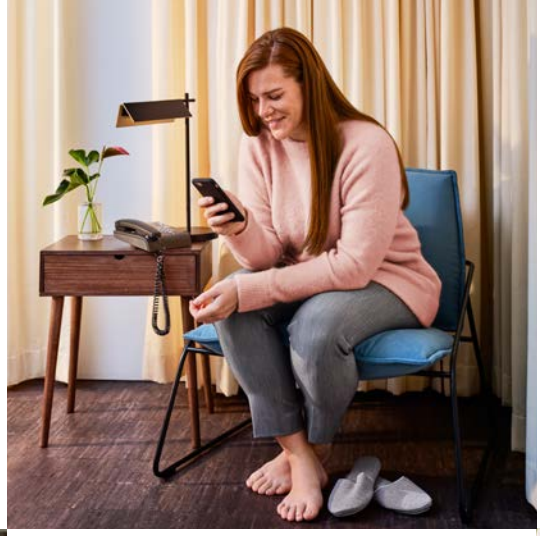
IT'S IN OUR NATURE
NIBE.CO.UK

NIBE S Series heat pumps

SMART CONNECTED SUSTAINABLE



The NIBE S Series

- Timeless, elegant design
- Integrated wifi connection
- Touchscreen with swipe function

- Weather control
- Wireless software updates
- A part of the smart home
- Support for voice assistants

NIBE Energy Systems Limited was founded in 2006 and is a subsidiary of the global NIBE Climate Solutions Group which can trace its history back to the southern Swedish region of Småland in the late 1940's.

Being born in the harsh outdoor environments of the Nordics means we are used to strong contrasts when it comes to climate. Living like this, with the elements constantly present makes us aware of the inherent power of nature, but also deeply thankful for the peace and quiet we find between the walls of what we call home.

Nature is our most fundamental source of energy and inspiration, and treating her with respect is the least we can do to show our deep gratitude. By harvesting the power from nature, we provide you with the perfect indoor climate. Our products can cool, heat, ventilate and supply your home with hot water – all with minimal impact on the environment. It's in our nature.

Many thanks for taking the time to read our brochure and for your interest in a NIBE renewable heating system.

What is the Renewable Heat Incentive?

GET PAID TO GENERATE HEAT

The Renewable Heat Incentive (RHI) is a government-backed financial incentive scheme designed to encourage UK homes to swap to renewable heating systems. Under the RHI, heat pump system owners are rewarded for the renewable heat they generate over a seven-year period.

HOW MUCH COULD YOU EARN?

How much you could earn depends on the technology you choose and the tariffs set out by the government (measured in pence per kilowatt-hour for the renewable heat produced).

Payment calculations are based on an estimate of how much heat your home will require from a renewable heating system and how it will perform once installed. As well as the technology itself, performance will also depend on other factors, such as insulation levels and the heat emitters your system uses (for example, low-temperature underfloor heating is likely to be more efficient than traditional radiators).

Before applying for RHI payments you will need an up-to-date Energy Performance Certificate (EPC), which shows how efficient your property is. If your EPC recommends loft and cavity wall insulation it must be installed, and the EPC replaced prior to applying. There are some circumstances under which you may be exempt from this requirement for which you must submit evidence

EXAMPLE

A NIBE GSHP fitted in a typical three bedroom house could generate annual payments of around £2,287 per year.*

10.71P/KWH	**20.89P/KWH**
Air Source heat pump	**Ground source heat pump**
*A NIBE ASHP fitted in a typical three bedroom house could generate annual payments of around £1012 per year.**	*A NIBE GSHP fitted in a typical three bedroom house could generate annual payments of around £2287 per year.**

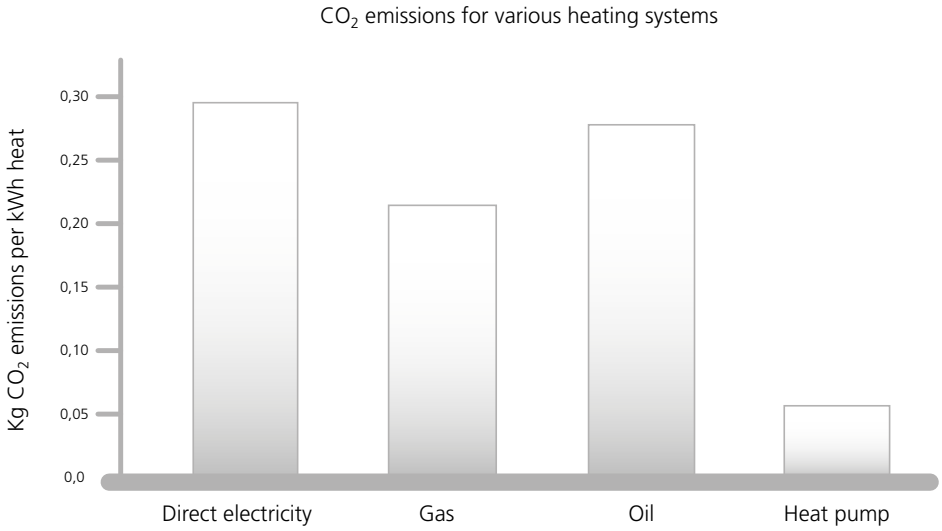
WHO IS ELIGIBLE?

Anyone who retrofits an air source or ground source heat pump in a single domestic property is eligible for RHI payments (whether they are an owner-occupier or private/social landlord). Self-build properties are the only new-build installations that are eligible.

To qualify for RHI payments, your system needs to have been fitted by an installer who has the right training and accreditation under the Microgeneration Certification Scheme (MCS). Opting for a NIBE VIP installer gives you complete peace of mind, as not only are all NIBE VIPs fully MCS-accredited, they can also offer an extended warranty on certain products – so it pays to make sure you deal with the experts.

References

Actual figures are £2,286.60 & £1011.50 a year based on a total energy demand of 15,000 KWh. GSHP system coefficient of performance of 3.7 and tariff of 20.89p/KWh and ASHP system coefficient of performance of 2.7 and tarriff of 10.71p/Kwh The RHI tariff is subject to change.



Start with a heat pump from NIBE

When making the switch from fossil fuels to renewable energy, you will experience benefits across the board. Not only will you do the environment a favour, you will save money by doing so.

With a heat pump from NIBE, you can create a perfect indoor climate by using renewable energy from your local surroundings. It immediately starts to deliver an environmental payback in the form of reduced energy consumption and emissions.

Since electricity is not the main energy source for the heat pump, the amount of electricity required is relatively low. It is only needed to drive the pump and enable the heat extraction process, allowing you to save up to 75% of your energy costs. With energy prices continually rising, you're unlikely to regret your decision. In fact, you'll start enjoying savings from the first month.

The new NIBE S Series

Welcome to NIBE's smart future!

The world is changing. Continuing technological development means a better future for everyone. NIBE is now taking the next step towards the future of heat pump technology with the launch of the NIBE S Series.

In today's smart homes, everyday technology is no longer sufficient. Devices that were previously incompatible online are now part of an intelligent network, designed to be smart and efficient.

A new digital platform is being launched, making life easier for both installers and end consumers. It will help to reduce costs whilst creating a perfect indoor climate, suited to everyday life. We will be a natural part of the connected home, giving our consumers greater opportunities to save energy for a greener, healthier world.

This is a technological advancement that will provide opportunities we cannot yet understand. At the same time we're future-proofing our products for the smart home.

NIBE works in-house with its own innovators and developers. The team has worked hard on the technological development – with many advantages for our end users as a result.

The heat pumps have a new design with a touchscreen and a new interface. The design is stylish and has a Scandinavian presence throughout.

In a smart home, wifi is standard. Naturally, this also applies to our new heat pumps, which no longer need to be connected via a cable.

With continuous technological advancement, we don't know exactly what we will be connecting to our heat pumps in 10 years' time. But whatever it is, we must ensure we have the product capability. One of the major advances we can see today is the improved efficiency of communication between the user and installer. It's also becoming easier, faster and more reliable for installers to troubleshoot remotely. It's now easy to diagnose disruptions without needing to be near the heat pumps.

Today's heat pumps are constantly becoming easier to connect to. In the future, it will be possible to combine existing and new energy sources, creating different system solutions.

To maintain our position at the leading edge of heat pump technology, we are continuing to develop smarter solutions that can be connected, identify needs and create opportunities in the right place at the right time. And in everything we do, we prove that the future is in our nature.

It’s easy to be smart

The demands of everyday life are constantly growing.
We’re about to make it easier for you.

The new S Series from NIBE features an elegant new look with a push-to-open aluminium door. A touchscreen control lets you swipe through the updated interface. With integrated wireless connectivity, you can connect your unit anywhere, anytime. It also has support for voice assistants, making it a natural part of your connected home.

The connected online system makes sure everything runs smoothly. By adjusting the temperature to your daily patterns, you get maximum comfort and minimum energy consumption. Both cheaper and greener. All you have to do is sit back and relax.

We make it easy to be smart.

Always updated

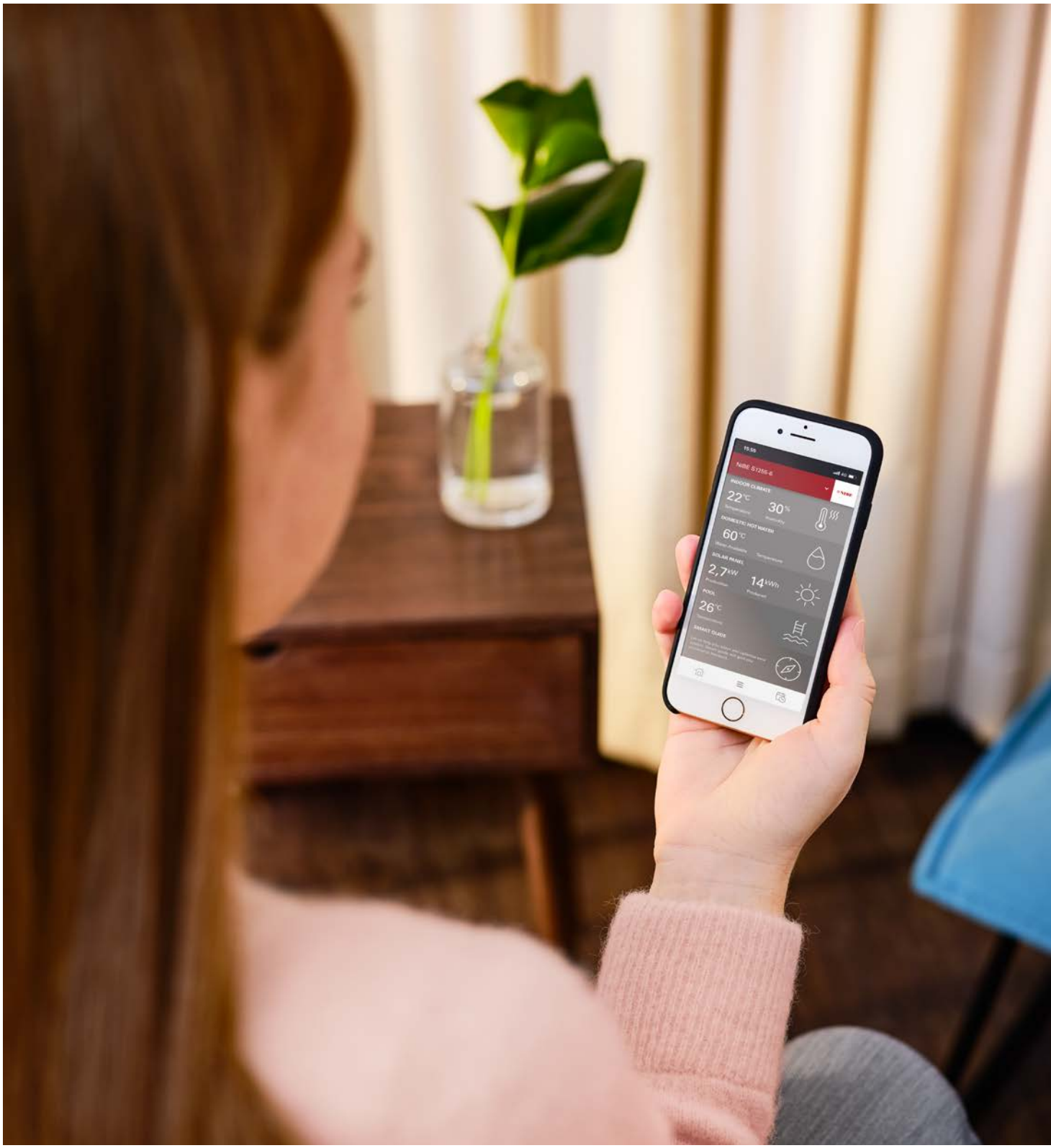
The new NIBE S Series is a step into the future of digitalisation.

As technology develops, there are new opportunities to connect and optimise our daily lives. NIBE is now taking a great step in making heat pumps the heart of the smart home.

With an integrated wifi connection and the new myUplink app, you can control your indoor climate in a way suited to you.

NIBE are constantly working to develop the software in your heat pump. When it's time to update your software, our new technology platform enables us to send an update directly to your NIBE heat pump. All you need to do is authorise the update on your heat pump's touchscreen. The latest software is always available at the press of a button. This helps to optimise operations and maximise energy savings.

The new NIBE S Series easily becomes a natural part of your smart home, both now and in the future.


22°C
30%
60°C
2,7kW
14kWh
26°C

Get a connected future with myUplink

The myUplink app allows you to control your smart heat pump from your smart phone.

With the launch of the smart S Series, the newly developed myUplink app is also released, the key to your smart home and a connected future.

Simplicity and clarity have been leading principles in the development of myUplink. You will be able to find what you need instantly, without having to search around in the product display menu.

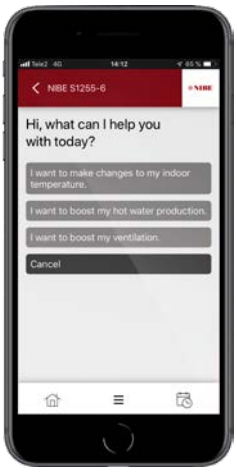
Via the new, simplistic, Scandinavian-designed interface, you can retrieve real-time data from your heat pump, monitor your installation from your smart phone or tablet and ensure that your heat pump is working flawlessly. Smart Price Adaption*, software updates, monitoring, alerts and weather forecast control are included as standard.

A premium subscription allows you to easily control and adjust your smart heat pump's settings, wherever you are. A premium subscrip-tion is also required for the IFTTT and voice assistant services.

By allowing you control over your hot water and indoor climate, the app also helps you to make energy savings. Good for the environment and good for your wallet.

myUplink is an important element of our future products, and will be updated with new functions that increase comfort and reduce energy consumption.

Using a heat pump has never been easier.



*) This requires a variable hourly tariff contract

myUplink

Using the Internet and myUplink you can get a quick overview of the status of your heat pump and the heating in your property. This flexible solution allows you to easily monitor and control your heating and hot water production. If your system is affected by an operational disturbance you receive an alert via a push-message and an email, allowing you to react quickly.

- An efficient tool that gives you quick and easy control over your property's heat pump, no matter where you are.
- Clear, easy to use system for monitoring and controlling heating and hot water temperatures for maximum comfort.
- Stores your heat pump's operational data, presented in a user-friendly graph.

myUplink

IFTTT

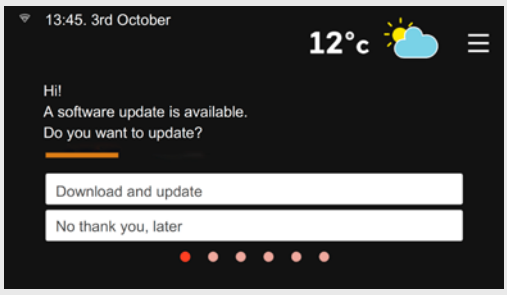
A free web-based service that enables you to make full use of your smart home technology. Connect products and services in your home for maximum comfort.

SMART PRICE ADAPTION*

This clever feature gives you the option to choose variable pricing for your energy plan. You can then automatically purchase energy when the price is low, and use self-produced or stored energy when the price is high.

WEATHER CONTROL

Weather control allows your heat pump to adapt to the weather forecast, a particularly good feature when weather changes rapidly. The smart heat pump is more proactive and knows when there's a predicted weather change, effectively managing the temperature change accordingly.



**) This requires a variable hourly tariff contract*

S Series product overview

THE NEW NIBE S SERIES

Ground source heat pumps	NIBE S1255 NIBE S1155
Exhaust air module	NIBE FLM S45
Indoor modules for air source heat pumps	NIBE VVM S320
Control module for air source heat pumps	NIBE SMO S40
Accessories	NIBE ERS S10-400 NIBE RMU S40
Hot Water Supply	NIBE VPB S300 NIBE VPBS S300

Ground source heat pumps

Ground source heat is pure, stored solar energy harvested from deep within the ground, the bottom of lakes or simply just below your lawn.

By using renewable energy you will reduce your energy costs and CO_2 emissions substantially. With the addition of various accessories, our ground source heat pumps can do much more than merely heat your home and hot water. For example, they can be used to cool your home in summer, ventilate it cost-effectively, or even heat your swimming pool. The relevant accessories are designed to fit neatly together, giving the appearance of a single streamlined system. Since all accessories are controlled via the heat pump, you only have to learn to use one operating system.

PRODUCTS	Groundsource units	S1255
		S1155
		F1145
		F1345
		F1355

Ground source heat pumps

NIBE S1255

Ground source heat pump

The NIBE S1255 is an intelligent, inverter-controlled ground source heat pump with integrated water heater. NIBE S1255 provides optimum savings since the heat pump always performs efficiently and automatically adapts to your home's heating demand all year round. NIBE is a leading player in the field of inverter technology, with many years' experience of variable output ground source heat pumps and one of the widest product ranges on the market.

The NIBE S1255 has a high seasonal performance factor, resulting in minimal operating costs. The heat pump is available in two different output sizes: 1.5–6 kW and 3–12 kW and is suitable for both small and large properties.

With integrated wifi, the S Series is a natural part of your connected home. Smart technology adjusts the indoor climate automatically while you're in complete control from your phone or tablet. Giving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

A+++

The system's efficiency class for heating.

A XL

The product's efficiency class and tap profile for hot water.

- Two output sizes and leading inverter technology for optimum customization.
- Optimal seasonal performance factor and minimal operating costs.
- User-friendly touchscreen and integrated wireless connectivity with smart energy saving technology for maximum comfort.

NIBE S1255		*1,5–6 kW*	*3–12 kW*
Space heating efficiency class 35°C / 55°C [1]		A+++ / A+++	
Space heating efficiency class of the system 35°C / 55°C [2]		A+++/A+++	
Efficiency class hot water / charging profile [3]		A / XL	
Nominal heating output ($P_{designh}$)	kW	6	12
$SCOP_{EN14825}$ cold climate, 35°C / 55°C		5.5 / 4.1	5.4 / 4.3
$SCOP_{EN14825}$ average climate, 35°C / 55°C		5.2 / 4.0	5.2 / 4.1
Output data according to EN 14511 nominal 0/35 – Rated output	kW	3.15	5.06
Output data according to EN 14511 nominal 0/35 – $COP_{EN14511}$		4.72	4.87
Sound power level (L_{WA}) according to EN 12102 at 0/35	dB(A)	36 – 43	36 – 47
Rated voltage		230 V ~ 50 Hz	
Refrigerant amout in CO_2-equivalent	ton	2.06	3.55
Height / Width / Depth	mm	1800 / 600 / 620	
Intergrated hot water heater	l	180	
Weight complete heat pump	kg	220	250

[1] Scale for the product's efficiency class room heating: A+++ – D. [2] Scale for the system's efficiency class room heating: A+++ – G. Reported efficiency for the system takes the product's temperature regulator into account. [3] Scale for efficiency class hot water: A+ – F.

NIBE S1155
Ground source heat pump

The NIBE S1155 is an intelligent, inverter-controlled ground source heat pump without an integrated hot water tank, making it easy to install in properties with lower ceilings. A separate hot water tank is selected according to hot water requirements. The NIBE S1155 provides optimum savings as the heat pump automatically adjusts to your home's heating demands. 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.

The NIBE S1155 has a high seasonal performance factor, resulting in minimal operating costs. The heat pump is available in two different output sizes: 1.5–6 kW and 3–12 kW, suitable for both small and large properties.

With integrated wifi, the S Series is a natural part of your connected home. Smart technology adjusts the indoor climate automatically while you're in complete control from your phone or tablet. Giving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

A+++

The system's efficiency class for heating.

A XXL

The product's efficiency class and tap profile for hot water when paired with VPB S300 (applies to S1155-12)

- Leading inverter technology and separate hot water tank* for optimum customization.
- Two output sizes for optimal seasonal performance factor and minimal operating costs.
- User-friendly touchscreen and integrated wireless connectivity with smart energy saving technology for maximum comfort.

**) NIBE VPB is available in the sizes 200, 300, 500, 750 and 1,000 litres.*

NIBE S1155		*1,5 – 6 kW*	*3 – 12 kW*
Space heating efficiency class 35°C / 55°C [1]		A+++ / A+++	
Space heating efficiency class of the system 35°C / 55°C [2]		A+++/A+++	
Efficiency class hot water / charging profile [3]		A / XL	A /XXL
Nominal heating output ($P_{designh}$)	kW	6	12
$SCOP_{EN14825}$ cold climate, 35°C / 55°C		5.5 / 4.1	5.4 / 4.3
$SCOP_{EN14825}$ average climate, 35°C / 55°C		5.2 / 4.0	5.2 / 4.1
Output data according to EN 14511 nominal 0/35 – Rated output	kW	3.15	5.06
Output data according to EN 14511 nominal 0/35 – $COP_{EN14511}$		4.72	4.87
Sound power level (L_{WA}) according to EN 12102 at 0/35	dB(A)	36 – 43	36 – 47
Rated voltage		230 V ~ 50 Hz	
Refrigerant amout in CO_2-equivalent	ton	2.06	3.55
Height / Width / Depth	mm	1500 / 600 / 620	
Weight complete heat pump	kg	155	170

[1] Scale for the product's efficiency class room heating: A+++ – D. [2] Scale for the system's efficiency class room heating: A+++ – G. Reported efficiency for the system takes the product's temperature regulator into account. [3] Scale for efficiency class hot water: A+ – F.

NIBE F1145

NIBE F1145 designed to supply your home with cost efficient and environmentally friendly heating. With an integrated immersion heater, circulation pumps and a control system separate hot water tank is selected according to hot water requirements.

NIBE F1145 is available in two sizes, 15 and 17 KW and is therefore suitable for larger houses.

A+++

The system's efficiency class for heating.

- Efficient, easy-to-install heat pump where the hot water tank is selected according to requirements.
- High seasonal efficiency – high temperature range.
- Energy-saving smart technology and user-friendly control.

NIBE F1145		*15 kW*	*17 kW*
System's efficiency class, room heating 35/55°C [1]		A+++/A++	A++/A++
Product's efficiency class, room heating 35/55°C [2]			
Efficiency class, hot water/load profile [3]		A/XXL – with VPB 500	
$SCOP_{EN14825}$ average climate, 35/55°C		4.6/3.7	4.4/3.6
$SCOP_{EN14825}$ cold climate, 35/55°C		4.7/3.7	4.5/3.7
Nominal heating output ($P_{designh}$)	kW	18/18	20/20
Output data according to EN 14511 nominal 0/35 – Capacity	kW	15.37	16.89
Output data according to EN 14511 nominal 0/35 – COP		4.42	4.30
Sound power level (L_{WA}) according to EN 12102 at 0/35	dB(A)	42	42
Rated voltage		400V 3NAC 50 Hz	
CO_2 equivalent refrigerant	tonnes	3.55	3.55
Height/width/depth	mm	1500/600/620	
Weight, complete heat pump	kg	200	205

[1] Scale for system's efficiency class, room heating: A+++ – G. The reported efficiency of the system also takes the product's temperature controller into account.
[2] Scale for product's efficiency class, room heating A++ – G. [3] Scale for efficiency class, hot water: A–G.

NIBE F1345

NIBE F1345 is a powerful, flexible ground source heat pump which is available in the output sizes 24, 30, 40 and 60 kW. Up to nine NIBE F1345s can be combined in a single system to cover output requirements of up to 540 kW.

NIBE F1345 has a high seasonal performance factor, and with less than 5 tonnes CO_2 equivalent refrigerant volume per compressor module. Two large compressors make NIBE F1345 perfect for properties with larger heating requirements. The compressors are switched on and off automatically for better output regulation, a longer operating range, less wear and tear and improved reliability.

A+++

The system's efficiency class for heating 35 °C.

- Powerful, flexible system that covers output requirements of up to 540 kW.
- Reliable system with efficient output regulation and no requirement for annual inspection.
- Smart technology with user-friendly control for optimal remote control.

NIBE F1345		*24 kW*	*30 kW*	*40 kW*	*60 kW*
System's efficiency class, room heating 35/55°C [1]		A+++/A++			
Product's efficiency class, room heating 35/55°C 2)		A++/A++			
SCOPEN14825 average climate, 35/55°C		4.8/3.8	4.7/3.6	4.8/3.8	4.6/3.7
SCOPEN14825 cold climate, 35/55°C		5.0/4.0	4.9/3.8	5.0/3.9	4.7/3.8
Nominal heating output (Pdesign)	kW	28	35	46	67
Output data according to EN 14511 nominal 0/35 – Capacity	kW	23.00	30.72	39.94	59.22
Output data according to EN 14511 0/35 – COP		4.65	4.44	4.49	4.32
Sound power level (LWA) according to EN 12102 at 0/35	dB(A)	47			
Rated voltage		400 V 3N ~ 50 Hz			
Amount of refrigerant in CO2 equivalent	tonnes	2 x 3.55	2 x 3.55	2 x 3.02	2 x 3.55
Height/width/depth	mm	1800/600/620			
Weight, complete heat pump	kg	320	330	345	346

[1] Scale for system's efficiency class, room heating: A+++ – G. The reported efficiency of the system also takes the product's temperature controller into account.
[2] Scale for product's efficiency class, room heating A++ – G.

NIBE F1355

NIBE F1355 is an intelligent and powerful inverter-controlled ground source heat pump in two sizes. NIBE F1355 provides optimum savings since the heat pump always performs efficiently and automatically adapts to the property's output requirements all year round. NIBE is a leading player in the field of inverter technology, with many years' experience of variable output ground source heat pumps and one of the widest product ranges on the market.

NIBE F1355 has a high seasonal performance factor and an operating range of 4–28 kW or 6–43 kW. With less than 5 tonnes CO_2 equivalent refrigerant volume per refrigeration module. Two compressors provide efficient output regulation and high reliavbility, making NIBE F1355 perfect for properties with larger heating requirements.

A+++

The system's efficiency class for heating 35 °C.

- Inverter technology for minimal operating costs and optimal seasonal performance factor.
- Efficient output regulation and high reliability for larger heating requirements.
- Smart technology with user-friendly control for easy remote control.

NIBE F1355		*28*	*43*
Space heating efficiency class of the system 35°C / 55°C [1]		A+++/A+++	
The product's room heating efficiency class 35 °C / 55 °C [2]		A+++ / A+++	
$SCOP_{EN14825}$ average climate, 35°C / 55°C		5.0 / 4.0	5,0 / 4,0
$SCOP_{EN14825}$ cold climate, 35°C / 55°C		5.4 / 4.2	5,3 / 4,1
Heating capacity	kW	4–28	6–43
Nominal heating capacity P_{design} 35 °C / 55 °C	kW	28	45/42
Heating capacity (P_H)	kW	4–28	6–43
Heating capacity $(P_H)_{EN\ 14511}$ nominal 0/35	kW	20.77	31,10
Sound power level $(L_{WA})_{EN\ 12102}$ at 0/35	dB(A)	47	
Rated voltage	V	400V 3N ~ 50 Hz	
Refrigerant amount in CO_2-equivalent	ton	Upper cooling module: 3.55 Lower cooling module: 3.90	Upper cooling module: 3,02 Lower cooling module: 4,39
Height / Width / Depth	mm	1800 / 600 / 620	
Weight	kg	335	351

[1] Scale for the system's efficiency class room heating: A+++ – G. Reported efficiency for the system takes the product's temperature regulator into account.
[2] Scale for the product's efficiency class room heating: A+++ – D

NIBE FLM S45
Exhaust air module

The NIBE FLM S45 is an exhaust air module with built-in fan, specially designed for combining recycling of mechanical exhaust air with a NIBE ground source heat pump, providing an integrated solution for ventilation, hot water and heating.

The NIBE FLM S45 has a high fan capacity and low noise level. Energy is recovered from the ventilated air; even when the heat pump is not in operation. Energy is stored in the soil or rock collector, putting the exhaust air energy into maximum use.

The NIBE S Series is a natural part of your connected home. Smart technology adjusts the indoor climate automatically while you're in complete control from your phone or tablet. Giving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

- Provides an integrated solution for ventilation, hot water and heating with ground source heat pumps.
- Efficient even when the heat pump is not in operation.
- A part of your energy-saving smart home in combination with a NIBE S series heat pump.

NIBE FLM S45		
Supply voltage		230 V ~ 50 Hz
Driving power fan	W	175
Enclosure class		IP21
Maximum sound power level to ISO 12102	dB(A)	36–46
Ventilation max airflow	m^3/h	350
Height / Width / Depth	mm	396 / 600 / 556
Weight	kg	35

DEVON LODGE, NORTH DEVON

It was the Goldman's vision to create an energy efficient home for the future that took advantage of the myriad technologies available, including the installation of a NIBE Ground Source Heat Pump system.

NIBE Ground source heat pumps
Case Study

Background

A modern, energy efficient home situated in five acres of remote woodland in North Devon highlights how a Ground Source Heat Pump System plays a part in a modern energy efficient home.

The block and render property offers four bedrooms, ensuite facilities, a large dining kitchen, living area, study and utility room. Its design is such that two huge, floor to apex windows flood the property with natural light and give the impression of a floating mezzanine floor providing the upstairs of the property.

It was the homeowners' vision to create an energy efficient home for the future that took advantage of the myriad technologies available. A local NIBE VIP installer worked with the homeowners from the planning stage of the property. They specified products and advised on all elements of its renewable energy installation including the ground source heat pump, solar photovoltaic (to generate electricity), solar thermal, under floor heating, high efficiency cylinder and heat recovery system. High quality double glazing was selected over triple glazing as the latter is much heavier and can skew visual clarity which would have hampered the woodland views from the lodge.

Solution

"A NIBE Ground Source Heat Pump was fitted to fulfil the aims and requirements of the homeowners and was specified as part of their overall wish to make their new build home as energy efficient as possible," commented the NIBE VIP installer. "Added to the Ground Source Heat Pump was a NIBE water tank and buffer cylinder - the latter stores unused heat which is able to be drawn upon when required at a later date. Each individual element of the specification enabled us to create a home that was warm and welcoming and used the energy generated for heating, hot water and power in the most efficient way possible. NIBE products continue to be at the top of the market and provide quality, reliable solutions for our customers."

As a result of a NIBE VIP installer being used, a seven-year warranty on all installed NIBE equipment was offered.

Results

The homeowners enjoyed a seamless installation and are now reaping the benefits of living in an energy efficient home, both aesthetically and financially. The heat recovery system makes the home much healthier eliminating condensation and the health and maintenance issues it can cause, and helps to conserve energy lowering the carbon footprint of the property.

Renewable Heat Incentive (RHI) payments are exactly as predicted coming in within £1 of the original estimate!

Ground Source Heat Pump Installed In Dollar Hills Near Falkirk, Scotland

"We've lived here over a year now and the heating bills during the winter are around £200 per month, which when you take into account the fact that it's a large property with permanent heating for an indoor pool, then it works out really well,"

NIBE Ground source heat pumps
Case Study

Background

A four-bedroom home set amidst the beautiful Dollar hills near Falkirk, Scotland is the realisation of a dream for Christopher Whalley.

Christopher and his wife Dianne set their sights on relocating to the stunning location in an 'off-grid' area near where he was born. To heat their self-build home, the Whalleys chose an energy efficient and sustainable heat pump system from NIBE.

Solution

The engineer on the project recommended a NIBE VIP Installer, a specialist renewable energy installer based in Glasgow. The NIBE VIP, designed a system involving a NIBE 24kw F1345 ground source heat pump with a 500 litre hot water cylinder to provide heating and hot water. A NIBE Pool 40 was also installed as an accessory.

The NIBE F1345 is a heat pump that has been specifically designed for larger properties. It enables simultaneous production of heating and hot water and is ideal for use with accessories such as the NIBE Pool 40, for heating a swimming pool.

The ground source heat pump sourced its energy through three vertical bore holes, which were drilled at depths of 180m in land close to his property.

The NIBE VIP installer offered a complete design, installation and commissioning service for the heat pump, which feeds the hot water system, the swimming pool, plus the underfloor heating to upstairs and downstairs of the four bedroom home. To make it even more sustainable, the house has 30 solar panels integrated into its roof.

NIBE's ground source heat pumps can be coupled with various accessories, such as comfort cooling and ventilation. All NIBE heat pump systems come with a seven-year warranty when installed by a NIBE VIP installer.

Results

"We've lived here over a year now and the heating bills during the winter are around £200 per month, which when you take into account the fact that it's a large property with permanent heating for an indoor pool, then it works out really well," said Mr Whalley.

He adds: "It is reassuring to know that we have a heating system that is sustainable but affordable for the future too."Mr and Mrs Whalley will also benefit from RHI payments for his heat pump.

Harvesting energy from air

Air source heat pumps

Thanks to the endless supply of air, one of nature's free and renewable energy sources, you will be able to maintain a perfect indoor climate for many years to come.

Heat pump technology is based on a very simple, well-known principle. Using a vapour compression cycle, it works in a similar way to any domestic refrigerator. By extracting heat energy from the outside air, even at lower temperatures, a NIBE air source heat pump can heat your home and supply it with hot water, all year round.

The NIBE air source systems consist of an outdoor module combined with an indoor or control module. This forms a complete climate system that is easy to install, operate and maintain. The modules work with any kind of terrain and are compatible with a variety of energy sources, and additional solutions for ventilation and pool heating can be added to the system.

PRODUCTS		
	Outdoor Modules	NIBE F2040
	Indoor Modules and Controllers	NIBE VVM S320 NIBE SMO20 NIBE SMO S40

NIBE 2040

NIBE F2040 is an intelligent and compact inverter controlled air source heat pump. NIBE F2040 provides optimum savings since the heat pump automatically adapts to your home's output requirements all year round.

The heat pump works down to an outdoor temperature of –20°C and at the same time supplies up to 58°C in supply line temperature.

A+++

Energy efficiency class 35°C package label for NIBE F2040

- Compact heat pump that adapts to your home's requirements.
- High capacity even down to – 20°C.
- Energy-saving smart technology with user-friendly control.

		NIBE F2040–6	*NIBE F2040–8*	*NIBE F2040–12*	*NIBE F2040–16*
System's efficiency class, room heating 35/55°C [1]		A+++/A++	A+++/A++	A+++/A++	A+++/A++
Product's efficiency class 35/55°C [2]		A++/A++	A++/A++	A++/A++	A++/A++
Efficiency class, hot water/load profile [3]		A/XL – A/XXL			
$SCOP_{EN14825}$ Average climate, 35/55°C		4.8/3.5	4.4/3.3	4.4/3.4	4.5/3.4
$P_{designh}$ Average climate 35/55°C	kW	5.0/5.0	8.2/7.0	11.5/10.0	14.5/14.0
$SCOP_{EN14825}$ Cold climate 35/55°C		3.7/3.0	3.6/2.8	3.6/2.9	3.7/2.9
$P_{designh}$ Cold climate 35/55°C	kW	4.0/6.0	9.0/10.0	11.5/13.0	15.0/16.0
7/35 Heat capacity/COP, EN14511, nominal	kW	2.67/5.32	3.86/4.65	5.21/4.78	7.03/4.85
Sound level (L_{WA}), EN12102 at 7/45, nominal	dB(A)	50	54	57	61
Rated voltage	V	230 V 50 Hz, 230 V 2 AC 50 Hz			
CO_2 equivalent (hermetically sealed refrigerant circuit)[4]	tonnes	3.13	5.32	6.06	8.35
Height/width/depth	mm	791/993/364	895/1035/422	995/1145/452	1450/1145/452
Weight (excluding packaging)	kg	66	90	105	135

[1] Scale for system's efficiency class, room heating: A+++ - G. The reported efficiency of the system also takes the product's temperature controller into account.
[2] Scale for product's efficiency class, room heating A++ - G. [3] Scale for efficiency class, hot water: A – G. [4] NIBE F2040 does not require annual inspection in accordance with the F-Gas Regulation.

Indoor modules

NIBE VVM S320

Indoor module

The NIBE VVM S320 is designed for combination with any NIBE air source heat pump to create a highly efficient climate system for your home.

The NIBE VVM S320 have a smart, user-friendly control system which provides efficient heating/cooling and hot water with high performance. The NIBE VVM S320 are a complete plug and play solution for easy installation.

With integrated wifi, the S Series is a natural part of your connected home. Smart technology adjusts the indoor climate automatically while you're in complete control from your phone or tablet. Giving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

- Combine with a NIBE air source heat pump for a complete system.
- Smart, user-friendly control system.
- User-friendly touch control and integrated wireless connectivity with energy saving smart technology for maximum comfort.

NIBE VVM S320		
Additional power	kW	7.0
Required heating power, coldest day		Up to 10 kW
Tap volume 40°C during Medium		240 l
Docking		High power external heat sources with external accumulators. No built-in accumulator volume.
Connection		Top
Rated voltage	V	230V~50Hz
Height / Width / Depth	mm	1800/600/622
Weight	kg	130
Compatible outdoor units		NIBE F2040-6 / F2040-8 / F2040-12

NIBE SMO Control module

NIBE SMO Control modules provide a flexible solution that you can easily customise, allowing you to integrate your heat pump with both existing or new systems. Additional heat sources and other accessories are chosen specifically for the actual set-up.

The entry model NIBE SMO 20 is a perfect choice for a system with heating and hot water supply. It handles one heat pump and has a limited range of accessories. Onboard functionality supports control of charge pump, 3-step addition both for heating and hot water, main circulator pump, a switching valve for hot water and an AUX relay.

The more advanced NIBE SMO S40 can handle up to eight heat pumps. It has all the onboard functionality that NIBE SMO 20 offers, but also allows you to add extra functions, advanced dockings, and also supports an external heat source.

Docking

NIBE offers a broad range of accessories, dockings and system solutions, all to make a complete climate solution. See section on additional functions to explore how you can create the perfect indoor climate for your needs.

Choosing the right NIBE SMO for my house

	SMO 20	SMO S40
		
Controls up to	1 heat pump	8 heat pumps
Self-regulating circulator pump	Available in 2 sizes, CPD11	Available in 2 sizes, CPD11
External heat sources	3 step electrical heater	3 step electrical heater or boiler with mixing valve
Dimensions H/W/D (mm)	410/360/110	410/360/120
Net weight	4,3 kg	5 kg

NIBE SMO S40*
Control module

The NIBE SMO S40 is an intelligent control module, providing optimised control over your indoor climate system. Combined with one or more NIBE air source heat pumps, water heaters or additional heat sources, the NIBE SMO S40 offers a complete climate system for properties.

The NIBE SMO S40 offers maximum flexibility when it comes to system solutions. The control module can be connected to components such as a water heater, additional heat sources and other accessories, allowing for customised installations. Up to eight NIBE air source heat pumps can be connected to a control system.

The NIBE S Series is a natural part of your connected home. The smart technology adjusts the indoor climate automatically and gives you complete control from your phone or tablet. Achieving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

- In combination with a NIBE air source heat pump – a part of your energy-saving smart home.
- Property solutions with up to eight NIBE air source heat pumps.
- Smart, user-friendly system with touchscreen for maximum flexibility.

NIBE SMO S40		
Controls up to		8 heat pumps
External heat source		3 steps for electrical heater or boiler with mixing valve Allows prioritised heating sources
Self-regulating circulator pump		CPD11, available in 2 sizes
Supply voltage		230V~50Hz
Enclosure class		IP21
Height / Width / Depth	mm	350/540/110
Weight	kg	~ 5
Compatible outdoor units		NIBE F2040-series
Accessories		Wide range including additional climate system, pool, solar cell, ventilation heat exchanger, room display etc.

NIBE RMU S40

Room unit

The NIBE RMU S40 is a room unit with a 2.8" touchscreen and built-in temperature and humidity sensors. It is used to control and monitor your NIBE Series heat pump/indoor module from another location in the property other than where the heat pump is installed.

The NIBE S Series is a natural part of your connected home. The smart technology adjusts the indoor climate automatically and gives you complete control from your phone or tablet. Achieving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

- Room unit with 2.8" touchscreen.
- Control and monitor your NIBE smart heat pump from another room.
- A part of your energy-saving smart home in combination with a NIBE S Series heat pump.

NIBE RMU S40		
Connection		wireless or wired to heat pump
Power supply		Wired to heat pump or via 5V USB supply
Backing (Width x Height x Depth)	mm	88x88x8
Display dimensions (Width x Height x Depth)	mm	64x85x16
Rated voltage (from main product		12VDC 40mA
Rated voltage (external USB)		5VDC 250mA

Barn conversion, honeybourne, worcestershire

"It is reassuring to know that we have a heating system that is sustainable but affordable for the future too."

NIBE Air source heat pumps
Case Study

Background

Following over 30 years spent living abroad, Steve and Beverley Mullins recently returned to the UK and bought Middle Barn in the village of Honeybourne in Worcestershire. They renovated the barn and outbuildings to create a large, five-bedroom home.

The property is in a rural area, off the gas grid and the couple were looking to invest in a more sustainable form of energy. A friend recommended a NIBE VIP installer as he had installed a NIBE ground source heat pump for them and they were more than satisfied with the service.

Solution

The NIBE VIP visited the property and recommended two NIBE F2040 12kw air source heat pumps to provide heating and hot water for the barn conversion.

The NIBE F2040 is an intelligent and compact inverter-controlled air source heat pump, which provides optimum savings as the heat pump automatically adapts to a home's heating requirements all year round. The heat pump works down to an outdoor temperature of –20°C whilst still providing sufficient hot water and the perfect indoor climate.NIBE's air source heat pumps can be coupled with various accessories, such as comfort cooling and ventilation.

Results

The Mullins' system is expected to achieve a seasonal performance factor of 3:1. When you consider this, plus the income from the RHI, the heat pump should pay for itself in just three to five years.

Mr Steve Mullins said: "We've not had the heat pump installed over a winter season yet, so we can't give an exact idea of energy and cost savings yet, however we are delighted with its performance so far. The NIBE VIP installer came highly recommended and we were very impressed with how responsive they were to our requirements. They were also very attentive to detail, particularly with regards the aesthetics in the plant room. We're really pleased with the result."

He adds: "It is reassuring to know that we have a heating system that is sustainable but affordable for the future too."

The NIBE VIP said: "This was a really enjoyable project to work on and Mr and Mrs Mullins will benefit from a comfortable warm home, through a heating system that is affordable to run and sustainable too."

BARN CONVERSION BENEFITS FROM A LOAD OF HOT AIR!

Scattered across the fens of Cambridgeshire are many dilapidated farm buildings that are ripe for renovation.

NIBE Air source heat pumps
Case Study

Background

Scattered across the fens of Cambridgeshire are many dilapidated farm buildings that are ripe for renovation.

One such barn, which was situated on family land, became a renovation project for owner Dan Houghton who embarked on the quest to create a new three bedroom home for himself and his partner and also utilise the skills he demonstrates in his occupation as a carpenter.

Whilst an alternative to main gas was clearly necessary due to the barns off grid location, it was only as planning permission was sought that it became apparent that a renewable energy source was necessary to fulfil requirements.

It was this that led Dan to a local NIBE VIP installer, who worked with him throughout the project to specify the correct products, install the system and take care of ongoing maintenance.

Solution

Through working with the NIBE VIP installer, from the specification stage of the project to ensure planning requirements were fulfilled and the correct products were installed to deliver warmth and hot water to meet demands, Dan opted for A NIBE F2040 8kW air source heat pump along with a 200 litre water cylinder, 40 litre buffer tank and SMO40 controller to give domestic controls and energy monitoring.

Results

The property received its EPC certificate resulting in Renewable Heat Incentive (RHI) payments of around £800 per annum.

Not only does it support the ethos of renewable energy systems in rural locations it also demonstrates that renovation projects (from virtually derelict buildings) can also reap the benefits of such technologies.

Ventilation

Our home is where we find comfort, so every home needs to breathe. We provide you with the ability to optimise your ventilation, regardless of your source of energy. Integrate your ventilation unit with your heat pump to establish a complete control system with all the benefits of our smart technology.

PRODUCTS	Heat recovery ventilation	NIBE ERS 20-250 NIBE ERS S10-400

NIBE ERS 20-250

The heat recovery ventilation units ERS 20-250 and ERS S10-400 are both easy to install together with a NIBE heat pump or indoor module. They can be controlled from the display of the heat pump.

The unit is intended for both new installations and replacement in houses or similar. ERS is suitable for ventilation systems where high temperature efficiency and low energy consumption are required. ERS 20 is normally used in homes with an area of up to approx. 200 m^2.

- Provides a complete exhaust and supply air solution for NIBE ground source or air source heat pump.
- ERS is controlled via the ground source heat pump/indoor module, which means that all measurement values are visible in the main product's display.
- Up to 92% recovery.

		ERS 20-250
Supply voltage		
Fuse	A	
Driving power fan	W	100 x 2
Enclosure class		
Filter type, exhaust air filter		
Filter type, supply air filter		
Sound pressure label $L_{W(A)}$	dB(A)	47.4/50[2]
Ventilation connection	mm	Ø125
Connection, condensation water drain	mm	Ø15
Length, supply cable	m	
Length, control cable	m	
Height / Width / Depth	mm	241/1202/673
Weight	kg	25

NIBE ERS S10-400
Heat recovery ventilation unit

The NIBE ERS S10-400 is a heat recovery ventilation unit with high temperature efficiency up to 90% and low energy consumption. The heat recovery ventilation unit is used in houses with areas up to approx. 300 m².

The NIBE ERS S10-400 is designed for installation with a NIBE ground source heat pump or a NIBE air source heat pump for a complete heating and ventilation system. The heat recovery ventilation unit is easily controlled by the heat pump.

The NIBE S Series is a natural part of your connected home. Smart technology adjusts the indoor climate automatically while you're in complete control from your phone or tablet. Giving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

A

Product efficiency class

- Heat recovery ventilation unit with high temperature efficiency and low energy consumption.
- Together with NIBE S Series controls, it provides a solution in houses with balanced ventilation.
- In combination with a NIBE S series heat pump or indoor module – a part of your energy-saving smart home.

NIBE ERS S10-400							
Efficiency class [1]		A					
Supply voltage		230 V – 50 Hz					
Fuse	A	10					
Fan capacity	W	85 x 2					
Enclosure class		IPX1					
Filter type, exhaust air filter		Coarse					
Filter type, supply air filter		ePM1-55%					
Sound power level (L_{WA}) [2]	dB (A)	47					
Ventilation connection	mm	Ø160					
Connection, condensation water drain	mm	G32					
Length, supply cable	m	2.4					
Length, control cable	m	2.0					
Height / Width / Depth	mm	900/600/612					
Weight, complete heat exchanger	kg	40					
Power/current for included NIBE EAH 20-1800 (electrical preheater)	W/A	300/1.3	600/2.6	900/3.9	1200/5.2	1500/6.6	1800/7.8

[1] Scale for product's efficiency class room heating A+ – G.
[2] 295 m3/h (82 l/s) at 50 Pa.

Hot water supply

We've been manufacturing hot water comfort for more than 50 years. So regardless of your hot water needs, we have the right solution for you. Our full range of hot water solutions complement our selection of heat pumps.

PRODUCTS	Domestic hot water cylinders	VPB S300, VPBS S300 VPB 500-1000
	Tank in tank water cylinders	NIBE VPA 300/200, NIBE VPAS 300/450
	Domestic hot water cylinders	NIBE HA-WH5 MEGACOIL
	Buffer vessels	NIBE UKV 40 / 100 / 200 / 300 / 500

Hot water supply

NIBE VPB S300
NIBE VPBS S300

The NIBE VPB/VPBS S300 are efficient hot water tanks which is designed for connection to a heat pump, gas or oil boiler. The NIBE VPBS S300 can also be docked to solar panels.

The NIBE VPB S300 and the ground source heat pump NIBE S1155 have a customised design, providing a stylish system solution with the option of concealed piping between the products. The storage tank has insulation made of polyurethane, which provides very good heat insulation.

The NIBE S Series is a natural part of your connected home. The smart technology adjusts the indoor climate automatically and gives you complete control from your phone or tablet. Achieving maximum comfort and minimum energy consumption, while doing nature a favour at the same time.

The product's efficiency class.

- Efficient water heater and accumulator tank designed for connection to a heat pump or other energy source.
- Stylish design for customisation with NIBE S Series heat pump with minimal heat loss.
- A part of your energy-saving smart home in combination with a NIBE S Series heat pump.

[1] Scale for the product's efficiency class room heating: A+ till F.

NIBE Hot water cylinders and buffer vessels
Products

NIBE VPA/VPAS

The NIBE VPA/VPAS range are particularly suited to high capacity heat pumps such as the NIBE F1345. The NIBE VPAS has an integrated solar hot water coil.

NIBE VPB 500–1000

VPB is a range of efficient water heaters, with a wide range of applications, which are suitable for connections to heat pumps. All models are intended for properties with large hot water requirements. They can also be suitable for connection in parallel for use in larger properties.

NIBE HA-WH5 MEGACOIL

NIBE HA-WH5 Megacoil cylinders are available in three single coil versions for use with NIBE F2040 air source heat pumps ranging from 160–300 litres. The HA-WH5 Megacoil cylinders are manufactured from high grade stainless steel and come with a 25 year guarantee. Two twin coil solar versions are available in 200 and 300 litres versions providing up to 70% of the domestic hot water requirements by utilising the free energy provided by the sun.

All HA-WH5 Megacoil models additionally come complete with an installation kit comprising: expansion vessel, hose and bracket, inlet zone valve assembly, tundish, 2 port manifold and installation manual including benchmark

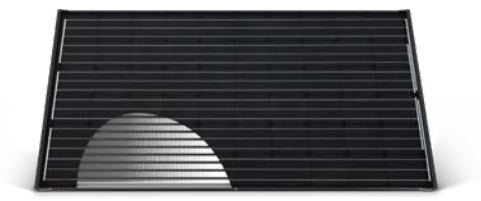
NIBE UKV
Buffer tank for heating systems

NIBE UKV 40, 100, 200, 300 and 500 are buffer tanks used together with heat pumps to increase the volume of water in the system for more stable operation.

NIBE PVT

The NIBE PVT collector is an alternative, innovative, heat source for use with NIBE ground source heat pumps, removing the requirement of a ground or bore hole collector array.

The PVT collectors produce electrical energy that can be used to operate the heat pump. As a rule, the total current output of the collectors is higher than the power consumption of the heat pump.



- Totally silent air collector for NIBE ground source.
- Unique, elegant, all-black panels with double production of energy, thermal and electricity.
- Connect to a NIBE ground source heat pump for maximum energy efficiency.
- Circulating brine helps cool the PVT panel, increasing PV generation efficiency.

PVT-Panel		
Type		Monocrystalline
Nominal Power	Wp	340
Short circuit current	A	9,45
Overall dimensions	mm	1985 x 995 x 65
Weight	mm	1965 x 984
Aperture surface	kg	32
Overall surface	m^2	1,95
PV dimensions	m^2	1, 98

NIBE PV

NIBE PV is an integrated solution which is based on a fully modular system with output sizes ranging from 3-4.2kW on a single phase inverter which offers direct connectivity and control prioritisation through a NIBE Heat Pump. Each size consists of a number of base packages with 10 panels and a nominal power of 3 kW, mounting parts and a suitable inverter with communication module, all of which are ready for installation. The solar package can easily be expanded with additional solar panels for optimum use of roof space.

NIBE PV comprises of monocrystalline silicon cell panels which use PERC technology, with an output of 300 Wp. The solar panels are elegant, all-black panels. NIBE PV harnesses sunlight all year round and converts it into electricity. NIBE PV can be connected to your NIBE heat pump* for maximum energy efficiency.

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.* applies to systems which can be connected to NIBE MyUplink.

- Flexible modular system with eight basic sizes which can be easily expanded.
- Elegant, all-black panels which use PERC technology for maximum efficiency.
- Connect to a NIBE heat pump for maximum energy efficiency.

Why choose a NIBE VIP Installer?

Once you've chosen the right NIBE system to meet your heating/ventilating needs, the next step is to ensure it is installed correctly so it can perform to its full potential.

As a leading renewables manufacturer, NIBE understands the vital importance of quality installations, which is why we have built an extensive network of highly skilled, trusted installers across the country.

Our NIBE VIP installers are fully trained and accredited to fit our products to the highest possible standards, so you can benefit from optimum results and full peace of mind. They are also MCS certified – an essential requirement to qualify for the government's Renewable Heat Incentive (RHI) payments.

To find a local VIP installer near you visit nibe.co.uk and use our 'find a VIP-installer' tool.

NIBE VIP installers:

- *Have completed NIBE product training*
- *Offer an extended warranty*
- *Have experience fitting NIBE technology*
- *Are MCS registered (essential requirement for RHI payments)*
- *Are signed up to NIBE's strict code of practice*

Under NIBE's code of practice installers must:

- *Perform professionally, competently and responsibly*
- *Comply with all relevant UK regulations, standards and codes of practice*
- *Install and commission all NIBE equipment in accordance with all NIBE's procedures and installation manuals*
- *Complete benchmark check lists for NIBE products*
- *Fully demonstrate correct system operation and controls to customers*
- *Register installations on NIBE's website*
- *Liaise directly with customers and respond to NIBE product enquiries in a quick and proficient manner*
- *Keep fully up to date with NIBE's product range as well as developments in the UK's plumbing and heating industry*

NIBE VIP INSTALLER

NIBE Quality 7 YEAR Warranty

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nibe.co.uk

M12649 KBR UK NIBE S Series heat pumps 2013-1