

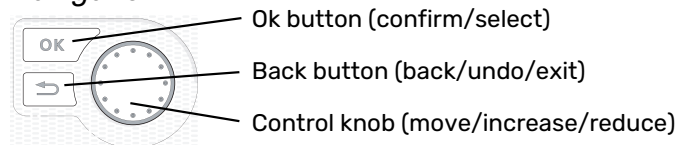
Exhaust air heat pump

NIBE F730



Quick guide

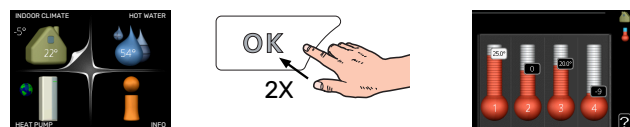
Navigation



A detailed explanation of the button functions can be found on page 36.

How to scroll through menus and make different settings is described on page 38.

Set the indoor climate



The mode for setting the indoor temperature is accessed by pressing the OK button twice, when in the start mode in the main menu.

Increase hot water volume



To temporarily increase the amount of hot water, first turn the control knob to mark menu 2 (water droplet) and then press the OK button twice.

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Important information

Safety information

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

The manual must be left with the customer.

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

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.

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Water may drip from the safety valve. A factory-fitted overflow pipe runs from the safety valve to an overflow cup. An overflow pipe has to be routed from the overflow cup to a suitable drain. The overflow pipe must be inclined along its entire length to prevent pockets where water can accumulate, and must be frost-proof.

F730 must be installed via an isolator switch. The cable area has to be dimensioned based on the fuse rating used.

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).



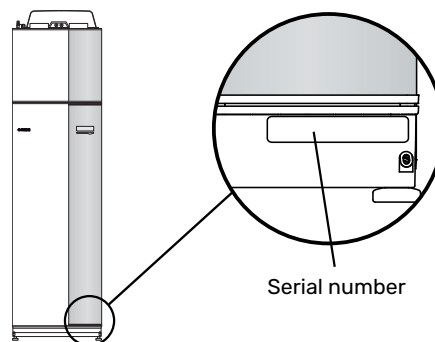
Read the User Manual.



Read the Installer Manual.

Serial number

The serial number can be found at the bottom right of the front cover, in the info menu (menu 3.1) and on the type plate (PZ1).



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.

Environmental information

F-GAS REGULATION (EU) NO. 517/2014

This unit contains a fluorinated greenhouse gas that is covered by the Kyoto agreement.

The equipment contains R407C, a fluorinated greenhouse gas with a GWP value (Global Warming Potential) of 1774. Do not release R407C into the atmosphere.

Inspection of the installation

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

✓	Description	Notes	Signature	Date
	Ventilation (page 20)			
	Setting ventilation flow exhaust air			
	Heating medium (page 18)			
	System flushed			
	System vented			
	Pressure in the climate system			
	Hot water (page 18)			
	Mixing valve			
	Electricity (page 22)			
	Connections			
	Main voltage			
	Phase voltage			
	Fuses heat pump			
	Fuses property			
	Outside sensor			
	Room sensor			
	Safety breaker			
	Earth circuit-breaker			

Delivery and handling

Transport

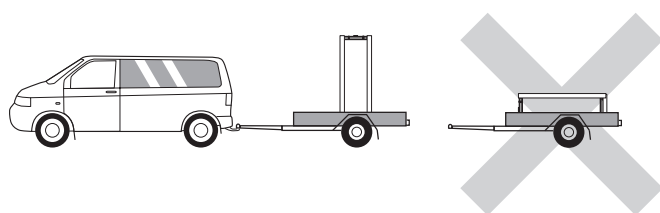
F730 is supplied in two sections and can be installed separately or as one unit. The images in this manual show F730 installed as one unit. For more information see page 11.

F730 should be transported and stored vertically in a dry place.

Ensure that the heat pump cannot fall over during transport.

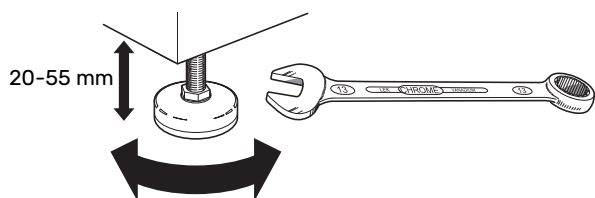
Check that F730 has not been damaged during transport.

However, the F730 can be carefully laid on its back when being moved into the building. The centre of gravity is in the top section.



Assembly

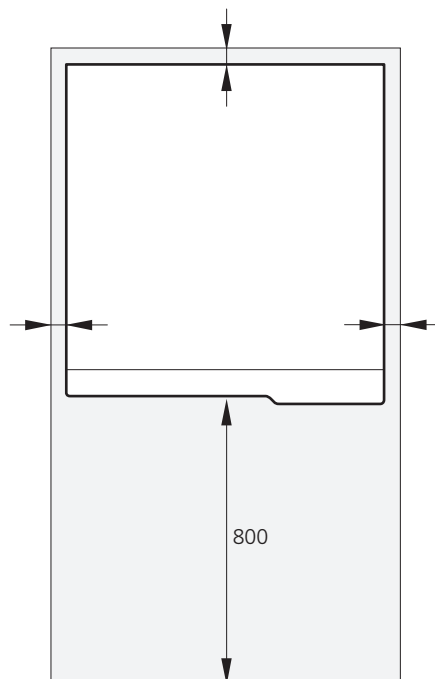
- Position F730 on a solid foundation indoors that withstands water and the weight of the product.
- Use the product's adjustable feet to attain a horizontal and stable set-up.



- Since water comes from F730, the area where F730 is located must be equipped with floor drainage.
- Because water comes from F730, 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 F730 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 F730 for connecting ventilation ducts.

Supplied components



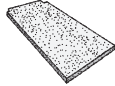
Outdoor temperature sensor
(BT1)



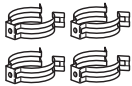
Room sensor(BT50)



Vent hose
(length 4 m)



Extra air filter



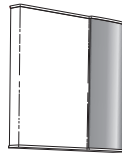
Clips



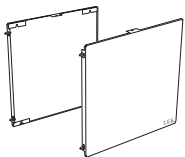
Screw



O-rings



Front hatch,
air treatment section



Side panels,
air treatment unit

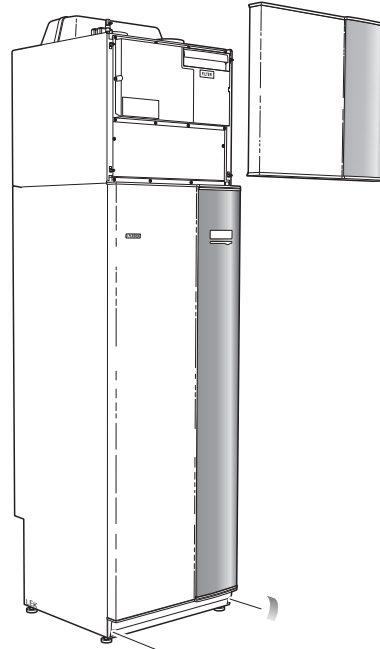
LOCATION

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

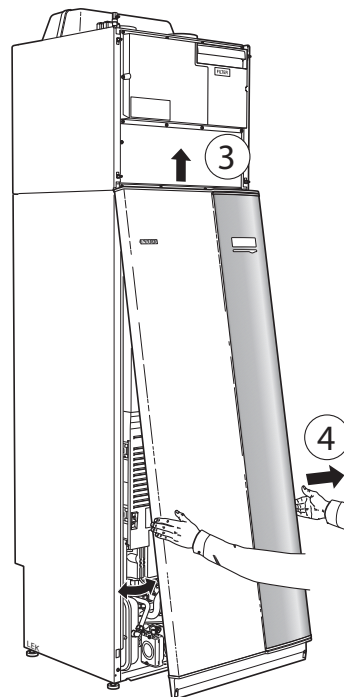
Removing the covers

FRONT COVER

1. Remove the upper panel by pulling it straight out.
2. Remove the screws from the lower edge of the front panel.

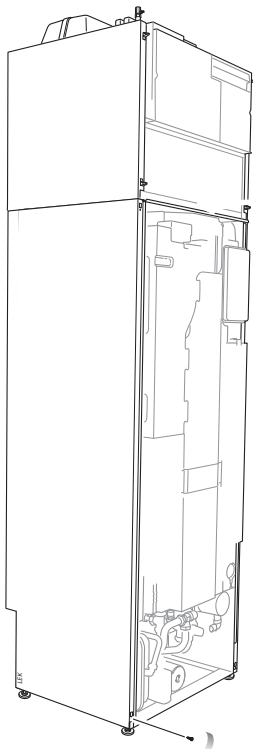


3. Lift the panel out at the bottom edge and up.
4. Pull the panel towards yourself.

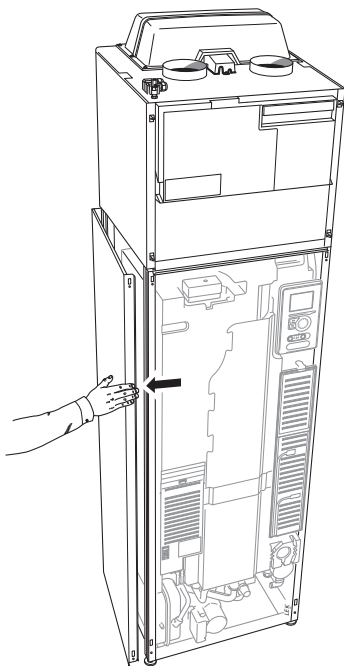


SIDE PANELS

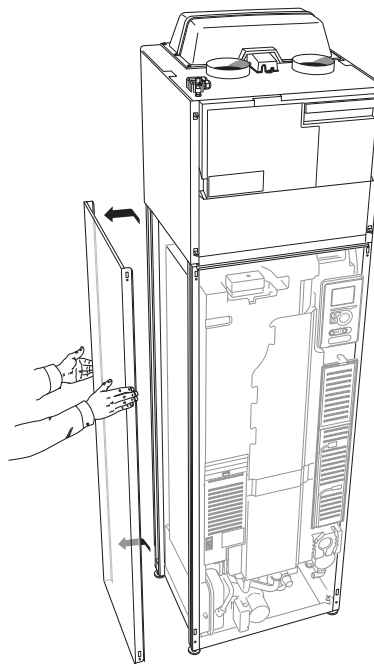
1. Remove the screws from the upper and lower edges.



2. Twist the panel slightly outwards.



3. Move the panel backwards and slightly to the side.



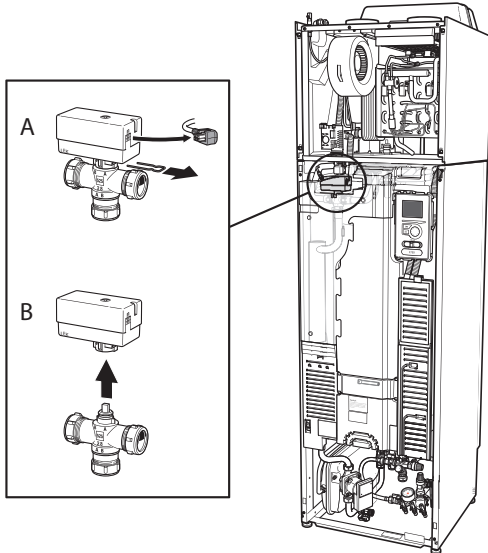
4. Assembly takes place in the reverse order.

Removing parts of the insulation

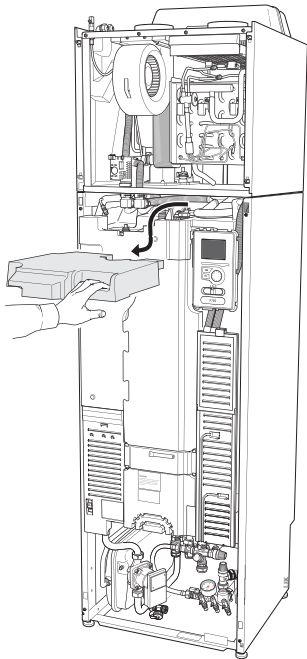
Parts of the insulation can be removed to facilitate the installation.

INSULATION, TOP

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



2. Grip the handle and pull straight out as illustrated.



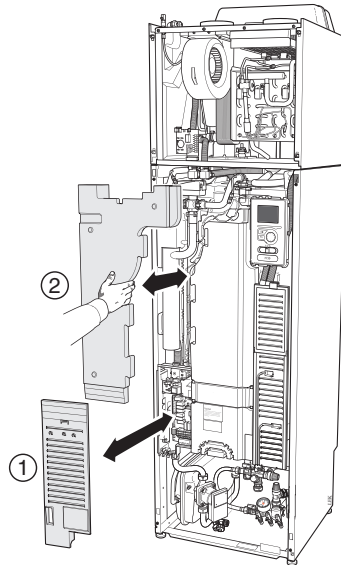
INSULATION, IMMERSION HEATER



CAUTION!

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.

1. Remove the cover for the junction box according to the description on page 23.
2. Grip the handle and pull the insulation carefully towards you as illustrated.



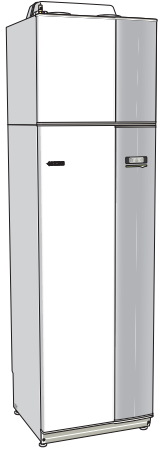
TIP!

Remove the hatch for the immersion heater card so that it is easier to remove the insulation (see page 23).

Separated/one unit

F730 supplied separately and can be installed separately or as a unit. For separate installation, the accessory DKI 10 is required. Clips, o-rings and screws are enclosed for both types of installation.

The images in this manual show F730 installed as one unit.



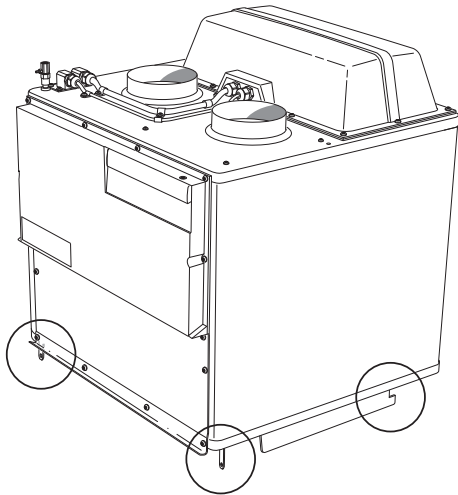
One unit



Separated installation

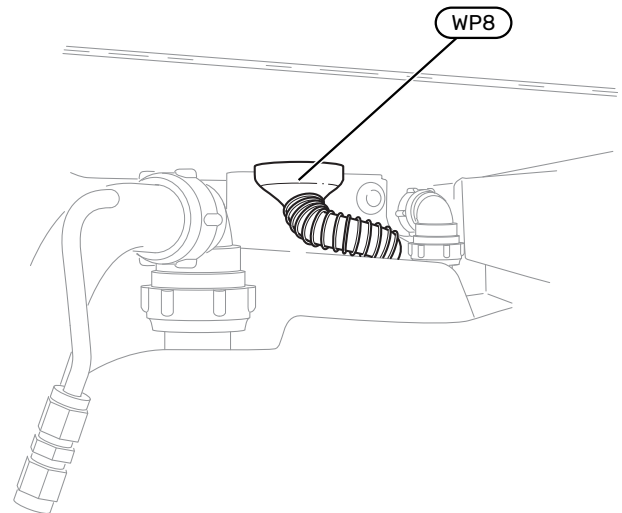
INSTALLING F730 AS A UNIT

1. Remove the heater unit front hatch.
2. Remove the insulation.
3. Remove the motor for the reversing valve for the climate system/water heater (QN10).
4. Bend down the lock tabs on the air treatment unit.



5. Place the air treatment unit above the water heater unit by sliding the rear part of the air treatment unit into the water heater unit.
6. Then lower the front part of the air treatment unit. The locking tabs are then located in grooves in the heater unit.

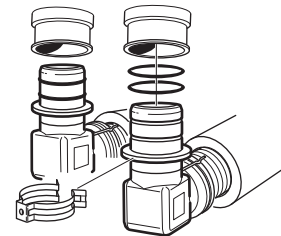
7. Secure the condensation hose in the air treatment unit's condensation hose connection (WP8).



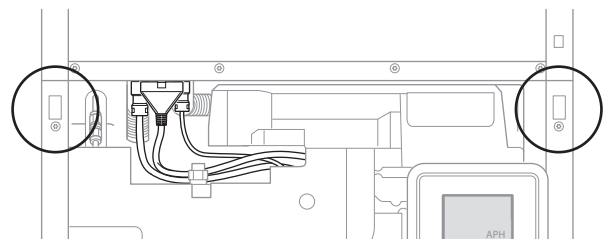
TIP!

Lift the air treatment unit slightly at the front edge so that it is easier to access.

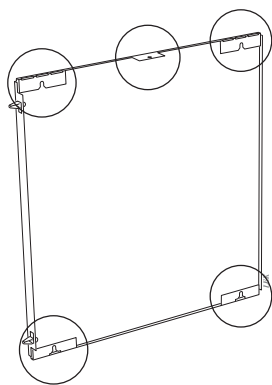
8. Install a water seal on the condensation hose.
9. Install an overflow cup and route the condensation hose to it.
10. Connect the air treatment unit flexible pipes to the heater unit. Use the o-rings and clips supplied.



11. Connect the air treatment unit wiring to the heater unit.
12. Secure the air treatment unit lock tabs in the water heater unit with 2 of the screws supplied.



13. Install the reversing valve motor and the heater unit insulation.
14. Secure the side panels on the air treatment unit with 2 of the remaining screws supplied. The side panels mounting points may need to be adjusted slightly.

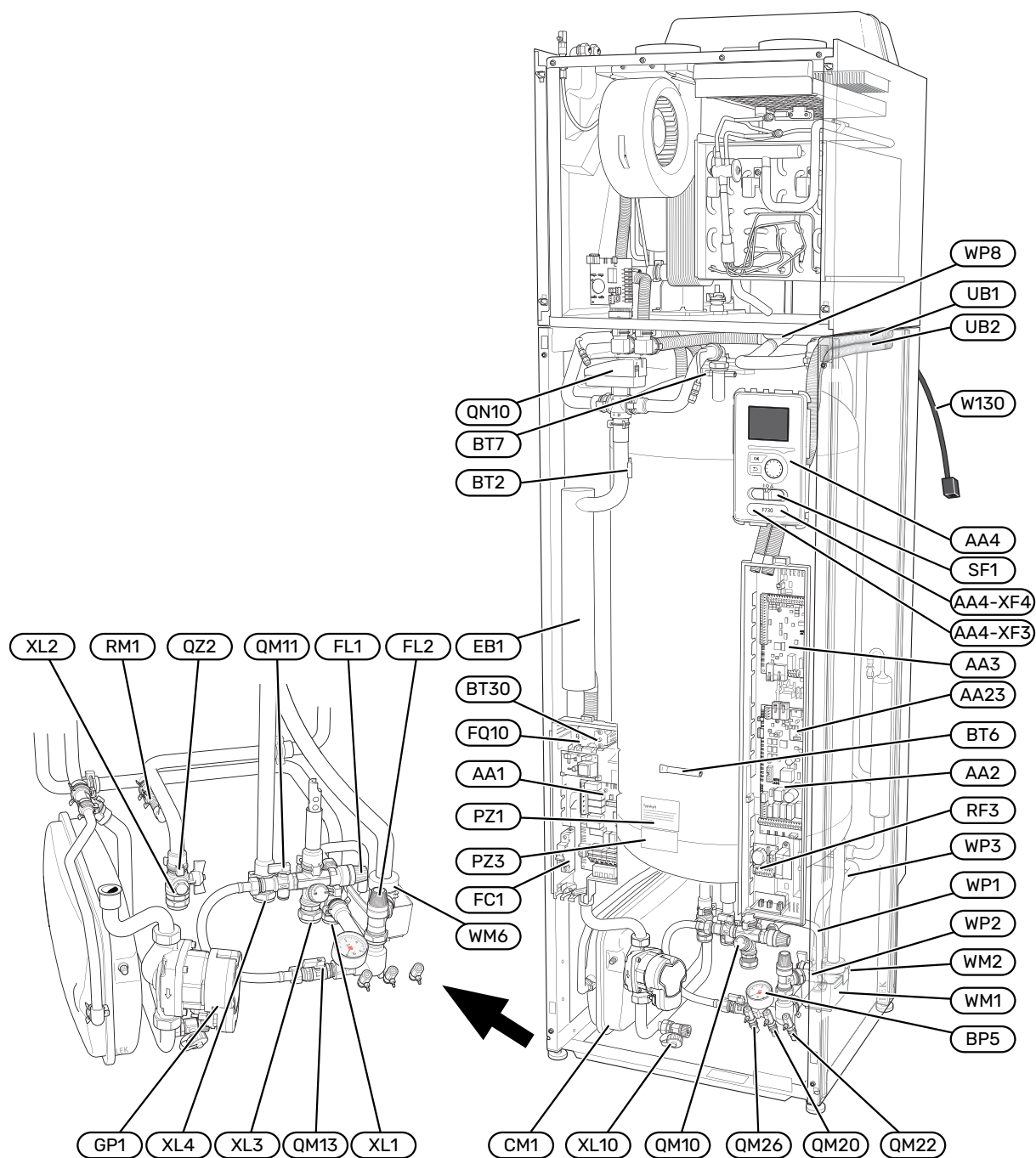


Side hatches mounting points

15. Install the front panels on the air treatment and heater units.

The heat pump design

General



PIPE CONNECTIONS

XL1	Connection, heating medium flow line
XL2	Connection, heating medium return line
XL3	Connection, cold water
XL4	Connection, hot water
XL10	Connection, draining heating medium

HVAC COMPONENTS

CM1	Expansion vessel
FL1	Safety valve, water heater
FL2	Safety valve, climate system
GP1	Circulation pump
QM10	Filler valve, hot water heater
QM11	Filler valve, climate system
QM13	Filler valve 2, climate system
QM20	Vent valve, heating medium
QM22	Venting valve, coil
QM26	Vent valve, heating medium 2
QN10	Shuttle valve, climate system/water heater
QZ2	Filterball
RM1	Non-return valve
WM1	Overflow cup
WM2	Overflow water discharge
WM6	Water seal
WP1	Overflow pipe, safety valve hot water heater
WP2	Overflow pipe, safety valve climate system
WP3	Overflow pipe, condensation
WP8	Condensation water connection

SENSORS ETC.

BP5	Pressure gauge, heating system
BT2	Temperature sensors, heating medium flow
BT6	Controlling hot water sensor
BT7	Display hot water sensor
BT30	Thermostat, backup heating

ELECTRICAL COMPONENTS

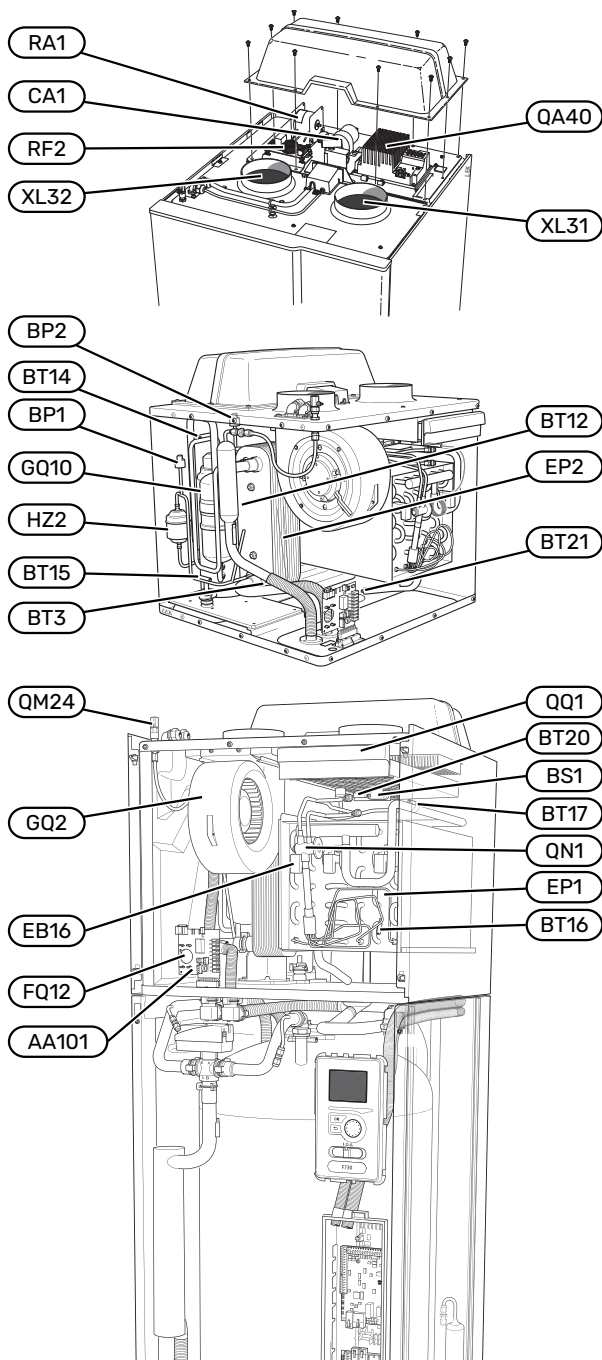
AA1	Immersion heater card
AA2	Base card
AA3	Input circuit board
AA4	Display unit
	AA4-XF3 USB port
	AA4-XF4 Service socket
AA23	Communication board
EB1	Immersion heater
FC1	Miniature circuit-breaker
FQ10	Temperature limiter
RF3	EMC card
SF1	Switch
W130	Network cable for myUplink

MISCELLANEOUS

PZ1	Rating plate
PZ3	Serial number plate
UB1-2	Cable gland

Designations according to standard EN 81346-2.

Air treatment unit



VENTILATION CONNECTIONS

- XL31 Ventilation connection, exhaust air
- XL32 Ventilation connection, extract air

HVAC COMPONENTS

- QM24 Vent valve, heat exchanger

SENSORS ETC.

- BP1 High pressure pressostat
- BP2 Low pressure pressostat
- BS1 Air speed sensor
- BT3 Temperature sensors, heating medium return
- BT12 Temperature sensor, heating medium flow after condenser
- BT14 Temperature sensor, hot gas
- BT15 Temperature sensor, fluid pipe
- BT16 Temperature sensor, evaporator
- BT17 Temperature sensor, suction gas
- BT20 Temperature sensor, exhaust air
- BT21 Temperature sensor, extract air

ELECTRICAL COMPONENTS

- AA101 Connection card sensor
- CA1 Capacitor
- EB16 Defrosting element
- FQ12 Temperature limiter, defrosting element
- FQ14 Temperature limiter, compressor¹
- QA40 Inverter
- RA1 Choke
- RF2 EMC card

¹ Not visible in the image

COOLING COMPONENTS

- EP1 Evaporator
- EP2 Condenser
- GQ10 Compressor
- HZ2 Drying filter
- QN1 Expansion valve

VENTILATION

- GQ2 Exhaust air fan
- HQ10 Exhaust air filter¹
- QQ1 Filter cover, exhaust air

¹ Not visible in the image

Pipe and ventilation connections

General pipe connections

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

The system requires the radiator circuit to be designed for a low temperature heating medium. At the lowest dimensioned outdoor temperature (DOT) the highest recommended temperatures are 55 °C on the supply line and 45 °C on the return line.

NOTE!

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



CAUTION!

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



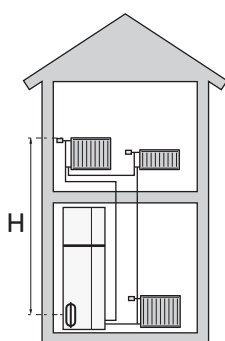
CAUTION!

Water may drip from the safety valve. A factory-fitted overflow pipe runs from the safety valve to an overflow cup. An overflow pipe has to be routed from the overflow cup to a suitable drain. The overflow pipe must be inclined along its entire length to prevent pockets where water can accumulate, and must be frost-proof.

SYSTEM VOLUME

F730 is equipped with an expansion vessel (CM1).

The volume of the expansion vessel is 10 litres and it is pre-pressurised as standard to 0.5 bar. As a result, the maximum permitted height "H" between the expansion vessel and the highest installed radiator is 5 m, see figure.



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

The maximum system volume, excluding F730, is 285 litres at the above-mentioned pre-pressure.

SYSTEM DIAGRAM

F730 consists of a heat pump, water heater, immersion heater, fan, circulation pump and control system. F730 is connected to the ventilation system and the climate system.

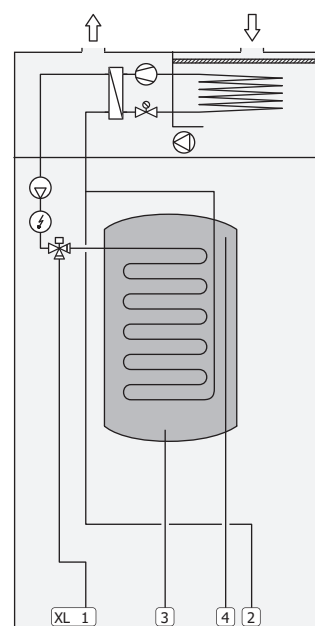
When the room temperature exhaust air, and in certain cases outdoor air, passes through the evaporator, the refrigerant evaporates because of its low boiling point. In this way, the energy in the air is transferred to the refrigerant.

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 climate system's 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.



Pipe connections

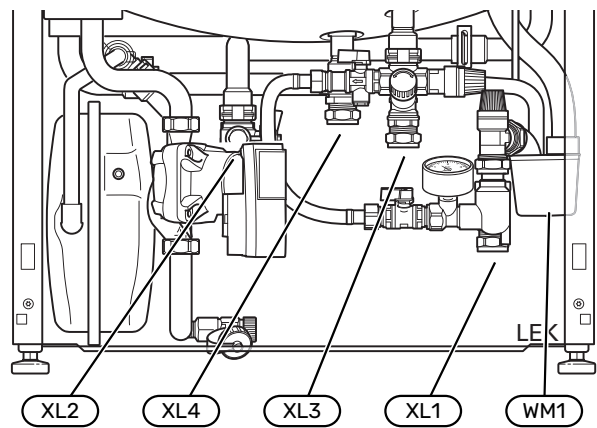
XL1	Connection, heating medium flow line
XL2	Connection, heating medium return line
XL3	Connection, cold water
XL4	Connection, hot water
XL10	Connection, draining heating medium



NOTE!

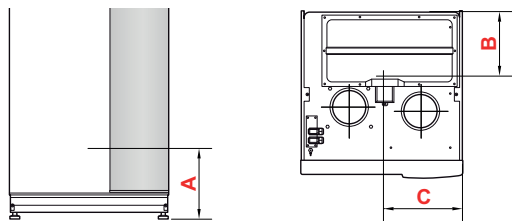
This is a principle of operation. For more detailed information about F730, see section "The heat pump design".

Dimensions and pipe connections



The overflow cup (WM1) can be turned, allowing the pipe to be pointed forwards or backwards to simplify connection to the drain.

SETTING OUT DIMENSIONS

















Connection		A	B	C
XL1 Heating medium supply	(mm)	150	285	105
XL2 Heating medium return	(mm)	220	285	365
XL3 Cold water	(mm)	255	445	195
XL4 Hot water	(mm)	280	405	260
WM1 Overflow cup	(mm)	190	280	50

PIPE DIMENSIONS

Connection		
XL1-XL2 Heating medium ext Ø	(mm)	22
XL3 Cold water ext Ø	(mm)	22
XL4 Hot water ext Ø	(mm)	22
WM2 Overflow water discharge	(mm)	32

Symbol key

Symbol	Meaning
	Unit box
	Non-return valve
	Mixing valve
	Circulation pump
	Immersion heater
	Temperature sensor
	Trim valve
	Reversing valve/shunt
	Overflow valve
	Domestic hot water
	Hot water circulation
	Heat pump
	Heating system
	Heating system with lower temperature

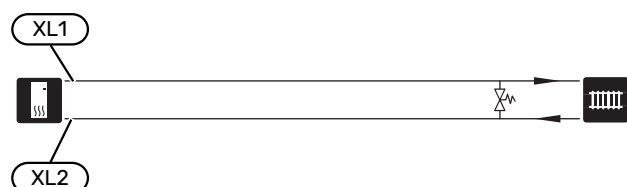
Climate system

A climate system is a system that regulates the indoor temperature with the help of the control system in F730 and, for example, radiators, underfloor heating, fan coils, etc.

CONNECTING THE CLIMATE SYSTEM

Install as follows:

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



Cold and hot water

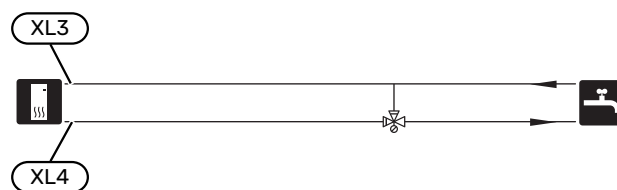
The settings for hot water are made in menu 5.1.1.

CONNECTING COLD AND HOT WATER

Install as follows:

- mixing valve

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



Installation alternative

F730 can be installed in several different ways, some of which are shown here.

Further option information is available at nibe.eu and in the respective assembly instructions for the accessories used. See page 53 for a list of the accessories that can be used with F730.

EXTRA HOT WATER HEATERS

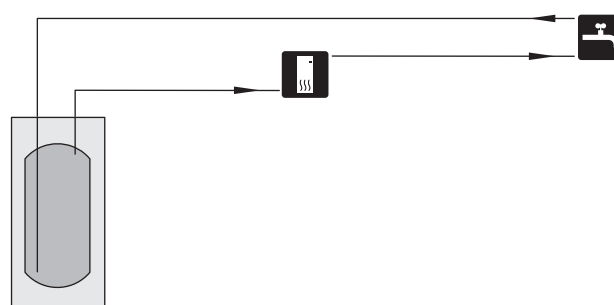
The system should be supplemented with an extra water heater, if a large bath tub or other significant consumer of hot water is installed.

Water heater without immersion heater

In water heaters without an immersion heater, the water is heated by the heat pump.

The water heater's flow is connected before F730.

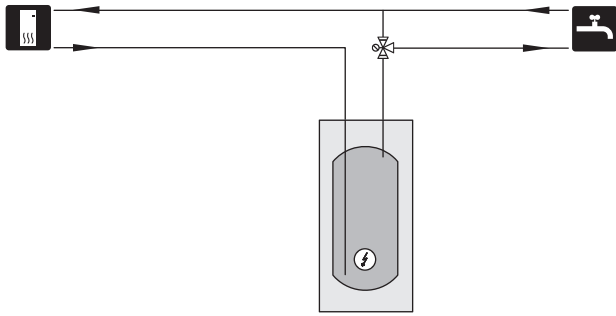
For connection, a docking kit DEW is required.



Water heater with immersion heater

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

The water heater's flow is connected after F730.

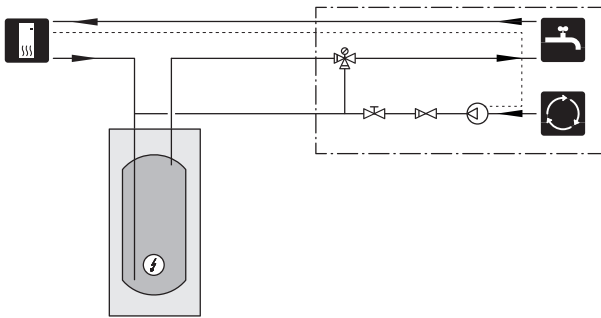


HOT WATER CIRCULATION

A circulation pump can be controlled by F730 to circulate the hot water. The circulating water must have a temperature that prevents bacterial growth and scalding, and national standards must be satisfied.

The HWC return is connected to a freestanding water heater.

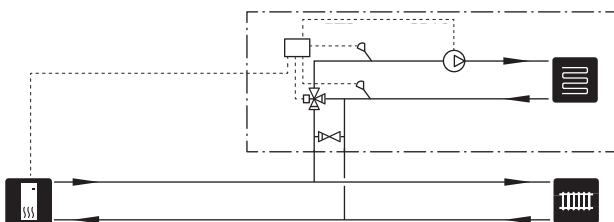
The circulation pump is activated via the AUX output in menu 5.4 - "soft in/outputs".



EXTRA CLIMATE SYSTEM

In buildings with several climate systems that require different supply temperatures, the accessory ECS 40/ECS 41 can be connected.

A shunt valve then lowers the temperature to the underfloor heating system, for example.



General ventilation connection

- 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.
- The extract air duct has to be insulated with diffusion-proof material along its entire length.
- Ensure that the condensation insulation is fully sealed at any joints and/or at lead-in nipples, silencers, roof cowls or similar.
- The extract air duct should, if possible, be routed up through the roof. If the duct is to be routed out through an external wall, avoid having an immediate 90° bend backwards, as this can cause noise and reduced capacity.
- The ventilation ducts should be installed in such a way that it is easy to open the inverter box.
- A duct in a masonry chimney stack must not be used for extract air.



CAUTION!

F730 has a very low extract air temperature. To avoid damaging the product and/or the house, it is therefore important that the extract air ducts are insulated with diffusion-proof material along their entire length.



TIP!

If additional condensation insulation dimension Ø 200 is installed on the outside of the existing exhaust line between the heat pump and the inner roof, the noise in the installation area is reduced by 1-2 dB(A).

EXHAUST AIR DUCT /KITCHEN FAN

Exhaust air duct (kitchen fan) must not be connected to F730.

To prevent cooking odours from being led to the F730, the distance between the kitchen fan and the exhaust air valve must be observed. The distance should not be less than 1.5 m.

Always use a kitchen fan when cooking.

Ventilation flow

Connect F730 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 should not be less than 21 l/s (75 m³/h).

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

If the exhaust air temperature falls below 6 °C, the compressor is blocked and electric additional heat is permitted. No energy is recovered from the exhaust air when the compressor is blocked.

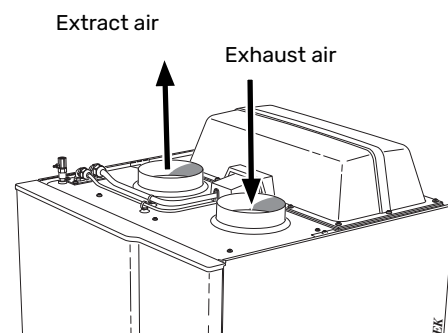
Adjusting ventilation

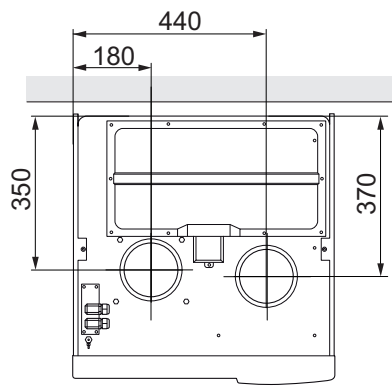
To obtain the necessary air exchange in every room of the house, the exhaust air devices must be correctly positioned and adjusted and the fan in the heat pump adjusted.

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



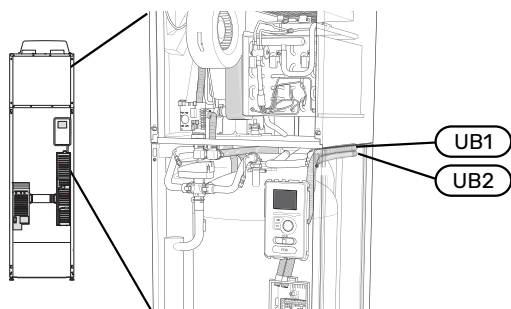


Electrical connections

General

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

- Electrical installation and wiring must be carried out in accordance with national provisions.
- Disconnect F730 before insulation testing the house wiring.
- If the building is equipped with an earth-fault breaker, F730 should be equipped with a separate one.
- F730 must be installed via an isolator switch. The cable area has to be dimensioned based on the fuse rating used.
- If a miniature circuit breaker is used, this must have 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 F730, see the "Technical specifications" section.
- When routing a cable into F730, the cable grommets (UB1) and (UB2) must be used.



CAUTION!

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



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.



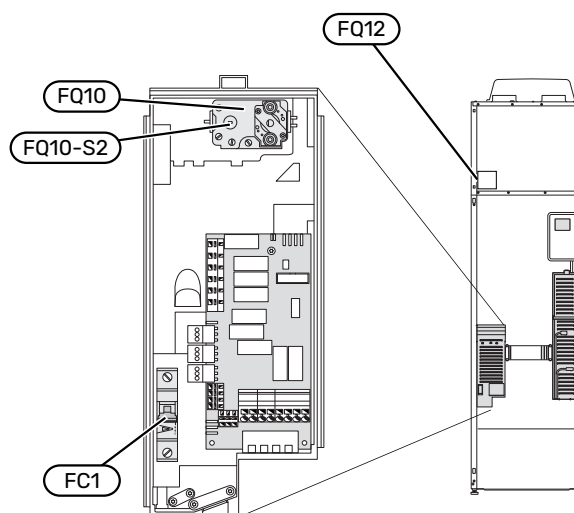
CAUTION!

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.



MINIATURE CIRCUIT-BREAKER (FC1)

Operation (230 V), fan, circulation pumps, etc., are internally fused by a miniature circuit-breaker.



NOTE!

Check the miniature circuit-breaker (FC1). It may have tripped during transport.

TEMPERATURE LIMITER (FQ10)

The temperature limiter (FQ10) cuts the current supply to the electric additional heat if the temperature rises between 90 and 100°C and can be manually reset.

Resetting

The temperature limiter (FQ10) is accessible behind the front cover. Reset the temperature limiter by carefully pressing the button (FQ10-SF2) using a small screwdriver.

TEMPERATURE LIMITER, DEFROSTING ELEMENT (FQ12)

The temperature limiter for the defrosting element (FQ12) cuts the current supply to the defrosting element if the temperature rises above 75 °C and is manually reset.

Resetting

The temperature limiter for the defrosting element (FQ12) is accessible behind the air treatment cover. Remove the cover and then the panel secured with screws. Reset the temperature limiter by carefully pressing the button (FQ12-SF2) using a small screwdriver.

ACCESSIBILITY, ELECTRICAL CONNECTION

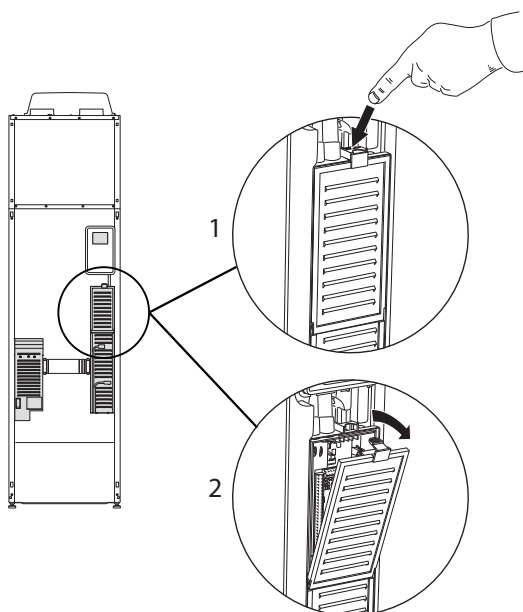
The plastic cap of the electrical boxes is opened using a screwdriver.



CAUTION!

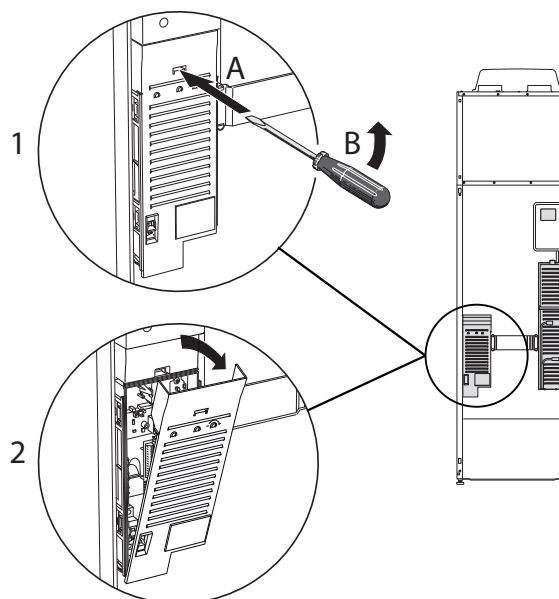
The cover for the input card is opened without a tool.

Removing the cover, input board



1. Push the catch down.
2. Angle out the cover and remove it.

Removing the cover, immersion heater board



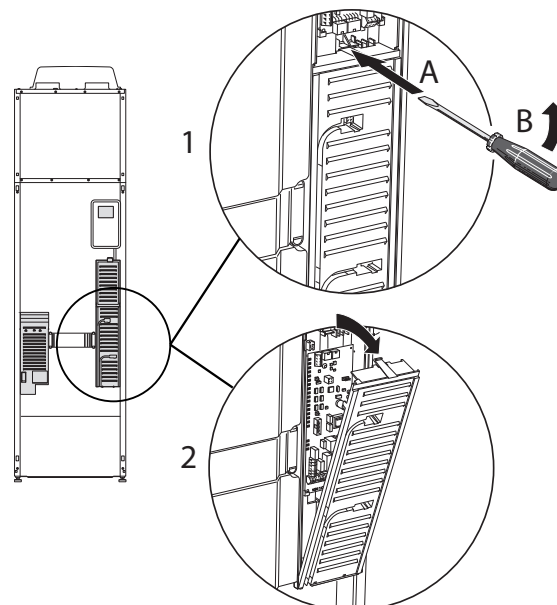
1. Insert the screwdriver (A) and pry the catch carefully downwards (B).
2. Angle out the cover and remove it.

Removing the cover, base circuit board



NOTE!

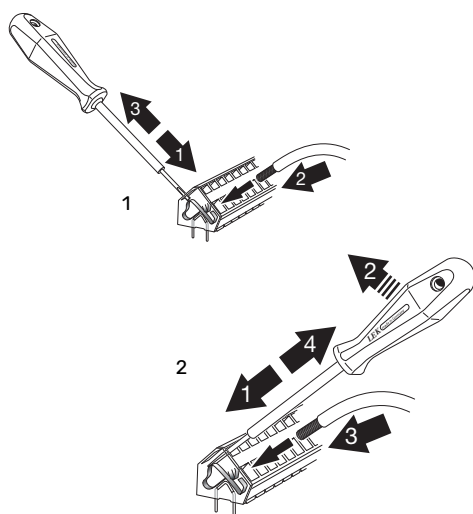
To remove the cover for the base board, the cover for the input circuit board must first be removed.



1. Insert the screwdriver (A) and pry the catch carefully downwards (B).
2. Angle out the cover and remove it.

CABLE LOCK

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



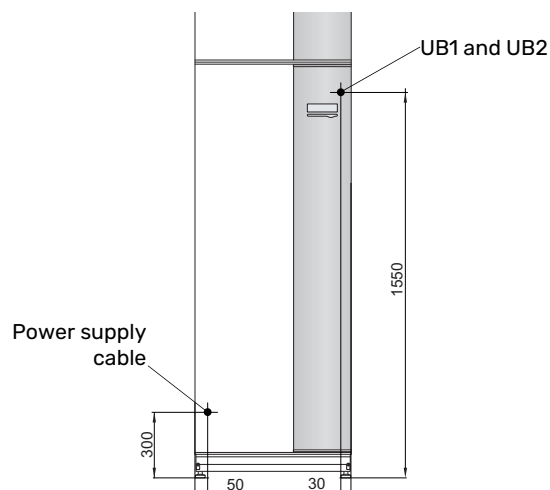
Connections

POWER CONNECTION

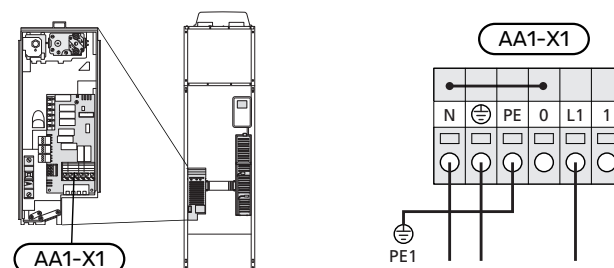
F730 must be installed via an isolator switch. The cable area has to be dimensioned based on the fuse rating used.

The enclosed cable (length approx. 2 m) for the incoming supply electricity is connected to terminal block X1 on the electric addition PCB (AA1).

The connection cable can be found on the reverse of F730 (see dimensions diagram below).



Connection 1x230V



TARIFF CONTROL

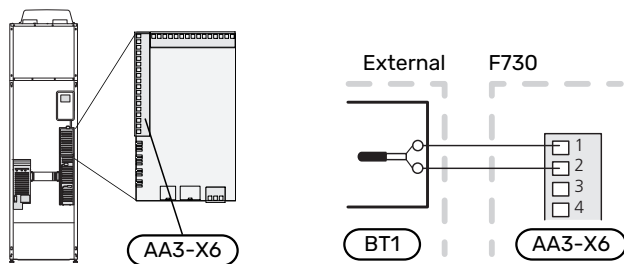
If the voltage to the immersion heater and/or the compressor disappears for a certain period, there must also be blocking via the AUX-input at the same time, see "Possible selection for AUX inputs".

OUTSIDE SENSOR

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

Connect the outdoor temperature sensor to terminal block X6:1 and X6:2 on the input board (AA3).

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



ROOM SENSOR

F730 is supplied with an enclosed room sensor (BT50). The room sensor has a number of functions:

1. Shows current room temperature in the display on F730.
2. Option of changing the room temperature in °C.
3. Provides the option of fine-tuning the room temperature.

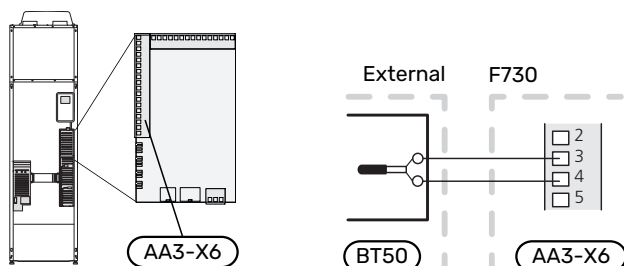
Install the sensor in a neutral position where the set temperature is wanted.

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

F730 operates without the room sensor, but if you want to read the home's indoor temperature from the display on F730, the sensor must be fitted. Connect the room sensor to X6:3 and X6:4 on the input board (AA3).

If the room temperature sensor will have a controlling function, it is activated in menu 1.9.4 - "room sensor settings".

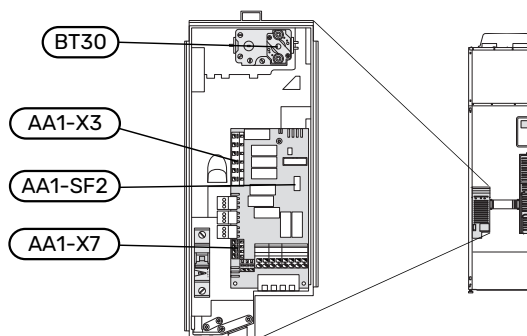
If the room sensor is used in a room with underfloor heating, it should only have an indicative function, not control of the room temperature.



NOTE!

Changes of temperature in accommodation take time. For example, short time periods in combination with underfloor heating will not give a noticeable difference in room temperature.

Settings



ELECTRICAL ADDITION - MAXIMUM OUTPUT

The immersion heater can be set up to a maximum of 6.5 kW. Delivery setting is 3.5 kW.

The immersion heater's power is set in menu 5.1.12 - "internal electrical addition".

Power steps of the immersion heater

The table(s) displays the total phase current for the immersion heater.

In addition to this, there is the current for compressor operation.

Electrical addition (kW)	Max (A)
0.0	1.2
0.5	3.4
1.0	5.5
1.5	7.7
2.0	9.9
2.5	12.1
3.0	14.2
3.5 ¹	16.4
4.0	18.5
4.5	20.7
5.0	22.9
5.5	25.1
6.0	27.3
6.5	29.4

¹ Factory setting

The heat pump is fused to at least 16 A.

EMERGENCY MODE

When the heat pump is set to emergency mode (SF1 is set to Δ), only the most necessary functions are activated.

- The compressor is off and heating is managed by the immersion heater.
- Hot water is not produced.

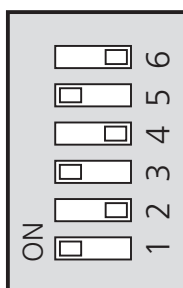
Power in emergency mode

The immersion heater's output in emergency mode is set with the dipswitch (S2) on the immersion heater circuit board (AA1) according to the table below.

kW	1	2	3	4	5	6
0.5	on	off	off	off	off	off
1.0	off	off	on	off	off	off
1.5	on	off	on	off	off	off
2.0	off	off	off	off	on	off
2.5	on	off	off	off	on	off
3.0	off	off	on	off	on	off
3.5 ¹	on	off	on	off	on	off
4.0	off	off	on	off	off	on
4.5	on	off	on	off	off	on
5.0	off	off	off	off	on	on
5.5	on	off	off	off	on	on
6.0	off	off	on	off	on	on
6.5	on	off	on	off	on	on

1 Factory setting

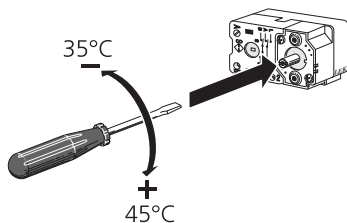
1x230 V



The image shows the dip-switch (AA1-S2) in the factory setting.

Emergency mode thermostat

The supply temperature in emergency mode is set using a thermostat (FQ10-BT30). It can be set to 35°C (pre-set, e.g. underfloor heating) or 45°C (e.g. radiators).



Optional connections

LOAD MONITOR

Integrated load monitor

F730 is equipped with a simple form of integrated load monitor, which limits the power steps for the electric additional heat by calculating whether future power steps can be connected to the relevant phase without exceeding the current for the specified main fuse.

If the current would exceed the specified main fuse, the power step is not permitted. The size of the property's main fuse is specified in menu 5.1.12 - "internal electrical addition".

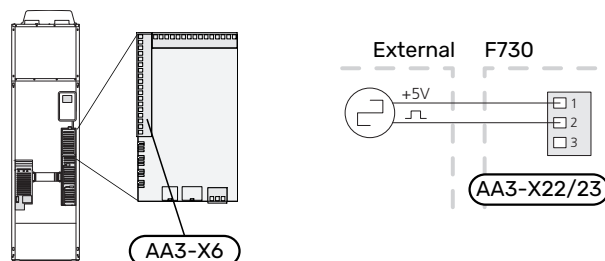
CONNECTING EXTERNAL ENERGY METER



CAUTION!

Connection of external energy meter requires version 35 or later on the input board (AA3) as well as "display version" 8874 or later.

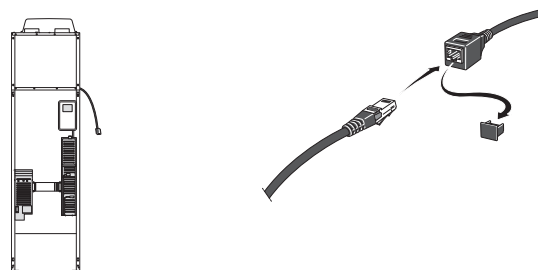
One or two energy meters (BE6, BE7) are connected to terminal block X22 and/or X23 on input board (AA3).



Activate the energy meter(s) in menu 5.2.4 and then set the desired value (energy per pulse) in menu 5.3.21.

MYUPLINK

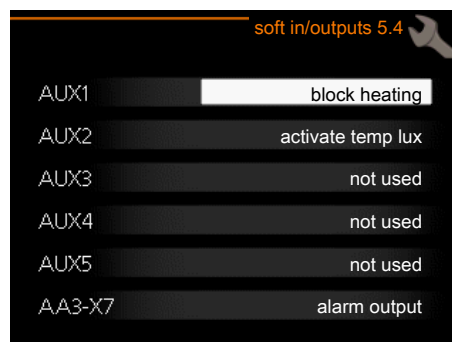
Connect the network connected cable (straight, Cat.5e UTP) with RJ45-contact (male) to RJ45 contact (female) on the rear of the heat pump.



EXTERNAL CONNECTION OPTIONS

F730 has software-controlled AUX inputs and outputs for connecting the external switch function (contact has to be potential-free) or sensor.

In menu 5.4 - "soft in/outputs", you select the AUX connection to which each function has been connected.



For certain functions, accessories may be required.



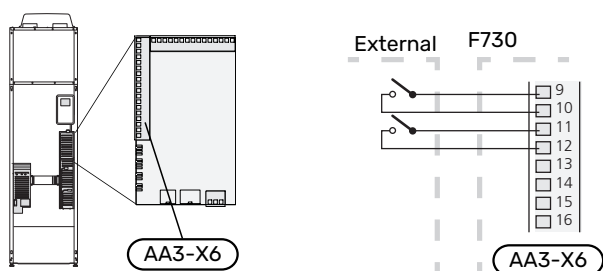
TIP!

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

Selectable inputs

Selectable inputs on the input board (AA3) for these functions are:

AUX1	AA3-X6:9-10
AUX2	AA3-X6:11-12
AUX3	AA3-X6:13-14
AUX4	AA3-X6:15-16
AUX5	AA3-X6:17-18



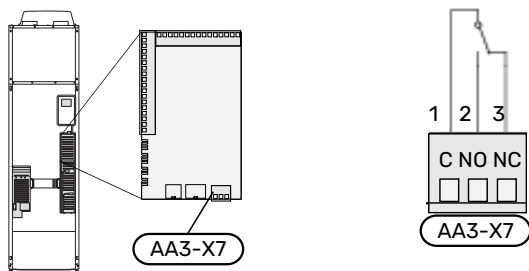
The example above uses the inputs AUX1 (X6:9-10) and AUX2 (X6:11-12) on the input board (AA3).

Selectable outputs

A selectable output is AA3-X7.

The output is a potential-free switching relay.

When switch (SF1) is in the "U" or "Δ" position, the relay is in the alarm position.



NOTE!

The relay output may be subjected to a max load of 2 A at resistive load (230 V~).



TIP!

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

Possible selection for AUX inputs

Temperature sensor

Available options are:

- ambient sensor (BT28) for outdoor air function (accessory OEK 20 is required)

Monitor

Available options are:

- external level monitor for the overflow cup (NO).
- pressure switch for climate system (NC).
- alarm from external units.
The alarm is connected to the control, which means that the malfunction is shown as an information message in the display. Potential free signal of type NO or NC.

External activation of functions

An external switch function can be connected to F730 to activate various functions. The function is activated during the time the switch is closed.

Possible functions that can be activated:

- hot water comfort mode "temporary lux"
- hot water comfort mode "economy"
- "external adjustment"

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

- climate system 1 to 8

Setting the value for the change is performed in menu 1.9.2 - "external adjustment".

- activation of one of four fan speeds.

The following options are available:

- "activate fan speed 1 (NO)" - "activate fan speed 4 (NO)"
- "activate fan speed 1 (NC)"

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

- SG ready



NOTE!

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

"SG Ready" requires two AUX inputs.

"SG Ready" is a smart form of tariff control, where your electricity supplier can alter the indoor and hot water temperatures or simply block the additional heating and/or

the compressor in the heat pump at certain times of the day (can be selected in menu 4.1.5 - "SG Ready" after the function is activated). Activate the function by connecting potential free switch functions to two inputs as selected in menu 5.4 - "soft in/outputs" (SG Ready A and SG Ready B).

Closed or open switch means one of the following:

– *Blocking (A: Closed, B: Open)*

"SG Ready" is active. The compressor in the heat pump and additional heat is blocked.

– *Normal mode (A: Open, B: Open)*

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

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

"SG Ready" is active. The system focuses on costs savings and can for example exploit a low tariff from the electricity supplier or over-capacity from any own power source (effect on the system can be adjusted in the menu 4.1.5).

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

"SG Ready" is active. The system is permitted to run at full capacity at over capacity (very low price) with the electricity supplier (effect on the system is settable in menu 4.1.5).

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

• **+Adjust**

Using +Adjust, the system communicates with the under floor heating's control centre¹ and adjusts the heating curve and calculated supply temperature based on the under floor heating system's feedback.

Activate the climate system you want +Adjust to affect by highlighting the function and pressing the OK button.



NOTE!

This function may require a software update in your F730. The version can be checked in the menu 3.1 - "Service info". Visit myuplink.com and click on the "Software" tab to download the latest software to your installation.



NOTE!

In systems with both underfloor heating and radiators, NIBE ECS 40/41 should be used for optimum operation.

External blocking of functions

An external switch function can be connected to F730 for blocking various functions. The switch must be potential-free and a closed switch results in blocking.

¹ Support for +Adjust is required



CAUTION!

Blocking entails a risk of freezing.

Functions that can be blocked:

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

Possible selections for AUX output

Indication

- alarm
- holiday
- away mode for "smart home" (complement to the functions in menu 4.1.7 - "smart home")

Control

- circulation pump for hot water circulation
- external heating medium pump

Activation

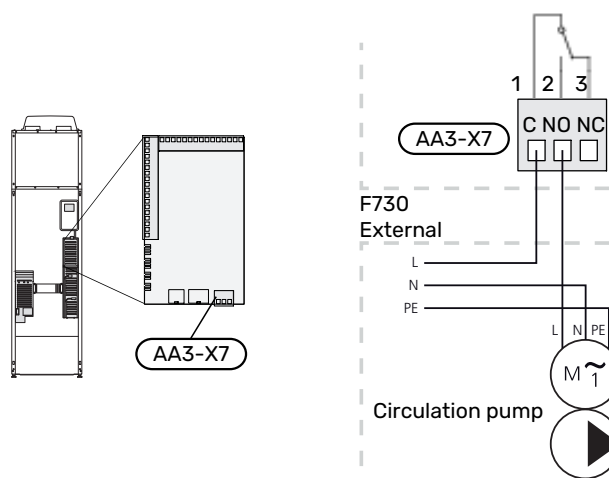
- damper (QN38) for outdoor air function (accessory OEK 20 is required)



CAUTION!

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

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



Connecting accessories

Instructions for connecting accessories are provided in the manual accompanying the accessory. See page 53 for the list of the accessories that can be used with F730.

Commissioning and adjusting

Preparations

1. Check that the switch (SF1) is in position "⏻".
2. Check that the filling valves (QM10) and (QM11) are fully closed.



NOTE!

Check the miniature circuit-breaker (FC1). It could have tripped during transport.



CAUTION!

Do not start F730 if there is a risk that the water in the system has frozen.

1. Turn the power switch (SF1) to ⏻.
2. Vent the heat pump via the vent valves (QM20), (QM22), (QM24), (QM26) and the rest of the climate system via its respective vent valves.
3. Keep topping up and venting until all air has been removed and the pressure is correct.



CAUTION!

The vent hoses from the container must be drained of water before air can be released. This means that the system is not necessarily vented despite the flow of water when the vent valves (QM20), (QM22), (QM24), (QM26) are opened.

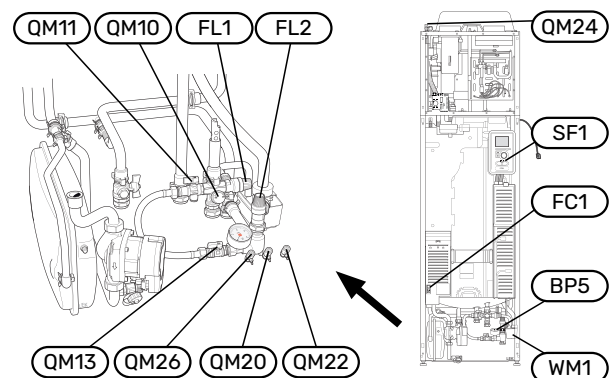
Filling and venting

FILLING THE HOT WATER HEATER

1. Open a hot water tap in the house.
2. Open the filling valve (QM10). Afterwards, this valve must be fully open during operation.
3. When the water that comes out of the hot water tap is no longer mixed with air, the water heater is full and the tap can be closed.

FILLING THE CLIMATE SYSTEM

1. Open the vent valves (QM20), (QM22), (QM24) and (QM26).
2. Open the filling valves (QM11), (QM13). The heating unit and the rest of the climate system fill with water.
3. When the water exiting the vent valves (QM20), (QM22), (QM24) and (QM26) is no longer mixed with air, close the valves.
4. After a while, the pressure begins to rise on the pressure gauge (BP5). When the pressure reaches 2.5 bar (0.25 MPa), the safety valve (FL2) starts to release water. Now, close one filling valve (QM11).
5. Reduce the pressure in the climate system to the normal working range (approx. 1 bar) by opening the vent valves (QM20), (QM22), (QM24) and (QM26) or the safety valve (FL2).
6. Start the heat pump and allow it to run in both heating and hot water modes.



VENTING THE CLIMATE SYSTEM



TIP!

Use the enclosed venting hose for simpler and easier venting.

Start-up and inspection

START GUIDE



CAUTION!

There must be water in the climate system before the switch is set to "I".

1. Set switch (SF1) on F730 to position "I".
2. Follow the instructions in the display's start guide. If the start guide does not start when you start the F730, you can start it manually in menu 5.7.



TIP!

See page 36 for a more in-depth introduction to the heat pump's control system (operation, menus etc.).

If the building is cooled when F730 starts, the compressor may not be able to meet the entire demand without having to use additional heating.

Commissioning

The first time the installation is started a start guide is started. The start guide instructions state what needs to be 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!

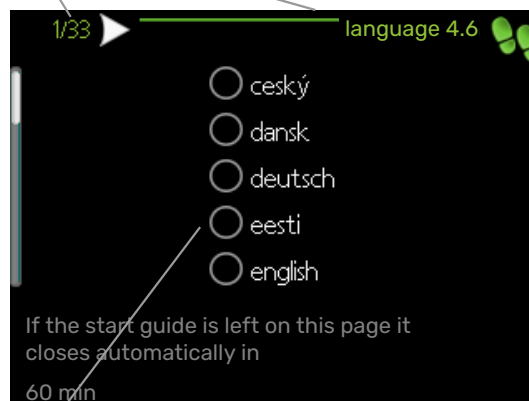
As long as the start guide is active, no function in the installation will start automatically.

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

Operation in the start guide

A. Page

B. Name and menu number



C. Option / setting

A. Page

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

Scroll between the pages of the start guide as follows:

1. Turn the control knob until one of the arrows in the top left corner (at the page number) has been marked.
2. Press the OK button to skip between the pages in the start guide.

B. Name and menu number

Here, you can see which menu in the control system this page of the start guide is based on. The digits in brackets refer to the menu number in the control system.

If you want to read more about affected menus either consult the help menu or read the user manual.

C. Option / setting

Make settings for the system here.

SETTING THE VENTILATION

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.

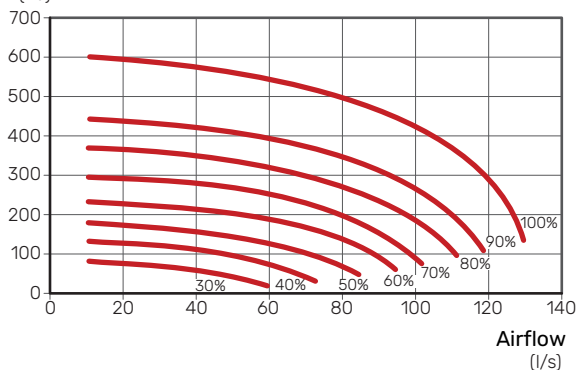


CAUTION!

Order a ventilation adjustment to complete the setting.

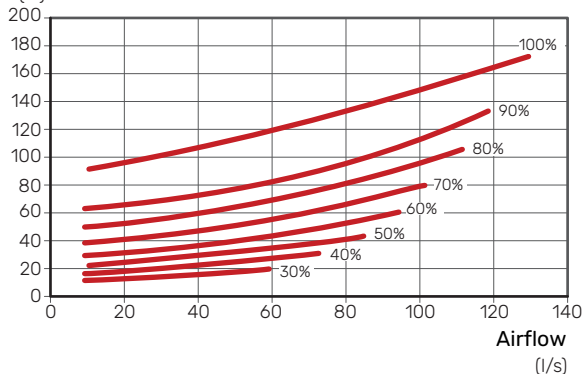
Ventilation capacity

Available pressure
(Pa)



Fan rating

Output
(W)



ADJUSTING THE EXHAUST AIR FLOW

1. Enter menu 5.1.5 - "fan sp. exhaust air".
2. Select "adjusting ventilation".
3. You now come to menu 5.1.5.1 - "adjusting ventilation".
4. Tick "adjusting ventilation".
5. Measure the airflow at the ventilation device.
6. Adjust the fan speed to achieve desired ventilation.
7. Enter the metered air flow.
8. Back to menu 5.1.5.
9. The value for fan speed that you entered in the menu 5.1.5.1 is now copied to "normal".

COMMISSIONING WITHOUT FAN

The heat pump can be run without recovery, as only an electric boiler, to produce heat and hot water, for example before the ventilation installation is complete.

1. Enter menu 4.2 - "op. mode" and select "add. heat only"
2. Enter menu 5.1.5 - "fan sp. exhaust air" and reduce the fan speed to 0%.

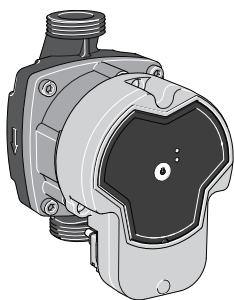


CAUTION!

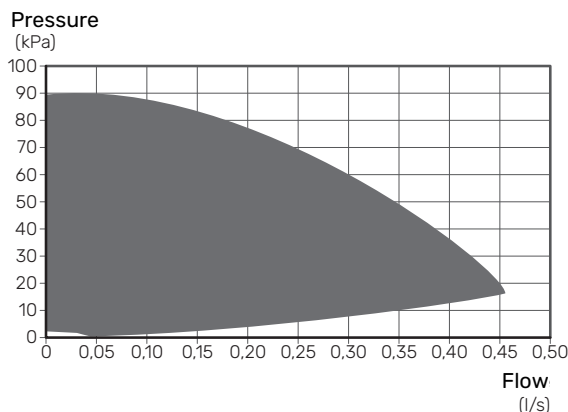
Select operating mode "auto" or "manual" when the heat pump is to run on recovery again.

SETTING PUMP SPEED

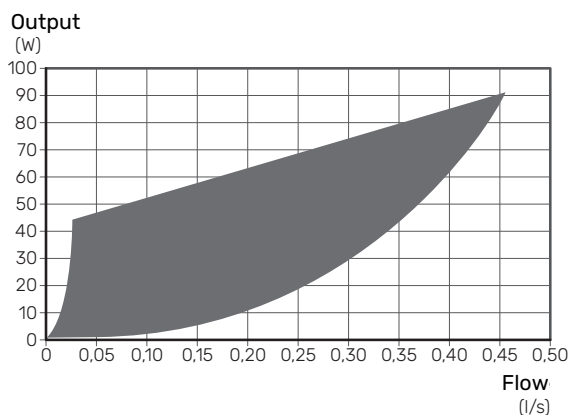
The heat pump (GP1) is automatically controlled and sets itself using the controls and based on the heating demand.



Capacity, heating medium pump



Output, heating medium pump



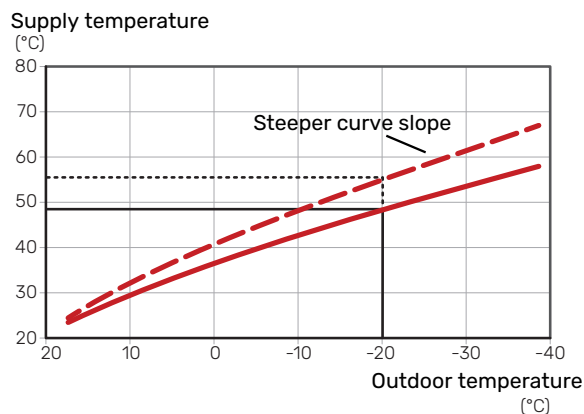
Setting the heating curve

In the menu "heating curve", you can see the heating curve for your house. The task of the curve is to provide an uniform indoor temperature, regardless of the outdoor temperature, and thereby energy-efficient operation. Based on this curve, the F730 determines the temperature of the water to the climate system (the supply temperature) and thus the indoor temperature.

CURVE COEFFICIENT

The slope of the heating curve indicates how many degrees the supply temperature is to be increased/reduced when the outdoor temperature drops/increases. A steeper slope means a higher supply temperature at a certain outdoor temperature.

The lower the heating curve, the more energy efficient the operation, although an excessively low curve entails reduced comfort.



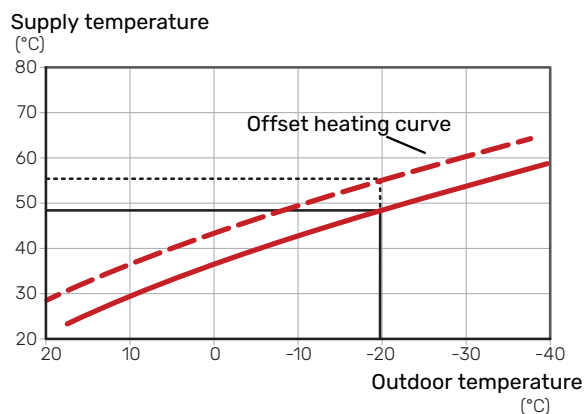
The optimum curve slope depends on the climate conditions and the lowest dimensioned outdoor temperature (DOT) in your location, whether the house has radiators, fan coils or underfloor heating and how well insulated the house is.

For houses with radiators or fan coils, a higher heating curve (e.g. curve 9) is suitable, for houses with under floor heating, a lower curve (e.g. curve 5) is suitable.

The heating curve is set when the heating installation is installed, but may need adjusting later. Normally, the curve will not need further adjustment.

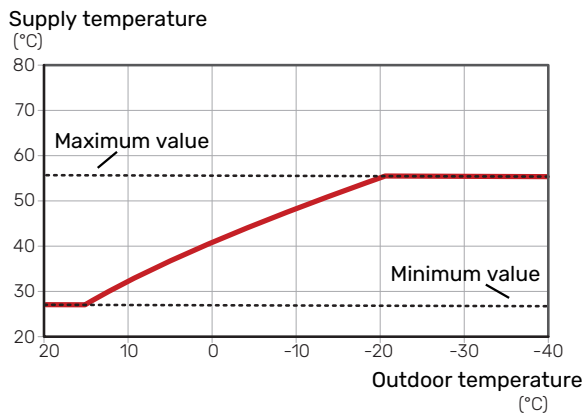
CURVE OFFSET

An offset of the heating curve means that the supply temperature changes by the same amount for all outdoor temperatures, e.g. a curve offset of +2 steps increases the supply temperature by 5 °C at all outdoor temperatures.



SUPPLY TEMPERATURE – MAXIMUM AND MINIMUM VALUES

Because the flow line temperature cannot be calculated higher than the set maximum value or lower than the set minimum value the heating curve flattens out at these temperatures.



NOTE!

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



NOTE!

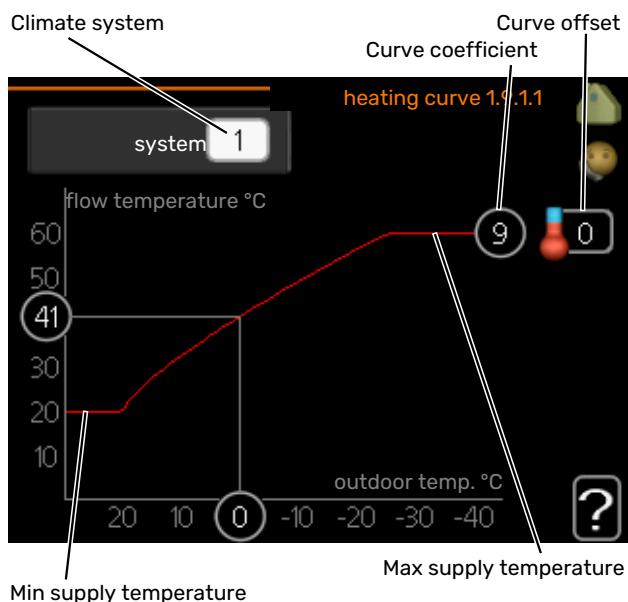
Curve 0 means that "own curve" is used.

Settings for "own curve" are made in menu 1.9.7.

TO READ OFF A HEATING CURVE

1. Turn the control knob so that the ring on the shaft with the outdoor temperature is marked.
2. Press the OK button.
3. Follow the grey line up to the curve and out to the left to read off the value for the supply temperature at the selected outdoor temperature.
4. You can now select to take read outs for different outdoor temperatures by turning the control knob to the right or left and read off the corresponding flow temperature.
5. Press the OK or Back button to exit read off mode.

ADJUSTMENT OF CURVE



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



NOTE!

If you need to adjust "min. flow line temp." and/or "max flow line temperature", you do this in other menus.

Settings for "min. flow line temp." in menu 1.9.3.

Settings for "max flow line temperature" in menu 5.1.2.

myUplink

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

Visit myuplink.com for more information.

Update your system to the latest software version.

Specification

You need the following in order for myUplink to be able to communicate with your F730:

- network cable
- Internet connection
- account on myuplink.com

We recommend our mobile apps for myUplink.

Connection

To connect your system to myUplink:

1. Select connection type (wifi/Ethernet) in menu 4.1.3 – internet.
2. Mark “request new connection string” and press the OK button.
3. When a connection string has been produced, it is shown in this menu and is valid for 60 minutes.
4. If you do not already have an account, register in the mobile app or on myuplink.com.
5. Use the connection string to connect your installation to your user account on myUplink.

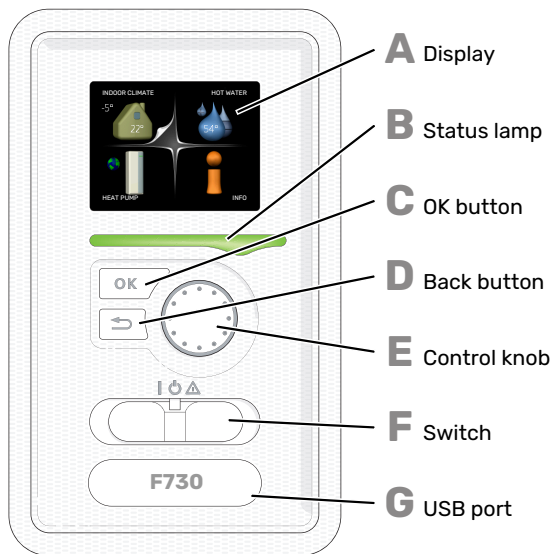
Range of services

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

Service level	Basic	Premium ex- tended his- tory	Premium change set- tings
Viewer	X	X	X
Alarm	X	X	X
History	X	X	X
Extended history	-	X	-
Manage	-	-	X

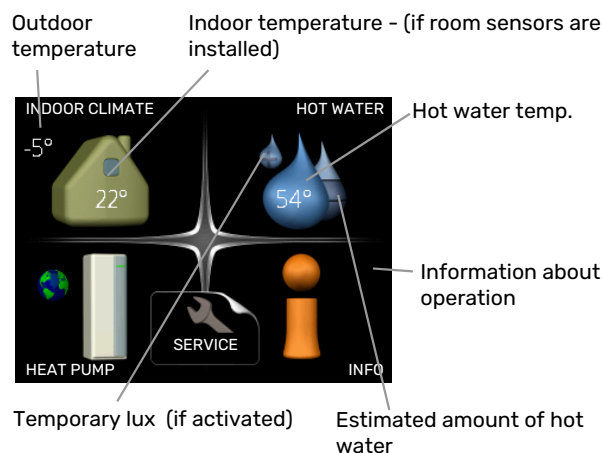
Control - Introduction

Display unit



- A DISPLAY**
Instructions, settings and operational information are shown on the display. You can easily navigate between the different menus and options to set the comfort or obtain the information you require.
- B STATUS LAMP**
The status lamp indicates the status of the heat pump. It:
- lights green during normal operation.
 - lights yellow in emergency mode.
 - lights red in the event of a deployed alarm.
- C OK BUTTON**
The OK button is used to:
- confirm selections of sub menus/options/set values/page in the start guide.
- D BACK BUTTON**
The back button is used to:
- go back to the previous menu.
 - change a setting that has not been confirmed.
- E CONTROL KNOB**
The control knob can be turned to the right or left. You can:
- scroll in menus and between options.
 - increase and decrease the values.
 - change page in multiple page instructions (for example help text and service info).
- F SWITCH (SF1)**
The switch assumes three positions:
- On (I)
 - Standby (⏻)
 - Emergency mode (⚠) (see page 48)
- Emergency mode must only be used in the event of a fault on the heat pump. In this mode, the compressor switches off and the immersion heater engages. The heat pump display is not illuminated and the status lamp illuminates yellow.
- G USB PORT**
The USB port is hidden beneath the plastic badge with the product name on it.
- The USB port is used to update the software.
- Visit myuplink.com and click the "Software" tab to download the latest software for your installation.

Menu system



MENU 1 - INDOOR CLIMATE

Setting and scheduling the indoor climate. See information in the help menu or user manual.

MENU 2 - HOT WATER

Setting and scheduling hot water production. See information in the help menu or user manual.

MENU 3 - INFO

Display of temperature and other operating information and access to the alarm log. See information in the help menu or user manual.

MENU 4 - HEAT PUMP










Setting time, date, language, display, operating mode etc. See information in the help menu or user manual.

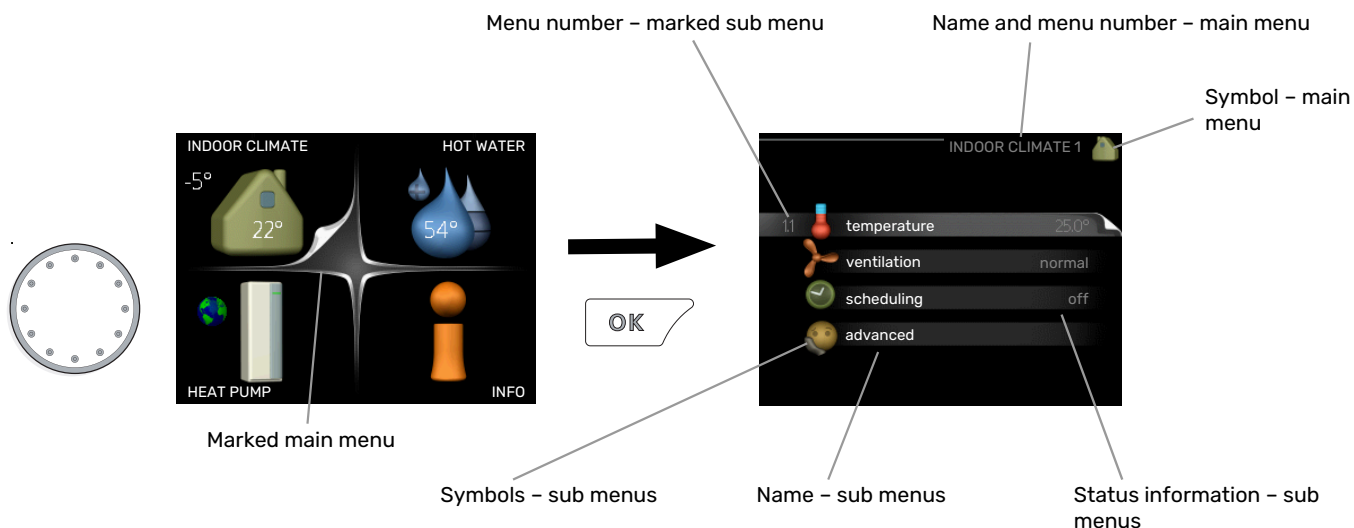
MENU 5 - SERVICE

Advanced settings. These settings are not available to the end user. The menu is visible when the Back button is pressed for 7 seconds when you are in the start menu. See page 42.

SYMBOLS IN THE DISPLAY

The following symbols may appear on the display during operation.

Symbol	Description
	This symbol appears by the information sign if there is information in menu 3.1 that you should note.
 <div>  Blocking the compressor.  Blocking additional heat. </div>	<p>These two symbols indicate whether the compressor or addition is blocked in F730.</p> <p>These can, for example, be blocked depending on which operating mode is selected in menu 4.2, if blocking is scheduled in menu 4.9.5 or if an alarm has occurred that blocks one of them.</p>
	This symbol appears if periodic increase or lux mode for the hot water is activated.
	This symbol indicates whether "holiday setting" is active in 4.7.
	This symbol indicates whether F730 has contact with myUplink.
	This symbol indicates the actual speed of the fan if the speed has changed from the normal setting.
	This symbol is visible in installations with active solar accessories.



OPERATION

To move the cursor, turn the control knob to the left or the right. The marked position is white and/or has a turned up tab.



SELECTING MENU

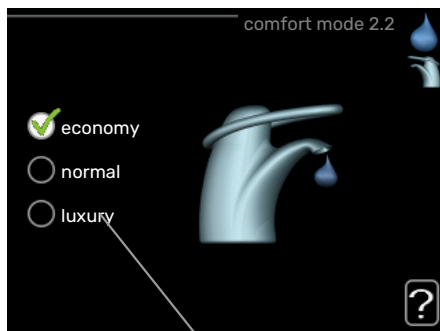
To advance in the menu system select a main menu by marking it and then pressing the OK button. A new window then opens with sub menus.

Select one of the sub menus by marking it and then pressing the OK button.

SETTING A VALUE



SELECTING OPTIONS



Alternative

In an options menu the current selected option is indicated by a green tick.

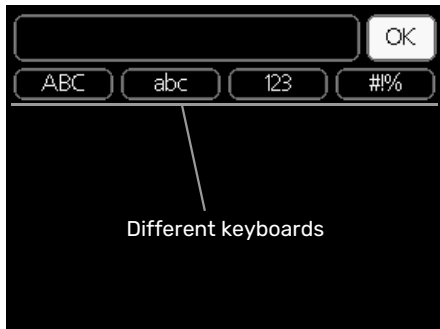
To select another option:

1. Mark the applicable option. One of the options is pre-selected (white).
2. Press the OK button to confirm the selected option. The selected option has a green tick.

To set a value:

1. Mark the value you want to set using the control knob. 01
2. Press the OK button. The background of the value becomes green, which means that you have accessed the setting mode. 01
3. Turn the control knob to the right to increase the value and to the left to reduce the value. 04
4. Press the OK button to confirm the value you have set. To change and return to the original value, press the Back button. 04

USE THE VIRTUAL KEYBOARD



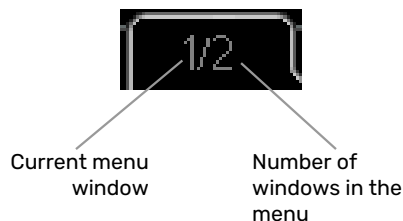
In some menus where text may require entering, a virtual keyboard is available.



Depending on the menu, you can gain access to different character sets which you can select using the control knob. To change character table, press the Back button. If a menu only has one character set the keyboard is displayed directly. When you have finished writing, mark "OK" and press the OK button.

SCROLL THROUGH THE WINDOWS

A menu can consist of several windows. Turn the control knob to scroll between the windows.




Scroll through the windows in the start guide



Arrows to scroll through window in start guide

1. Turn the control knob until one of the arrows in the top left corner (at the page number) has been marked.
2. Press the OK button to skip between the steps in the start guide.

HELP MENU

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

To access the help text:

1. Use the control knob to select the help symbol.
2. Press the OK button.

The help text often consists of several windows that you can scroll between using the control knob.

Control - Menus

Menu 1 - INDOOR CLIMATE

OVERVIEW

1 - INDOOR CLIMATE	1.1 - temperature		
	1.2 - ventilation		
	1.3 - scheduling		1.3.1 - heating
			1.3.3 - ventilation
	1.9 - advanced		1.9.1.1 - heating curve
	1.9.2 - external adjustment		
	1.9.3 - min. flow line temp.		
	1.9.4 - room sensor settings		
	1.9.6 - fan return time		
	1.9.7 - own curve		
	1.9.8 - point offset		
	1.9.9 - night cooling		

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
			2.9.2 - hot water recirc. *

* Accessory needed.

Menu 3 - INFO

OVERVIEW

3 - INFO	3.1 - service info
	3.2 - compressor info
	3.3 - add. heat info
	3.4 - alarm log
	3.5 - indoor temp. log
	3.6 - energy log

Menu 4 - HEAT PUMP

OVERVIEW

4 - HEAT PUMP	4.1 - plus functions *	4.1.3 - internet	4.1.3.1 - myUplink
			4.1.3.8 - tcp/ip settings
			4.1.3.9 - proxy settings
			4.1.5 - SG Ready
			4.1.6 - smart price adaption™
			4.1.7 - smart home
			Menu 4.1.10 - solar electricity *
			4.1.11 - demand-contr. ventil.
			*
	4.2 - op. mode		
	4.3 - my icons		
	4.4 - time & date		
	4.6 - language		
	4.7 - holiday setting		
	4.9 - advanced	4.9.1 - op. prioritisation	
		4.9.2 - auto mode setting	
		4.9.3 - degree minute setting	
		4.9.4 - factory setting user	
		4.9.5 - schedule blocking	
		4.9.6 - schedule silent mode	

* Accessory needed.

Menu 5 - SERVICE

OVERVIEW

5 - SERVICE	5.1 - operating settings	5.1.1 - hot water settings
		5.1.2 - max flow line temperature
		5.1.3 - max diff flow line temp.
		5.1.4 - alarm actions
		5.1.5 - fan sp. exhaust air
		5.1.10 - op. mod heat med pump
		5.1.11 - pump speed heating medium
		5.1.12 - internal electrical addition
		5.1.14 - flow set. climate system
		5.1.24 - blockFreq
		5.1.25 - time filter alarm
	5.2 - system settings	
	5.3 - accessory settings	5.3.3 - extra climate system *
		5.3.11 - modbus *
		5.3.17 - outdoor air mixing *
		5.3.21 - flow sensor / energy meter*
	5.4 - soft in/outputs	
	5.5 - factory setting service	
	5.6 - forced control	
	5.7 - start guide	
	5.8 - quick start	
	5.9 - floor drying function	
	5.10 - change log	
	5.12 - country	

* Accessory needed.

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

Sub-menus

Menu **SERVICE** has orange text and is intended for the advanced user. This menu has several sub-menus. Status information for the relevant menu can be found on the display to the right of the menus.

operating settings Operating settings for the heat pump.

system settings System settings for the heat pump, activating accessories etc.

accessory settings Operational settings for different accessories.

soft in/outputs Setting software-controlled inputs and outputs on input board (AA3).

factory setting service 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

Operating settings can be made for the heat pump in the sub menu.

MENU 5.1.1 - HOT WATER SETTINGS



CAUTION!

The factory set tap water temperatures specified in the manual can vary due to the directives in force in different countries. From this menu, you can check the relevant settings for the system.

economy

Setting range start temp. economy: 5-55 °C

Factory setting start temp. economy : 42 °C

Setting range stop temp. economy: 5 - 60 °C

Factory setting stop temp. economy : 46 °C

normal

Setting range start temp. normal: 5 - 60 °C

Factory setting start temp. normal : 46 °C

Setting range stop temp. normal: 5 - 65 °C

Factory setting stop temp. normal : 50 °C

luxury

Setting range start temp. lux: 5 - 70 °C

Factory setting start temp. lux : 49 °C

Setting range stop temp. lux: 5 - 70 °C

Factory setting stop temp. lux : 53 °C

stop temp. per. increase

Setting range: 55 - 70 °C

Factory setting: 55 °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.

With "high power" activated, the hot water is charged with greater power than standard mode and therefore has a faster recharging time.

MENU 5.1.2 - MAX FLOW LINE TEMPERATURE

climate system

Setting range: 20-70 °C

Default value: 60 °C

Here, you set the maximum supply temperature for the climate system. If the installation has more than one climate system, individual maximum supply temperatures can be set for each system. Climate system 2 - 8 cannot be set to a higher max supply temperature than climate system 1.

NOTE!

For underfloor heating systems, max flow line temperature should normally be set to between 35 and 45°C.

Check the max floor temperature with your floor supplier.

MENU 5.1.3 - MAX DIFF FLOW LINE TEMP.

max diff compressor

Setting range: 1 - 25 °C

Default value: 10 °C

max diff addition

Setting range: 1 - 24 °C

Default value: 7 °C

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

max diff compressor

If the current supply temperature *exceeds* the calculated supply by set value, the degree minute value is set to +2. The compressor in the heat pump stops if there is only a heating demand.

max diff addition

If "addition" is selected and activated in menu 4.2 and the current supply temperature *exceeds* the calculated temperature by the set value, the additional heat is forced to stop.

MENU 5.1.4 - ALARM ACTIONS

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

The different alternatives are that the heat pump stops producing hot water (default setting) and/or reduces the room temperature.



NOTE!

If no alarm action is selected, it can result in higher energy consumption in the event of an alarm.

MENU 5.1.5 - FAN SP. EXHAUST AIR

normal and speed 1-4

Setting range: 0 - 100 %

Set the speed for the five different selectable speeds for the fan here. You can also select "adjusting ventilation" and "fan synch. operation".

adjusting ventilation

Tick "adjusting ventilation" in conjunction with ventilation adjustment. The selection is active for as long as you remain in the menu but deactivates when you leave the menu.

fan synch. operation

Select whether the fan is to maintain the same speed, regardless of whether the compressor is operating or not, or alternatively run at different speeds. If the function is activated, fan speed 2 applies when the compressor is not in operation, and normal fan speed applies when the compressor is in operation.



NOTE!

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

For optimum heat pump performance, the ventilation flow should not be less than 21 l/s (75 m³/h).

MENU 5.1.5.1 - ADJUSTING VENTILATION

actual air flow

Setting range: 1 – 400 m³/h

Factory setting: 0 m³/h

fan speed

Setting range: 0-100 %

Factory setting: the value selected in "normal" in menu 5.1.5.

Here, you set the air flow and adjust the fan speed at ventilation adjustment.

"adjusting ventilation": Activate this function while the ventilation is being adjusted.

"actual air flow": Here, you set the real air flow as measured during the ventilation adjustment.



CAUTION!

When this setting is made, it is important that the ventilation flow is in a stable condition.

"fan speed": Here you can adjust the fan speed while "adjusting ventilation" is activated.



CAUTION!

If the fan speed is too high during adjustment, information that it needs to be reduced is given at the bottom of the page.

The function is deactivated when you exit the menu.

MENU 5.1.10 - OP. MOD HEAT MED PUMP

op. mode

Setting range: auto, intermittent

Default value: auto

Default value: intermittent

Set the operating mode of the heating medium pump here.

auto: The heating medium pump runs according to the current operating mode for F730.

intermittent: The heating medium pump starts approx. 20 seconds before, and stops at the same time as, the compressor.

MENU 5.1.11 - PUMP SPEED HEATING MEDIUM

heating

Setting range: 1 – 100 %

Factory setting: 70 %

hot water

Setting range: 1 – 100 %

Factory setting: 70 %

speed in wait mode

Setting range: 1 – 100 %

Default values: 30 %

min. allowed speed

Setting range: 1 – 50 %

Default values: 1 %

max. allowed speed

Setting range: 50 – 100 %

Default values: 100 %

Here you set whether the heating medium pump's speed is to be regulated automatically or manually during heating and hot water. Select "auto" if the speed of the heating medium pump is to be regulated automatically (factory setting) for optimal operation. Select manual if you want to set the heating medium pump speed yourself, during heating and hot water.

If "auto" is activated for heating operation or hot water you can also make the setting "max. allowed speed", which restricts the heating medium pump and does not allow it to run at a higher speed than the set value.

"speed in wait mode" means operating mode heating for the heating medium pump, but when the heat pump neither has a need for compressor operation nor electric additional heat and slows down.

MENU 5.1.12 - INTERNAL ELECTRICAL ADDITION

set max electrical add.

Setting range: 0 – 6.5 kW

Default values: 3.5 kW

fuse size

Setting range: 1 – 200 A

Factory setting: 16 A

Here you set the max. electrical output of the internal electrical addition in F730 and the fuse size for the installation.

MENU 5.1.14 - FLOW SET. CLIMATE SYSTEM

presettings

Setting range: radiator, floor heat., rad. + floor heat., DOT °C

Default value: radiator

Setting range DOT: -40.0 – 20.0 °C

Factory setting DOT: -18.0 °C

own setting

Setting range dT at DOT: 0.0 – 25.0

Factory setting dT at DOT: 10.0

Setting range DOT: -40.0 – 20.0 °C

Factory setting DOT: -18.0 °C

The type of heating distribution system the heating medium pump (GP1) works towards is set here.

dT at DOT is the difference in degrees between flow and return temperatures at dimensioned outdoor temperature.

MENU 5.1.24 - BLOCKFREQ

silent mode

Setting range: 80 – 120 Hz

Factory setting: 120 Hz

Silent mode requires scheduling in menu 4.9.6.

from frequency

Setting range: 20 – 115 Hz

Factory setting: 20 Hz

Maximum setting range: 50 Hz.

to frequency

Setting range: 25 – 120 Hz

Factory setting: 25 Hz

Maximum setting range: 50 Hz.

blocking 100-120 Hz

On activation, blocking is active 24 hours a day.

Here you can set frequencies that are not to be permitted for the compressor. It is possible to restrict two different frequencies. Each frequency is restricted to between 3 and 50 Hz.

This function requires scheduling in menu 4.9.6.



CAUTION!

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



CAUTION!

Blocking peak output in F730 can lead to reduced savings.

MENU 5.1.25 - TIME FILTER ALARM

months btwn filter alarms

Setting range: 1 – 24

Factory setting: 3

Here you set the number of months between alarms for a reminder to clean the filter in F730.

MENU 5.2 - SYSTEM SETTINGS

Inform the heat pump which accessories are installed here.

There are two ways of activating connected accessories. You can either mark the alternative in the list or use the automatic function "search installed acc.".

search installed acc.

Mark "search installed acc." and press the OK button to automatically find connected accessories for F730.

MENU 5.3 - ACCESSORY SETTINGS

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

This is also where you activate the outdoor air damper.

MENU 5.3.3 - EXTRA CLIMATE SYSTEM

mixing valve amplifier

Setting range: 0.1 – 10.0

Default value: 1.0

mixing valve step delay

Setting range: 10 – 300 s

Default values: 30 s

Contr. pump GP10

Setting range: on/off

Factory setting: off

Here, you select which climate system (2 – 8) you wish to set.

mixing valve amplifier, mixing valve step delay: Here, you set the shunt amplification and shunt waiting time for the various extra climate systems that are installed.

Contr. pump GP10: Here, you can set the speed of the circulation pump manually.

See the accessory installation instructions for function description.

MENU 5.3.11 - MODBUS

address

Factory setting: address 1

word swap

Factory setting: not activated

As from Modbus 40 version 10, the address can be set between 1 - 247. Earlier versions have a fixed address (address 1).

Here, you can select if you want to have "word swap" instead of the preset standard "big endian".

See the accessory installation instructions for function description.

MENU 5.3.21 - FLOW SENSOR / ENERGY METER

Energy meter

set mode

Setting range: energy per pulse / pulses per kWh

Default value: energy per pulse

energy per pulse

Setting range: 0 - 10000 Wh

Factory setting: 1000 Wh

pulses per kWh

Setting range: 1 - 10000

Factory setting: 500

Energy meter (Electricity meter)

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

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

pulses per kWh: Here you set the number of pulses per kWh that are sent to F730.

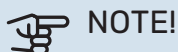
MENU 5.4 - SOFT IN/OUTPUTS

Here, you can select which input/output on the input board (AA3) the external switch function (page 26) will be connected to.

Selectable inputs on terminal block AUX 1-5 (AA3-X6:9-18) and output AA3-X7 on the input board.

MENU 5.5 - FACTORY SETTING SERVICE

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 and any connected accessories 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 31 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 heating or 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.

MENU 5.9 - FLOOR DRYING FUNCTION

length of period 1 - 7

Setting range: 0 - 30 days

Factory setting, period 1 - 3, 5 - 7: 2 days

Factory setting, period 4: 3 days

temp. period 1 - 7

Setting range: 15 - 70 °C

Default value:

temp. period 1	20 °C
temp. period 2	30 °C
temp. period 3	40 °C
temp. period 4	45 °C
temp. period 5	40 °C
temp. period 6	30 °C
temp. period 7	20 °C

Set the function for under floor drying here.

You can set up to seven time periods with different calculated supply temperatures. If fewer than seven periods are to be used, set the remaining periods to 0 days.

Mark the active window to activate the underfloor drying function. A counter at the bottom shows the number of days the function has been active.



TIP!

If operating mode "add. heat only" is to be used, select it in menu 4.2.



TIP!

It is possible to save a floor drying log that shows when the concrete slab has reached the correct temperature. See section "Logging floor drying" on page 50.

MENU 5.10 - CHANGE LOG

Read off any previous changes to the control system here.

The date, time, ID no. (unique to particular setting) and the new set value are shown for every change.



NOTE!

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

5.12 - COUNTRY

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

Language settings can be made regardless of this selection.



NOTE!

This option locks after 24 hours, after restarting the display and during program updating.

Service



CAUTION!

Servicing and maintenance should only be carried out by persons with the necessary expertise.

When replacing components on F730 only replacement parts from NIBE may be used.

Maintenance

Inform the user of necessary maintenance action.

CLEANING THE FLOOR DRAIN

Condensation forms when the heat pump is working. This condensation is routed via an overflow cup (WM1) to a drain, e.g. a floor drain.

The condensation water contains a certain amount of dust and particles.

Check regularly that any floor drains are not blocked; water must be able to run through freely. Clean, if necessary.



CAUTION!

If the floor drain is blocked, water can spill over onto the floor of the installation area. To prevent damage to the building, a waterproof floor or floor membrane is recommended.

Service actions

EMERGENCY MODE

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

Emergency mode is activated by setting switch (SF1) to "△". This means that:

- The status lamp illuminates yellow.
- The display is not lit and the control computer is not connected.
- The temperature at the immersion heater is controlled by the thermostat (FQ10). It can be set either to 35 or 45°C.
- The compressor is switched off and only the fan, the heating medium pump and the electric additional heat are active. The electric additional heat power in emergency mode is set on the electric addition PCB (AA1). See page 25 for instructions.

DRAINING THE HOT WATER HEATER

The water heater can be drained through the safety valve (FL1) or via the overflow cup (WM1).



CAUTION!

There may be some hot water, risk of scalding.

1. Disconnect the overflow pipe from the safety valve (FL1) and connect a hose to a draining pump instead. If a draining pump is not available, the water can be released directly into the overflow cup instead (WM1).
2. Open the safety valve (FL1).
3. Open a hot water tap to let air into the system. If this is not sufficient, detach the pipe connection (XL4) on the hot water side and ensure that air is entering.

DRAINING THE CLIMATE SYSTEM

In order to carry out service on the climate system, it may be easier to drain the system first.



CAUTION!

There may be some hot water, risk of scalding.

The hot water can be drained as follows:

- through the draining valve (XL10)
 - through the safety valve (FL2) via the overflow cup (WM1)
 - through a hose that is connected to the safety valve's (FL2) outlet
1. Open the safety valve/drain valve.
 2. Set the vent valves for the climate system (QM20), (QM22), (QM24), (QM26) in the open position for air supply.



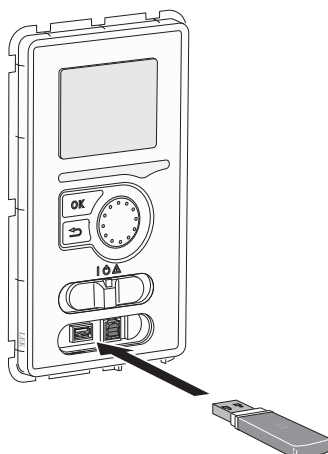
CAUTION!

The heat pump should not, after draining, be exposed to risk of freezing because a certain of water remains in the coil.

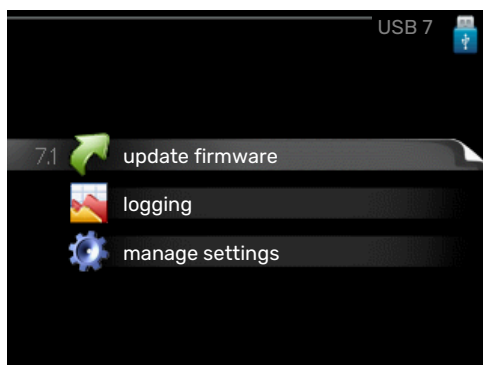
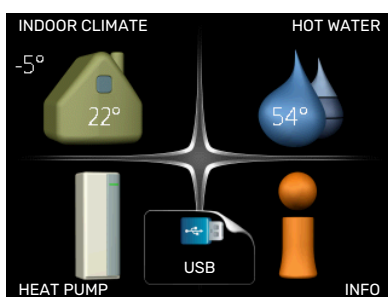
TEMPERATURE SENSOR DATA

Temperature (°C)	Resistance (kOhm)	Voltage (VDC)
-10	56.20	3.047
0	33.02	2.889
10	20.02	2.673
20	12.51	2.399
30	8.045	2.083
40	5.306	1.752
50	3.583	1.426
60	2.467	1.136
70	1.739	0.891
80	1.246	0.691

USB SERVICE OUTLET

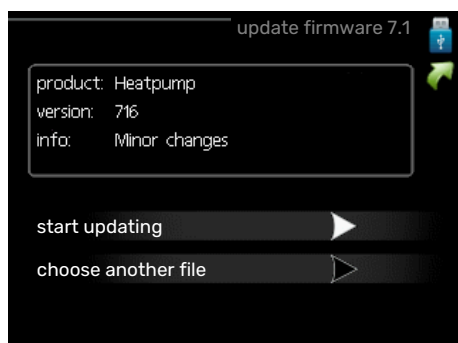


The display unit is equipped with a USB socket that can be used to update the software and save logged information in F730.



When a USB memory is connected, a new menu (menu 7) appears in the display.

Menu 7.1 - "update firmware"



Here, you can update the software in F730.



CAUTION!

For the following functions to work the USB memory must contain files with software for F730 from NIBE.

The fact box at the top of the display shows information (always in English) of the most probable update that the update software has selected from the USB memory.

This information states the product for which the software is intended, the software version and general information about it. If you want a file other than the one selected, the correct file can be selected through "choose another file".

start updating

Select "start updating" if you want to start the update. You are asked whether you really want to update the software. Respond "yes" to continue or "no" to undo.

If you responded "yes" to the previous question the update starts and you can now follow the progress of the update on the display. When the update is complete F730 restarts.



TIP!

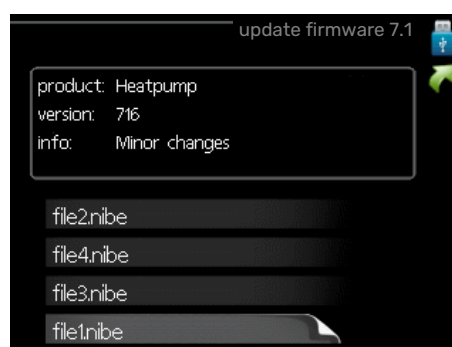
A software update does not reset the menu settings in F730.



NOTE!

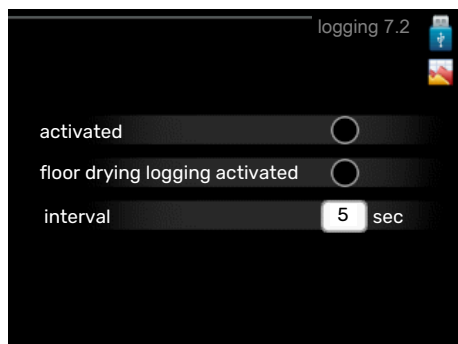
If the update is interrupted before it is complete (for example, by a power cut), the software can be reset to the previous version if the OK button is held in during start-up until the green lamp comes on (takes about 10 seconds).

choose another file



Select "choose another file" if you do not want to use the suggested software. When you scroll through the files, information about the marked software is shown in a fact box just as before. When you have selected a file with the OK button you will return to the previous page (menu 7.1) where you can choose to start the update.

Menu 7.2 - logging



Setting range: 1 s – 60 min

Factory setting range: 5 s

Here you can choose how current measurement values from F730 should be saved onto a log file on the USB memory.

1. Set the desired interval between loggings.
2. Tick "activated".
3. The present values from F730 are saved in a file in the USB memory at the set interval until "activated" is unticked.



NOTE!

Untick "activated" before removing the USB memory.

Logging floor drying

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

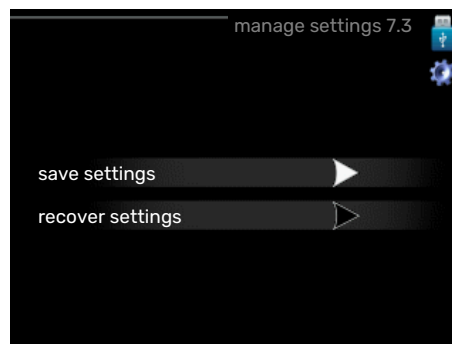
- Make sure that "floor drying function" is activated in menu 5.9.
- Select "logging floor drying activated".
- A log file is now created, where the temperature and the immersion heater output can be read off. Logging continues until "logging floor drying activated" is deselected or until "floor drying function" is stopped.



NOTE!

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

Menu 7.3 - manage settings



save settings

Setting option: on/off

recover settings

Setting option: on/off

In this menu, you save/upload menu settings to/from a USB memory stick.

save settings: Here, you save menu settings in order to re-store them later or to copy the settings to another F730.



NOTE!

When you save menu settings to the USB memory, you replace any previously saved settings on the USB memory.

recover settings: Here, you upload all menu settings from the USB memory stick.



NOTE!

Resetting of menu settings from the USB memory cannot be undone.

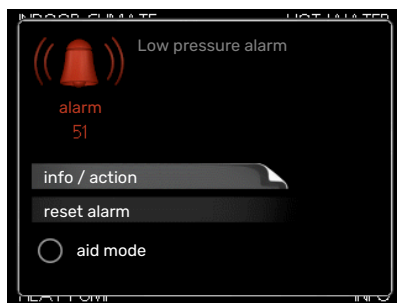
Disturbances in comfort

In most cases, F730 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, some kind of malfunction has occurred, which is indicated by the status lamp changing from green continuously to red continuously. In addition, an alarm bell appears in the information window.

ALARM

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

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

reset alarm In many cases, it is sufficient to select "reset alarm" for the product to revert to normal operation. If a green light comes on after selecting "reset alarm", the alarm has been remedied. If the red light is still on, and a menu called "alarm" is visible in the display, the problem causing the alarm still remains.

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



NOTE!

To select aid mode an alarm action must be selected in the menu 5.1.4.



NOTE!

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

Troubleshooting

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

BASIC ACTIONS

Start by checking the following items:

- The switch's (SF1) position.
- Group and main fuses of the accommodation.
- The property's earth circuit breaker.
- Heat pump's earth-fault breaker.
- Miniature circuit breaker for F730 (FC1).
- Temperature limiter for F730 (FQ10).
- Correctly set load monitor.

LOW HOT WATER TEMPERATURE OR A LACK OF HOT WATER

- Closed or choked filling valve (QM10) for the hot water.
 - Open the valve.
- F730 in incorrect operating mode.
 - Enter menu 4.2. If mode "auto" is selected, select a higher value on "stop additional heat" in menu 4.9.2.
 - If mode "manual" is selected, select "addition".
- 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.
- Too low or no operating prioritisation of hot water.
 - Enter menu 4.9.1 and increase the time for when hot water is to be prioritised. Note that if the time for hot water is increased, the time for heating production is reduced, which can give lower/uneven room temperatures.

LOW ROOM TEMPERATURE

- Closed thermostats in several rooms.
 - Set the thermostats to max, in as many rooms as possible. Adjust the room temperature via menu 1.1, instead of choking the thermostats.

See the "Saving tips" section in the User manual for more detailed information about how to best set the thermostats.

- F730 in incorrect operating mode.
 - Enter menu 4.2. If mode "auto" is selected, select a higher value on "stop heating" in menu 4.9.2.
 - If mode "manual" is selected, select "heating". If this is not enough, select "addition".
- Too low set value on the automatic heating control.
 - Enter menu 1.1 - "temperature" and adjust the offset heating curve up. If the room temperature is only low in cold weather, the curve slope in menu 1.9.1 - "heating curve" may need to be adjusted upwards.
- Too low or no operating prioritisation of heat.
 - Enter menu 4.9.1 and increase the time for when heating is to be prioritised. Note that if the time for heating is increased the time for hot water production is reduced, which can give smaller amounts of hot water.
- "comfort mode" "luxury" selected in combination with large hot water outlet.
 - When you have selected "comfort mode" "luxury", F730 prioritises hot water production over heat production. If you want to change comfort mode: Enter menu 2.2 and select "economy" or "normal".
- "Holiday mode" activated in menu 4.7.
 - Enter menu 4.7 and select "Off".
- External switch for changing room temperature activated.
 - Check any external switches.
- The heating medium pump (GP1 has stopped).
- Air in the climate system.
 - Vent the climate system (see page 30).
- Closed valves to the climate system.
 - Open the valves.
- Incorrect value set in menu 5.1.12.
 - Enter menu 5.1.12 and increase the value on "set max electrical add.".

HIGH ROOM TEMPERATURE

- Too high set value on the automatic heating control.
 - Enter menu 1.1 - "temperature" and reduce the offset heating curve. If the room temperature is only high in cold weather, the curve slope in menu 1.9.1 - "heating curve" may need to be adjusted downwards.
- External switch for changing room temperature activated.
 - Check any external switches.

LOW SYSTEM PRESSURE

- Not enough water in the climate system.
 - Top up the water in the climate system (see page 30).

LOW OR A LACK OF VENTILATION

- The exhaust air filter (HQ10) is clogged.
 - 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 1.2 and select "normal".
- External switch for changing the fan speed activated.
 - Check any external switches.

HIGH OR DISTRACTING VENTILATION

- The exhaust air filter (HQ10) is clogged.
 - Clean or replace the filter.
- The ventilation is not adjusted.
 - Order/implement ventilation adjustment.
- Fan speed in forced mode.
 - Enter menu 1.2 and select "normal".
- External switch for changing the fan speed activated.
 - Check any external switches.

THE COMPRESSOR DOES NOT START

- There is no heating or hot water demand.
 - F730 does not call on heating or hot water.
- The heat pump defrosts.
 - The compressor starts, when defrosting is complete.
- Compressor blocked due to the temperature conditions.
 - Wait until the temperature is within the product's working range.
- Minimum time between compressor starts has not been reached.
 - Wait for at least 30 minutes and then check if the compressor has started.
- Alarm tripped.
 - Follow the display instructions.

Accessories

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

Not all accessories are available on all markets.

SPLITTER KIT DKI 10

For split installation of F730.

Part no. 089 777

DOCKING KIT DEW 41

DEW 41 means that F730 can be connected to water heater VPB 200.

Part no. 067 537

DOCKING KITS SCA 43

SCA 43 means that F730 can be connected to the tanks AHPS/AHPH/VPB 300.

Part no. 067 540

EXTRA SHUNT GROUP ECS

This accessory is used when F730 is installed in houses with two or more different climate systems that require different supply temperatures.

ECS 40 (Max 80 m²)

Part no 067 287

ECS 41 (approx. 80-250 m²)

Part no 067 288

COMMUNICATIONS MODULE MODBUS 40

MODBUS 40 enables F730 to be controlled and monitored using a DUC (computer sub-centre) in the building. Communication is then performed using MODBUS-RTU.

Part no 067 144

ROOM UNIT RMU 40

The room unit is an accessory with a built-in room sensor, which allows the control and monitoring of F730 to be carried out in a different part of your home to where it is located.

Part no 067 064

SOLAR PACKAGE NIBE PV

NIBE PV is a modular system comprising solar panels, assembly parts and inverters, which is used to produce your own electricity.

ACCESSORY BOARD AXC 20

Accessory board for hot water circulation, damper for frost protection and/or external heating medium pump.

Part no. 067 609

OUTDOOR AIR MIXING OEK 20-160

OEK 20-160 is an accessory that enables F730 to operate with both exhaust air and outdoor air.

Part no. 067 535

WATER HEATER

AHPS

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

Requires that the whole installation (F730 and AHPS) is positioned at a distance of 60 mm from the rear wall.

Requires docking kit.

Part no. 256 119

AHPH

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

Requires that the whole installation (F730 and AHPH) is positioned at a distance of 60 mm from the rear wall.

Requires docking kit.

Part no. 256 120

VPB

Water heater without immersion heater with charge coil. Requires docking kit.

VPB 200

Corrosion protection:

Copper Part no. 081 068

Enamel Part no. 081 069

Stainless Part no. 081 070

VPB 300

Corrosion protection:

Copper Part no. 081 071

Enamel Part no. 081 073

Stainless Part no. 081 072

TOP CABINET TOC 40

Top cabinet that conceals the ventilation ducts and reduces the sound to the installation room by 1-2 dB(A).

Height 245 mm

Part no. 089 756

Height 345 mm

Part no. 089 757

Height 445 mm

Part no. 067 522

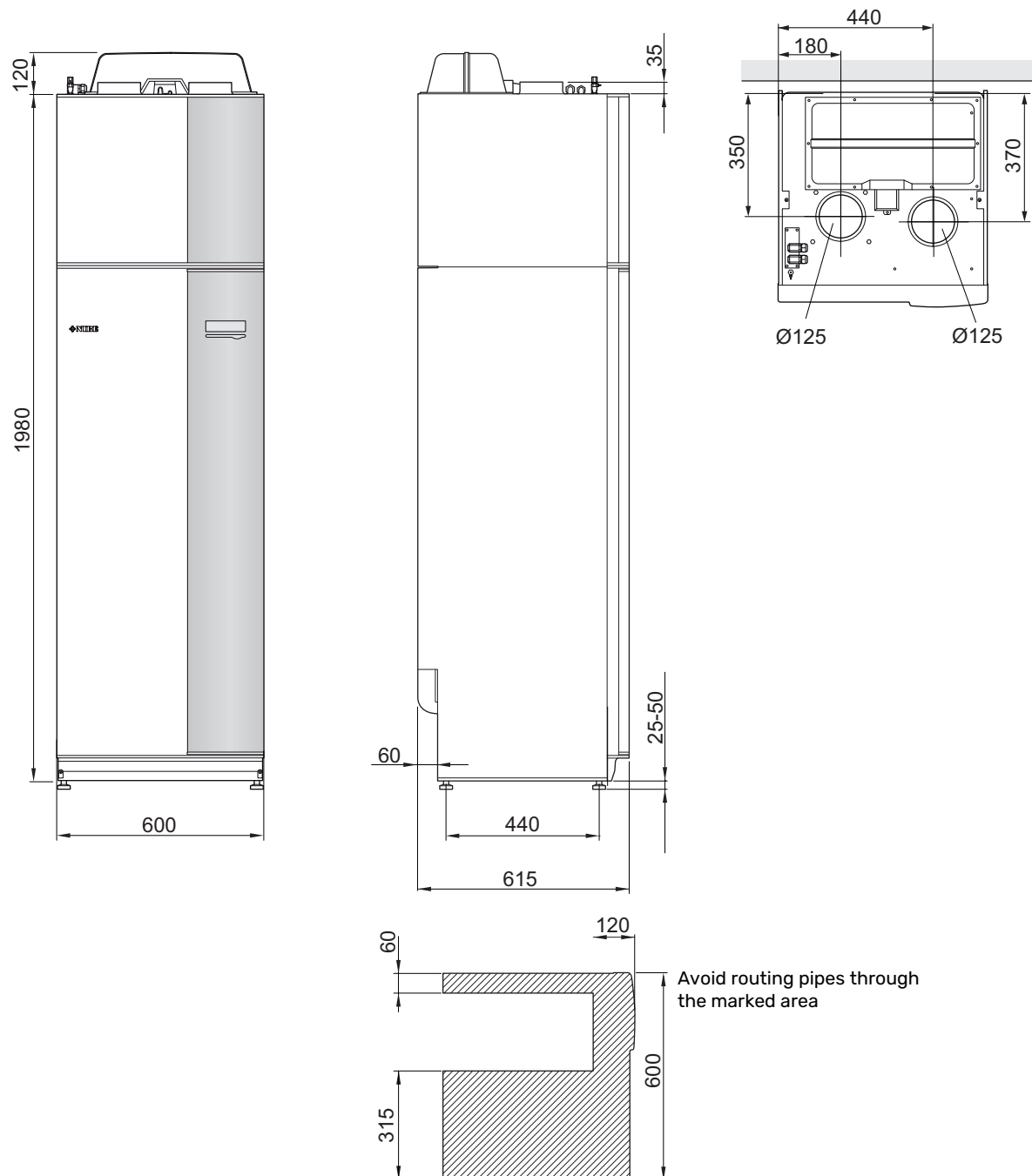
Height 385 - 635 mm

Part no. 089 758

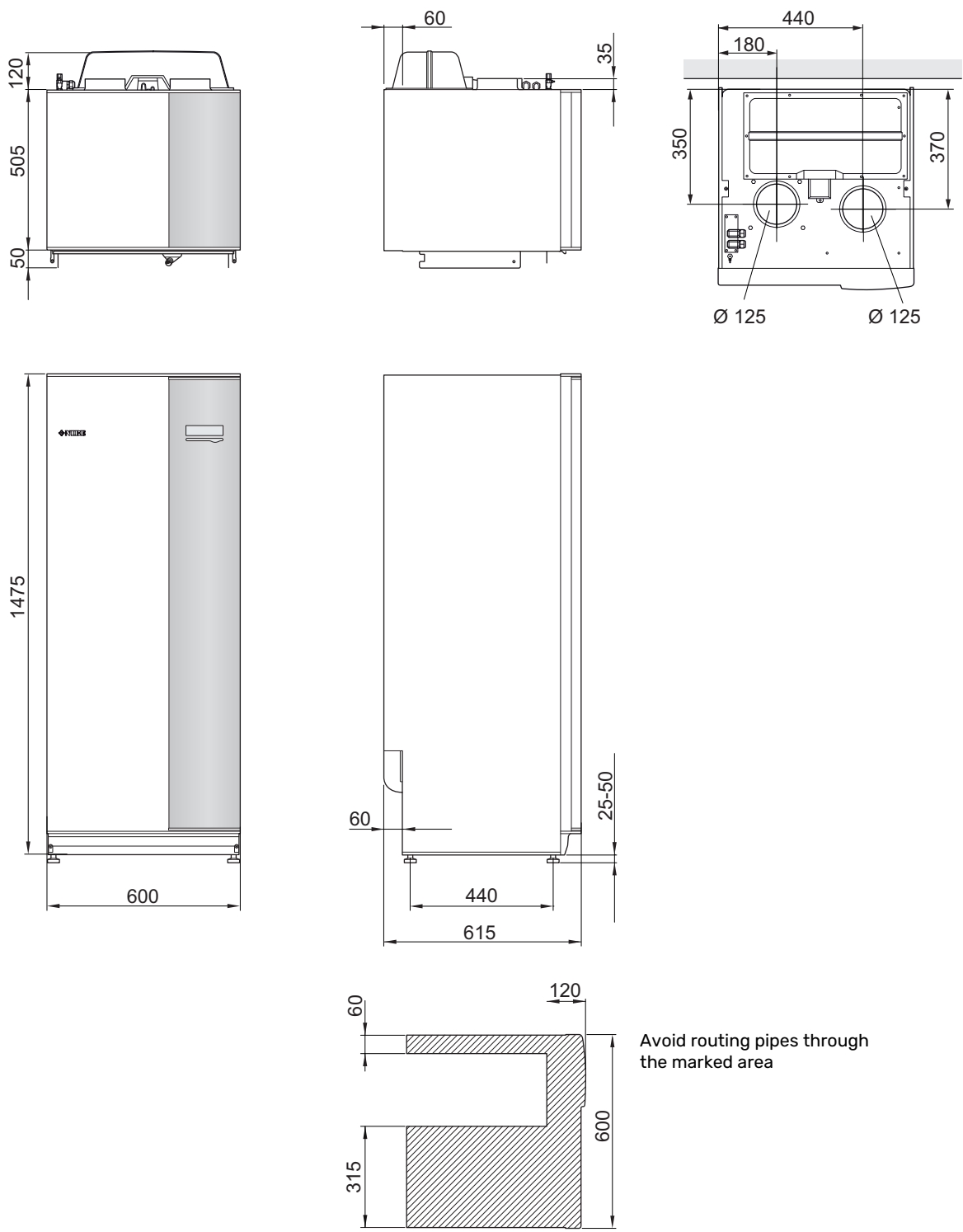
Technical data

Dimensions

F730 installed as one unit.



F730 at separated installation.



Technical specifications

1x230 V		Stainless
Output data according to EN 14 511		
Heating capacity (P _H)/COP ¹	kW/-	1.27 / 4.79
Heating capacity (P _H)/COP ²	kW/-	1.53 / 5.32
Heating capacity (P _H)/COP ³	kW/-	5.35 / 2.43
Output data according to EN 14 825		
Rated heating output (P _{designh})	kW	5
SCOP cold climate, 35°C / 55 °C		4.65 / 3.57
SCOP average climate, 35 °C / 55 °C		4.35 / 3.38
SCOP warm climate, 35°C / 55°C		4.44 / 3.40
Additional power		
Max power, immersion heater (factory setting)	kW	6.5 (3.5)
Energy rating, average climate		
The product's efficiency class room heating, average climate 35 / 55 °C ⁴		A++ / A++
The system's efficiency class room heating, average climate 35 / 55 °C ⁵		A+++ / A++
Declared tap profile/efficiency class hot water heating ⁶		XL / A
Electrical data		
Rated voltage	V	230 V ~ 50 Hz
Max operating current	A	42.4
Min. fuse rating	A	16
Drive output heating medium pump	W	1-91
Driving power exhaust air fan	W	10-170
Enclosure class		IP 21
Equipment Compliant with IEC 61000-3-12		
For Connection Design Purposes, Compliant with IEC 61000-3-3 technical requirements		
Refrigerant circuit		
Type of refrigerant		R407C
GWP refrigerant		1774
Volume	kg	0.74
CO ₂ equivalent	ton	1.312
Cut-out value pressostat HP	MPa/bar	2.9 / 29.0
Cut-out value pressostat LP	MPa/bar	0.05 / 0.5
Heating medium circuit		
Opening pressure, safety valve	MPa/bar	0.25 / 2.5
Max temperature, supply line (factory setting)	°C	70 (60)
Ventilation		
Min. airflow	l/s	21
Noise		
Sound effect level according to EN 12 102 (L _{W(A)}) ⁷	dB(A)	40-55
Sound pressure level in the installation room (L _{P(A)}) ⁸	dB(A)	36-51
Pipe connections		
Heating medium ext Ø	mm	22
Hot water ext Ø	mm	22
Cold water ext Ø	mm	22
Ventilation Ø	mm	125

¹ A20(12)W35, exhaust air flow 25 l/s (90 m³/h) min. compressor frequency

² A20(12)W35, exhaust air flow 70 l/s (252 m³/h) min. compressor frequency

³ A20(12)W45, exhaust air flow 70 l/s (252 m³/h) max. compressor frequency

⁴ Scale for the product's efficiency class room heating: A+++ to D.

⁵ Scale for the system's efficiency class room heating: A+++ to G. Reported efficiency for the system takes the product's temperature regulator into account.

⁶ Scale for efficiency class hot water: A+ to F.

⁷ The value varies with the selected fan curve. For more detailed sound data, including sound to channels, visit nibe.eu.

⁸ The value can vary with the room's damping capacity. These values apply at a damping of 4 dB.

Other 1x230 V		Stainless
Water heater and heating section		
Volume heating section	litre	10
Volume, hot water heater	litre	180
Max pressure in hot water heater	MPa/bar	1.0/10
Capacity, hot water		
Tap volume 40°C according to EN 255-3($V_{max.}$) ¹	litre	213 - 273
Tap volume 40°C according to EN 16 147($V_{max.}$) ²	litre	177 - 227
COP at Normal comfort (COP_t)		2.28
Idle loss at Normal comfort (P_{es})	W	50
Dimensions and weight		
Width	mm	600
Depth	mm	610
Height excl. inverter box, incl. feet	mm	2,000 - 2,025
Required ceiling height	mm	2,170
Weight	kg	185
Part No.		066 158

¹ A20(12) exhaust air flow 50 l/s (180 m³/h). The value varies depending on the choice of comfort mode (economy, normal and lux)

² A20(12) exhaust air flow 50 l/s (180 m³/h). The value varies depending on the choice of comfort mode (economy, normal and lux)

Energy labelling

INFORMATION SHEET

Supplier		NIBE
Model		F730
Temperature application	°C	35 / 55
Declared load profile for water heating		XL
Seasonal space heating energy efficiency class, average climate		A++ / A++
Water heating energy efficiency class, average climate		A
Rated heat output (P_{designh}), average climate	kW	4,5 / 4,5
Annual energy consumption space heating, average climate	kWh	2112 / 2681
Annual energy consumption water heating, average climate	kWh	1529
Seasonal space heating energy efficiency, average climate	%	173 / 136
Water heating energy efficiency, average climate	%	110
Sound power level L_{WA} indoors	dB	44
Rated heat output (P_{designh}), cold climate	kW	4,5 / 4,5
Rated heat output (P_{designh}), warm climate	kW	4,5 / 4,5
Annual energy consumption space heating, cold climate	kWh	2384 / 3106
Annual energy consumption water heating, cold climate	kWh	1529
Annual energy consumption space heating, warm climate	kWh	1348 / 1766
Annual energy consumption water heating, warm climate	kWh	1123
Seasonal space heating energy efficiency, cold climate	%	183 / 140
Water heating energy efficiency, cold climate	%	110
Seasonal space heating energy efficiency, warm climate	%	175 / 133
Water heating energy efficiency, warm climate	%	110
Sound power level L_{WA} outdoors	dB	-

DATA FOR ENERGY EFFICIENCY OF THE PACKAGE

Model		F730
Temperature application	°C	35 / 55
Controller, class		VI
Controller, contribution to efficiency	%	4
Seasonal space heating energy efficiency of the package, average climate	%	177 / 140
Seasonal space heating energy efficiency class of the package, average climate		A+++ / A++
Seasonal space heating energy efficiency of the package, cold climate	%	187 / 144
Seasonal space heating energy efficiency of the package, warm climate	%	179 / 137

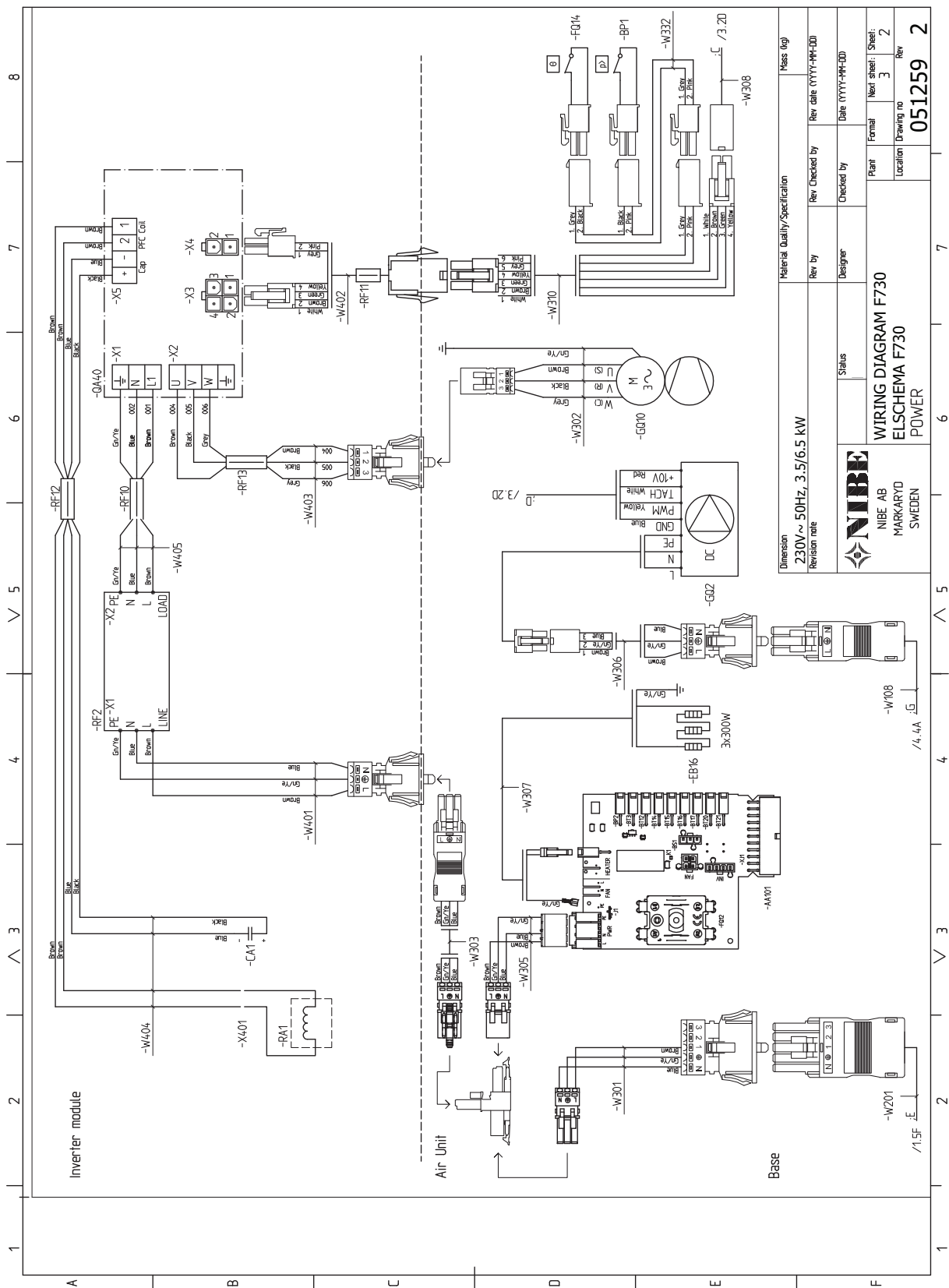
Reported efficiency for the system also takes the temperature regulator into account. If the system is supplemented with external additional heat or solar heating, the total efficiency of the system must be recalculated.

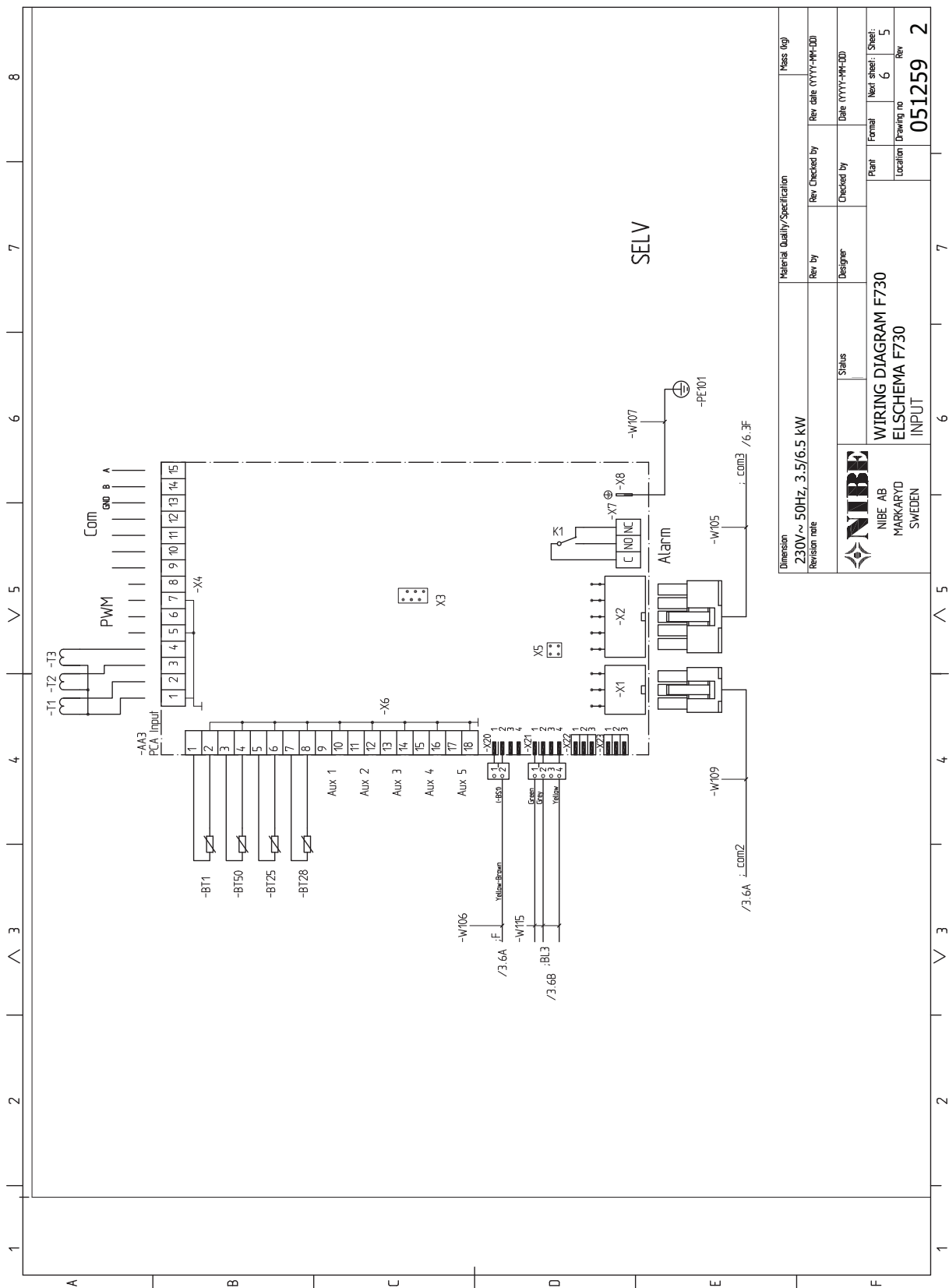
TECHNICAL DOCUMENTATION

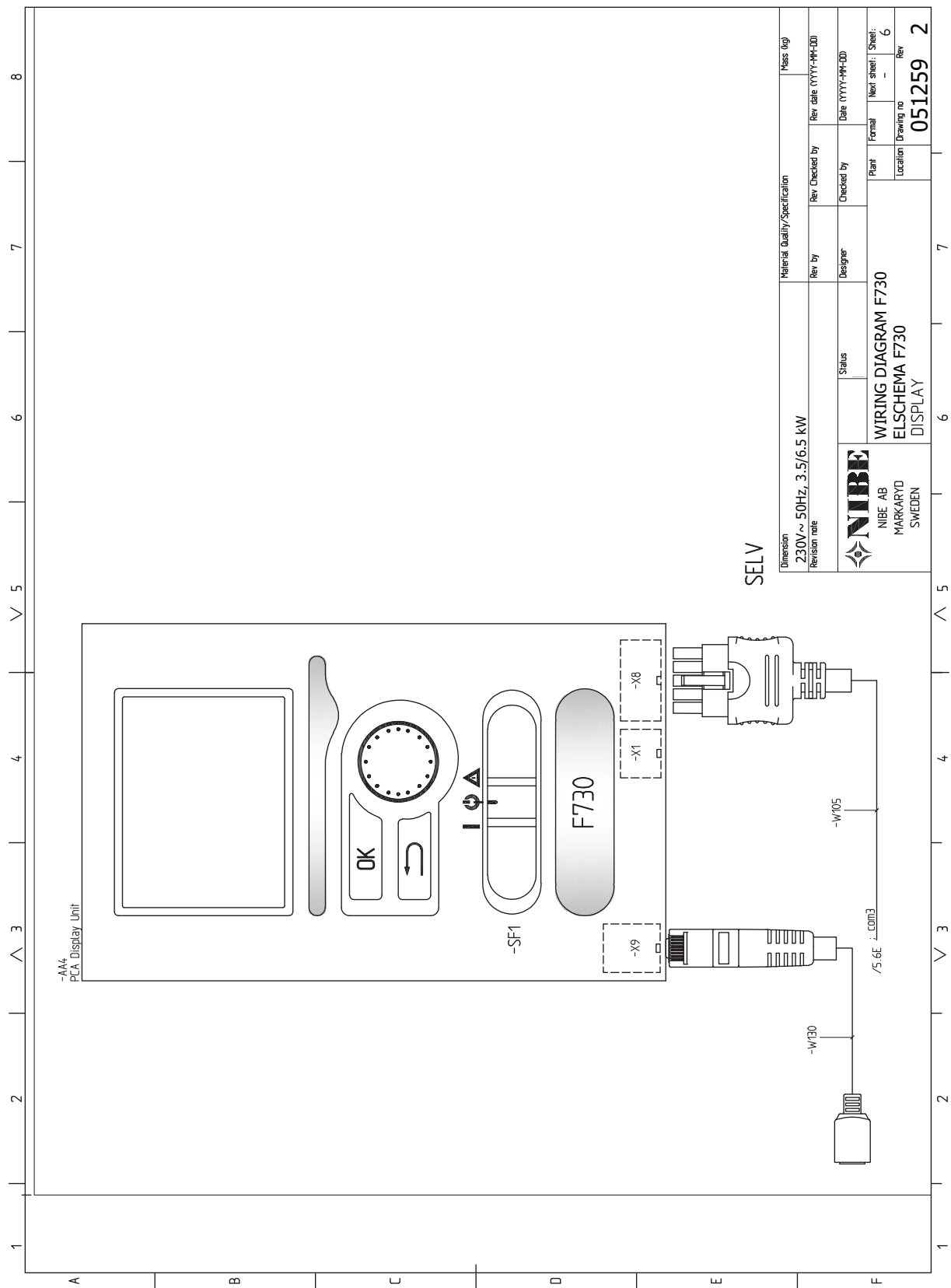
Model				F730			
Type of heat pump		<input type="checkbox"/> Air-water <input checked="" type="checkbox"/> Exhaust-water <input type="checkbox"/> Brine-water <input type="checkbox"/> Water-water					
Low-temperature heat pump		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Integrated immersion heater for additional heat		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Heat pump combination heater		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
Climate		<input checked="" type="checkbox"/> Average <input type="checkbox"/> Cold <input type="checkbox"/> Warm					
Temperature application		<input checked="" type="checkbox"/> Medium (55°C) <input type="checkbox"/> Low (35°C)					
Applied standards		EN14825, EN14511, EN16147, EN12102					
Rated heat output	Prated	4.5	kW	Seasonal space heating energy efficiency	η_s	132	%
Declared capacity for space heating at part load and at outdoor temperature T_j				Declared coefficient of performance for space heating at part load and at outdoor temperature T_j			
$T_j = -7\text{ °C}$	P _{dh}	4.0	kW	$T_j = -7\text{ °C}$	COP _d	2.29	-
$T_j = +2\text{ °C}$	P _{dh}	2.5	kW	$T_j = +2\text{ °C}$	COP _d	3.53	-
$T_j = +7\text{ °C}$	P _{dh}	1.6	kW	$T_j = +7\text{ °C}$	COP _d	4.36	-
$T_j = +12\text{ °C}$	P _{dh}	1.7	kW	$T_j = +12\text{ °C}$	COP _d	4.60	-
$T_j = \text{biv}$	P _{dh}	4.0	kW	$T_j = \text{biv}$	COP _d	2.29	-
$T_j = \text{TOL}$	P _{dh}	3.6	kW	$T_j = \text{TOL}$	COP _d	2.34	-
$T_j = -15\text{ °C}$ (if $\text{TOL} < -20\text{ °C}$)	P _{dh}		kW	$T_j = -15\text{ °C}$ (if $\text{TOL} < -20\text{ °C}$)	COP _d		-
Bivalent temperature	T _{biv}	-7	°C	Min. outdoor air temperature	TOL	-10	°C
Cycling interval capacity	P _{cyh}		kW	Cycling interval efficiency	COP _{cyh}		-
Degradation coefficient	C _{dh}	0.94	-	Max supply temperature	WTOL	60	°C
Power consumption in modes other than active mode				Additional heat			
Off mode	P _{OFF}	0.003	kW	Rated heat output	P _{sup}	0.9	kW
Thermostat-off mode	P _{TO}	0.023	kW				
Standby mode	P _{SB}	0.01	kW	Type of energy input	Electric		
Crankcase heater mode	P _{CK}	0.00	kW				
Other items							
Capacity control	Variable			Rated airflow (air-water)		180	m³/h
Sound power level, indoors/outdoors	L _{WA}	44 / -	dB	Nominal heating medium flow			m³/h
Annual energy consumption	Q _{HE}	2,681	kWh	Brine flow brine-water or water-water heat pumps			m³/h
For heat pump combination heater							
Declared load profile for water heating	XL			Water heating energy efficiency	η_{wh}	110	%
Daily energy consumption	Q _{elec}	7.25	kWh	Daily fuel consumption	Q _{fuel}		kWh
Annual energy consumption	AEC	1,529	kWh	Annual fuel consumption	AFC		GJ
Contact information	NIBE Energy Systems – Box 14 – Hannabadsvägen 5 – 285 21 Markaryd – Sweden						

1X230 V









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Contact information

AUSTRIA

KNV Energietechnik GmbH
Gahberggasse 11, 4861 Schörfling
Tel: +43 (0)7662 8963-0
mail@knv.at
knv.at

FINLAND

NIBE Energy Systems Oy
Juurakkotie 3, 01510 Vantaa
Tel: +358 (0)9 274 6970
info@nibe.fi
nibe.fi

GREAT BRITAIN

NIBE Energy Systems Ltd
3C Broom Business Park,
Bridge Way, S41 9QG Chesterfield
Tel: +44 (0)330 311 2201
info@nibe.co.uk
nibe.co.uk

POLAND

NIBE-BIAWAR Sp. z o.o.
Al. Jana Pawła II 57, 15-703 Białystok
Tel: +48 (0)85 66 28 490
biawar.com.pl

CZECH REPUBLIC

Družstevní závody Dražice - strojírna
s.r.o.
Dražice 69, 29471 Benátky n. Jiz.
Tel: +420 326 373 801
nibe@nibe.cz
nibe.cz

FRANCE

NIBE Energy Systems France SAS
Zone industrielle RD 28
Rue du Pou du Ciel, 01600 Reyrieux
Tél: 04 74 00 92 92
info@nibe.fr
nibe.fr

NETHERLANDS

NIBE Energietechnik B.V.
Energieweg 31, 4906 CG Oosterhout
Tel: +31 (0)168 47 77 22
info@nibenl.nl
nibenl.nl

SWEDEN

NIBE Energy Systems
Box 14
Hannabadsvägen 5, 285 21 Markaryd
Tel: +46 (0)433-27 30 00
info@nibe.se
nibe.se

DENMARK

Vølund Varmeteknik A/S
Industrivej Nord 7B, 7400 Herning
Tel: +45 97 17 20 33
info@volundvt.dk
volundvt.dk

GERMANY

NIBE Systemtechnik GmbH
Am Reiherpfahl 3, 29223 Celle
Tel: +49 (0)5141 75 46 -0
info@nibe.de
nibe.de

NORWAY

ABK-Qviller AS
Brobekkveien 80, 0582 Oslo
Tel: (+47) 23 17 05 20
post@abkqviller.no
nibe.no

SWITZERLAND

NIBE Wärmetechnik c/o ait Schweiz AG
Industriepark, CH-6246 Altishofen
Tel. +41 (0)58 252 21 00
info@nibe.ch
nibe.ch

For countries not mentioned in this list, contact NIBE Sweden or check nibe.eu for more information.

NIBE Energy Systems
Hannabadsvägen 5
Box 14
SE-285 21 Markaryd
info@nibe.se
nibe.eu

IHB EN 2405-1 831223

This is a publication from NIBE Energy Systems. All product illustrations, facts and data are based on the available information at the time of the publication's approval.

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