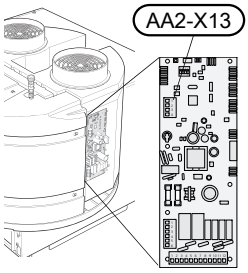
Selectable inputs

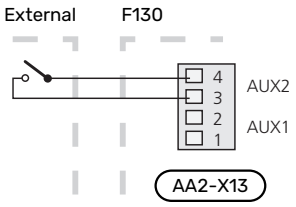
Switch for external blocking of compressor

When external blocking of the compressor is desired, this can be connected to terminal block X13 on the base board (AA2).

The compressor is disconnected by connecting a potential-free switch function to AUX2 (X13:3 och X13:4) (compressor).

A closed contact results in the electrical output being disconnected.





In the above example, inputs AUX1 (X13:1-2) and AUX2 (X13:3-4) on the input board (AA2) are both used.

Commissioning and adjusting

Preparations

1. Check that the display is off.
2. Check that the filling valves are fully closed.

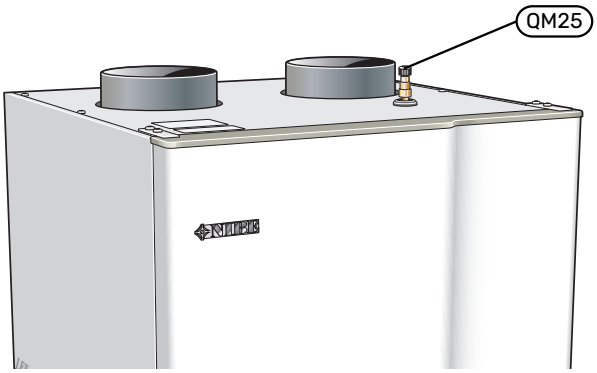
Filling and venting

FILLING

1. Open a hot water tap in the house.
2. Fill F130 by opening the shut-off valve on the cold water pipe to the heat pump.
3. When the water that comes out of the hot water tap it is no longer mixed with air, F130 is full and the tap can be closed.

VENTING

Vent the heat pump with the vent valve (QM25) until there is no air in the water that comes out of the valve. Repeat venting after operating for a while.



Start-up and inspection

START GUIDE

> **CAUTION!**
> There must be water in the heat pump before it is started.

1. Start F130 by connecting the supply cable.
2. Follow the instructions in the display's start guide. If the start guide does not start when you start the heat pump, you can start it manually in menu 5.7.

> **TIP!**
> See page 23 for a more in-depth introduction to the heat pump's control system (operation, menus etc.).

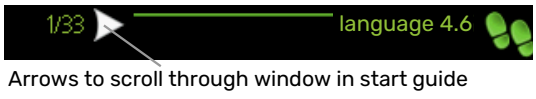
Commissioning

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.

> **NOTE!**
> 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



Arrows to scroll through window in start guide

1. Press the up or down button until one of the arrows in the top left corner (at the page number) has been marked.
2. Press the OK or Back button to move backwards or forwards in the start guide.

See page 23 for a more in-depth introduction to the heat pump's control system.

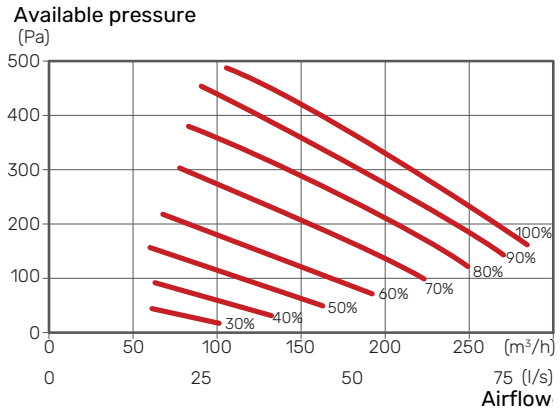
SETTING THE VENTILATION (EXHAUST AIR)

The ventilation must be set according to applicable standards. The fan speed is set in menu 5.1.5 - "fan speed".

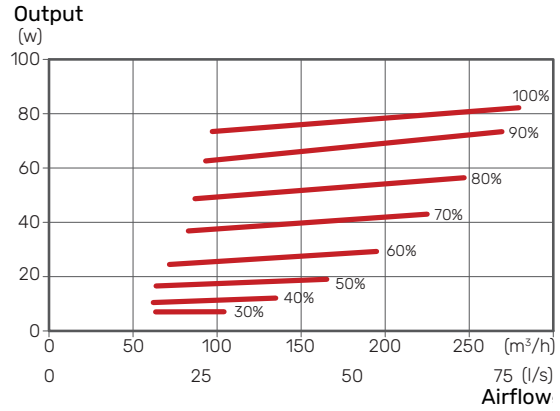
Even if ventilation is roughly set at installation it is important that a ventilation adjustment is ordered and permitted.

> **CAUTION!**
>
> Order a ventilation adjustment to complete the setting.

Fan capacity

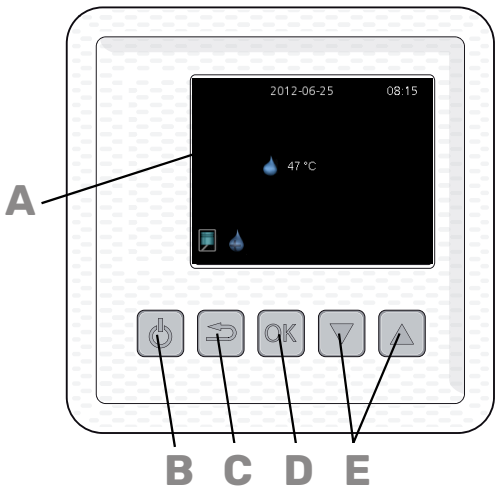


Fan rating



Control - Introduction

Display unit



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

B **STAND-BY BUTTON**
F130 can be switched to stand-by mode using the standby button. The compressor and fan are then switched off. Hold the button in for three seconds to activate/deactivate standby mode.

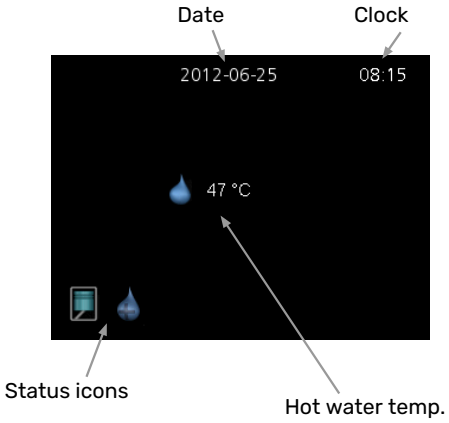
C **BACK BUTTON**
The back button is used to:
- go back to the previous menu.
- change a setting that has not been confirmed.

D **OK BUTTON**
The OK button is used to:
- confirm selections of sub menus/options/set values.

E **UP AND DOWN BUTTONS**
With the up and down buttons you can:
- scroll in menus and between options.
- increase and decrease the values.

Menu system

When F130 is started you come to the information menu. Basic information about the heat pump status is shown here.

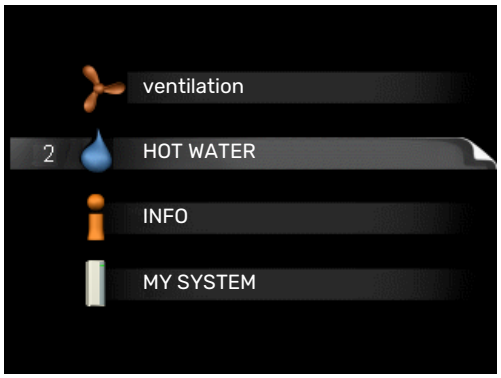


The information menu shows:

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

Press any button to go to the main menu.

MAIN MENU



The menu system's main menus are shown here.

MENU 1 - VENTILATION

Setting the ventilation. See page 25.

MENU 2 - HOT WATER

Setting and scheduling hot water production. See page 26.

MENU 3 - INFO

Display of temperatures and other operating information and access to the alarm log. See page 28.

MENU 4 - MY SYSTEM

Setting time, date, language, etc. See page 29.

MENU 5 - SERVICE

Advanced settings. These settings are not available to the end user. Go to the main menu and hold the Back button pressed in for 7 seconds to access the Service menu. See page 30.

SYMBOLS IN THE DISPLAY

The following symbols may appear on the display during operation.

Symbol	Description
	This symbol is displayed when the compressor is operating.
	This symbol appears when the speed of the fan is changed from its normal setting.
	This symbol appears when lux mode for hot water is activated or when periodic increase is active.
	This symbol appears when "scheduling" is activated in menu 2.3.
	This symbol appears when "holiday setting" is activated in menu 4.7.

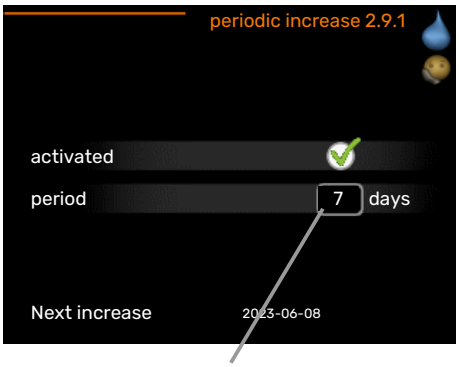
OPERATION

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

SELECTING MENU

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

SETTING A VALUE



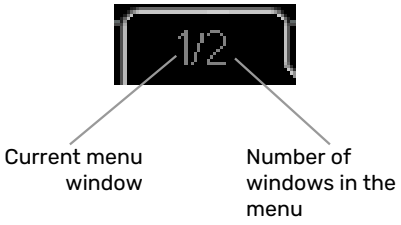
Adjustable value

To set a value:

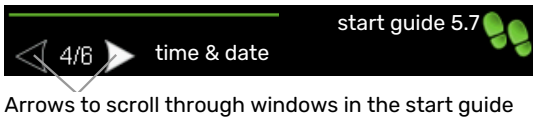
1. Mark the value you want to set using the up or down button. 
2. Press the OK button. The background of the value becomes green, which means that you have accessed the setting mode. 
3. Press the up button to increase the value or the down button to reduce the value. 
4. Press the OK button to confirm the value you have set. To undo and return to the original value, press the back button. 

SCROLL THROUGH THE WINDOWS

A menu can consist of several windows. Mark the page number, using the up and down keys, in the upper left corner and then press the OK button to switch between the windows.



Scroll through the windows in the start guide



Arrows to scroll through windows in the start guide

1. Mark, using the up and down keys, one of the arrows in the top left corner (at the page number).
2. Press the OK button to scroll between the windows in the start guide.

Control - Menus

Menu 1 - ventilation

OVERVIEW

1 - ventilation

MENU 1 - VENTILATION

Setting range: normal and speed 1-4

Default value: normal

This menu is only shown with exhaust air installation.

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

When a new speed has been selected, a countdown is initiated. After 4 hours, the ventilation speed returns to the normal setting.

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

TIP!

If longer time changes are required use the holiday function.

NOTE!

The heat pump requires a minimum ventilation flow in order to work properly. An insufficient ventilation flow can result in an alarm and blocking of compressor operation.

Menu 2 - HOT WATER

OVERVIEW

2 - HOT WATER*	2.1 - temporary lux	
	2.2 - comfort mode	
	2.3 - scheduling	
	2.9 - advanced	2.9.1 - periodic increase

* Accessory needed.

Sub-menus

This menu only appears if a water heater is docked to the heat pump.

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

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

comfort mode Setting hot water comfort. The status information displays what mode is selected, "economy", "normal" or "luxury".

scheduling Scheduling hot water comfort. Status information "active" displays if the scheduling is active right now, the status information "set" displays if the scheduling is set but not active.

advanced Setting periodic increase in the hot water temperature.

MENU 2.1 - TEMPORARY LUX

Setting range: 3, 6 and 12 hours and mode "off" and "one time increase"

Default value: "off"

When hot water requirement has temporarily increased this menu can be used to select an increase in the hot water temperature to lux mode for a selectable time.

NOTE!

If comfort mode "luxury" is selected in menu 2.2 no further increase can be carried out.

The function is activated immediately when a time period is selected and confirmed using the OK button. The remaining time for the selected setting is shown to the right.

When the time has run out F130 returns to the mode set in menu 2.2.

Select “off" to switch off temporary lux.

MENU 2.2 - COMFORT MODE

Setting range: economy, normal, luxury

Default value: normal

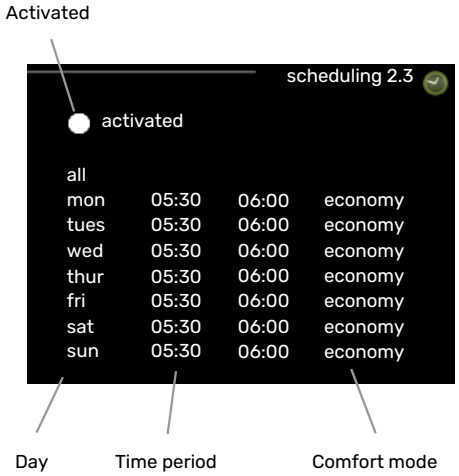
The difference between the selectable modes is the temperature of the hot tap water. Higher temperature means that the hot water lasts longer.

economy: This mode produces less hot water than the others, but is more economical.

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

luxury: Lux mode gives the greatest possible amount of hot water.

MENU 2.3 - SCHEDULING



What hot water comfort the heat pump is to work with can be scheduled here.

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

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

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

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

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

TIP!

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

NOTE!

If the stop time is earlier in the day than the start time it means that the period extends past midnight.

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

If time periods overlap each other at midnight, the time period that starts after midnight is prioritised.

MENU 2.9 - ADVANCED

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

MENU 2.9.1 - PERIODIC INCREASE

period
Setting range: 1 - 90 days

Factory reset: activated, 7 days

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

Here, you can select the length of time between increases in the hot water temperature. The time can be set between 1 and 90 days. Factory setting is 7 days. Tick/untick "activated" to start/switch off the function.

Menu 3 - INFO

OVERVIEW

3 - INFO	3.1 - service info
	3.2 - compressor info
	3.4 - alarm log

Sub-menus

For the menu INFO there are several sub-menus. No settings can be made in these menus, they just display information.

service info shows temperature levels and software versions in the heat pump.

compressor info shows operating times, number of starts and status for the compressor.

alarm log displays the latest alarm and information about the heat pump when the alarm occurred.

MENU 3.1 - SERVICE INFO

Information about the actual operating status of the installation (e.g. current temperatures etc.) can be obtained here. No changes can be made.
The information is on several pages. Push the up and down buttons to scroll between the pages.

Symbols in this menu:			
	Compressor		
	Ventilation (only shown with exhaust air installation)		Periodic increase or lux mode for hot water
	Scheduling		Holiday setting

MENU 3.2 - COMPRESSOR INFO

Information about the compressor's operating status and statistics can be obtained here. No changes can be made.

MENU 3.4 - ALARM LOG

To facilitate fault-finding the heat pump operating status at alarm alerts is stored here. You can see information for the 10 most recent alarms.

To view the run status in the event of an alarm, mark the alarm and press the OK button.

Menu 4 - MY SYSTEM

OVERVIEW

4 - MY SYSTEM	4.4 - time & date	
	4.6 - language	
	4.7 - holiday setting	
	4.9 - advanced	4.9.4 - factory setting

Sub-menus

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

time & date Setting current time and date. Status information displays the time.

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

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

advanced Resetting all settings to factory default values.

MENU 4.4 - TIME & DATE

Set time and date and display mode here.

MENU 4.6 - LANGUAGE

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

MENU 4.7 - HOLIDAY SETTING

To reduce energy consumption you can schedule a reduction in hot water temperature and any ventilation.

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

TIP!

Finish the holiday setting about a day before your return, so the hot water temperature has time to regain usual levels.

MENU 4.9 - ADVANCED

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

MENU 4.9.4 - FACTORY SETTING

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

After factory settings, user settings must be reset.

Menu 5 - SERVICE

OVERVIEW

5 - SERVICE	5.1 - operating settings	5.1.1 - hot water settings
		5.1.5 - fan sp. exhaust air
		5.1.5 - fan speed
		5.1.15 - air in-temperatures
		5.1.16 - installation
	5.5 - factory setting	
	5.6 - forced control	
	5.7 - start guide	
	5.8 - quick start	

Go to the main menu and hold the Back button in for 7 seconds to access the Service menu.

Sub-menus

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

operating settings Operating settings for the heat pump.

factory setting Total reset of all settings (including settings available to the user) to default values.

forced control Forced control of the different components in the heat pump.

start guide Manual start of the start guide which is run the first time the heat pump is started.

quick start Quick starting the compressor.

> **CAUTION!**
>
> Incorrect settings in the service menus can damage the heat pump.

MENU 5.1 - OPERATING SETTINGS

Make settings for the heat pump here.

MENU 5.1.1 - HOT WATER SETTINGS

economy

Setting range economy start temp: 10 – 53 °C

Factory setting economy start temp: 45 °C

Setting range economy stop temperature: 13 – 56 °C

Factory setting economy stop temperature: 51 °C

normal

Setting range normal start temp: 10 - 53 °C

Factory setting normal start temp: 49 °C

Setting range normal stop temperature: 13 - 56 °C

Factory setting normal stop temperature: 54 °C

luxury

Setting range luxury start temp: 10 – 57 °C

Factory setting luxury start temp: 53 °C

Setting range luxury stop temperature: 13 – 60 °C

Factory setting luxury stop temperature: 58 °C

stop per increase

Setting range: 5 – 60 °C

Default value: 60 °C

Here you set the start and stop temperature of the hot water for the different comfort options in menu 2.2 as well as the stop temperature for periodic increase in menu 2.9.1.

MENU 5.1.5 - FAN SPEED

Exhaust air installation

Setting range: 30 – 100 %

Factory setting normal: 70 %

Factory setting speed 1: 30 %

Factory setting speed 2: 50 %

Factory setting speed 3: 70 %

Factory setting speed 4: 90 %

Installation ambient air

Setting range: 30 – 100 %

Factory setting speed 1: 30 %

Set the speed of the fan here.

NOTE!

An incorrectly set ventilation flow can damage the house and may also increase energy consumption.

MENU 5.1.15 - AIR IN-TEMPERATURES

max air in.temp.
Setting range: 20 - 37 °C

Default value: 37 °C

min air in.temp.
Setting range: -10 - 25 °C

Factory setting surrounding air and exhaust air: 10 °C

Set the min and max temperature of the incoming air to F130 here.

MENU 5.1.16 - INSTALLATION

installation
Setting range: ambient air, exhaust air

Factory setting: ambient air

Set how F130 is installed here.

This menu is not reset by a return to factory settings in menu 4.9.4 or 5.5.

MENU 5.5 - FACTORY SETTING

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

CAUTION!

When resetting, the start guide is displayed the next time the heat pump is restarted.

MENU 5.6 - FORCED CONTROL

You can force control the different components in the heat pump here.

MENU 5.7 - START GUIDE

When the heat pump is started for the first time the start guide starts automatically. Start it manually here.

See page 21 for more information about the start guide.

MENU 5.8 - QUICK START

It is possible to start the compressor from here.

NOTE!

There must be a hot water demand to start the compressor.

CAUTION!

Do not quick start the compressor too many times over a short period of time, as this could damage the compressor and its surrounding equipment.

Disturbances in comfort

In most cases, F130 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 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 source of the fault. See help menu or user manual for more information about menu 3.1.

Manage alarm

In the event of an alarm, a malfunction has occurred, which is indicated by an alarm symbol in the display.

ALARM

In the event of an alarm, a malfunction has occurred that F130 cannot rectify itself. The display shows what type of alarm it is and lets you reset the alarm.

reset alarm In many cases it is sufficient to select "reset alarm" to correct the problem that caused the alarm. If the alarm recurs, the problem that caused the alarm remains. If the alarm disappears and then recurs, see the troubleshooting section (page 32).

Troubleshooting

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

BASIC ACTIONS

Start by checking the following items:

- That the feed cable is connected to F130.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.

LOW HOT WATER TEMPERATURE OR A LACK OF HOT WATER

- Large hot water consumption.
  - Wait until the hot water has heated up. Temporarily increased hot water capacity (temporary lux) can be activated in menu 2.1.
- Too low hot water setting.
  - Enter menu 2.2 - "comfort mode" and select a higher comfort mode.
- Filter clogged (installation with ambient air)
  - Clean or replace the filter.
- Low or a lack of ventilation (exhaust air installation)
  - See section "Low or a lack of ventilation".

LOW OR NO VENTILATION (EXHAUST AIR INSTALLATION)

- Filter (HQ12) blocked.
  - Clean or replace the filter.
- The ventilation is not adjusted.
  - Order/implement ventilation adjustment.
- Exhaust air device blocked or throttled down too much.
  - Check and clean the exhaust air devices.
- Fan speed in reduced mode.
  - Enter menu 1 - "ventilation" and select "normal"

HIGH OR DISTURBING VENTILATION (EXHAUST AIR INSTALLATION)

- Filter (HQ12) blocked.
  - Clean or replace the filter.
- The ventilation is not adjusted.
  - Order/implement ventilation adjustment.
- Fan speed in forced mode.
  - Enter menu 1 - "ventilation" and select "normal"

THE COMPRESSOR DOES NOT START

- There is no hot water requirement.
  - The heat pump does not call on hot water.
- The heat pump defrosts.
  - The compressor starts, when defrosting is complete.

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.

Accessories

Not all accessories are available on all markets.

Detailed information about the accessories and complete accessories list available at nibe.eu.

Water heater

VPD10
Water heater without immersion heater

VPD 150
Corrosion protection:
Stainless Part no. 086 017

VPD 300
Corrosion protection:
Stainless Part no. 086 019

Top cabinet TOC 40

Top cabinet, which conceals any pipes/ventilation ducts.

HEIGHT 245 MM
Part no. 089 756

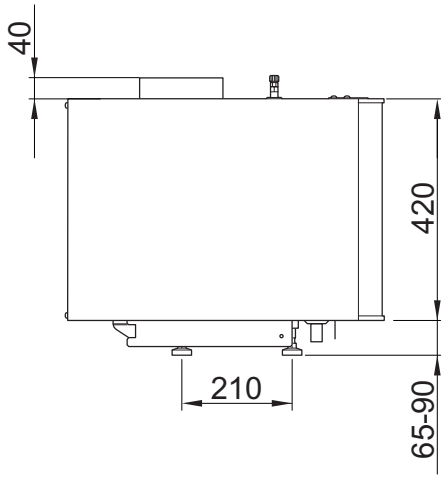
HEIGHT 345 MM
Part no. 089 757

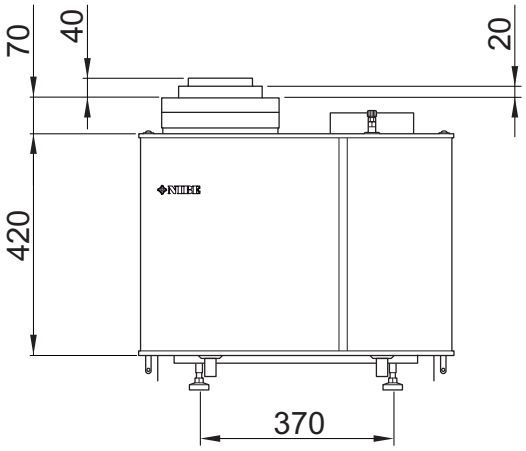
HEIGHT 445 MM
Part no. 067 522

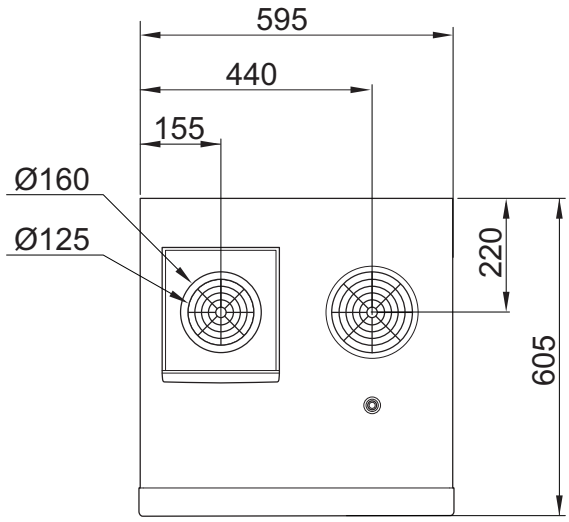
HEIGHT 385 - 635 MM
Part no. 089 758

Technical data

Dimensions







Technical specifications

1x230 V		
Output data according to EN 14 511		
Capacity (P_H)/COP	kW/-	1.42 / 3.87[1]
Capacity (P_H)/COP	kW/-	1.34 / 3.13[2]
Capacity (P_H)/COP	kW/-	1.27 / 2.65[3]
Electrical data		
Rated voltage	V	230 V ~ 50 Hz
Max operating current	A	3.5
Min. fuse rating	A	6
Driving power circulation pump	W	5-20
Driving power fan	W	20-75
Enclosure class		IP21
Ventilation		
Filter type, exhaust air filter		Coarse 65%
Refrigerant circuit		
Type of refrigerant		R134A
GWP refrigerant		1430
Filling amount	kg	0.38
CO_2 equivalent	ton	0.54
Cut-out value pressostat HP	MPa/bar	2.2 / 22.0
Heat pump		
Max system pressure	MPa/bar	1.0 / 10.0
Max temperature, supply line	°C	63
Max temperature, return line	°C	54
Air flow requirement		
Min. airflow with the temperature of the incoming air at least 10 °C	l/s	25
Temperature range for compressor operation	°C	10 - 37
Sound effect level according to EN 12 102		
Sound power level ($L_{W(A)}$)[4]	dB(A)	47.0
Sound pressure levels according to EN ISO 11 203		
Sound pressure level in the installation room ($L_{P(A)}$)[5]	dB(A)	43.0
Pipe connections		
Hot water ext ⌀	mm	22
Air connections ext. ⌀	mm	160
Filter box ext. ⌀	mm	160/125

1 A20(12)W35, frånluftsflöde 50 l/s (180 m³/h), exkl. driveffekt för fläkt

2 A20(12)W45, frånluftsflöde 50 l/s (180 m³/h), exkl. driveffekt för fläkt

3 A20(12)W55, frånluftsflöde 50 l/s (180 m³/h), exkl. driveffekt för fläkt

4 The value varies with the fan speed selected. For more detailed sound data, including sound to ducts, visit nibe.eu.

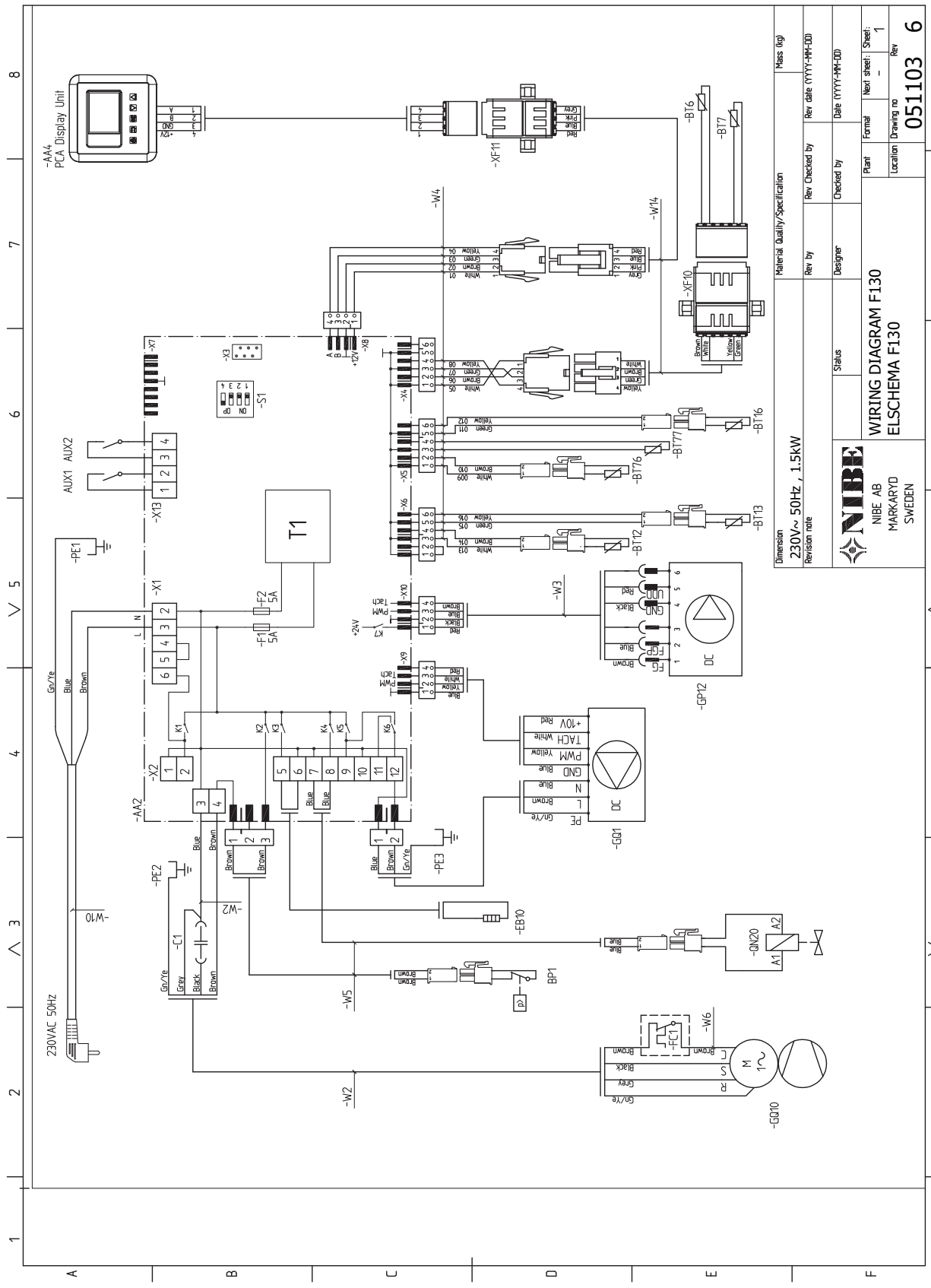
5 The value can vary with the room's damping capacity. These values apply at a damping of 4 dB.

Other 1x230 V		
Dimensions and weight		
Length, supply cable	m	2.8
Width	mm	600
Depth	mm	605
Height		490 - 515
Weight	kg	50
Part No.		066 009
EPREL no.		-

Energy labelling

Supplier		NIBE AB	
Model		**F130 Surrounding air**	**F130 Surrounding air**
Model hot water heater		**VPD10-150**	**VPD10-300**
Declared load profile		**L**	**XL**
Water heating energy efficiency class		**A**	**A**
Water heating energy efficiency, $_{wh}$	%	106	110
Annual energy consumption water heating, AEC	kWh	967	1,519
Thermostat setting	°C	54	54
Sound power level L_{WA} indoors	dB	47	47
Daily electrical consumption, Q_{elec}	kWh	4.40	6.90
Applied standards		EN 16147	

ELECTRICAL CIRCUIT DIAGRAM



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