# Ground source heat pump NIBE F1155

NIBE F1155 is an intelligent, inverter-controlled ground source heat pump without integrated hot water tank, which makes it easy to install in locations with low ceilings. A separate hot water tank is selected according to hot water requirements. NIBE F1155 provides optimum savings since the heat pump automatically adapts to your home's heating demand. NIBE is a leading player in the field of inverter technology, with many years' experience of output-regulating ground source heat pumps and one of the widest product ranges on the market.

NIBE F1155 has a high seasonal performance factor, resulting in minimal operating costs. The heat pump is available in three different output sizes: 1.5-6 kW, 3-12 kW and 4-16 kW, and is suitable for both small and large properties.

Thanks to smart technology, the product gives you control over your energy consumption and will be a key part of your connected home. The efficient control system automatically adjusts the indoor climate for maximum comfort, and you do nature a favour at the same time.

- Leading inverter technology and separate hot water tank for optimum customisation.
- Three output sizes for optimal seasonal performance

  factor and minimal operating costs.
- Energy-saving smart technology with user-friendly control for maximum comfort.



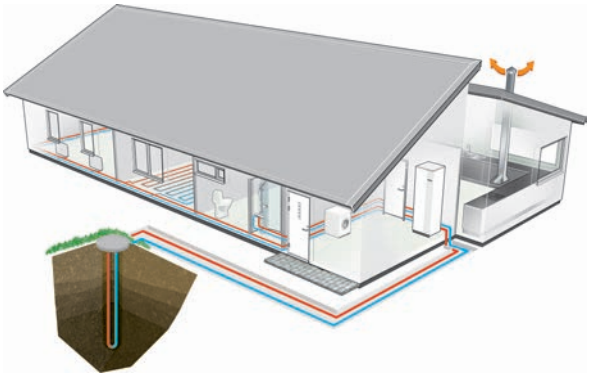

NIBE

# This is how F1155 works

## Installation method

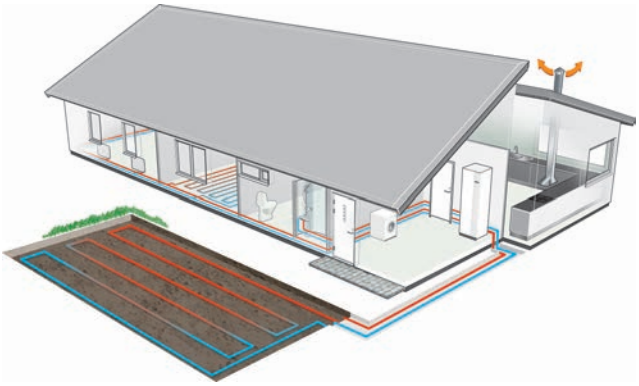
*Rock*

F1155 collects a proportion of the rock's stored solar energy via a collector in a borehole in the rock.



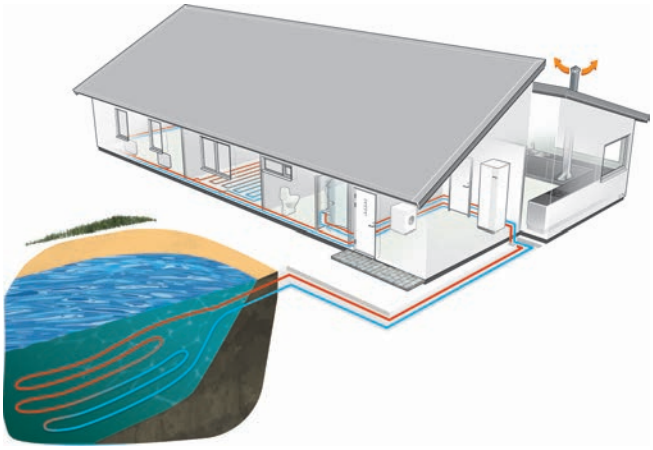
*Ground*

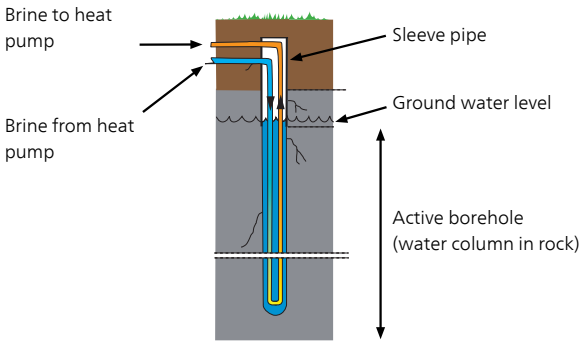
F1155 collects a proportion of the ground's stored solar energy via a buried ground collector.



*Lake*

F1155 collects a proportion of the water's stored solar energy via a lake collector that is anchored on the lake bed.





# Design

F1155-6 has a 6.5 kW immersion heater whilst F1155-12 and F1155-16 have an integrated electric heater of 7 kW with seven steps that automatically engage as necessary. Switchable to four steps of 9 kW.

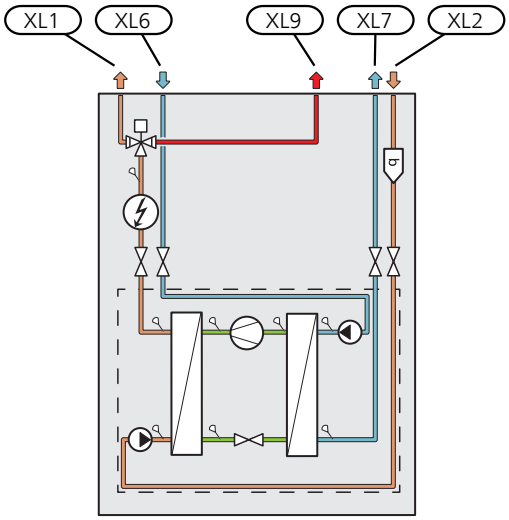
F1155 is constructed on a robust frame with durable panels and effective soundproofing for the best possible comfort. All panels are easy to remove to facilitate installation and for any servicing.

# Principle of operation

F1155 consists of heat pump, immersion heater, circulation pumps and control system. F1155 is connected to the brine and heating medium circuits.

The heat from the heat source (rock, soil, lake) is taken up via a closed brine system in which a mixture of water and antifreeze circulates. In some cases, the ground water can also be used as a heat source. An intermediate heat exchanger should be used to protect the heat pump in such cases.

In the heat pump evaporator, the brine (water mixed with anti-freeze, glycol or ethanol) releases its energy to the refrigerant, which is vaporised in order to be compressed in the compressor. The refrigerant, of which the temperature has now been raised, is passed to the condenser where it gives off its energy to the heating medium circuit and, if necessary, to any docked water heater. If there is a greater need for heating/hot water than the compressor can provide there is an integrated immersion heater.




| | |
|---|---|
| XL1 | Connection, heating medium flow |
| XL2 | Connection, heating medium return |
| XL6 | Connection, brine in |
| XL7 | Connection, brine out |
| XL9 | Connection, hot water heater |

# Good to know about F1155

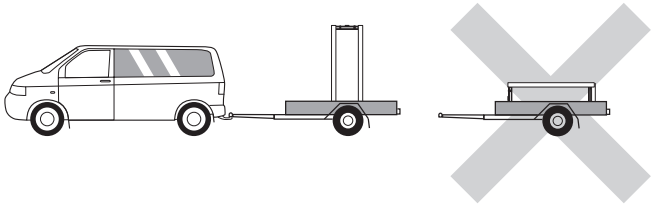
## Transport and storage

F1155 should be transported and stored vertically in a dry place. When being moved into a building, F1155 may be leant back 45 °.

The product can be tail heavy.

If the cooling module is pulled out and transported upright, F1155 can be transported on its back.

Remove the outer panels in order to protect them when moving in confined spaces inside buildings.



### EXTRACTING THE COOLING MODULE

To simplify transport and service, the heat pump can be separated by pulling the cooling module out from the cabinet.

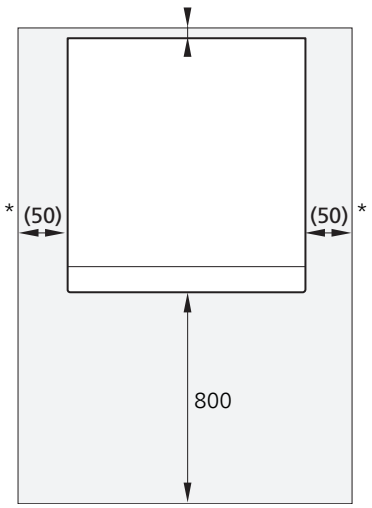
See section "Service" in the installer manual for comprehensive instructions about the separation.

# Installation and positioning

- Place F1155 on a solid foundation indoors that can take the heat pump's weight.
- Because water comes from F1155, the area where the heating pump is located must be equipped with floor drainage.
- Install with its back to an outside wall, ideally in a room where noise does not matter, in order to eliminate noise problems. If this is not possible, avoid placing it against a wall behind a bedroom or other room where noise may be a problem.
- Wherever the unit is located, walls to sound sensitive rooms should be fitted with sound insulation.
- Route pipes so they are not fixed to an internal wall that backs on to a bedroom or living room.

## INSTALLATION AREA

Leave a free space of 800 mm in front of the product. Approx. 50 mm free space is required on each side, to allow the side panels to be removed (see image). All service on F1155 can be carried out from the front, however the right-hand panel may need to be removed. Leave free space between the heat pump and the wall behind (and any routing of supply cables and pipes), to reduce the risk of any vibrations being propagated.

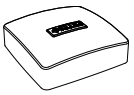



* A normal installation needs 300 – 400 mm (any side) for connection equipment, valves and electrical equipment.

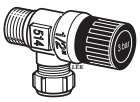
# Supplied components

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

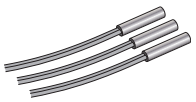

Outside sensor

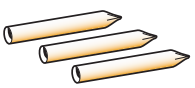

Room sensor

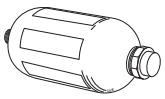

Current sensor[1]

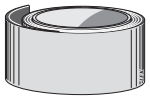

Safety valve 0.3 MPa (3 bar)[1]


O-rings

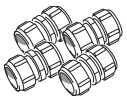

Temperature sensor


Tubes for sensors


Level vessel[1]


Insulation tape


Aluminium tape


Compression ring couplings

*6 kW*

2 x (ø28 x G25)
3 x (ø22 x G20

*12/16 kW*

5 x (ø28 x G25)


Filterball

*6 kW*

1 x G1
1 x G3/4

*12/16 kW*

1 x G1
1 x G1 1/4

1 Not Italy and the DACH countries.

# Installation

## Inspection of the installation

Current regulations require the heating installation to be inspected before it is commissioned. The inspection must be carried out by a suitably qualified person.

## Pipe installation

Pipe installation must be carried out in accordance with current norms and directives. F1155 can operate with a return temperature of up to 58 °C and an outgoing temperature from the heat pump of 70 (65 °C with only the compressor).

F1155 is not equipped with external shut off valves; these must be installed to facilitate any future servicing.

Water may drip from the safety valve's overflow pipe. The entire length of the overflow water pipe must be routed to a suitable drain and be inclined to prevent water pockets, and must also be frost-proof. The overflow pipe must be at least the same size as the safety valve. The overflow pipe must be visible and its mouth must be open and not located close to electrical components.

### BRINE

- Insulate all indoor brine pipes against condensation.
- The level vessel must be installed at the highest point in the brine system on the incoming pipe before the brine pump.

  If the level vessel cannot be placed at the highest point, an expansion vessel must be used.

Note that condensation may drip from the level vessel. Position the vessel so that this does not harm other equipment.

- Details of the antifreeze used must be shown on the level vessel.
- Install the enclosed safety valve under the level vessel.
- Install a shut off valve for outgoing brine as close to the heat pump as possible.
- Fit the enclosed filterball on the incoming brine.

If filling connection KB25/KB32 is used, the enclosed filterball does not need to be fitted.

In the case of connection to an open groundwater system, an intermediate frost-protected circuit must be provided, because of the risk of dirt and freezing in the evaporator. This requires an extra heat exchanger.

*Side connection*

It is possible to angle the brine connections, for connection to the side instead of top connection.

### HEATING MEDIUM

A climate system is a system that regulates indoor comfort with the help of the control system in F1155 and for example radiators, underfloor heating/cooling, fan convectors etc.

- Install all necessary safety devices, shut-off valves (as close to the heat pump as possible) and the enclosed filterball.
- Install the safety valve on heating medium return. The recommended opening pressure is 0.25 MPa (2.5 bar). For information about max. opening pressure, see the technical specifications.
- When connecting to a system with thermostats on all radiators (or underfloor heating coils), either a bypass valve must be fitted or some of the thermostats must be removed to ensure there is sufficient flow.

### COLD AND HOT WATER

- Any docked hot water heater must be fitted with necessary set of valves.
- A mixer valve must also be installed, if the factory setting for hot water is changed. National regulations must be observed.
- The safety valve must have max. 1.0 MPa (10.0 bar) opening pressure, and be installed on the incoming domestic water line.

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

For more information see nibe.eu.

# Guideline values for collectors

The length of the collector hose varies depending on the rock/soil conditions, climate zone and on the climate system (radiators or underfloor heating) and the heating requirement of the building Each installation must be sized individually.

Max. length per coil for the collector should not exceed 400 m.

In those cases where it is necessary to have several collectors, these should be connected in parallel with the possibility for adjusting the flow of the relevant coil.

For surface soil heat, the hose should be buried at a depth determined by local conditions and the distance between the hoses should be at least 1 metre.

For several bore holes, the distance between the holes must be determined according to local conditions.

Ensure the collector hose rises constantly towards the heat pump to avoid air pockets. If this is not possible, airvents should be used.

Because the temperature of the brine system can fall below 0 °C, it must be protected against freezing down to -15 °C. When making the volume calculation, use 1 litres of ready mixed brine per metre of collector hose (applies when using PEM-hose 40x2.4 PN 6.3) as a guide value.

# Docking alternatives

## VENTILATION RECOVERY

The installation can be supplemented with the exhaust air module NIBE FLM to provide ventilation recovery. NIBE FLM is equipped with a built-in fan specially designed to combine recovery of mechanical exhaust air with an energy collector in rock or in the ground.

- Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.
- The brine system must be supplied with a pressure expansion vessel. If there is a level vessel this should be replaced.

## FREE COOLING

The accessory PCS 44 allows the connection of passive cooling, for example with fan coils. The cooling system is connected to the heat pump brine circuit, whereby cooling is supplied from the collector via a circulation pump and shunt valve.

- Pipes and other cold surfaces must be insulated with diffusion-proof material to prevent condensation.
- Where the cooling demand is high, fan convectors with drip trays and drain connection are needed.
- The brine system must be supplied with a pressure expansion vessel. If there is a level vessel this should be replaced.

## TWO OR MORE CLIMATE SYSTEMS

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.

## POOL

With the POOL 40 accessory, you can heat the pool with your heat pump.

During pool heating, the heating medium circulates between the F1155 and the pool exchanger using the heat pump's internal circulation pump.

# 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.

The heat pump is controlled by built-in supply and return brine temperature sensors (collector). Brine return temperatures can, if necessary, be limited to a minimum e.g. for ground water systems.

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 setting selected. After adjustment, the correct amount of heat for the current outdoor temperature is supplied. The supply temperature of the heat pump will oscillate around the theoretically required value.

### OWN CURVE

F1155 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

If the water heater is docked to F1155 and there is a hot water demand, the heat pump's software control prioritizes the hot water charging mode with optimal heat pump power.

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).

With the Smart Control function activated, F1155 learns how much hot water is used and when. The Smart Control function memorises the previous week's hot water consumption and adapts the hot water temperature for the coming week to ensure minimal energy consumption.

It is also possible to set F1155 in holiday mode, which means that the lowest possible temperature is achieved without the risk of freezing.

## Master/slave

Several heat pumps can be interconnected, by selecting one heat pump as the master and the others as slaves.

The heat pump is always delivered as master and up to till 8 slaves can be connected to it. In systems with several heat pumps each pump must have a unique name, that is only one heat pump can be ""Master" and only one can be for example "Slave 5".

## Additional heat only

F1155 can be used exclusively as an additional heater, (max 9 kW) to produce heat and any hot water, for example before the collector 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.

# Floor drying

F1155 has an integrated underfloor drying function. This allows for controlled drying of concrete slabs. It is possible to create your own program or to follow a pre-programmed time and temperature schedule.

# Brine control

For users who are going to replace an existing heat pump.

The risk of over-exploiting the collector system is reduced with the smart integrated brine control. This function can be used when replacing older heat pump systems where the collector may be undersized for a modern heat pump with a higher COP and SCOP.

An undersized collector can result in additional heat being required to assist on the coldest days of the year.

# NIBE Uplink

Using the Internet and NIBE Uplink, you can obtain a quick overview and the present status of the installation and the heating in your home. You can obtain a good overall view, allowing you to monitor and control the heating and hot water comfort effectively. If the system is affected by a malfunction, you receive an alert via e-mail that allows you to react quickly.

NIBE Uplink also gives you the opportunity to control the comfort in your home easily, no matter where you are.

## RANGE OF SERVICES

You have access to different levels of service via NIBE Uplink. A basic level that is free and a premium level where you can select different extended service functions for a fixed annual subscription fee (the subscription fee varies depending on the selected functions).

NIBE Uplink also available as an app from App Store and Google Play.

## INSTALLATION AND ASSOCIATED EQUIPMENT REQUIREMENTS

NIBE Uplink needs the following in order to communicate with your F1155:

- network cable
- Internet connection to which F1155 can be connected
- web browser with JavaScript activated
- account on nibeuplink.com

We recommend our mobile app for NIBE Uplink.

If it is not possible to connect to NIBE Uplink, F1155 can be controlled remotely via text message. For this, the SMS 40 accessory is required.

For more information, visit nibeuplink.com.

## 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 heat pump's consumption according to the time of day that electricity prices are lowest. This allows for savings, provided that the hourly rate subscription has been signed with the electricity supplier.

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

## SMART HOME

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

By allowing connected units to communicate with NIBE Uplink, 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 NIBE Uplink in order to work.

# The display

F1155 is controlled using a clear and easy to use display.

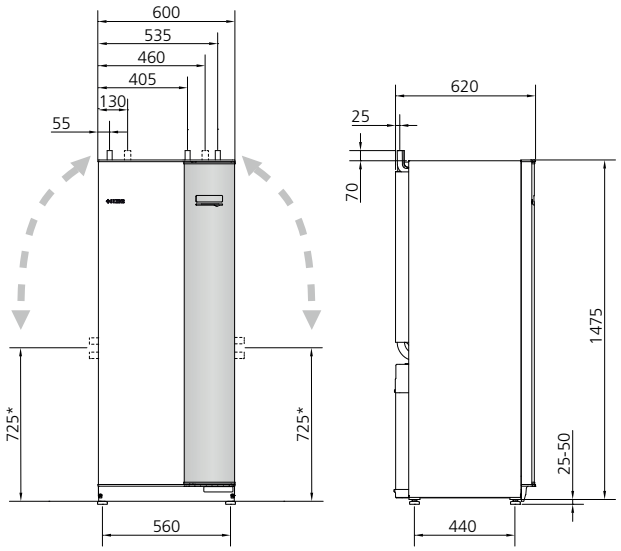
Instructions, settings and operational information are shown on the display. You can easily navigate between the different menus and options to set the comfort or obtain the information you require.

The display unit is equipped with a USB socket that can be used to update the software and save logged information in F1155.

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

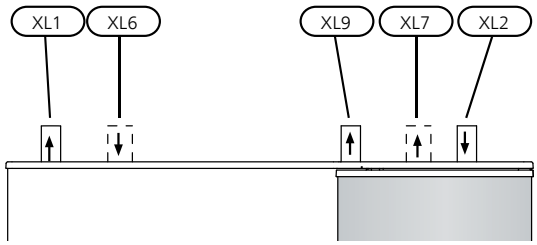
# Technical data

## Dimensions




* Can be angled for side connection

## Pipe connections




PIPE DIMENSIONS

| *Connection* | | *6 kW* | *12 kW* | *16 kW* |
|---|---|---|---|---|
| (XL1)/(XL2) Heating medium flow/return ext Ø | (mm) | 22 | 28 | |
| (XL9) Connection, hot water heater ext Ø | (mm) | 22 | 28 | |
| (XL6)/(XL7) Brine in/out ext Ø | (mm) | 28 | | |

# Electrical data

The following data only applies to F1155 3x400 V. F1155 is also available with energy meter, passive cooling, and in voltage versions 1x230 V and 3x230 V. Contact your NIBE  dealer for more information.

## 3X400V ELECTRICAL DATA

| *F1155-6* | | |
|---|---|---|
| Rated voltage | | 400V 3N ~ 50Hz |
| Max operating current including 0 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 12(16) |
| Max operating current including 0.5 – 6.5 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 16(16) |
| Additional power | kW | 0.5 – 6.5 |

| *F1155-12* | | |
|---|---|---|
| Rated voltage | | 400V 3N ~ 50Hz |
| Max operating current including 0 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 9(10) |
| Max operating current including 1 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 12(16) |
| Max operating current including 2 – 4 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 16(20) |
| Max operating current including 5 – 7 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 21(25) |
| Max operating current including 9 kW immersion heater, requires reconnection (Recommended fuse rating). | $A_{rms}$ | 24(25) |
| Additional power | kW | 1 – 9 |

| *F1155-16* | | |
|---|---|---|
| Rated voltage | | 400V 3N ~ 50Hz |
| Max operating current including 0 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 10(10) |
| Max operating current including 1 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 13(16) |
| Max operating current including 2 – 4 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 17(20) |
| Max operating current including 5 – 7 kW immersion heater (Recommended fuse rating). | $A_{rms}$ | 21(25) |
| Max operating current including 9 kW immersion heater, requires reconnection (Recommended fuse rating). | $A_{rms}$ | 24(25) |
| Additional power | kW | 1 – 9 |
| Short circuit power (Ssc)* | MVA | 2.0 |

*) This equipment complies with IEC 61000-3-12, on the condition that the short circuit power Ssc is greater than or equal to 2.0 MVA at the connection point between the customer installation electrical supply and the mains network. It is the responsibility of the installer or user to ensure, through consultation with the distribution network operator if required, that the equipment is only connected to a supply with a short circuit power Ssc equal to or greater than 2.0 MVA.

# Technical specifications

## 3X400 V

| | | *F1155-6* | *F1155-12* | *F1155-16* |
|---|---|---|---|---|
| *Output data according to EN 14511* | | | | |
| Heating capacity ($P_H$) | kW | 1.5 – 6 | 3 – 12 | 4 – 16 |
| *0/35 nominal* | | | | |
| Heating capacity ($P_H$) | kW | 3.15 | 5.06 | 8.89 |
| Supplied power ($P_E$) | kW | 0.67 | 1.04 | 1.83 |
| COP | | 4.72 | 4.87 | 4.85 |
| *0/45 nominal* | | | | |
| Heating capacity ($P_H$) | kW | 2.87 | 4.78 | 8.63 |
| Supplied power ($P_E$) | kW | 0.79 | 1.27 | 2.29 |
| COP | | 3.61 | 3.75 | 3.77 |
| *10/35 nominal* | | | | |
| Heating capacity ($P_H$) | kW | 4.30 | 6.33 | 11.22 |
| Supplied power ($P_E$) | kW | 0.66 | 1.03 | 1.84 |
| COP | | 6.49 | 6.12 | 6.11 |
| *10/45 nominal* | | | | |
| Heating capacity ($P_H$) | kW | 3.98 | 5.98 | 10.92 |
| Supplied power ($P_E$) | kW | 0.83 | 1.30 | 2.32 |
| COP | | 4.79 | 4.59 | 4.72 |
| *SCOP according to EN 14825* | | | | |
| Rated heating output ($P_{designh}$) | kW | 6 | 12 | 16 |
| $SCOP_{EN14825}$ cold climate 35 °C / 55 °C | | 5.5 / 4.1 | 5.4 / 4.3 | 5.5 / 4.2 |
| $SCOP_{EN14825}$ average climate, 35 °C / 55 °C | | 5.2 / 4.0 | 5.2 / 4.1 | 5.2 / 4.1 |
| *Energy rating, average climate* | | | | |
| The product's room heating efficiency class 35 °C / 55 °C[1] | | A+++ / A+++ | A+++ / A+++ | A+++ / A+++ |
| The system's room heating efficiency class 35 °C / 55 °C[2] | | A+++ / A+++ | A+++ / A+++ | A+++ / A+++ |
| Efficiency class hot water / charging profile with water heater[3] | | A / XL<br>VPB 300 | A / XXL<br>VPB 300 | A / XXL<br>VPB 300 |
| *Noise* | | | | |
| Sound power level ($L_{WA}$) acc to EN 12102 at 0/35 | dB(A) | 36 – 43 | 36 – 47 | 36 – 47 |
| Sound pressure level ($L_{PA}$) calculated values according to EN ISO 11203 at 0/35 and 1m range | dB(A) | 21 – 28 | 21 – 32 | 21 – 32 |
| *Electrical data* | | | | |
| Output, Brine pump | W | 10 – 87 | 3 – 180 | 20 – 180 |
| Output, Heating medium pump | W | 2 – 63 | 2 – 60 | 10 – 87 |
| Enclosure class | | IP21 | | |
| *Refrigerant circuit* | | | | |
| Type of refrigerant | | R407C | | |
| GWP refrigerant | | 1,774 | | |

| | | *F1155-6* | *F1155-12* | *F1155-16* |
|---|---|---|---|---|
| Volume | kg | 1.16 | 2.0 | 2.2 |
| $CO_2$ equivalent | ton | 2.06 | 3.55 | 3.90 |
| *Brine circuit* | | | | |
| Min/max system pressure brine | MPa | 0.05 (0.5 bar) / 0.45 (4.5 bar) | | |
| Nominal flow | l/s | 0.18 | 0.29 | 0.51 |
| Flow at Pdesignh[4] | l/s | 0.29 | 0.64 | 0.66 |
| Max external avail. press at nom flow | kPa | 64 | 115 | 95 |
| Max external available press at Pdesignh | kPa | 52 | 70 | 72 |
| Min/Max incoming Brine temp | °C | see diagram | | |
| Min. outgoing brine temp. | °C | -12 | | |
| *Heating medium circuit* | | | | |
| Min/Max system pressure heating medium | MPa | 0.05 (0.5 bar) / 0.45 (4.5 bar) | | |
| Nominal flow | l/s | 0.08 | 0.12 | 0.22 |
| Flow at Pdesignh | l/s | 0.16 | 0.38 | 0.50 |
| Max external avail. press at nom flow | kPa | 69 | 73 | 71 |
| Max external available press at Pdesignh | kPa | 68 | 55 | 40 |
| Min/max HM-temp | °C | see diagram | | |
| *Pipe connections* | | | | |
| Brine ext diam. CU pipe | mm | 28 | | |
| Heating medium ext diam. CU pipes | mm | 22 | 28 | |
| Connection, hot water heater ext diam | mm | 22 | 28 | |
| *Compressor oil* | | | | |
| Oil type | | POE | | |
| Volume | l | 0.68 | 0.9 | 1.45 |
| *Dimensions and weight* | | | | |
| Width | mm | 600 | | |
| Depth | mm | 620 | | |
| Height | mm | 1500 | | |
| Required ceiling height[5] | mm | 1670 | | |
| Weight complete heat pump | kg | 150 | 180 | 185 |
| Weight only cooling module | kg | 90 | 120 | 125 |
| Part number, 3x400V | | 065 294 | 065 409 | 065 295 |

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

2 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.

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

4 For 16 kW, the value is given at Delta T=4°, for others at Delta T=3°

5 With feet removed, the required ceiling height is approx. 1,650 mm.

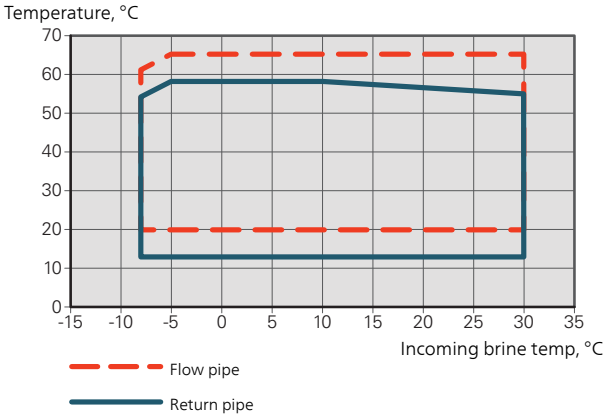
## 3X400 V

## WORKING RANGE HEAT PUMP, COMPRESSOR OPERATION

The compressor provides a supply temperature up to 65 °C, at 0 °C incoming brine temperature, the remainder (up to 70°C) is obtained using the additional heat.

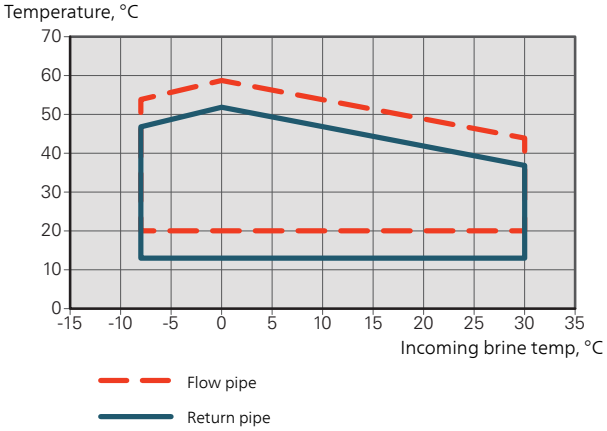
*F1155-6, -12, -16*

This diagram shows the working range below 75 % for F1155-6 and the entire working range for F1155-12, -16.




*F1155-6*

This diagram shows the working range above 75 % for F1155-6.



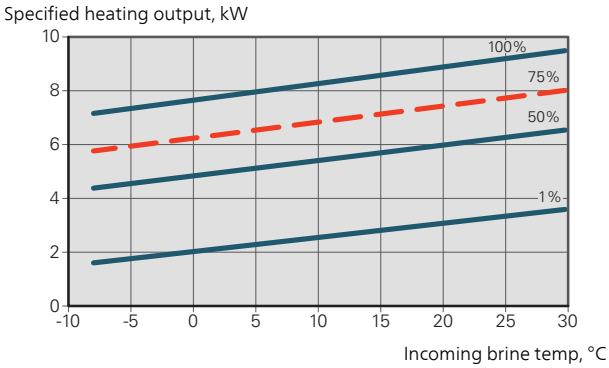

Unlocking is required for F1155-6 to operate above 75% compressor speed. This can produce a louder noise level than the value stated in the technical specifications.

## DIAGRAM, DIMENSIONING COMPRESSOR SPEED

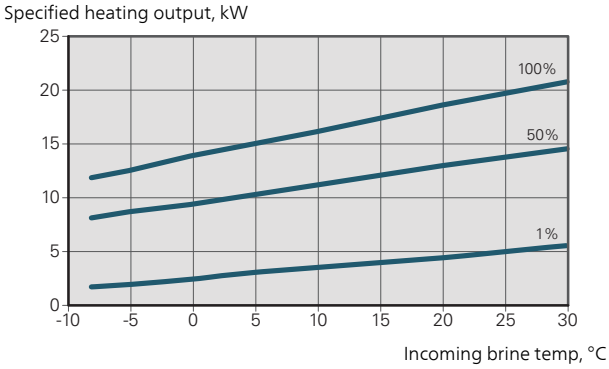
### *Heating mode 35 °C*

Use this diagram to dimension the heat pump. The percentages show approximate compressor speed.

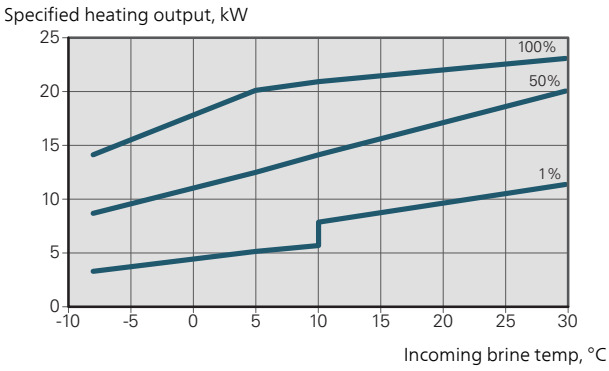
*F1155-6*




*F1155-12*




*F1155-16*

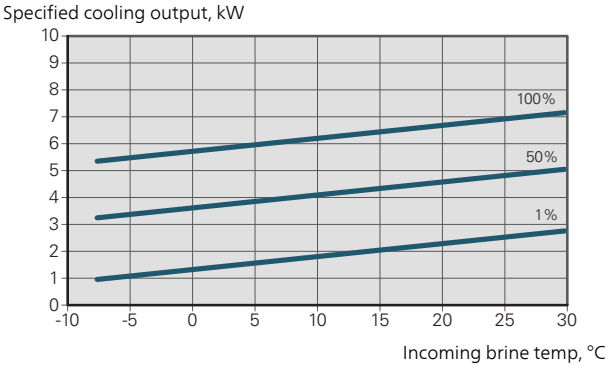



### *Cooling mode (Accessory required)*

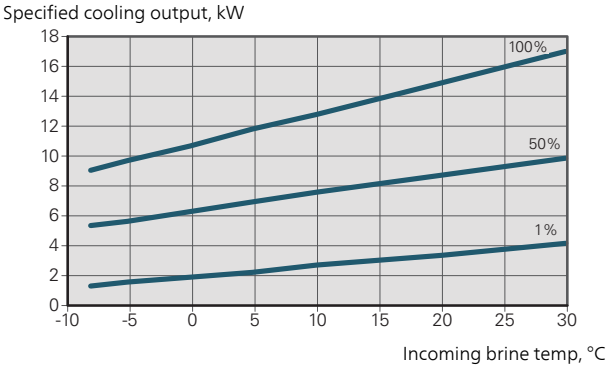
To dimension heating dump, see the diagram for heating operation.

## *Supply temperature, heating medium 35 °°C*

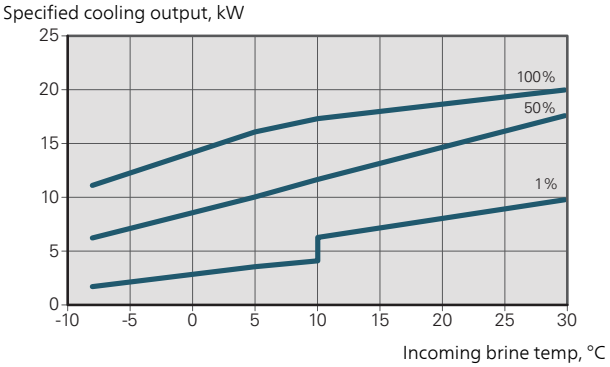
### *F1155-6*




### *F1155-12*

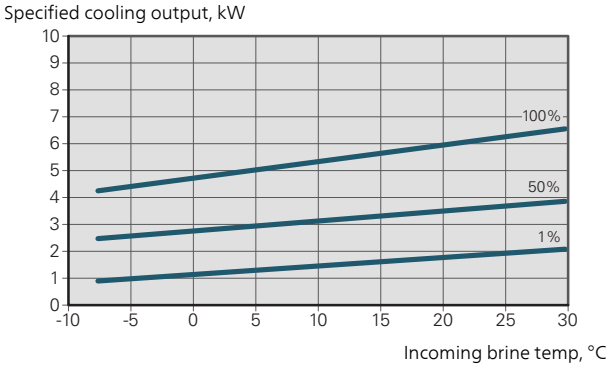



### *F1155-16*

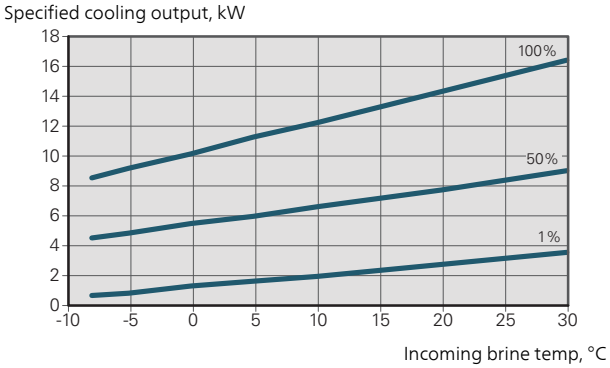



## *Supply temperature, heating medium 50 °°C*

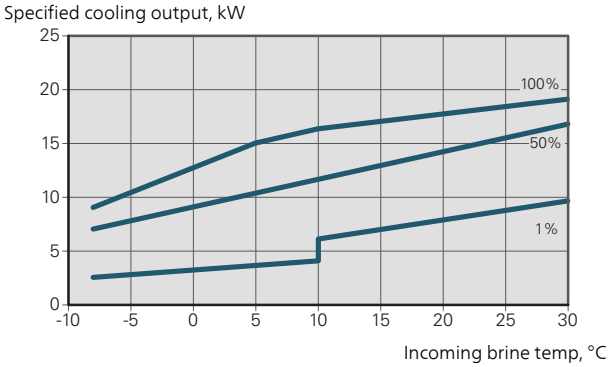
### *F1155-6*




### *F1155-12*




### *F1155-16*



# PUMP CAPACITY DIAGRAM

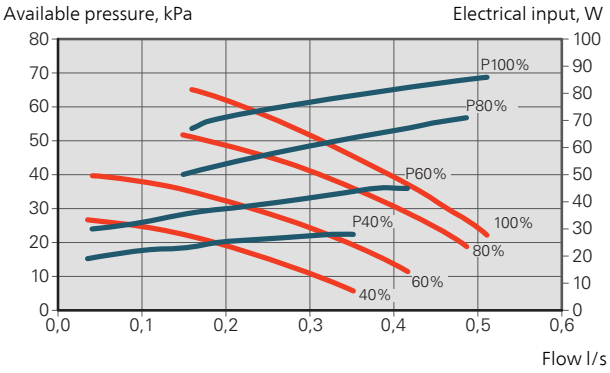
## *Brine side*

To set the correct flow in the brine system, the brine pump must run at the correct speed. F1155 has a brine pump that is controlled automatically in standard mode.

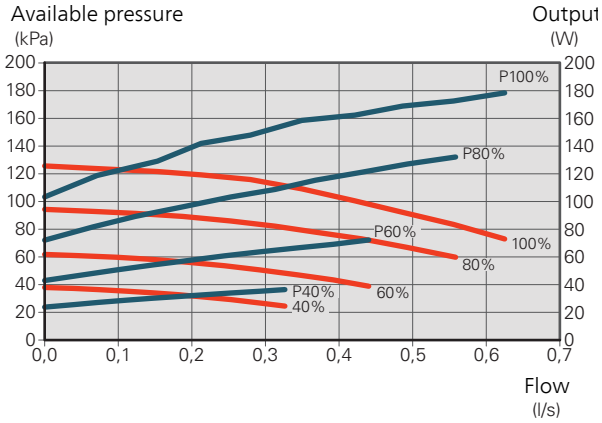
For optimum operation when several heat pumps are installed in a multi-installation, all heat pumps should have the same compressor size.

Available pressure, kPa
p Electrical output, W

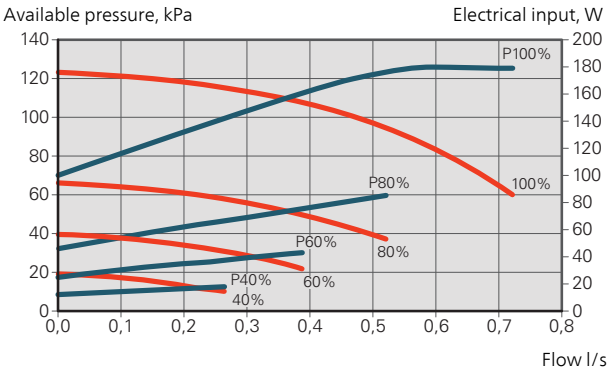
*F1155 6 kW*




*F1155 12 kW*




*F1155 16 kW*

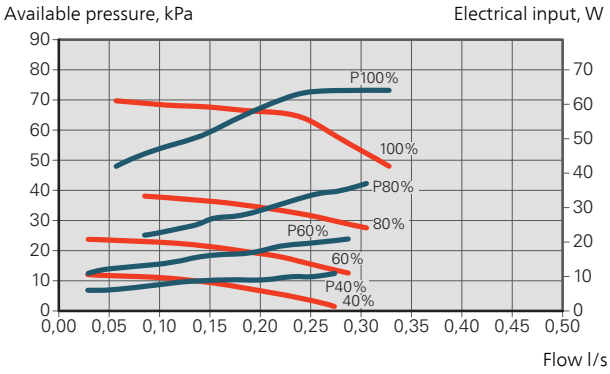



## *Heating medium side*

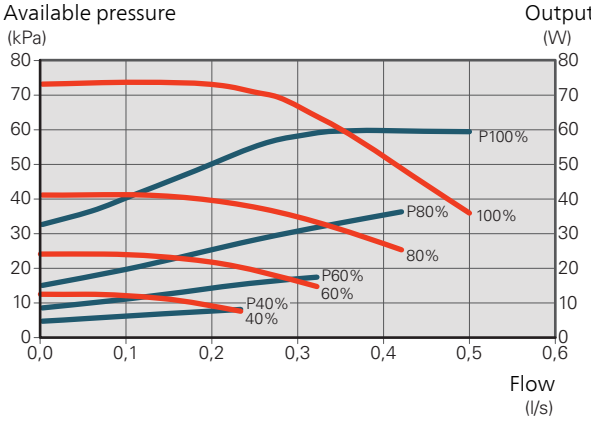
To set the correct flow in the heating medium system, the heating medium pump must run at the correct speed. F1155 has a heating medium pump that can be automatically controlled in standard mode.

Available pressure, kPa
p Electrical output, W

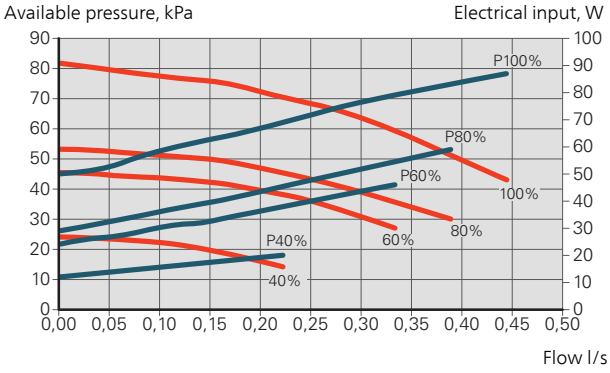
*F1155 6 kW*




*F1155 12 kW*




*F1155 16 kW*



# Accessories

Not all accessories are available on all markets.

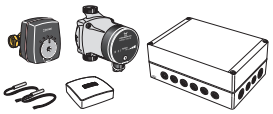
Detailed information about the accessories and complete accessories list available at nibe.eu.

## ACTIVE/PASSIVE COOLING IN 4-PIPE SYSTEM ACS 45

ACS 45 is an accessory that makes it possible for your heat pump to control the production of heating and cooling independently of each other.

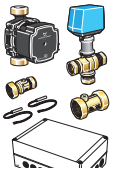
## EXTRA SHUNT GROUP ECS 40/ECS 41

This accessory is used when F1155 is installed in houses with two or more different heating systems that require different supply temperatures.



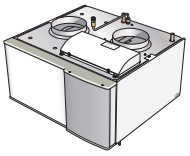
## FREE COOLING PCS 44

This accessory is used when F1155 is installed in an installation with passive cooling.



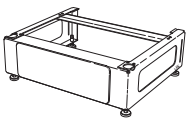
## EXHAUST AIR MODULE NIBE FLM

NIBE FLM is an exhaust air module designed to combine recovery of mechanical exhaust air with ground source heating.



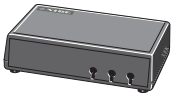
## BASE EXTENSION EF 45

This accessory is used to create a larger connection area under F1155.



## COMMUNICATIONS MODULE MODBUS 40

MODBUS 40 enables F1155 to be controlled and monitored using a DUC (computer sub-centre) in the building.

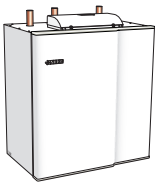


## COMMUNICATIONS MODULE SMS 40

When there is no internet connection, you can use the accessory SMS 40 to control F1155 via SMS.

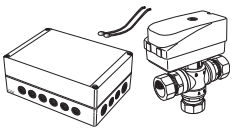
## PASSIVE COOLING PCM 42

PCM 42 makes it possible to obtain passive cooling from rock, groundwater or surface soil collectors.



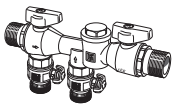
## POOL HEATING POOL 40

POOL 40 is used to enable pool heating with F1155.



## FILLING VALVE KIT KB 25/32

Valve kit for filling brine in the collector hose. Includes particle filter and insulation.

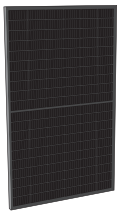


## ROOM UNIT RMU 40

The room unit is an accessory that allows the control and monitoring of F1155 to be carried out in a different part of your home to where it is located.

## SOLAR PACKAGE NIBE PV

Solar panel package, 3.2 – 22.4 kW (10 – 80 panels), which is used to produce your own electricity.

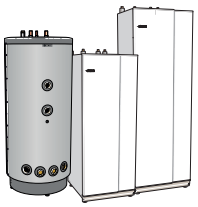


## ACCESSORY CARD AXC 40

This accessory is used to enable connection and control of shunt controlled additional heat, step controlled additional heat, external circulation pump or ground water pump.

## WATER HEATER/ACCUMULATOR TANK

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



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PBD EN 2011-3 M11975