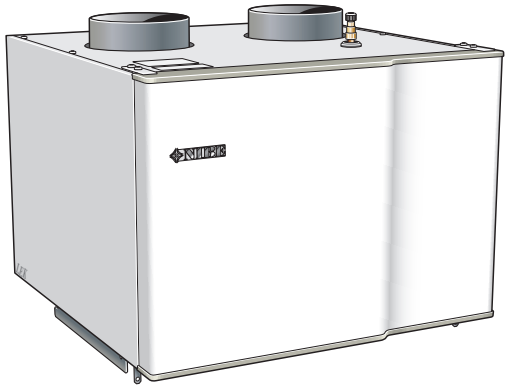


Installer manual

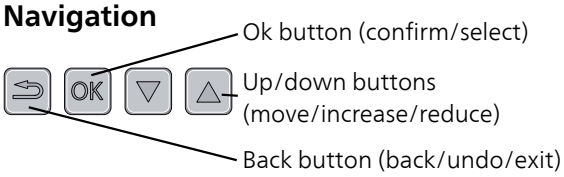
NIBE™ F130

Heat pump

IHB GB 1538-3
231984

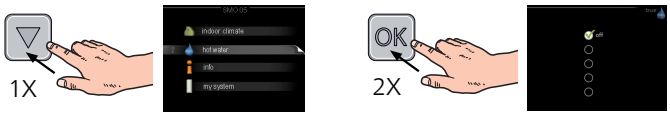
Quick guide

Navigation



A detailed explanation of the button functions can be found on page 22.
How to scroll through menus and make different settings is described on page 23.

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 25.

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 31 for instructions.

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

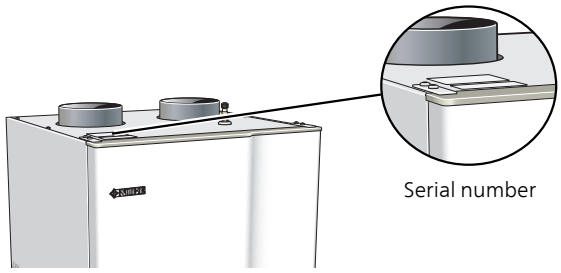
F130 is CE marked and fulfils IP21.

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 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 of water.

Serial number

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



Serial number

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.

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			

Contact information

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

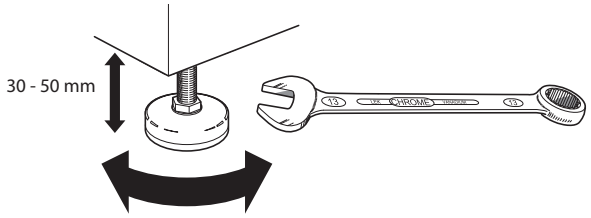
Transport

Transport

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

Assembly

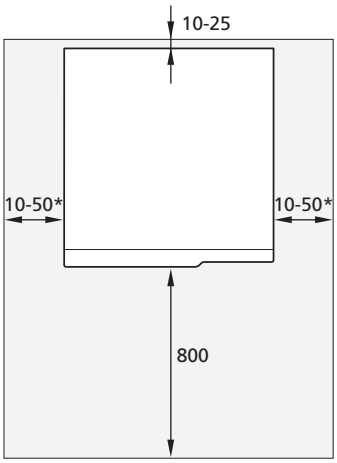
- F130 is installed freestanding on brackets or a suitable flat surface. Noise from the fan and compressor can be transferred to the brackets or the surface that F130 is placed on. Use the product's adjustable feet to obtain a horizontal and stable set-up.



- The area where F130 is located must be equipped with floor drainage.
- F130 must be positioned with the back towards a wall. Install the brackets or position F130 against an outside wall, ideally in a room where noise does not matter, in order to eliminate noise problems. If this is not possible, avoid placing it against a wall behind a bedroom or other room where noise may be a problem.
- Wherever the unit is located, walls to sound sensitive rooms should be fitted with sound insulation.
- Route pipes so they are not fixed to an internal wall that backs on to a bedroom or living room.

Installation area

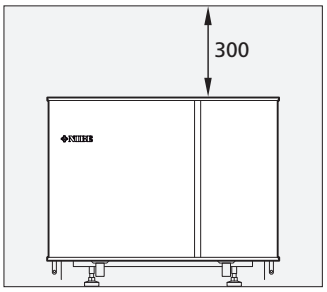
Leave a free space of 800 mm in front of the heat pump. Approx. 50 mm free space is required on each side, to remove the side panels. The panels do not need to be removed during service, all service can be carried out from the front. Leave space between the heat pump and the wall behind (and any routing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



* Depending on whether the panels can be removed or not.

NOTE

Ensure that there is sufficient space (300 mm) above F130 for installing ventilation hoses.

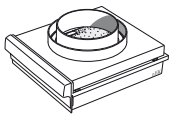


Supplied components

Location

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

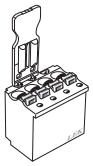
Display



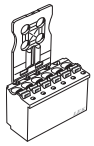
Filter cartridge

Air connection

Silencer



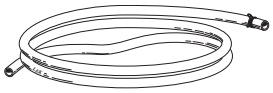
4-pin display connector



6-pin sensor connector

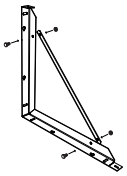
2 x sensors

Choke washer Ø22 mm



Drainage hose Ø 20 mm

L=2200 mm



2 x bracket

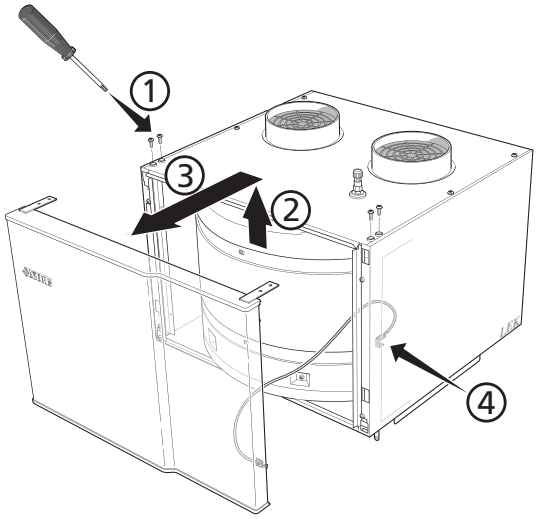
6 x screws

6 x nuts

4 x washers

Removing the covers

Front hatch

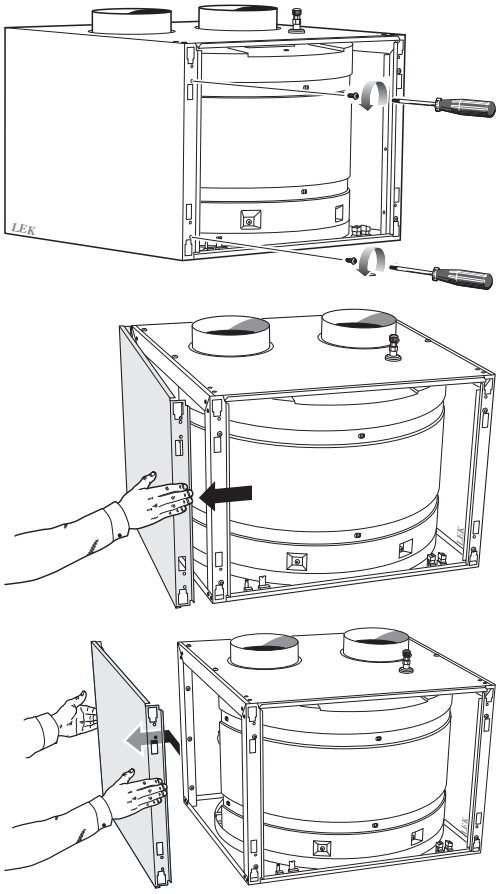


1. Slacken off the screws for the securing plate above F130.
2. Slide the hatch upwards and pull it towards you.
3. Pull the hatch towards yourself.

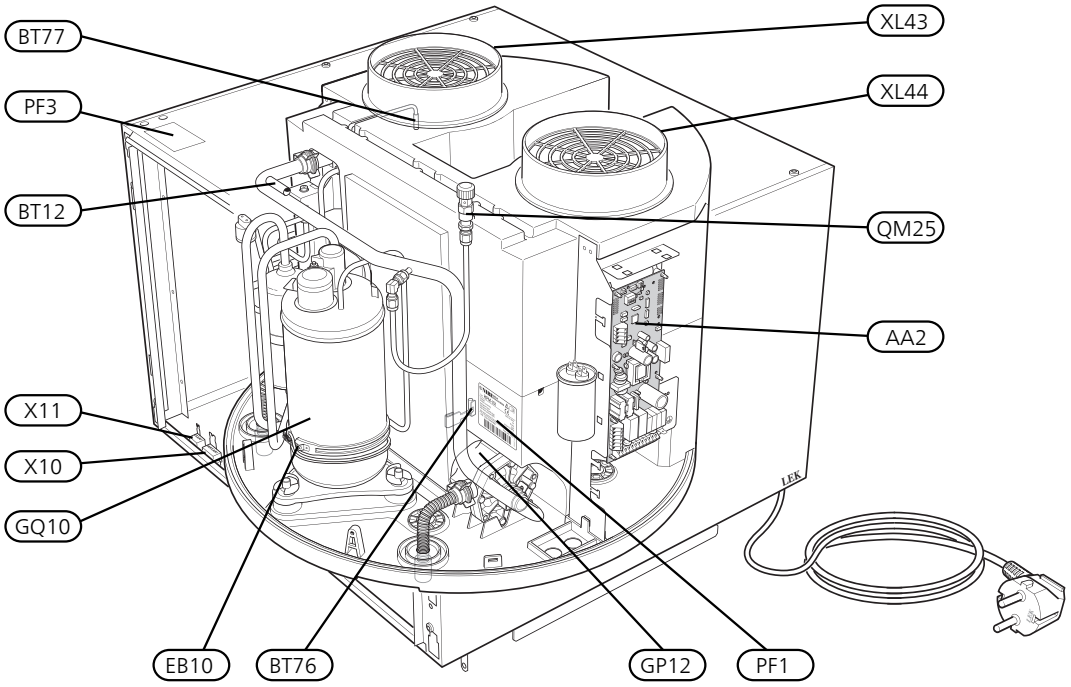
> **NOTE**
>
> A ground cable is installed in the hatch, it can therefore only be lifted out 0.35 m. If the hatch needs to be removed completely, the cable must be detached.

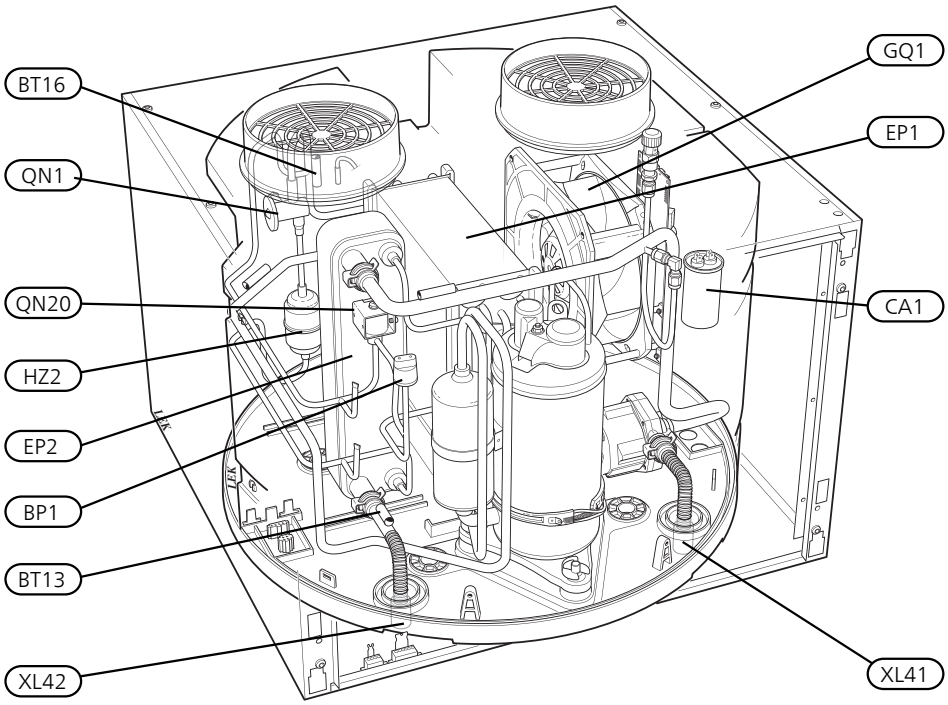
Side panels

1. Undo the screws at the edge.
2. Twist the cover slightly outward.
3. Move the side cover outwards and backwards.
4. Assembly takes place in the reverse order.



3 The Heat pump design





Pipe connections

XL 41	Connection, hot water outgoing
XL 42	Connection, hot water incoming
XL43	Connecting incoming air
XL44	Connecting outgoing air
WM2	Overflow water discharge[1]

HVAC components

GP12	Circulation pump, charging
QM25	Venting, hot water

Sensors etc.

BP1	High pressure pressostat
BT 6	Temperature sensor, hot water, control
BT 7	Temperature sensor, hot water, display
BT12	Temperature sensor, condenser out
BT13	Temperature sensor, heating medium return before condenser
BT16	Temperature sensor, evaporator
BT76	Temperature sensor, defrosting
BT77	Temperature sensor, incoming air

Electrical components

AA2	Base card
CA1	Capacitor
EB10	Compressor heater
X 10	Sensor switch
X 11	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

PF1	Rating plate
PF3	Serial number plate

[1]Not visible in the image

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

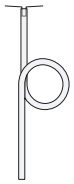
4 Pipe and air connections

General pipe connections

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

F130 is only designed for upright installation. 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.



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.

NOTE

The pipe systems need to be flushed out before F130 is connected so that any debris cannot damage component parts.

Symbol key

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

System diagram

F130 consists of heat pump module and control system.

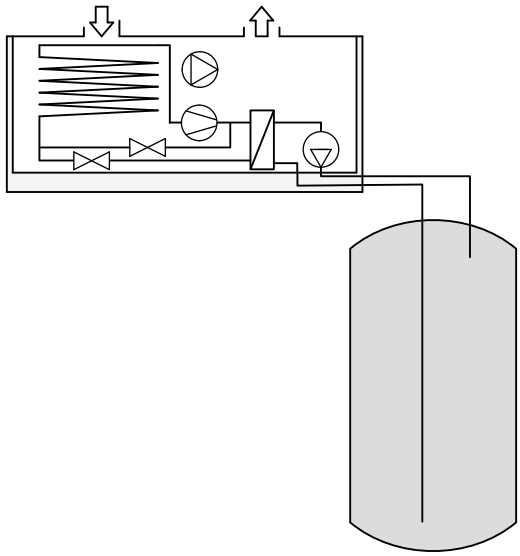
When the air passes through the evaporator, the refrigerant evaporates because of its low boiling point. In this way the energy in the air is transferred to the refrigerant.

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

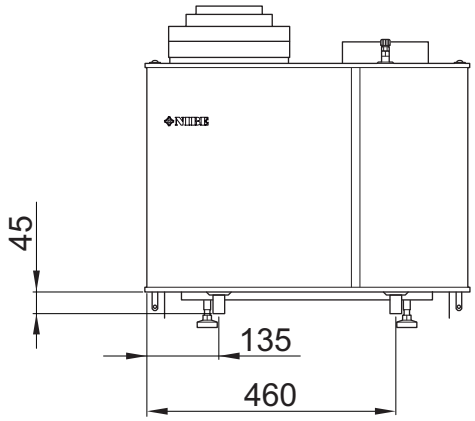
The warm refrigerant is led to the condenser. Here the refrigerant gives off its energy to the hot water, whereupon the refrigerant changes state from gas to liquid.

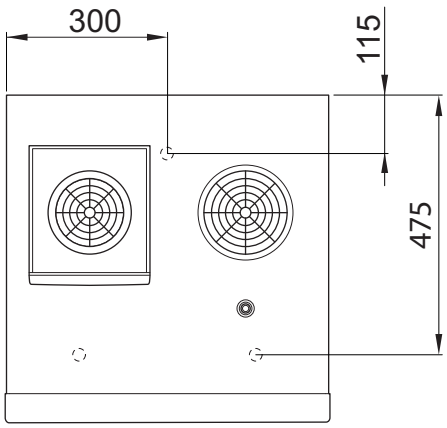
The refrigerant then goes via filters to the expansion valve, where the pressure and temperature are reduced.

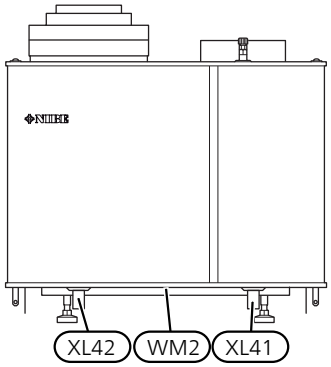
The refrigerant has now completed its circulation and returns to the evaporator.



Dimensions and pipe connections







Pipe dimensions

Connection		
XL41 Outgoing hot water ext Ø	(mm)	22
XL42 Incoming hot water ext Ø	(mm)	22
WM2 Overflow water discharge int Ø	(mm)	20

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.

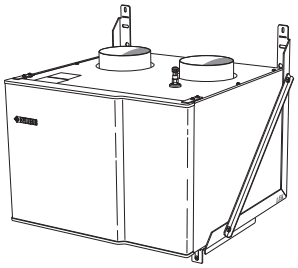
NOTE

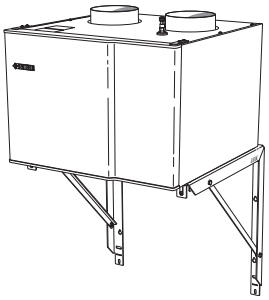
Check that the mountings are located in their applicable grooves on the heat pump.

Ensure that the heat pump is installed horizontally.

Installing on brackets

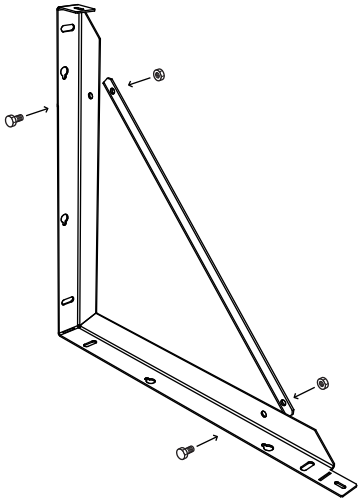
1. Install F130 on brackets.
2. Connect water and ventilation pipes.

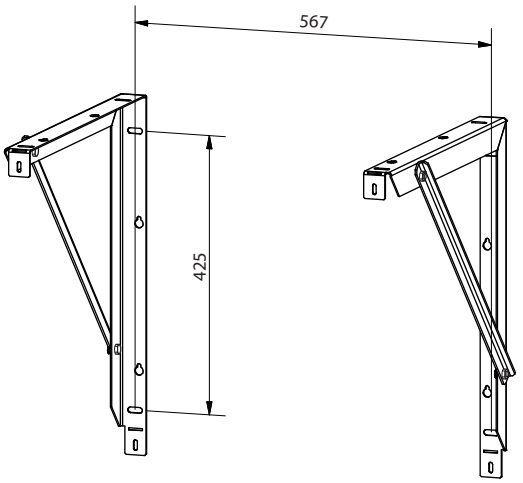




Installing brackets

1. Install the brackets together using the M6 screws and nuts supplied.
2. Drill holes in the wall as illustrated.
3. Fit the brackets on the wall.
4. Screw F130 into place in the brackets using the M5 screws and nuts supplied.



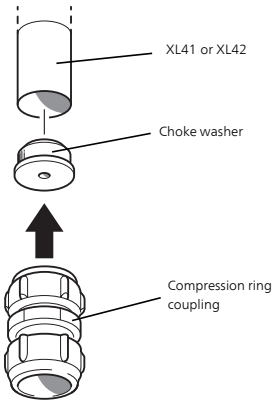


Connecting cold and hot water

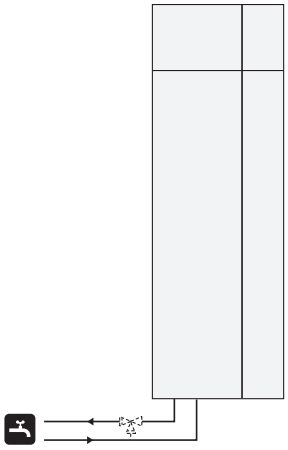
For optimal hot water operation, install the supplied choke washer.

The washer is installed in the connection for outgoing hot water (XL41) or connection for incoming hot water (XL42) before the compression connection is installed.

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



The mixer valve must be installed if the factory setting is changed so that the temperature can exceed 60 °C. If the factory setting is changed, national regulations must be observed. The setting is made in menu 5.1.1 (page 29).

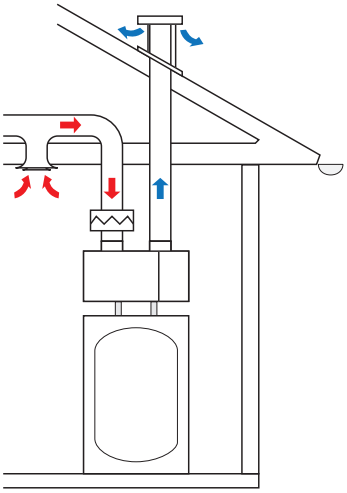


Installation alternative

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

Installation must be carried out in accordance with current standards and directives.

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.

NOTE

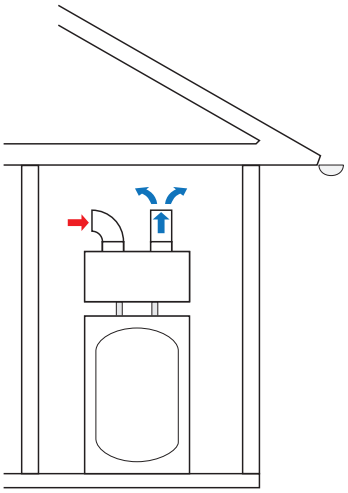
An air filter (HQ12) (enclosed), minimum classification G2, is required on the exhaust air duct of this connection. The filter must be cleaned regularly.

Caution

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

Surrounding air

Take incoming air from one room and release the outgoing air to the same room.



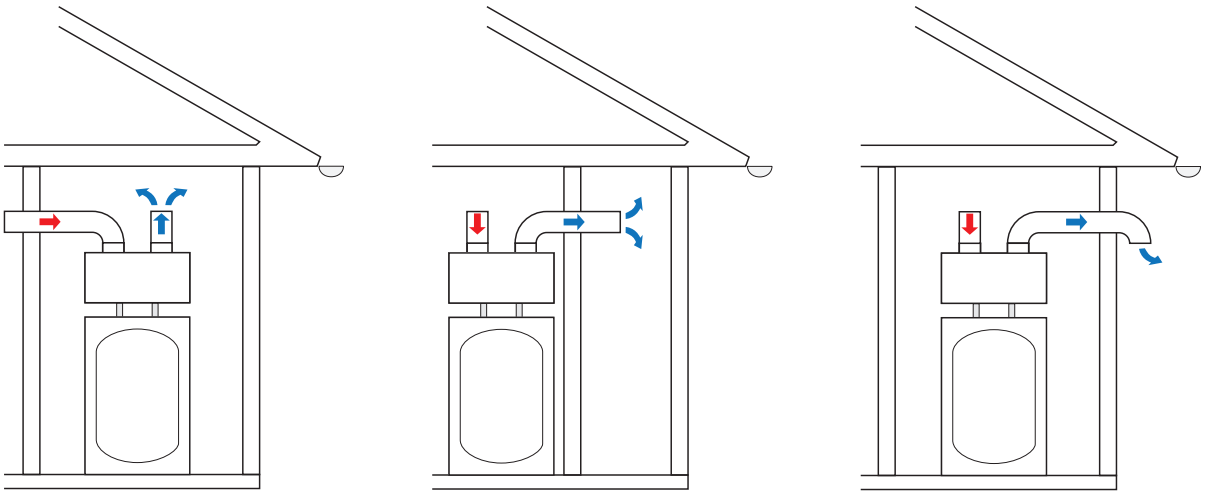
Connecting surrounding air

With surrounding air connection the heat in the room air is used to heat up the hot water. The outgoing air can be used to cool a room.

- If the incoming air is taken from the same room where the outgoing air is released it is important that the pipe for incoming air is not located so that the outgoing air is sucked into the heat pump. This can be prevented by the putting a bend in one of the air pipes.
- Have sufficient ceiling height so that recirculation of the air is avoided.
- If incoming air to F130 contains a lot of particles and there is a high hot water demand the heat pump must be equipped with an air filter (HQ12) (supplied), minimum class G2.
- Noise from the fan can be transferred to the room via the air pipes.
- 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.

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

Take incoming air from one room and release the outgoing air to another room or outdoors.



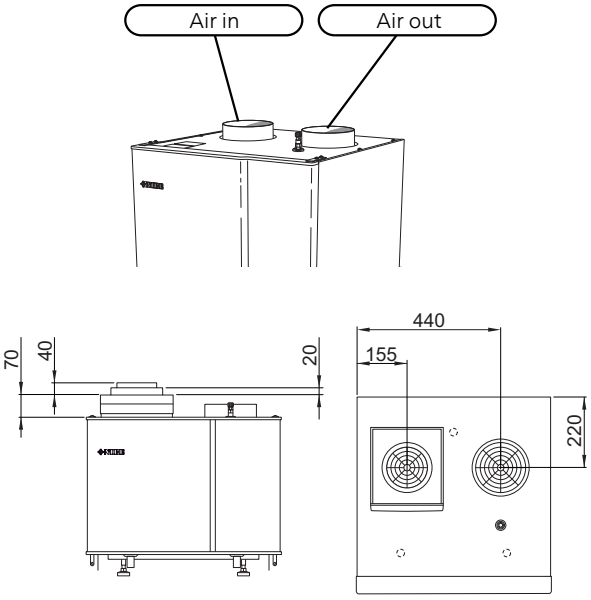
General air connections

Air installation must be carried out in accordance with applicable directives.

To prevent fan noise being transferred to the ventilation devices, it may be a good idea to install a silencer in the duct, alternatively mount the enclosed silencer in F130.

Connections must be made via flexible hoses, which must be installed so that they are easy to replace. Ducts that may become cold must be insulated with diffusion-proof material (PE30) along their entire lengths. 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 in the cross-sectional area in the form of kinks, tight bends etc., since this will reduce the capacity. The air duct system must be a minimum of air tightness class B.

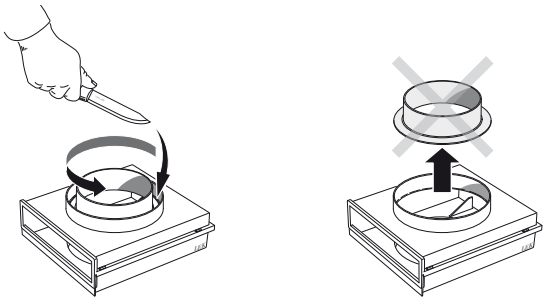
If there is a high hot water demand and incoming air to F130 contains a lot of particles the heat pump module must be equipped with an air filter (HQ12) (enclosed).



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



Install the connector

If the filter cartridge is not installed, the enclosed connector is installed in the connection for incoming air (XL43).

Install the silencer

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

Exhaust air duct /kitchen fan

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

To prevent food vapour being transferred to F130 the distance between the kitchen fan and the exhaust air device must be considered. The distance should not be less than 1.5 m, but this can 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 (exhaust air)

Connect F130 so that all exhaust air except exhaust air duct air (kitchen fan) passes the evaporator (EP1) in the heat pump. For optimum heat pump performance, the ventilation flow should not be less than 25 l/s (90 m^3/h). When the exhaust air temperature is lower than 20 °C (for example at start-up and when there is no one at home) the minimum value is 31 l/s (110 m3/h).

Ensure that the ventilation openings are not blocked. Set the ventilation capacity in the heat pump's menu system (menu 5.1.5).

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.

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

5 Electrical connections

General

Installation must be carried out in accordance with current standards and directives.

When working behind screwed covers, the circuit fuse must be removed or the connection plug pulled out.

Work behind screwed covers may only be carried out under the supervision of a qualified electrician.

- Disconnect F130 before insulation testing the house wiring.
- For electrical wiring diagram for F130, see page 38.
- Signal cables to external connections must not be laid close to high current cables.
- Signal cables to external connections are four core, at least 0.35 mm^2.
- If the supply cable is damaged, it must be replaced by qualified persons.

NOTE

The supply cable must not be connected until the boiler has been filled. Internal components can be damaged.

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

Power connection

NOTE

To prevent interference, unscreened communication and/or sensor cables to external connections must not be laid closer than 20 cm from high voltage cables.

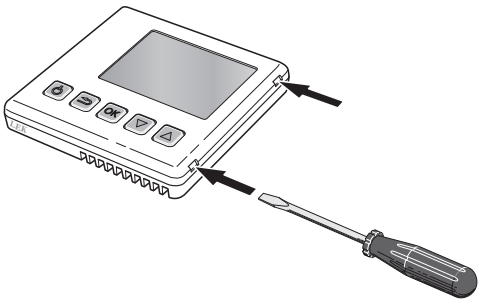
F130 is connected to an earthed socket with the factory installed power cord, which is supplied with connection plug.

Installing display

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

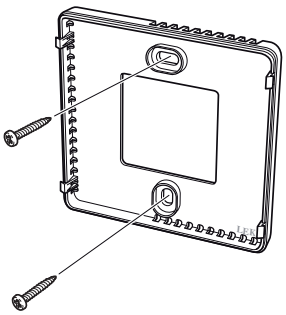
Install the display either in a spare apparatus box or on the plastic spacer supplied.

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.

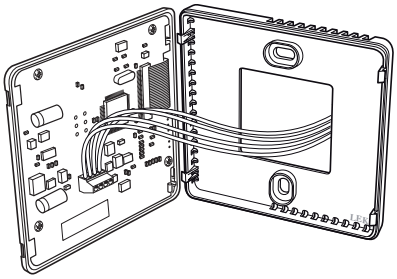
2.



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

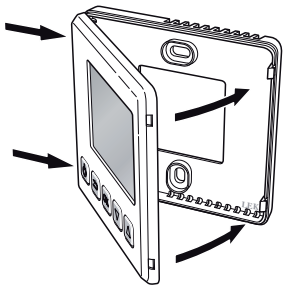
With plastic spacer: Screw the plastic spacer into the wall. Then screw the the rear panel into the plastic spacer with the two screws supplied.

3.



Connect according to section "Display".

4.



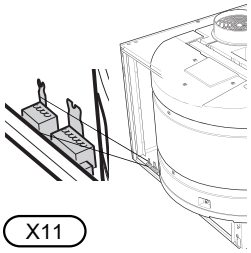
Angle the front panel approx. 30° and secure the two clips on one side. Then close the unit and secure the two clips on the other side.

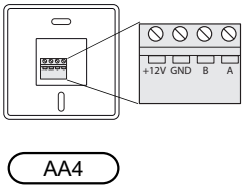
Display

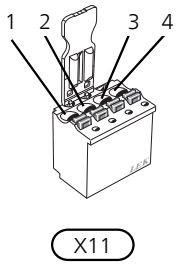
Connect the display (AA4) to the four pin display connector X11:1 (A), X11:2 (B), X11:3 (GND) and X11:4 (+12V).

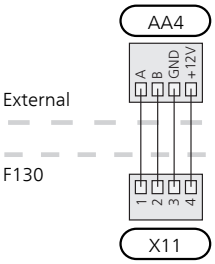
Use a 4 core cable of at least 0.5 mm² cable area.

> **NOTE**
>
> The cable to the display must be a maximum of 15 m.





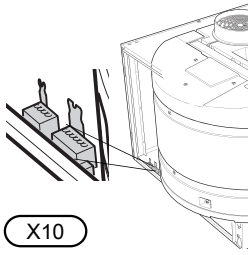


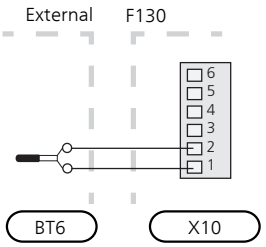


Temperature sensor, hot water charging

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

Connect the sensor to terminal block X10:1 and X10:2. Use a 2 core cable of at least 0.5 mm² cable area.

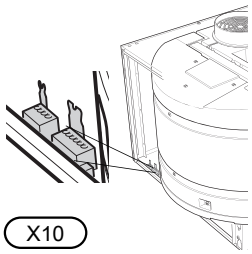


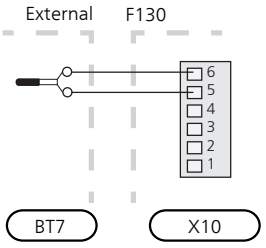


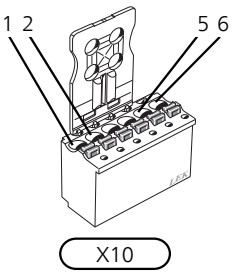
Temperature sensor, hot water top

A temperature sensor for hot water top (BT7) can be connected to F130 to show the water temperature at the top of the tank.

Connect the sensor to terminal block X10:5 and X10:6. Use a 2 core cable of at least 0.5 mm² cable area.







Optional connections

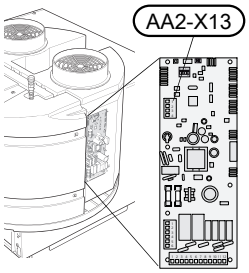
AUX inputs

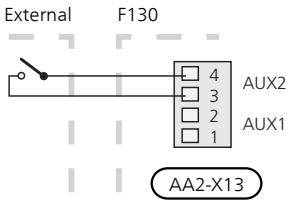
Switch for external blocking of compressor

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.





6 Commissioning and adjusting

Preparations

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

Caution

Check miniature circuit breaker (FA1) in the heat pump. It may have tripped during transportation.

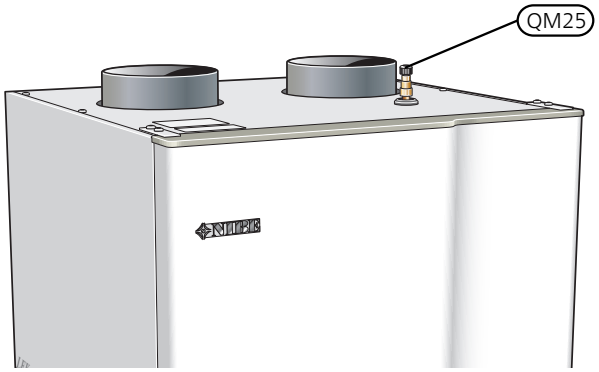
Filling and venting

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.

Bleeding

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



Start-up and inspection

Starting

NOTE

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 start guide in the display. If the start guide does not start when you start the heat pump, start it manually in menu 5.7.

TIP

See page 22 and onwards for a more in-depth introduction to the installation's control system (operation, menus etc.).

Commissioning

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.

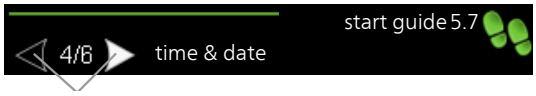
The start guide ensures that the start-up is carried out correctly and cannot be bypassed. The start guide can be started later in menu 5.7.

Caution

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

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

Operation in the start guide



Arrows to scroll through windows in the 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 22 for a more in-depth introduction to the heat pump's control system.

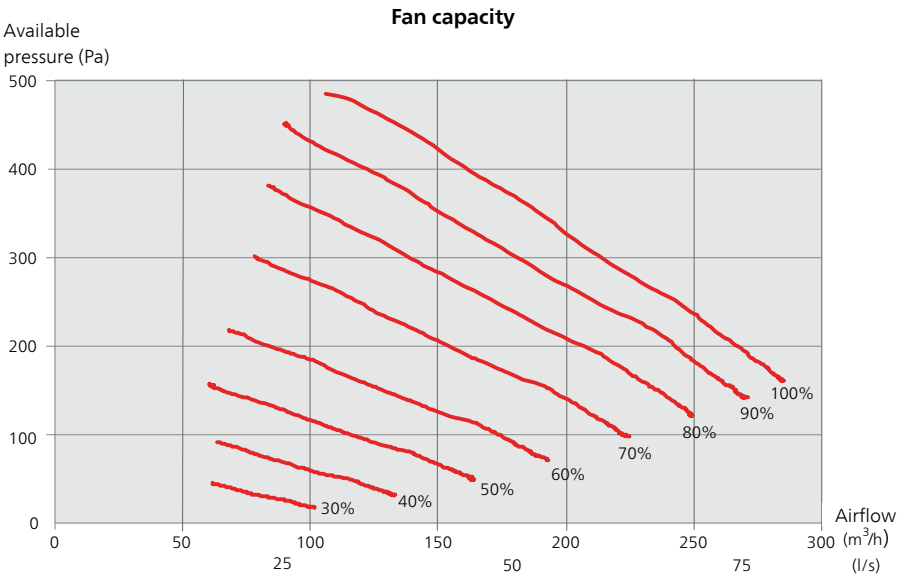
Setting ventilation (exhaust air)

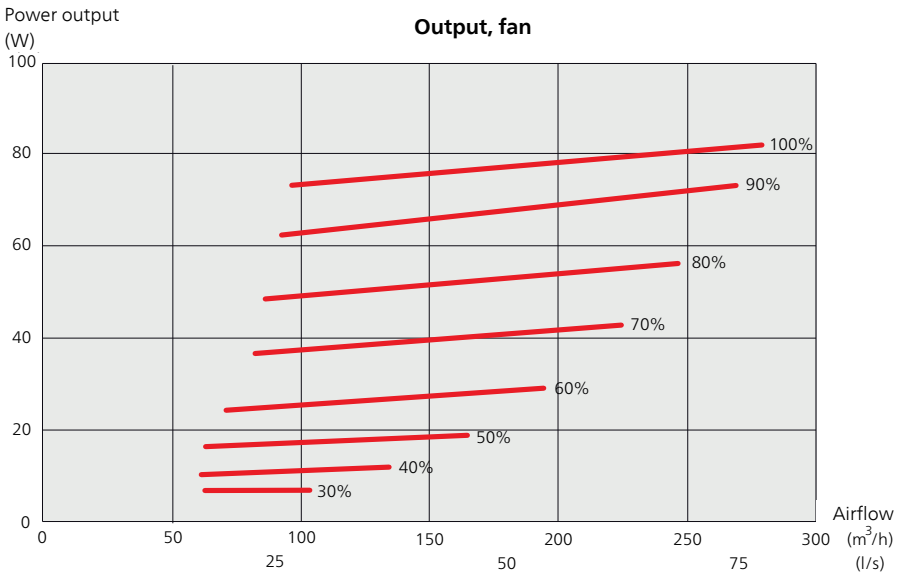
Ventilation must be set according to applicable standards. The setting is made in menu 5.1.5.

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

NOTE

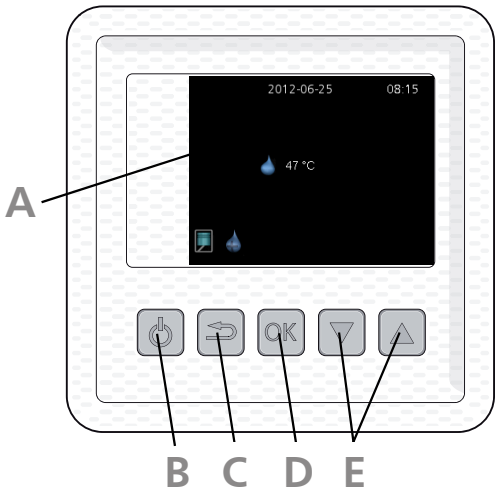
Order a ventilation adjustment to complete the setting.





7 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

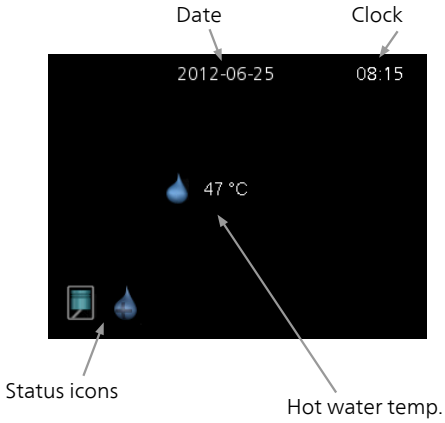
The OK button is used to:
- confirm selections of sub menus/options/set values.

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

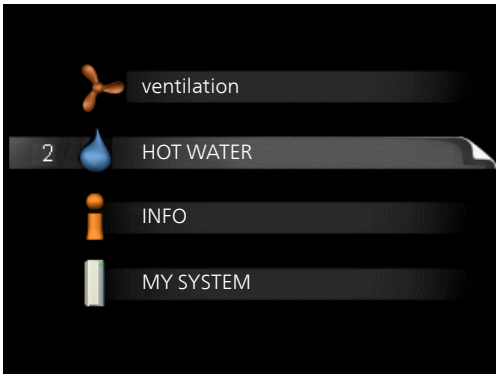
When F130 is started you come to the information menu. Basic information about the heat pump status is shown here.



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 24.

Menu 2 - HOT WATER

Setting and scheduling hot water production. See page 25.

Menu 3 - INFO

Display of temperatures and other operating information and access to the alarm log. See page 27.

Menu 4 - MY SYSTEM

Setting time, date, language etc. See page 28.

Menu 5 - SERVICE

Advanced settings. These settings are not available to the end user. Go to the main menu and hold the Back button in for 7 seconds to access the Service menu. See page 29.

Symbols in the display

The following symbols can appear in 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.

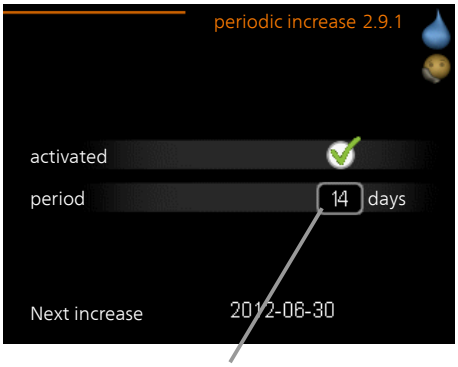
Operation

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. 

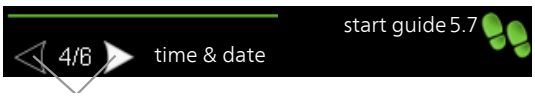
Scroll through the windows

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.

Current menu window

Number of windows in the menu

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.

8 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.

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"

Default value: "off"

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

Caution

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

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

When the time has run out 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 gives less hot water than the others, but is more economical.

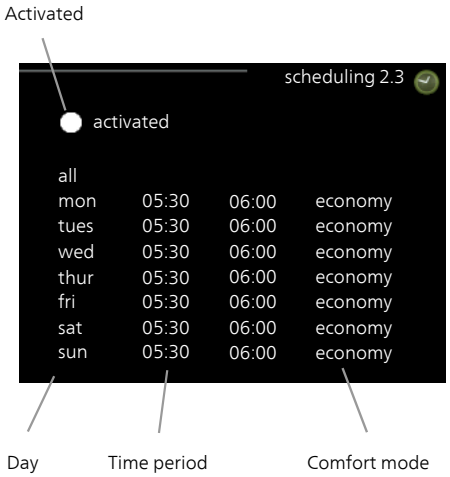
normal: Normal mode gives a larger amount of hot water and is suitable for most households.

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 schedule 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 line "all" is used, all days in the period are set for these times.

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.

Caution

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 setting: activated, 14 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.

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

Menu 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 heat pump's actual operating status (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	
	4.8 - alarm	
	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".

alarm Alarms can be reset here.

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.

This setting applies to all climate systems with room sensors.

This setting applies to all climate systems without room sensors.

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

TIP

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

Caution

If you choose to switch off hot water production during the vacation “periodic increase" (preventing bacterial growth) are blocked during this time. "periodic increase" started in conjunction with the vacation setting being completed.

Menu 4.8 - alarm

This menu is only available if an alarm has occurred.

Here you can reset any alarms that have occurred in F130.

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.

Caution

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 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.

NOTE

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.

Caution

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.

NOTE

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 20 for more information about the start guide.

Menu 5.8 - quick start

It is possible to start the compressor from here.

Caution

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 may damage the compressor and its surrounding equipment.

9 Disturbances in comfort

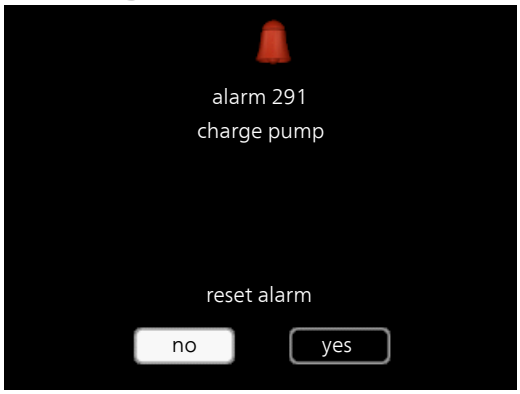
If F130 is not installed together with the indoor module, go directly to section Troubleshooting.

In most cases, the heat pump notes operational interference (operational interference can lead to disturbance in hot water comfort) and indicates this with an alarm 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.

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 most cases it is enough 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 returns, see the troubleshooting section (page 31).

Alarm list

Sensor alarm for example BT6/BT13/BT77:

The sensor has lost contact with the accessory card or is broken. The alarm resets automatically after correct connection.

- Check the connection of the sensor to the base card and that the cable has not got a short-circuit.
- If the above is not the source of the fault, replace the sensor.

Communication alarm display

The display has lost contact with the base card.

- Check the connection between F130 and the base card and that the cable has not got a short-circuit.

Troubleshooting

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

Basic actions

Start by checking the following possible fault sources:

- That the indoor module or supply cable to F130 is connected.
- 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 and select a higher comfort mode.
- Low or a lack of ventilation (exhaust air installation)
  - See section "Low or a lack of ventilation".
- Filter (HQ12) blocked (installation with ambient air)
  - Clean or replace the filter.
- Thermostat setting too low (BT35)
  - Turn the thermostat to max.

Low or a lack of ventilation (exhaust air installation)

- The ventilation is not adjusted.
  - Order/implement ventilation adjustment.
- Filter (HQ12) 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.
  - Enter menu 1 and select "normal".

High or distracting ventilation (exhaust air installation)

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

10 Accessories

Top cabinet

Top cabinet for concealing the ventilation ducts.

245 mm

Part no. 089 756

345 mm

Part no. 089 757

395-645 mm

Part no. 089 758

Water heater/Accumulator tank

VPD10 150

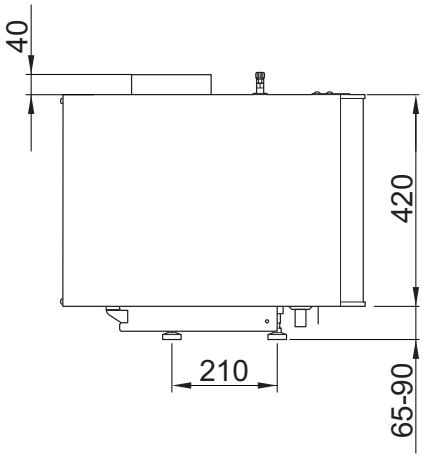
Stainless steel water heater without immersion heater
Part no. 086 017

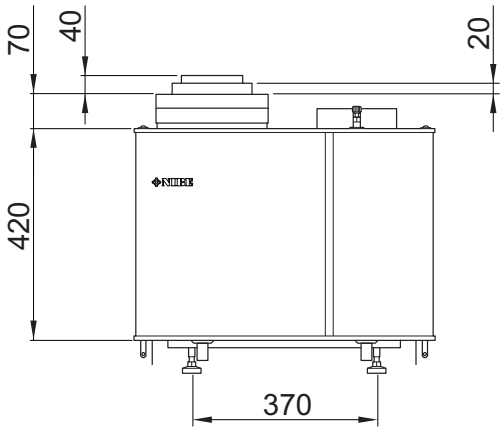
VPD10 300

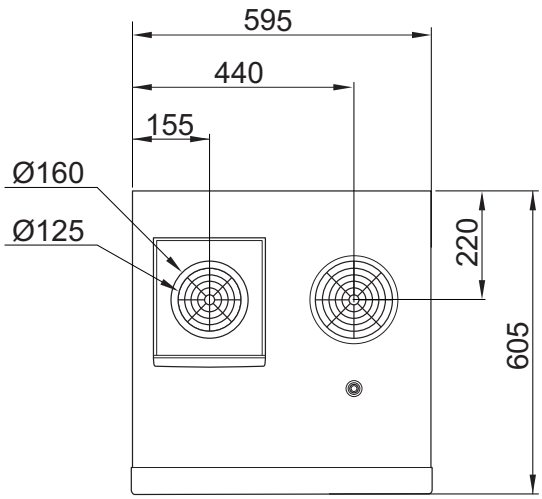
Stainless steel water heater without immersion heater
Part no. 086 019

11 Technical data

Dimensions and setting-out coordinates







Technical specifications

1x230 V		
Output data according to EN 14 511		
Specified heating output (P_H)[1]	kW	1.42
COP[1]		3.87
Specified heating output (P_H)[2]	kW	1.34
COP[2]		3.13
Specified heating output (P_H)[3]	kW	1.27
COP[3]		2.65
Electrical data		
Rated voltage	V	230V ~ 50 Hz
Max operating current	A	3.5
Driving power circulation pump	W	5 - 20
Driving power fan	W	20 - 75
Specified compressor output according to EN16147[6)]	kW	1.32
Min fuse rating	A	6
Enclosure class		IP 21
Refrigerant circuit		
Type of refrigerant		R134A
Volume	kg	0.38
Compressor type		Rotation
Cut-out value pressostat HP	MPa/bar	2.2/22.0
Heat pump		
Max system pressure	MPa/bar	1.0/10
Max supply temperature	°C	63
Max return temperature	°C	54
Energy class circulation pump		low energy
Air flow requirement		
Min air flow, air temperature >10 °C	l/s	25
Temperature range for compressor operation	°C	+10 - +37
Sound power level according to EN 12 102		
Sound power level ($L_{W(A)}$)[4]	dB(A)	47
Sound pressure levels according to EN ISO 11 203		
Sound pressure level in boiler room ($L_{P(A)}$)[5]	dB(A)	43
Pipe connections		
Hot water ext Ø	mm	22
Safety valve ext Ø	mm	15
Air connections ext. Ø	mm	160
Filter box ext Ø	mm	160 / 125

[1]A20(12)W35, exhaust air flow 180 m³/h (50 l/s), excl. drive power for fan

[2]A20(12)W45, exhaust air flow 180 m³/h (50 l/s), excl. drive power for fan

[3]A20(12)W55, exhaust air flow 180 m³/h (50 l/s), excl. drive power for fan

[4] The value varies with the selected fan speed. Visit www.nibe.eu for more extensive sound data including sound to channels.

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

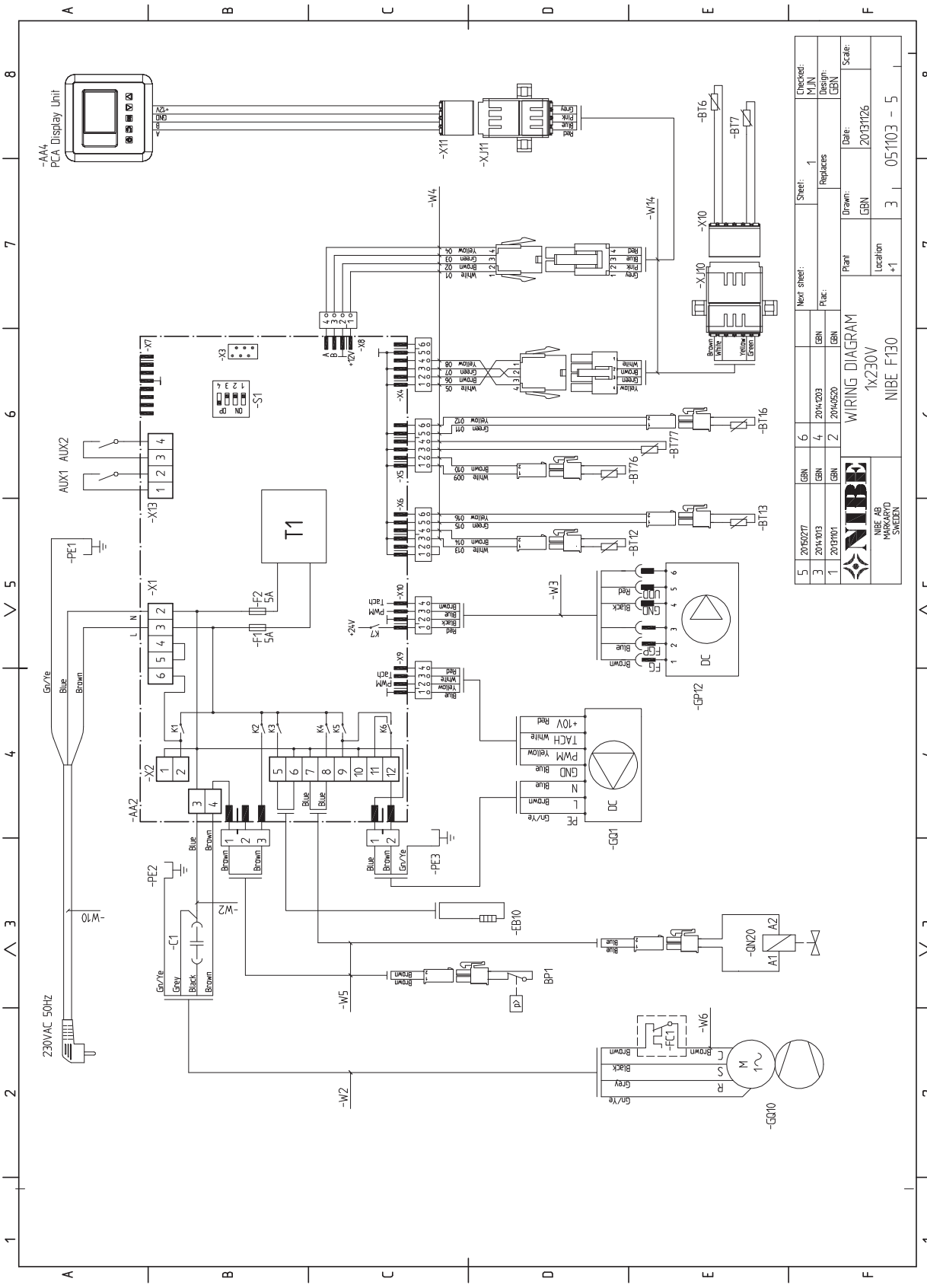
[6)] 180 m³/h

Miscellaneous		
Dimensions and weight		
Width	mm	600
Depth	mm	605
Height (excluding connectors)	mm	490 - 515
Weight	kg	50
Part No.		066 009

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



12 Item register

Item register

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