

IT'S IN OUR NATURE  
NIBE.CO.UK



# NIBE Heat pumps





*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.

# Indoor comfort is in our nature

*Nature inspires us to create the perfect climate conditions for our everyday lives. Welcome to our world of indoor comfort.*



# 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 £2,239 per year.\*

<b>10.49P/KWH</b>	<b>20.46P/KWH</b>
<b>Air Source heat pump</b>	<b>Ground source heat pump</b>
<i>A NIBE ASHP fitted in a typical three bedroom house could generate annual payments of around £990 per year.*</i>	<i>A NIBE GSHP fitted in a typical three bedroom house could generate annual payments of around £2,230per year.*</i>

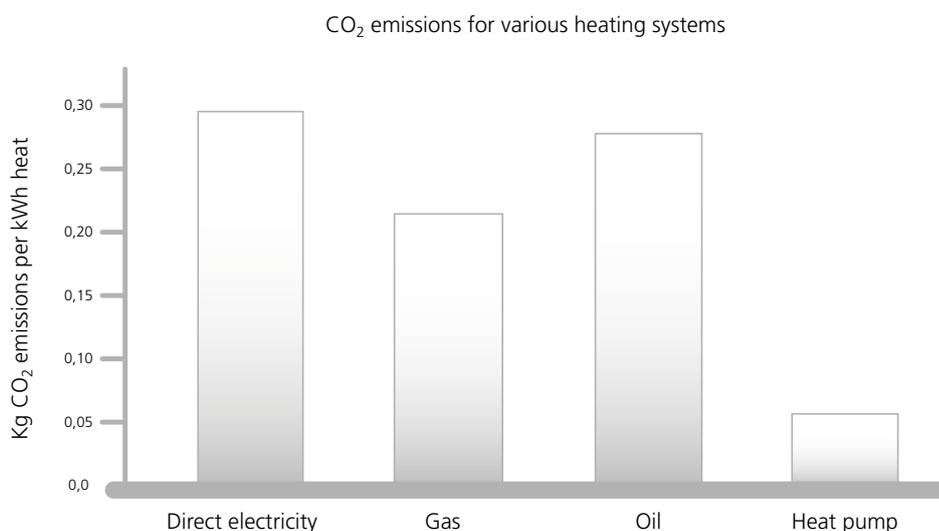
## WHO IS ELIGIBLE?

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 £2,239.35 & 990.67 a year based on a total energy demand of 15,000 kWh. GSHP system coefficient of performance of 3.7 and tariff of 20.46p/kWh and ASHP system coefficient of performance of 2.7 and tariff of 10.49p/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.

Home is where your heat is



# 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<sub>2</sub> 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

NIBE F1145

NIBE F1155

NIBE F1255

NIBE F1345

NIBE F1355



## NIBE Ground source heat pumps Products

### 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 <sup>1)</sup>		A+++/A++	A+++/A++
Product's efficiency class, room heating 35/55°C <sup>2)</sup>			
Efficiency class, hot water/load profile <sup>3)</sup>		A/XXL – with VPB 500	
SCOP <sub>EN14825</sub> average climate, 35/55°C		4.6/3.7	4.4/3.6
SCOP <sub>EN14825</sub> cold climate, 35/55°C		4.7/3.7	4.5/3.7
Nominal heating output (P <sub>designh</sub> )	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 <sub>WA</sub> ) according to EN 12102 at 0/35	dB(A)	42	42
Rated voltage		400V 3NAC 50 Hz	
CO <sub>2</sub> equivalent refrigerant	tonnes	3.55	3.55
Height/width/depth	mm	1500/600/620	
Weight, complete heat pump	kg	200	205

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ – G. <sup>3)</sup> Scale for efficiency class, hot water: A–G.

## NIBE Ground source heat pumps Products

### 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 two different output sizes: 1.5–6 kW and 3–12 kW, and is suitable for both small and large properties.



**A+++**

The system's efficiency class for heating.

- *Leading inverter technology and separate hot water tank for optimum customisation.*
- *Two output sizes for optimal seasonal performance factor and minimal operating costs.*
- *Energy-saving smart technology with user-friendly control for maximum comfort.*

NIBE F1155		6 kW	12 kW
System's efficiency class, room heating 35/55°C <sup>1)</sup>		A+++ / A+++	
Product's efficiency class, room heating 35/55°C <sup>2)</sup>		A++ / A++	
Efficiency class, hot water/load profile with VPB 300 <sup>3)</sup>		A/XL	A/XXL
SCOP <sub>EN14825</sub> average climate, 35/55°C		5.2/4.0	5.2/4.1
SCOP <sub>EN14825</sub> cold climate, 35/55°C		5.5/4.1	5.4/4.3
Nominal heating output (P <sub>design,h</sub> )	kW	6	12
Heating capacity	kW	1.5–6	3–12
Output data according to EN 14511 nominal 0/35 – Capacity	kW	3.15	5.06
Output data according to EN 14511 nominal 0/35 – COP		4.72	4.87
Sound power level (L <sub>WA</sub> ) <small>according to EN 12102 at 0/35</small>	dB(A)	36–43	36–47
Rated voltage		230V~50Hz	
CO <sub>2</sub> equivalent refrigerant	tonnes	2.06	3.55
Height/width/depth	mm	1500/600/620	
Weight, complete heat pump	kg	150	175

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ – G. <sup>3)</sup> Scale for efficiency class, hot water: A – G.

## NIBE Ground source heat pumps Products

**NIBE F1255** NIBE F1255 is an intelligent, inverter-controlled ground source heat pump with integrated water heater. NIBE F1255 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.

NIBE F1255 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.



**A+++**

The system's efficiency class for heating.

- Two output sizes and leading inverter technology for optimum customisation.
- Optimal seasonal performance factor and minimal operating costs.
- Energy-saving smart technology with user-friendly control for maximum comfort.

NIBE F1255		6 kW	12 kW
System's efficiency class, room heating 35/55°C <sup>1)</sup>		A+++/A+++	
Product's efficiency class, room heating 35/55°C <sup>2)</sup>		A++/A++	
Efficiency class, hot water/load profile <sup>3)</sup>		A/XL	
SCOP <sub>EN14825</sub> average climate, 35/55°C		5.2/4.0	5.2/4.1
SCOP <sub>EN14825</sub> cold climate, 35/55°C		5.5/4.1	5.4/4.3
Nominal heating output (P <sub>design,h</sub> )	kW	6	12
Heating capacity	kW	1.5–6	3–12
Output data according to EN 14511 nominal 0/35 – Capacity	kW	3.15	5.06
Output data according to EN 14511 nominal 0/35 – COP		4.72	4.87
Sound power level (L <sub>WA</sub> ) <small>according to EN 12102 at 0/35</small>	dB(A)	36–43	36–47
Rated voltage		230V~50Hz	
CO <sub>2</sub> equivalent refrigerant	tonnes	2.06	3.55
Height/width/depth	mm	1800/600/620	
Capacity of water heater	l	approx. 180	
Weight, complete heat pump	kg	200	230

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ – G. <sup>3)</sup> Scale for efficiency class, hot water: A – G.

## NIBE Ground source heat pumps Products

**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<sub>2</sub> 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.



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 <sup>1)</sup>		A+++/A++			
Product's efficiency class, room heating 35/55°C <sup>2)</sup>		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 (P <sub>design</sub> )	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 CO <sub>2</sub> 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

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ – G.

## NIBE Ground source heat pumps Products

### NIBE F1355

NIBE F1355 is an intelligent and powerful inverter controlled ground source heat pump. 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. With less than 5 tonnes CO<sub>2</sub> equivalent refrigerant volume per refrigeration module. Two compressors provide efficient output regulation and high reliability, making NIBE F1355 perfect for properties with larger heating requirements.



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
System's efficiency class, room heating 35/55°C <sup>1)</sup>		A+++/A+++
Product's efficiency class, room heating 35/55°C <sup>2)</sup>		A++/A++
SCOP <sub>EN14825</sub> average climate, 35/55°C		5.0/4.0
SCOP <sub>EN14825</sub> cold climate, 35/55°C		5.4/4.2
Nominal heating output (P <sub>designh</sub> )	kW	28
Heating capacity	kW	4-28
Output data according to EN 14511 nominal 0/35 – Capacity	kW	20.77
Output data according to EN 14511 nominal 0/35 – COP		4.55
Sound power level (L <sub>WA</sub> ) <small>according to EN 12102 at 0/35</small>	dB (A)	47
Rated voltage		400 V 3N ~ 50 Hz
CO <sub>2</sub> equivalent refrigerant	tonnes	Upper cooling module 3.55/Lower cooling module 3.90
Height/width/depth	mm	1800/600/620
Weight, complete heat pump	kg	375

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ – G.

# 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!

# NIBE Heat Pump Showcased As Centre Piece of Home



*There are many elements of a home that architects and designers try to hide or camouflage, but one visionary house builder has made his heating and hot water system a focal point in his hallway.*



## NIBE Ground source heat pumps *Case Study*

### Background

The combination of a new build project and the renovation of an old 18th century cottage seems like the ultimate building challenge. But one developer in Suffolk has found that it has given him the opportunity to create the home of his dreams.

Woodlands, is a combination of a two bedroom cottage and a one bedroom contemporary extension; a seamless example of how old and new can live effortlessly side by side.

And, to ensure the property had plentiful heating and hot water, owner and developer Mark Aldred chose to install two NIBE Ground Source Heat Pumps which allowed him to move away from his previous oil system and to future proof the home in terms of its energy source.

The NIBE F1155 systems were of the latest generation inverter driven type which are speed controlled and regulate output according to demand. This allows the heat pump to automatically adjust itself to the power demand of the property which results in optimal savings and reduced energy consumption as the heat pump always runs at the correct output all year round.

In an added twist, Mark has installed the system with the heat pumps on show in the central hallway of the new build part of the house to showcase the system and add another feature to his contemporary styled home.

### Solution

In order to support the merger of a 100sqm old cottage with a 153sqm new build two heat pumps were specified to deliver 18kw of power. They were fitted in a cascade format to ensure sufficient heating capacity was generated no matter what the requirements of the homeowner. 1200M of collector loops were laid horizontally to facilitate the system.

### Results

The installation is entirely suitable for the Government led Renewable Heat Incentive (RHI) programme and the predicted figures will be a little over £2700 per annum

Furthermore, the system will balance the heat in both parts of the property which have different demands. The new construction will benefit from under floor heating whilst the old cottage will enjoy the replacement of radiators in keeping with the style of the property and to comply with planning requirements.

# 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 320

NIBE SMO 20

NIBE SMO 40

## NIBE Air source heat pumps Products

### 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  $-20^{\circ}\text{C}$  and at the same time supplies up to  $58^{\circ}\text{C}$  in supply line temperature.



**A+++**

Energy efficiency class  $35^{\circ}\text{C}$   
package label for NIBE F2040

- Compact heat pump that adapts to your home's requirements.
- High capacity even down to  $-20^{\circ}\text{C}$ .
- 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 $35/55^{\circ}\text{C}$ <sup>1)</sup>		A+++/A++	A+++/A++	A+++/A++	A+++/A++
Product's efficiency class $35/55^{\circ}\text{C}$ <sup>2)</sup>		A++/A++	A++/A++	A++/A++	A++/A++
Efficiency class, hot water/load profile <sup>3)</sup>		A/XL - A/XXL			
SCOP <sub>EN14825</sub> Average climate, $35/55^{\circ}\text{C}$		4.8/3.5	4.4/3.3	4.4/3.4	4.5/3.4
P <sub>designh</sub> Average climate $35/55^{\circ}\text{C}$	kW	5.0/5.0	8.2/7.0	11.5/10.0	14.5/14.0
SCOP <sub>EN14825</sub> Cold climate $35/55^{\circ}\text{C}$		3.7/3.0	3.6/2.8	3.6/2.9	3.7/2.9
P <sub>designh</sub> Cold climate $35/55^{\circ}\text{C}$	kW	4.0/6.0	9.0/10.0	11.5/13.0	15.0/16.0
7/35 Heat capacity/COP, EN14511, nominal		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		50	54	57	61
Rated voltage		230 V 50 Hz, 230 V 2 AC 50 Hz			
CO <sub>2</sub> equivalent (hermetically sealed refrigerant circuit) <sup>4)</sup>		3.13	5.32	6.06	8.35
Height/width/depth		791/993/364	895/1035/422	995/1145/452	1450/1145/452
Weight (excluding packaging)		66	90	105	135

<sup>1)</sup> 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.

<sup>2)</sup> Scale for product's efficiency class, room heating A++ - G. <sup>3)</sup> Scale for efficiency class, hot water: A - G. <sup>4)</sup> NIBE F2040 does not require annual inspection in accordance with the F-Gas Regulation.

# Indoor and control modules

*The flexible indoor and control modules from NIBE provide efficient heating, and hot water supply. With our advanced technology, you will be able to control your indoor comfort from wherever you are.*

- *Intelligent integrated controller, advanced technology, easy to understand, simple to use.*
- *Control your comfort online and stay in touch with your system wherever you are via Uplink also available as an app.*

The NIBE VVM 320 indoor modules are all-in-one units that include a smart and user-friendly control system, water heater, electrical addition, self-regulating circulating pump, and further functions that will help you create an efficient indoor climate.

NIBE VVM 320 also includes the filling loop, pressure gauges, safety valves and expansion vessel, everything needed for the typical installation.

The control modules, NIBE SMO, provide a flexible solution that easily can be customised. System components such as water heaters, additional heat sources, and other accessories are chosen depending on the specific setup.

## NIBE VVM indoor module

### Heating

NIBE VVM 320 is equipped with the new generation controller for comfort, good economy and safe operation. Clear information about status, operating time and all temperatures in the system is shown on the large and easy to read display.

### Domestic hot water

The NIBE VVM 320 has a built-in DHW storage tank of 185 litres.

### Docking

The indoor unit is connected to the air source outdoor unit and your house heating distribution system. It is prepared for connection to a number of different products and accessories, e.g swimming pool and climate systems with different temperatures

	VVM 320
	
Compatible outdoor units	NIBE F2040-6/8/12
Electrical heater built-in	7 kW
Hot water volume, normal mode	240L @ 40C
Connection	Top
Dimensions H/W/D (mm)	1800/600/615
Net weight	146 kg

## NIBE SMO Control module

*NIBE SMO Control modules provide a flexible solution that you easily can 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 40 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 40
		
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	5,2 kg

# PEAR TREE MEWS



*A development of nine high specification, individual homes in a rural conservation area has proven to be the perfect setting for a range of NIBE air source heat pumps.*



## NIBE Air source heat pumps *Case Study*

### Background

A development of nine high specification, individual homes in a rural conservation area has proven to be the perfect setting for a range of NIBE air source heat pumps.

Pear Tree Mews in the centre of the village of Breedon on the Hill, Derbyshire was a small development constructed around the former yard, farm and farm buildings known as The Limes and was a sympathetic development in keeping with the aesthetics of the village.

Part of the planning consent granted by North West Leicestershire District Council was for the developers, Alexander Hastings Developments Ltd, to support a policy for renewable energy and carbon reduction and it was this condition that led to the sourcing and commissioning of nine NIBE air source heat pumps, one for each individual property, to manage hot water and heating supply to the homes.

### Solution

The project required the installation of 7 x F2040 8kW and 2 x F2040 12kW ASHP (tailored to property size) which were supplemented by SMO 20 intelligent control systems and Megacoil cylinders to meet domestic hot water needs and give a customised heating system.

The advanced air source heat pumps system works by harnessing natural energy stored in the outdoor air. Using a highly efficient vapour compression cycle the additional energy generated is used to supply hot water and heating for each of the new homes.

### Results

The systems were designed and installed by a NIBE VIP Installer, whose experience in this field allowed for a seamless system installation right from site survey through to commissioning and ongoing maintenance support.

The NIBE F2040 air source heat pumps fitted at Pear Tree Mews can operate at temperatures as low as -20°C and are particularly suitable for domestic applications.

# 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.

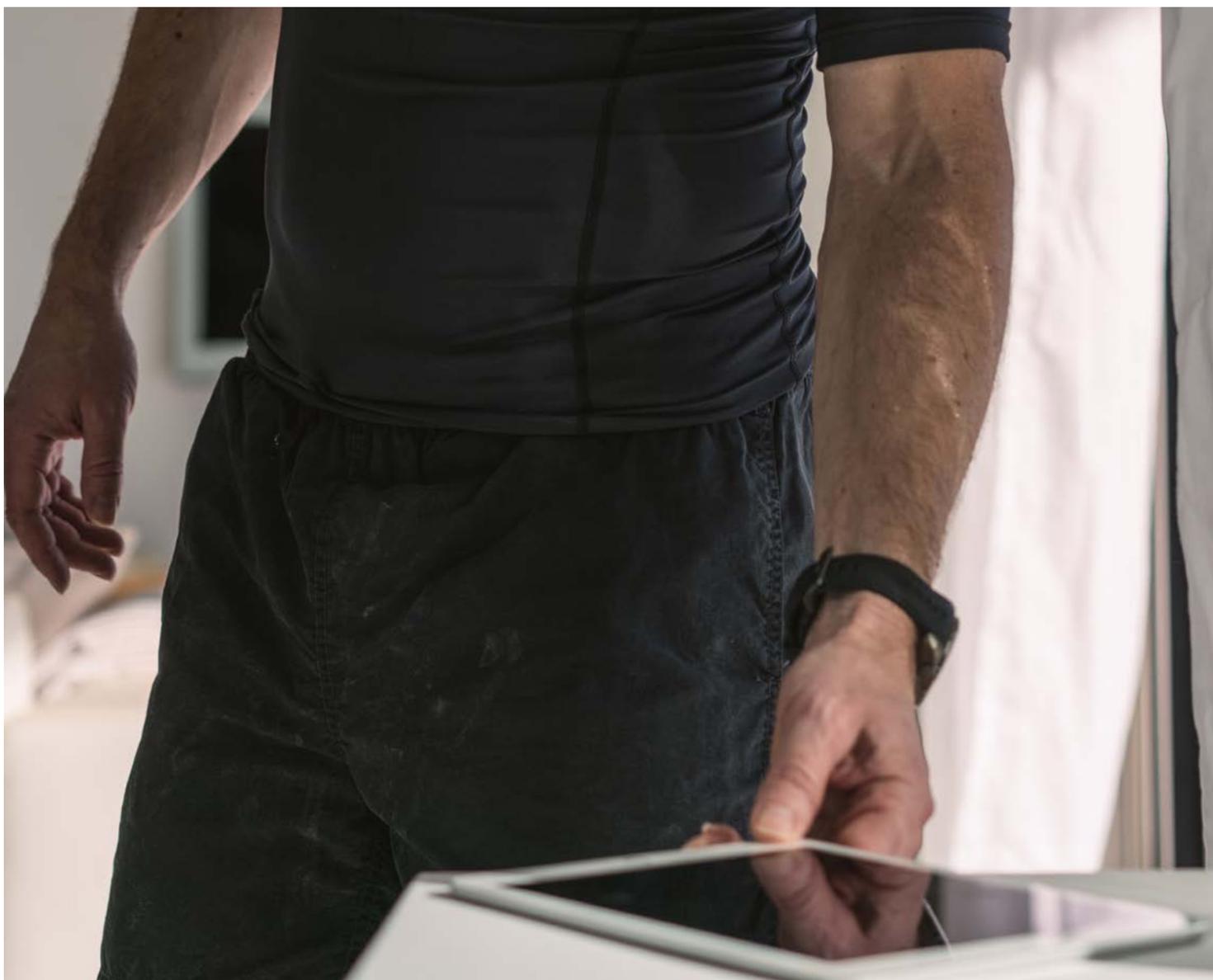


# Sustainable climate solutions for your individual journey



# A connected indoor system

*We strive to maximise the outcome of every product carrying the NIBE name, while always focusing on the system as a whole through connectivity and flexibility. Controlling everything with its software, the system allows you to integrate products within your home to create a balanced indoor climate with minimal impact on the environment.*



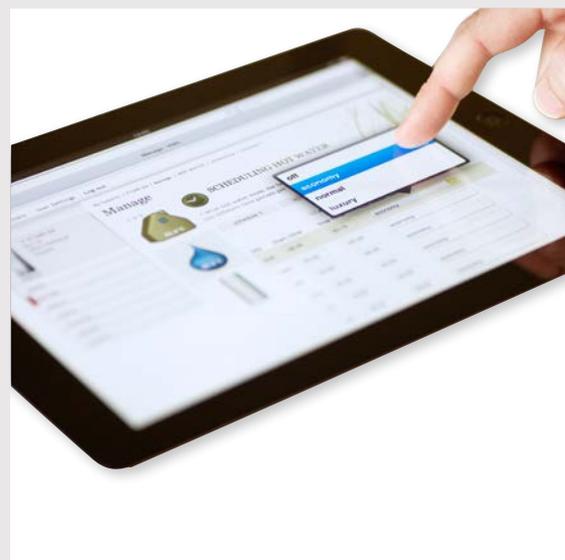
NIBE Heat pumps  
*Sustainable climate solutions for your individual journey*

NIBE UPLINK

*Freedom – anywhere, any time*

Using the Internet and NIBE Uplink you can get a quick overview and the present status of your heat pump and the heating in your property. You get a good overall view where you can follow and control your heating and hot water production. If your system is affected by an operational disturbance you receive an alert via e-mail that allows you to react quickly.

- *An efficient tool that gives you quick and easy control over your property's heat pump wherever you are.*
- *Clear, easy way of monitoring and controlling heating and water temperatures for maximum comfort.*
- *Provides logging of heat pump parameters presented in a user-friendly history chart.*

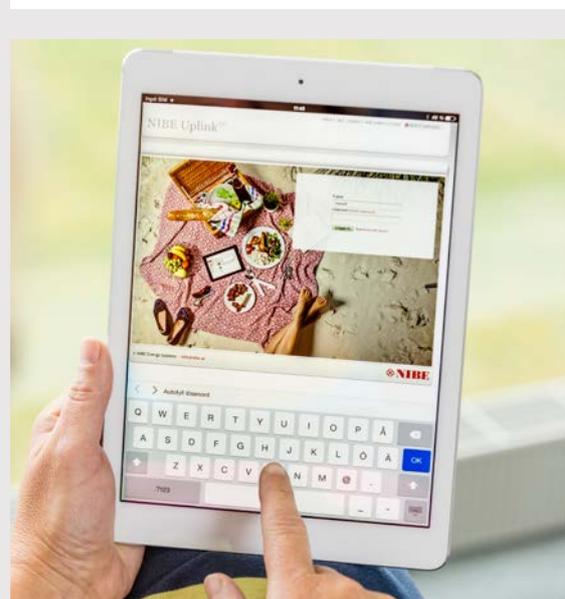


PUBLIC API

API functionality for external integration of e.g home management systems and BMS.

IFTTT

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



# 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 10-400  
NIBE ERS 20-250



## NIBE Heat recovery ventilation units

### Products

NIBE ERS 10-400 The heat recovery ventilation units ERS 10 and ERS 20  
 NIBE ERS 20-250 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 10 is normally used in homes with an area of up to approx. 300 m<sup>2</sup>, ERS 20 to approx. 200 m<sup>2</sup>.



- 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 10-400	ERS 20-250
Supply voltage		230 V ~ 50 Hz	
Fuse	A	10	
Driving power fan	W	170 x 2	100 x 2
Enclosure class		IP21	
Filter type, exhaust air filter		G4	
Filter type, supply air filter		F7	
Sound pressure label L <sub>W(A)</sub>	dB(A)	48 <sup>(1)</sup>	47.4/50 <sup>(2)</sup>
Ventilation connection	mm	Ø160	Ø125
Connection, condensation water drain	mm	G32	Ø15
Length, supply cable	m	2.4	
Length, control cable	m	2.0	
Height / Width / Depth	mm	900/600/612	241/1202/673
Weight	kg	40	25

# 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 300, VPBS 300  
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

## NIBE Hot water cylinders and buffer vessels *Products*

NIBE VPB/VPBS For a truly comprehensive installation, NIBE VPB 300 and VPBS 300, with their integrated design, are best combined with NIBE F1145. VPBS 300 has an easy-to-connect internal solar coil for heat exchanging energy from the solar panels into the hot water heater.



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 Hot water cylinders and buffer vessels *Products*

### 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 Hot water cylinders and buffer vessels

### Products

#### 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.





## 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](http://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*





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This brochure is a publication from NIBE Energy Systems. All product illustrations, facts and specifications are based on current information at the time of the publication's approval. NIBE makes reservations for any factual or printing errors in this brochure.

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