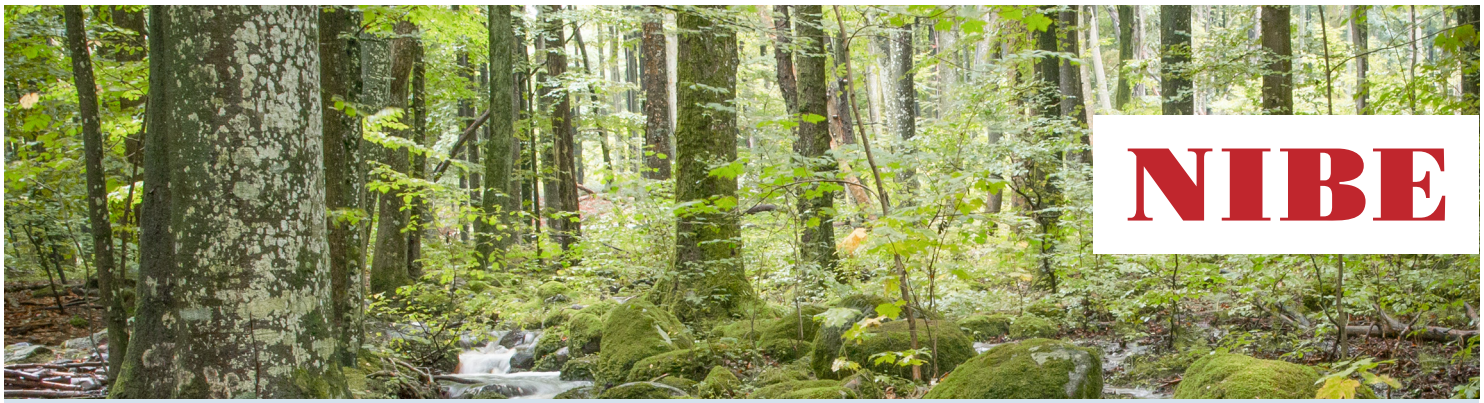


Exhaust air heat pump
NIBE F372

The NIBE F372 is a complete exhaust air heat pump that meets the need for heating, hot water and ventilation. It works with a natural refrigerant for a sustainable footprint on climate and nature. With its built-in water heater, immersion heater, circulation pump, fan and control system, it provides a reliable and economical source of heat.

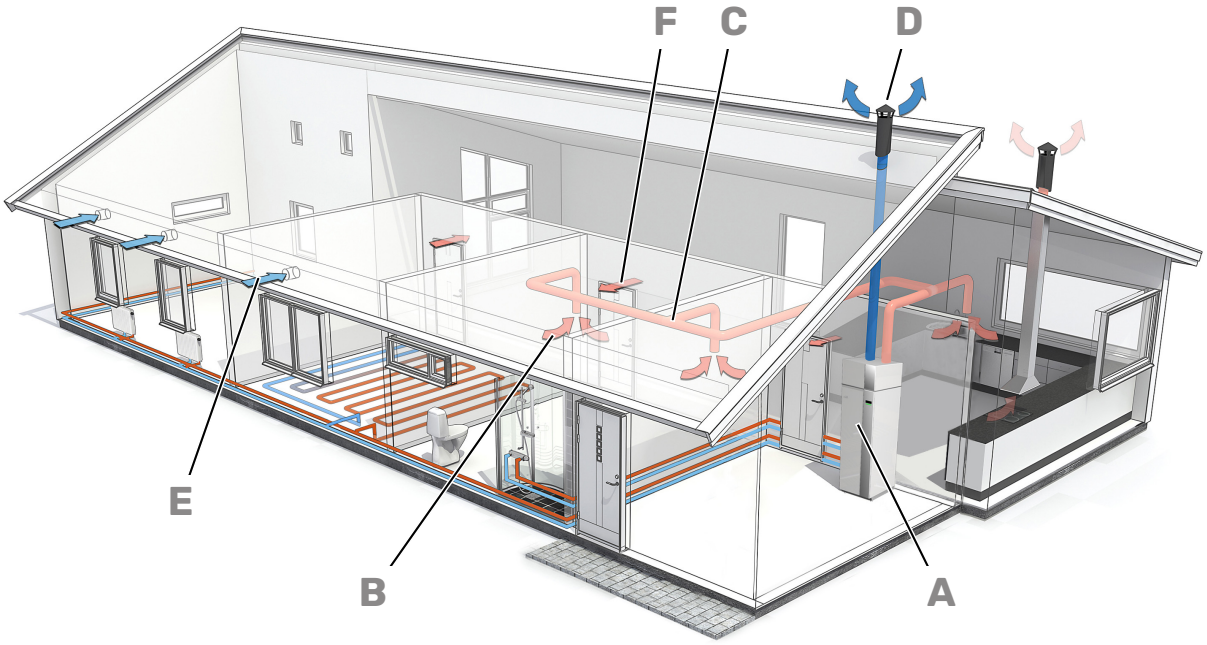
The NIBE F372 can be connected to radiators, convectors or under floor heating. The stylish design and compact size make it easy to put in place and install.

Smart technology gives you full control of the system from your smartphone or tablet, making it an important part of your connected home. The efficient control system automatically adjusts the indoor climate for a high level of comfort, and you're doing nature a favour at the same time.

- **Our complete solution for the provision of heating, hot water, and ventilation, with a stylish design.**
- **Natural refrigerant for a sustainable impact on nature and the climate.**
- **myUplink gives you full control over your system and can be controlled from your smartphone.**

This is how F372 works

Principle



F372 is an exhaust air heat pump with integrated fan and a water heater that is provided with corrosion protection in the form of copper, enamel or stainless steel. In addition, it has an integrated immersion heater.

Energy is recovered from the ventilation air and supplied to the heat pump, which significantly reduces the energy costs. The device ventilates the house, supplies heat and produces domestic hot water.

F372 is intended for low-temperature dimensioned radiator circuits and/or underfloor heating, and is suitable for replacement in houses or equivalent.

Using accessories, F372 can be docked with other heat sources.

A F372 ventilates the house and supplies it with both hot water and room heating.

B The warm room air is drawn into the air duct system.

C The warm room air is fed to F372.

D The air is released when it has passed F372. The air temperature has then dropped since F372 has extracted the energy in the air.

E Outdoor air is drawn into the house.

F Air is diverted from rooms with outdoor air devices to rooms with exhaust air valves.

Design

Control of F372 is designed to ensure easy operation while always enabling the heat pump to run as efficiently as possible. F372 decides on the best operation mode. The display shows the current temperatures and set values in plain text.

The design of the air treatment section delivers a high ventilation capacity. Moreover, the steplessly adjustable fan can easily be increased or reduced via the display unit or an external signal.

F372 gives great savings thanks to an efficient compressor, which, by means of intelligent control, works with the most favourable temperature conditions at the time.

The outer casing is of white powder-coated steel plate. The front door is easy to remove for easy access when installing and for servicing.

F372 has a maximum immersion heater output of 10.3 kW. The power is easy to adjust via the display, and the heat pump can be blocked.

Principle of operation, cooling circuit

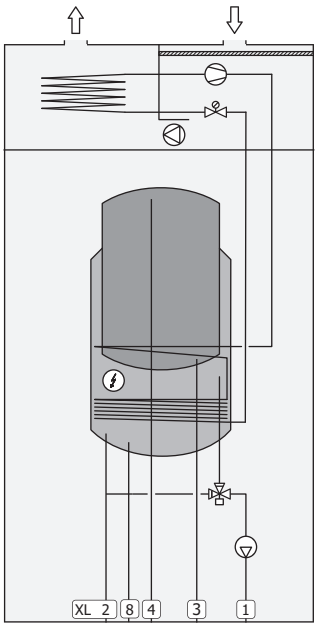
When the exhaust air at room temperature passes through the evaporator, the refrigerant evaporates because of its low boiling point. As a result, the air releases energy to the refrigerant.

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

The warm refrigerant is led to the condenser. Here, the refrigerant gives off its energy to the 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.



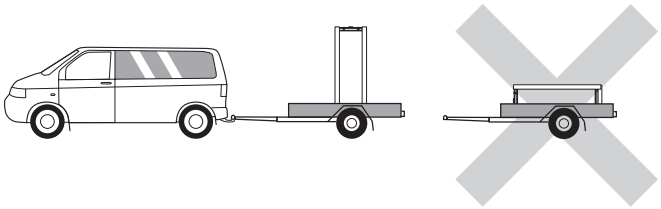
XL1	Connection, heating medium flow
XL2	Connection, heating medium return
XL3	Cold water connection
XL4	Hot water connection
XL8	Docking connection, supply

Good to know about F372

Transport and storage

F372 should be transported and stored vertically in a dry place.

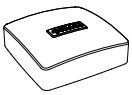
Ensure that the heat pump cannot fall over during transport.



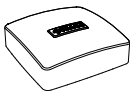
However, the F372 can be carefully laid on its back when being moved into the building. The centre of gravity is in the top section.

Supplied components

Local differences in the enclosed kit may occur. See relevant installer manual for more information.



Outdoor temperature sensor



Room sensor

Earth cabling (2 pcs)

Current sensor

LOCATION

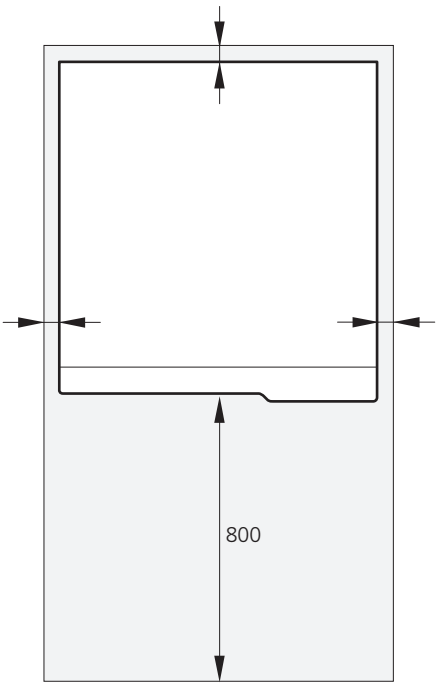
The kit of supplied items is placed on top of the product.

Installation and positioning

- Position F372 on a solid foundation indoors that withstands water and the weight of the product.
- Since water comes from F372, the area where F372 is located must be equipped with floor drainage.
- Because water comes from F372, 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.
- 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 F372 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.



Ensure that there is sufficient space (300 mm) above F372 for connecting ventilation ducts.

Installation

Equipment

F372 is equipped with a climate-controlled heating control system with outdoor temperature, room temperature and supply temperature sensors, circulation pump, load monitor and expansion vessel. For the heating section, F372, copper and stainless steel, is equipped with a filling and a safety valve. The hot water section in F372 copper and stainless steel is equipped with a set of valves comprising filling, mixing, non-return and safety valves.

Maximum boiler and radiator volumes

F372 is equipped with an expansion vessel.

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 between the expansion vessel and the highest radiator is 5 metres. There is a valve on the expansion vessel for any pre-pressure adjustment.

The maximum system volume, excluding F372, is 219 litres at the above-mentioned pre-pressure.

Inspection

F372 is equipped with a closed expansion vessel as standard. National standards can assert that the boiler installation must be inspected before it is taken into use. This inspection may only be performed by persons with the necessary expertise.

National regulations can assert that the function of the ventilation system must be checked. This check may only be carried out by an authorised person.

Pipe installation

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

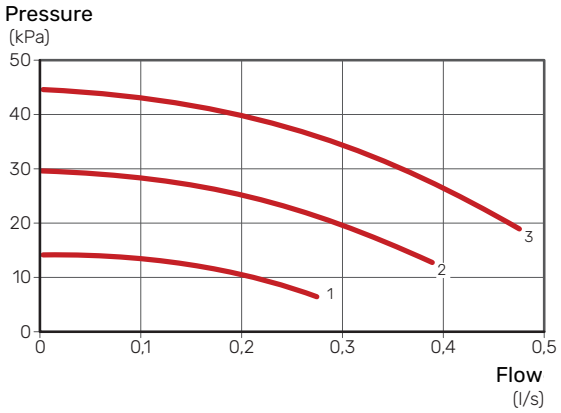
Pipe connections for cold and hot water as well as supply and return lines are fitted with 22 mm compression ring couplings.

CONNECTING THE HEATING SYSTEM

When the circulation pump is operating, the flow in the heating system must not be stopped completely, i.e. at least one of the heating system's radiators/underfloor heating coils must be fully open.

AVAILABLE EXTERNAL PRESSURE, HEATING SYSTEM

Capacity, circulation pump (CP)



Installation alternative

EXTRA HOT WATER HEATERS

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

Water heater with immersion heater

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

The water heater's flow is connected after F372.

Ventilation

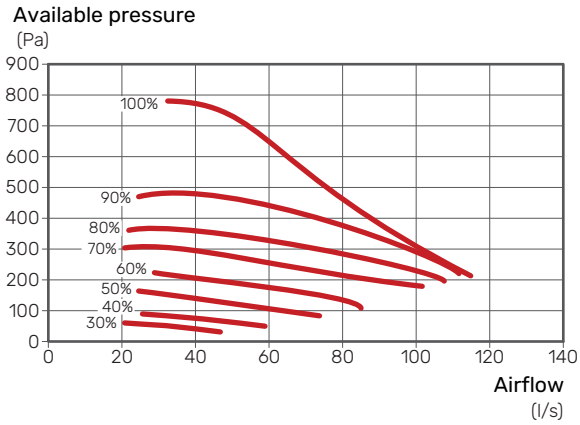
Connect F372 so that all the exhaust air, except kitchen duct air (kitchen fan), passes through the evaporator in the heat pump.

- The ventilation flow must comply with the applicable national standards.
- For optimum heat pump performance, the ventilation flow must not be less than 28 l/s (100 m³/h) at an exhaust air temperature of at least 20 °C. When the exhaust air temperature is lower than 20 °C (for example at start-up and when there is nobody at home), the minimum value is 31 l/s (110 m³/h).
- The heat pump's installation area must be ventilated to at least 5 l/s (18 m³/h)
- If the exhaust air temperature falls below 16 °C, the compressor is blocked and electric additional heat is permitted. No energy is recovered from the exhaust air when the compressor is blocked.
- Provision must be made for inspection and cleaning of the duct.
- 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.
- Because the extract air temperature can be low, the extract air duct must be insulated with diffusion-proof material along its entire length.
- Exhaust air ducts that are routed in cold areas must be insulated.
- All joins in the ducting must be sealed to prevent leakage.
- The extract air duct must be a maximum of 20 m long with a maximum of six bends.
- Because the heat pump contains a flammable refrigerant, the air ducting system must be earthed. This is done by making a good electrical connection to the air ducts using the enclosed earth cables (2).
- A duct in a masonry chimney stack must not be used for extract air.
- If a stove or similar is installed, it must have airtight doors. It must also be able to take combustion air from outside.
- 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.

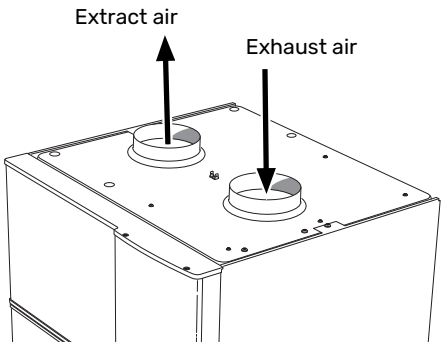
SETTING THE FAN CAPACITY

Select the ventilation capacity steplessly in the display.

Ventilation capacity



VENTILATION CONNECTIONS



Functions

Control, general

The indoor temperature depends on several different factors. Sunlight and heat emissions from people and household machines are normally sufficient to keep the house warm during the warm seasons. When it gets colder outside, the climate system needs to help heat the house. The colder it is outside, the warmer radiators and underfloor heating systems have to be.

Control of the heat production is performed based on the "floating condensing" principle, which means that the temperature level needed for heating at a specific outdoor temperature is produced based on collected values from the outdoor and supply temperature sensors. The room sensor can also be used to compensate the deviation in room temperature.

Heat production

The supply of heat to the house is regulated in accordance with the heating curve selected setting. After adjustment, the correct quantity of heat for the current outdoor temperature is supplied.

OWN CURVE

F372 has pre-programmed non-linear heating curves. It is also possible to create your own defined curve. This is an individual linear curve with a number of break points. You select break points and the associated temperatures.

Hot water production

Hot water charging starts when the temperature has fallen to the set start temperature. Hot water charging stops when the hot water temperature at the hot water sensor has been reached.

For temporary higher hot water demand, there is a function that allows the temperature to be raised temporarily for up to 12 hours or by a one time increase (can be selected in the menu system).

It is also possible to set F372 in holiday mode, which means that the lowest possible temperature is achieved without the risk of freezing.

Additional heat only

F372 can be used with only additional heat (electric boiler) to produce heating and hot water, for example, before the ventilation system is complete.

Alarm indications

The status lamp lights red in the event of an alarm and the display shows detailed information depending on the fault. An alarm log is created with each alarm containing a number of temperatures, times and operating status.

The display

F372 is controlled using a clear and easy to use 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.

The display unit is equipped with a USB socket that can be used to update the software and save logged information in F372.

Visit myuplink.com and click the "Software" tab to download the latest software for your installation.

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.

SPECIFICATION

You need the following in order for myUplink to be able to communicate with your F372:

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

We recommend our mobile apps for 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 extended history	Premium change settings
Viewer	X	X	X
Alarm	X	X	X
History	X	X	X
Extended history	-	X	-
Manage	-	-	X

MOBILE APPS FOR MYUPLINK

The mobile apps can be downloaded free of charge from where you usually download your mobile apps. Logging into the mobile app is performed using the same account details as on myuplink.com.

MYUPLINK PRO

myUplink PRO is a complete tool for offering service agreements to the end customer and for always having the latest information about the installation, as well as the option to adjust settings remotely.

With myUplink PRO, you can provide your connected customers with rapid status and remote diagnostics.

Visit pro.myuplink.com for information about what else you can do using the mobile app and online.

NIBE SMART PRICE ADAPTION™

Smart Price Adaption is not available in all countries. Contact your NIBE dealer for more information.

Smart Price Adaption adjusts the system's consumption according to the time of day when electricity prices are lowest. This allows for savings, provided that an hourly rate subscription has been signed with the electricity supplier.

The function is based on hourly rates for the coming day being downloaded via myUplink. To use the function, an Internet connection and account on myUplink are necessary.

SMART HOME

When you have a smart home system that can communicate with myUplink, you can control the installation via an app by activating the "smart home" function.

By allowing connected units to communicate with myUplink, your heating system becomes a natural part of your homesmart home and gives you the opportunity to optimise the operation.

Remember that the "smart home" function requires myUplink in order to work.

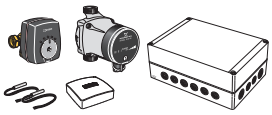
Accessories

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

Not all accessories are available on all markets.

EXTRA SHUNT GROUP ECS

This accessory is used when F372 is installed in houses with two or more different climate systems that require different supply temperatures.



ECS 40
Max 80 m²

ECS 41
Approx. 80-250 m²

ROOM UNIT RMU 40

The room unit is an accessory with a built-in room sensor, which allows the control and monitoring of F372 to be carried out in a different part of your home to where it is located.

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.

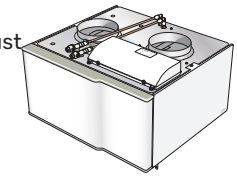
ACCESSORY BOARD AXC 20

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

SUPPLY AIR MODULE SAM

SAM is a supply air module specially developed for houses with supply and exhaust air systems.

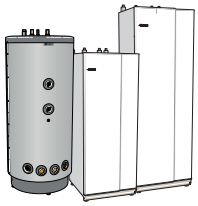
SAM 42
(approx. 28-70 l/s)



WATER HEATER/ACCUMULATOR TANK

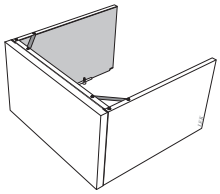
For information regarding suitable water heaters, see nibe.eu.

Some models of water heater require a docking kit.



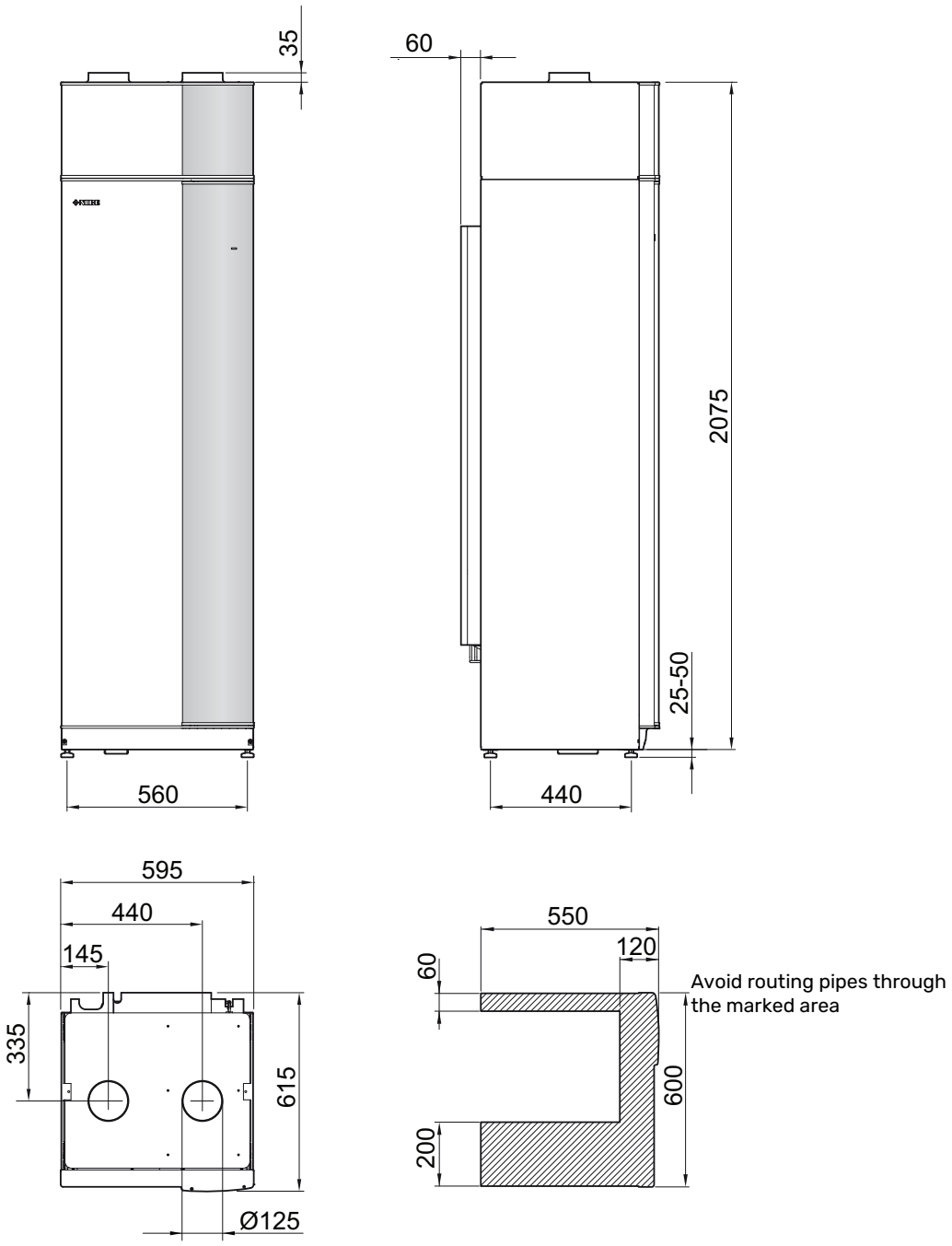
TOP CABINET TOC 30

Top cabinet, which conceals any pipes/ventilation ducts.

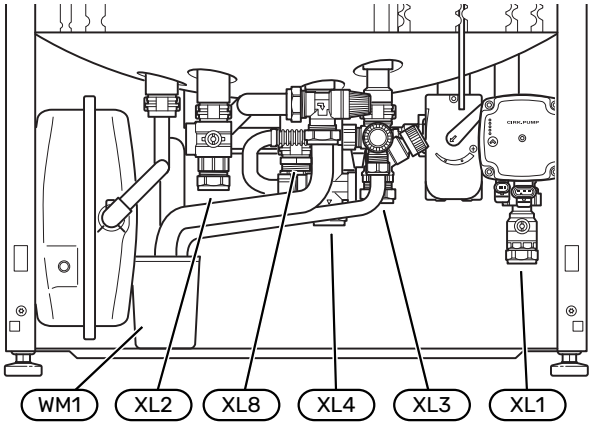


Technical data

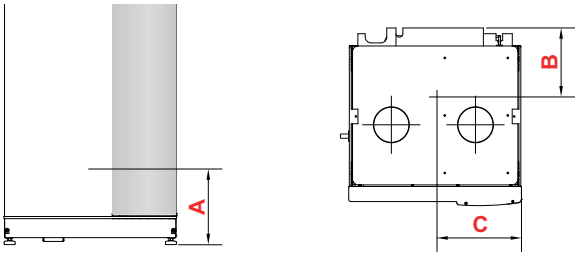
Dimensions



Pipe connections



SETTING OUT DIMENSIONS



Connection		A	B	C
XL1 Heating medium supply	(mm)	135	360	65
XL2 Heating medium return	(mm)	215	425	385
XL3 Cold water	(mm)	200	455	215
XL4 Hot water	(mm)	180	405	265
XL8 Docking	(mm)	220	290	300
WM1 Overflow cup	(mm)	95	205	430

PIPE DIMENSIONS

Connection		
XL1-XL2 Heating medium ext ⌀	(mm)	22
XL3 Cold water ext ⌀	(mm)	22
XL4 Hot water ext ⌀	(mm)	22
XL8 Docking ext. ⌀	(mm)	22
WM2 Overflow water discharge	(mm)	32

Technical specifications

The following data only applies to F372 3x400 V. F372 is also available in voltage version 3x230 V. Contact your NIBE dealer for more information.

Type		Stainless
Output data according to EN 14 511		
Heating capacity (P_H)/COP [1]	kW/-	2.18 / 3.93
Heating capacity (P_H)/COP [2]	kW/-	2.03 / 3.24
Heating capacity (P_H)/COP [3]	kW/-	1.88 / 2.74
Rated heating output ($P_{designh}$)	kW	3
SCOP cold climate, 35°C / 55 °C		3.55 / 2.98
SCOP average climate, 35 °C / 55 °C		3.35 / 2.83
Additional power		
Max power, immersion heater (factory setting)	kW	10.3 (5.6)
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]		L / A
Electrical data		
Rated voltage	V	400 V 3N ~ 50Hz
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		R290
GWP refrigerant		0.02
Filling amount	kg	0.4
CO_2 equivalent	ton	0.000006
Heating medium circuit		
Opening pressure, safety valve	MPa/bar	0.25 / 2.5
Max temperature, supply line (factory setting)	°C	70 (60)
Ventilation		
Min. air flow at exhaust air temperature at least 20°C	l/s	28
Min. air flow at exhaust air temperature below 20°C	l/s	31
Noise		
Sound effect level according to EN 12 102 ($L_{W(A)}$) [7]	dB(A)	46.5-48.0
Sound pressure level in the installation room ($L_{P(A)}$) [8]	dB(A)	42.5-44.0
Water heater and heating section		
Volume heating section	litre	70
Volume, hot water heater	litre	170
Max pressure in hot water heater	MPa/bar	1.0 / 10.0
Capacity hot water heating [9]		
Tap volume 40°C according to EN 16 147($V_{max.}$)	litre	217/248
Miscellaneous		
Required ceiling height	mm	2,170
Weight	kg	195
Part No.		066 268
EPREL		217 92 79

1 A20(12)W35, exhaust air flow 56 l/s (200 m^3/h)

2 A20(12)W45, exhaust air flow 42 l/s (150 m^3/h)

3 A20(12)W55, exhaust air flow 31 l/s (110 m^3/h)

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.

9 A20(12) exhaust air flow 42 l/s (150 m^3/h). Comfort mode, normal/large

Sustainable energy solutions since 1952

NIBE has since 1952 been manufacturing energy-efficient and sustainable climate solutions for your home. It all began in Markaryd, in the southern Swedish province of Småland, and we recognise our Nordic heritage by utilising the power of nature. We combine renewable energy with smart technology to offer efficient solutions, allowing us to work together to create a more sustainable future.

Regardless of whether it is a chilly winter's day or a warm afternoon in the summer sun, we need a balanced indoor climate that allows us to enjoy a comfortable life, whatever the weather. Our extensive range of products supply your home with cooling, heating, ventilation and hot water, making it possible for you to create a pleasant indoor climate with little impact on the environment.

NIBE Energy Systems
Box 14, SE-285 21 Markaryd
nibe.eu

PBD EN 2440-1 M13690