

ONE 12/25

Sustainability is in our nature

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NIBE AIR SOURCE HEAT PUMPS





Nature can be warm and comforting, but it can also be powerful and determined. It is our greatest source of energy and we depend on it to give life to everything around us.

The harsh Nordic environment, with its fluctuating climate, has shaped us and taught us how to adapt. Whether it's a cold winter's day or a warm summer afternoon, the temperature inside your home must be adjusted to ensure comfort at all times, whatever the weather.

Our wide product range provides cooling, heating, ventilation and hot water to your home, all with little impact on the environment, so that we can create a more sustainable future together.



Visit nibe.co.uk to view all our brochures



Help us to build a sustainable future

A large proportion of the carbon dioxide in the atmosphere originates from fossil energy sources for heating and hot water installations. Oil, coal and gas must be replaced by renewable energy sources to reduce the lasting damage to nature.

We value our Nordic heritage and, with nearly 70 years' experience of manufacturing climate solutions, we're inviting you to help us build a more sustainable future. By harnessing the renewable energy of nature and combining it with smart, innovative technology, we can offer efficient solutions that benefit everyone.







You reap multiple benefits when you replace fossil fuels with renewable energy. You get a more sustainable heating solution that helps you to reduce your carbon footprint. In addition, you can choose a more energy-efficient solution that can reduce your energy consumption and energy costs. You do both yourself and the environment a favour.

With a heat pump from NIBE, you can use the renewable energy from your surroundings to create a comfortable indoor climate. The heat pump offers immediate environmental returns in the form of reduced energy consumption and reduced emissions. The amount of electricity required is relatively low, as electricity is not the main source of power for the heat pump. Electricity

is only required to operate the heat pump, which utilises the renewable energy allowing you to save up to 75% of your energy costs for heating and hot water. With energy prices rising all the time, you will be very happy with your decision.



Welcome to our world of indoor comfort

With the power of nature and smart technology, we help you to create a pleasant indoor climate



The advantages of choosing an air source heat pump from NIBE



Sustainable

Our air source heat pumps use the power of nature to give a low environmental impact. They're designed to save energy for you without compromising on comfort. Together with an S-series indoor module, they automatically adjust your heating according to your habits and the weather forecast. Everything to give you cheaper, greener and more comfortable heating, now and in the future.



Peace of mind

Having NIBE as your supplier ensures you great peace of mind. We're a Swedish company that's been manufacturing sustainable climate solutions for 70 years. This means our products have been adapted to the challenges of the Nordic climate.



We have expert NIBE Pro installers all over the country who can help you to make a quick and smooth decision regarding purchasing a NIBE heat pump. If you would like to know more and get in touch with an installer near you, please visit find an installer on our website **nibe.co.uk** Our experts will answer your questions and give you all the help you need.



Say hello to the S series

Upgrade to sustainable and weather-adapted heating

When it's time for a new heat pump, choose real comfort. With the S series at the heart of your home, you get a pleasant indoor climate all year round, sustainable energy consumption, and full control from your mobile.

Suits all houses

Our intelligent and energy-efficient heat pumps in the S series adapt to the conditions of your house and your needs. This makes them suitable for all houses and easy to switch to. They always have the latest software and adjust the heating according to your habits and the weather fore-cast. All to give you cheaper, greener, and more pleasant heating, both now and in the future.

An investment you can feel confident in

The S series contains our most advanced products to date, and is the result of Swedish engineering skill. They are designed to meet tomorrow's challenges in technology and innovative design. Elegant and timeless, to blend in with the heart of your home. Made in Sweden for the challenges of the Nordic climate and to give you great comfort and low energy consumption – while you do nature a favour.

Advantages of the S series

Regardless of which S series heat pump you choose, you get:

- Wi-Fi connection with the possibility of connecting the heat pump to your smart home
- User-friendly touchscreen with colour display
- Temperature control according to weather forecasts
- Automatic software updates
- Voice assistant control support
- The option of adding smart wireless accessories for increased comfort



The key to your smart home

1 myUplink

Heating, hot water and ventilation can easily be controlled with an S-Series heat pump via the myUplink app.

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myUplink will notify if something happens. For example, it will alert you to any malfunctions via push messages from the app and by email.



Historical data and a number of intelligent services, such as voice control and IFTTT*, are also accessible, allowing several smart products to be connected to each other.











Always updated

myUplink makes it possible to update the software wirelessly, providing optimised operation with the latest functions.



Weather forecast control

With weather forecast control, the heat pump can adapt according to the weather forecast.



Extra comfort

Wireless accessories adjust the indoor climate automatically to optimise comfort levels using low energy consumption.



*IFTTT is a free-of-charge online service that enables you to get the most out of your smart home technology. Connecting products and services in your home ensures a high level of comfort.



The NIBE S-series

Air source heat pumps

Thanks to the endless supply of air - one of nature's free and renewable energy sources - you can create a pleasant indoor climate with a low environmental impact.

Heat pump technology is based on a very simple, well-known principle – the same one used in an ordinary refrigerator. By extracting heat energy from the outside air, even at lower temperatures, a NIBE air source heat pump can supply your home with heating and hot water. The process can also be reversed to provide cooling during the summer months.

A NIBE air source system consists of an outdoor module combined with an indoor or control module. They work together to create a complete climate system that's easy to install, run and maintain.

This system is compatible with other energy sources and you can easily install additional functions, such as ventilation and pool heating.





Air source heat pump **NIBE S2125**

NIBE S2125 is an intelligent, inverter-controlled air source pump. With NIBE indoor modules, it forms a very efficient climate system for your home. NIBE S2125 provides optimised savings as it automatically adapts to your home's output requirements all year around.

The NIBE S2125 has an optimised seasonal performance factor*, which results in low operating costs and high-performance hot water. The working area gives a supply temperature of up to 75°C. At an outdoor temperature down towards -25°C, it still delivers up to 65°C, while the noise level stays low. Available in two power sizes, 8 and 12.

Together with the NIBE S-series indoor module with built-in wifi connection and the possibility of wireless accessories, 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 high comfort and low energy consumption, while doing nature a favour at the same time.

- temperature of -25°C.
- New design for low noise level.



XXL Product's efficiency class and load profile for hot

water with NIBE VVM S320

NIBE \$2125		8	12			
Product's efficiency class 35/55°C ²⁾		A+++/A++	A+++/A+++			
System's efficiency class, room heating 35/55°C ¹⁾		A+++/A+++				
Efficiency class, hot water/charging profile ³⁾		Α/	A/XL			
SCOP _{EN14825} Average climate, 35/55°C		5,00 / 3,70	5,00 / 3,80			
P _{designh} average climate 35/55°C	kW	5,33 / 5,30	6,80 / 7,60			
SCOP _{EN14825} cold climate, 35/55°C		4,10 / 3,20	4,20 / 3,40			
P _{designh} cold climate 35/55°C	cold climate 35/55°C kW		8.4/8.4			
/35 Heat capacity/COP, EN14511, nominal kW		3,15/5,18	3,67/5,21			
Sound level (L _{WA}), _{EN12102 at 7/45, nominal} dB(A)		49				
Rated voltage		230 V	- 50Hz			
CO ₂ - equivalent (hermetically sealed refrigerant circuit) ⁴) tonnes		0,0024				
Height/width/depth	mm	1070/1130/820				
Weight (excluding packaging)	kg	150	160			

1) Scale for system's efficiency class, room heating. A+++ - G. Reported system efficiency takes the product's temperature regulator into account ²⁾ Scale for product's efficiency class, room heating A++ - G. ³⁾ Scale for efficiency class, hot water: A - G. ¹⁾ The NIBE S2125 does not require annual inspection in accordance with the F-Gas Regulation.

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 Optimised seasonal performance factor* and low operating costs. • Working range up to 75°C supply temperature and 65°C at an outdoor

*The NIBE S2125 has a rating of SCOP of 5.0 (Average climate, 35/55 °C) and SCOP of >4.1 (Cold climate, 35/55 °C) in accordance with European standard EN 14825:2018, i.e. the standard for determining the reference seasonal effect level, SCOP. Applies to S2125 -8 and -12.



Indoor module **NIBE VVM S320**

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 has a smart, user-friendly control system which provides efficient heating/cooling and hot water with high performance. The NIBE VVM S320 is ready for installation since the water heater, electric additional heat, self-regulating circulation pump, filling valve, manometer, safety valve and expansion vessel are included.

For more information on our indoor modules see pages 26-27.



Combine with a NIBE air source heat pump for an integrated system.



Smart, user-friendly control system.

User-friendly touch control and integrated wireless connectivity with energy saving smart technology for maximum comfort.

NIBE VVM		\$320
Additional power	kW	7 (1x230V)
Tap volume 40°C during Medium	I	210 I
Main features		Complete and plug-in solution for easy installations
Connection		Тор
Rated voltage	V	230V-50Hz
Height / Width / Depth	mm	1800/600/622
Weight ¹⁾	kg	R: 123
Compatible outdoor units		NIBE F2040-6 / F2040 -8 / F2040 -12 / S2125-8 / S2125-12

¹⁾Weight stainless steel excluding packaging and without water - 123kg



Control module NIBE SMO S40

The NIBE SMO S40 gives optimized control of the climate system and is designed to be combined with NIBE air source heat pumps to provide an integrated climate system for homes and 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 specific to a customised installation. Up to eight NIBE air source heat pumps can be connected to SM0 S40

flexibility.

NIBE SMO S40			
Controls up to		8 heat pumps	
External heat source		3 steps for electrical heater with mixing valve	
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 S2125-series, NIBE F2040-series,	
Accessories		Wide range including extra heating circuit, pool, solar, ventilation heat recovery unit, room display etc.	

Smart, user-friendly system with touch control for maximum

Multiple property solutions with up to eight NIBE air source heat pumps.

In combination with a NIBE air source heat pump - a part of the energy-saving home.

Heat recovery ventilation unit **NIBE ERS S10**

The NIBE ERS S10 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 m^2 .

The NIBE ERS S10 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.

Heat recovery ventilation unit with temperature efficiency and low energy consumption.

Together with NIBE VVM S320 it provides a solution in houses with balanced ventilation

A⁺ The product's efficiency class.

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⁾	А			
Supply voltage		230 V ~ 50 Hz		
Fuse	А	10		
Driving power fan	W	85 x 2		
Enclosure class		IPX1		
Filter type, exhaust air filter		ISO Coarse		
Filter type, supply air filter		ePM1 55%		
Noise Level $(L_{P(A)})^{2)}$	dB(A)	47		
Ventilation Ø	mm	160		
Condensation water drain		G32		
Length, supply cable	m	2.4		
Length, control cable	m	2.0		
Height / Width / Depth	mm	900/600/612		
Weight	kg	40		
¹⁾ Scale for efficiency class: A+ to G. ²⁾ 295 m ³ /h (82 l/s) at 50 Pa				



Wireless accessories for the S series.



RMU S40 Wireless display, temperature and humidity sensor

The NIBE RMU S40 is a wireless*/wired room unit with a 2.8" touch screen and built -in temperature and humidity sensors. It can be used for remote control and monitoring of a NIBE S series heat pump, as a supplement to the myUplink app in your smartphone or tablet. The room unit is easy to position and simple to use with an intuitive interface. The room unit also enhances the signal between smart home products when these are located at a distance from each other.

*Requires external power source, micro USB, purchased separately.



pump.

RPP 10 Repeater



Plug in the repeater and connect it to your NIBE S-series heating installation.

SRV 10 Smart radiator valve

pump.



CDS 10 Wireless CO₂, temperature and humidity sensor

This wireless sensor allows reading of the CO₂, temperature and humidity level in a room or climate zone using the myUplink app. For NIBE S-series heating installations with ventilation the indoor comfort level can automatically be adjusted to provide a comfortable indoor climate. For example, ventilation can be increased and the CO₂ level decreased when there are a lot of people present, or lower the ventilation to further reduce energy costs. Because it is battery powered, it is easy to install, but it can also operate with an external power source using a micro USB.

Mount the thermostat in the room and connect it to the NIBE S-series heat and ventilation installation.

THS 10 Wireless temperature and humidity sensor



This wireless sensor allows reading of the temperature and humidity in a room or climate zone using the myUplink app. The current room temperature is visible, along with the option to alter it in °C. THS 10 replaces the fixed indoor sensor. Because it is battery powered, it is easy to install.

Mount the thermostat in the room and connect it to the NIBE S-series heating installation.



ROT 10 Wireless room thermostat

The wireless room thermostat allows reading and controlling of the temperature of a room or a climate zone from the display of the room thermostat or via the myUplink app in your smartphone. For instance by increasing the ventilation when guests are present, or lower the ventilation for better savings when the home is empty. Because it is powered by a rechargeable battery, it is easy to install.

Mount the thermostat in your room and connect it to your NIBE S-series heat

Enhances the signal, improving communication between the smart home products when they are placed at a distance from each other. For NIBE S-series heating installations, the repeater functions as a switch, providing the opportunity to control it remotely, schedule On and Off times and

This wireless smart radiator thermostat allows temperature reading and controlling of individual rooms. Compatible with NIBE S-Series products, ensure maximum comfort levels using time and temperature zone control. Because it is battery powered, it is easy to install.

Fit the valve onto the radiators and connect it to your NIBE S-Series heat

The NIBE F-series

NIBE F2050

NIBE F2050 is an intelligent, compact and inverter-controlled air/water heat pump with climate-friendly refrigerant. NIBE F2050 provides optimised 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. The effective cooling function allows the heat pump to deliver a comfortable indoor climate even at high outdoor temperatures. It also has a climate-friendly refrigerant to provide less impact on the environment. Available in two sizes, F2050-6 and F2050-10.

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





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Energy efficiency class package label, 35 °C

A++

Energy efficiency class package label, 55 °C

NIBE F2050		6	10	
System's efficiency class, room heating 35/55°C $^{\ensuremath{^1}}$		A+++/A++		
Product's efficiency class 35/55°C ²⁾		A+++/A++	A++/A++	
SCOP _{EN14825} Average climate, 35/55°C		5.08 / 3.58	4.6 / 3.4	
P _{designh} Average climate 35/55°C	kW	5.20 / 5.60	6.3 / 6.5	
SCOP _{EN14825} cold climate, 35/55°C		4.10 / 3.05	3.9 / 2.9	
P _{designh} Cold climate 35/55°C	P _{designh} Cold climate 35/55°C kW		6.5 / 6.2	
7/35 Heat capacity/COP, EN14511, nominal kW		2.64/5.42	4.00/5.33	
Sound level (L _{wA}), EN12102 at 7/45, nominal dB(A)		53	53	
Rated voltage V		230 V 50 Hz, 23	30 V 2 AC 50 Hz	
$\rm CO_2$ - equivalent (hermetically sealed refrigerant circuit) ⁴ tonnes		0.88	1.24	
Height/width/depth mm		791/993/383	905/1035/422	
Weight (excluding packaging) kg		76	83	

¹⁾Scale for the system's efficiency class, room heating: A+++ to G. Reported system efficiency takes the product's temperature regulator into account. ²⁾Scale for the product's efficiency class, room heating A+++ to D. ³⁾Scale for efficiency class, hot water: A+ to F. ⁴⁾NIBE F2050 does not require annual inspection, in accordance with the F-Gas Regulation.

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Compact and Quiet

Nominal sound power as low as 53dB(A), despite a small installation footprint

Extremely Efficient

Excellent seasonal performance factor for low operating costs.

Connectivity

Part of the NIBE S-Series range when paired with an SMO S40 or VVM S320 indoor module.

Reduced Global Warming Potential

R32 refrigerant for reduced environmental impact

Heat recovery ventilation unit **NIBE ERS 20-300**

The heat recovery ventilation units ERS 10 and ERS 20 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 $m^2\!,$ ERS 20 to approx. 200 $m^2\!.$

The product's efficiency class.



Provides a complete exhaust and supply air solution for NIBE ground source or air/water heat pump.

ERS is controlled via the ground source heat pump / indoor module, which means that all the measurement values are visible in the main product's display

NIBE ERS 20-250 230 V ~ 50 Hz Supply voltage Fuse А Driving power fan 100 x 2 W Enclosure class IP21 Filter type, exhaust air filter G4 Filter type, supply air filter F7 dB(A) 47.4/50(2 Noise Level L_{W(A)} 0125 Ventilation connection mm Connection, condensation water drain 015 mm 2.4 Length, supply cable m 2.0 Length, control cable m 241/1202/673 Height / Width / Depth mm 25 kg Weight

¹⁾287 m³/h (80 l/s) at 50 Pa

²⁾105 m³/h at 50 Pa / 250 m3/h at 140 Pa (at 1 m)





Indoor Modules - Air source heat pumps from NIBE



Indoor control modules and hot water

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

The NIBE VVM S320 indoor module is an all-in-one unit 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.

The NIBE VVM S320 also includes a filling loop, pressure gauges, safety valves and an expansion vessel; everything that is needed for the normal installation.

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

For technical information see page 16.

NIBE SMO Control Modules

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, cooling and hot water supply. It handles one heat pump and has a range of accessories. Onboard functionality supports control of the charge pump, 3-step addition both for heating and hot water, main circulator pump, a switching valve for hot water and an AUX relay.

Choose the right NIBE SMO for my home

	NIBE SMO S40
	+100
Compatible outdoor units	
Controls up to	8 heat pur
Self-regulating circulator pump	
External heat sources	3 steps for electrical heater valve Allowes prioritized h
Accessories	See nibe.c
Dimensions H/W/D (mm)	350/540/
Net weight	5 kg

- 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 myUplink or Uplink also available as an app.
- Smart Energy Source function with NIBE VVM and NIBE SMO S40 for optimal integration of prioritised heating sources.

The more advanced NIBE SM0 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.

NIBES	M0 20		
All sizes of: NIBE S2125, NIBE F2040			
	1 heat pump		
Available in 2 sizes, CPD11			
mixing	3 step electrical heater		
6			
	Room sensor		
	410/360/110		
	4,3 kg		
of: NIBE S2125, Ni ilable in 2 sizes, Cl mixing	EE F2040 1 heat pump 2D11 3 step electrical heater Room sensor 410/360/110 4,3 kg		



HOT WATER CYLINDERS & BUFFER VESSELS **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.



Smooth coil to resist limescale deposits



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Specifically designed for NIBE air source heat pump range



High grade stainless steel with 25 year guarantee

| NIBE HA-WH5 megacoil                  |         | 160      | 200      | 200 Solar | 300      | 300 Solar |
|---------------------------------------|---------|----------|----------|-----------|----------|-----------|
| Volume                                | Litre   | 148,5    | 179      | 174       | 271      | 267       |
| Volume, charge coil                   | Litre   | 8,1      | 8,5      | 8,5       | 10,6     | 8,8       |
| Net weight                            | kg      | 42       | 45       | 49        | 59       | 61        |
| Equivalent amount of hot water (40°C) | Litre   | 198      | 234      | 232       | 361      | 356       |
| Max pressure, primary side            | bar/MPa |          |          | 3/0.3     |          |           |
| Max pressure, water heater            | bar/MPa | 5,5/0,55 |          |           |          |           |
| Max recommended heat pump size        | kW      |          |          | 12        |          |           |
| Efficiency class*                     |         | В        |          | (         | 2        |           |
| Height/Diameter                       | mm      | 971/585  | 1129/585 | 1135/585  | 1608/585 | 1609/585  |

<sup>1)</sup>Scale for efficiency class: A+ to G.

# **NIBE UKV**

NIBE UKV 40, 100, 200, 300, 500, 750 and 1000 are buffer tanks used together with heat pumps to increase the volume of water in the system for more stable operation.



Product's efficiency class for NIBE UKV 40

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|                                   |       | 40 | 100 | 200 | 300 | 500 | 750 | 1000 |
|-----------------------------------|-------|----|-----|-----|-----|-----|-----|------|
| Efficiency class <sup>1)</sup>    |       | В  |     | (   | 0   |     |     |      |
| Max. temperature in the tank      | °C    | 9  | 5   |     |     | 85  |     |      |
| Max. working pressure in the tank | (bar) |    | 6   |     | 1   | 0   | 3   | 3    |
| Weight                            | kg    | 16 | 31  | 61  | 83  | 110 | 170 | 200  |
| Volume                            | litre | 39 | 98  | 218 | 296 | 496 | 741 | 992  |

<sup>1)</sup>Scale for efficiency class: A+ to G.

### HOT WATER CYLINDERS & BUFFER VESSELS

Volume expansion for the heating

For a highly efficient and safe climate system without heat spikes

Chilled water options for NIBE UKV 200 and NIBE UKV 300 for systems with active cooling





### Passivhaus Self-Build, Nottinghamshire **NIBE F2040 Air Source**

When the chance to buy a building plot with planning permission came up, Dominic and Shamim Byrne decided it was time to act on a long-held ambition and build their own home. The couple had no previous building experience but conducted extensive research on the Passivhaus standard and on the best contractors and equipment suppliers.

As a writer on global energy markets and climate change, Dominic was very conscious of the importance of energy efficiency and the shortcomings of the UK's existing housing stock. He also believed that most new homes were still falling far short of standards that should easily be achievable by developers. The couple set themselves the target of building a house that would set the very highest quality and energy efficiency standards at a per square metre cost that would be less than a new house on the open market.

A key part of the answer was to go back to the planners to gain permission for a modified design that incorporated Passivhaus principles. The final design reorientated the house on the site to optimise solar gain and slightly increased the volume and footprint of the house to improve its thermal performance. Importantly, it also drastically simplified the roof design, eliminating six previously planned dormers, and the associated likelihood of cold bridges, in favour of a simpler roof structure with just two, larger dormers on the southfacing slope.

The property was also constructed as an 'upside down' house with living, library, kitchen and dining areas upstairs and four bedrooms, two bathrooms and a second kitchen downstairs. The upstairs area is an open plan design with elevated views across the local countryside and townscape. The building's thermal efficiency is achieved by a 350mm depth of insulation in the walls (400mm in the vaulted ceiling roof) and airtightness that is not only many times better than building regulations standards, but comfortably

improves on the Passivhaus target. Dominic project-managed the construction himself using a mix of local trades and national suppliers.

The Passivhaus design keeps the need for space heating to a minimum, but what little is needed, as well as the hot water, is provided by a NIBE F2040 6kW air source heat pump (ASHP), with a 200 litre Megacoil HWC linked to a fully zoned underfloor heating system on the ground floor. The zonal control enables any required winter heat for the upstairs to come from the downstairs hallway with heat rising up the stairwell. These were expertly installed by Trusted Energy Solutions alongside a water to air heat exchanger linked to the heat pump that can give an alternative space heating option to maximise control and flexibility.

The excellent airtightness means that good ventilation is important. This is achieved by a NIBE ERS 10-500 mechanical ventilation with heat recovery (MVHR) system.



Docked alongside and controlled by the ASHP (and combined with NIBE Uplink and internet service), the compact and easy to install ERS 10 ventilates the property and can recycle up to 92% of heat in the air, helping to drive down energy consumption and increase the efficiency of the heat pump. This is further supplemented with a solar PV array on the south-facing side of the roof.

The finished project is a 169m2 home, plus a separate large double garage and workshop, adding another 50sqm. The total spend, including the cost of the plot and professional fees, worked out at around £2,800 per sq metre. That's some 25% less than the typical per sq metre cost noted down by Dominic for new build houses advertised for sale locally at the start of the project.

This lower cost was achieved while maintaining a top-level finish, whether it be the choice of construction materials, the selection of kitchen and bathroom equipment, or extras, such as a central vacuum system and external venetian blinds that further set the home apart from those built for the open market.

in the home.

area.

And the house also delivers impressively on its energy efficiency goals. It has a heating load of 9.8W/m2 (≤10 W/m2 required by Passivhaus standards), a primary energy demand (nonrenewable) of 109kWh/m2 (≤135kWh/m2 required by Passivhaus standards) and an airtightness of 0.34 air changes per hour (ACH) (≤0.6 ACH required by Passivhaus standards).

This enables the ASHP to perform at a staggering seasonal performance factor (SPF) of 4.12, meaning every unit of electricity consumed is outputted as heat energy at more than four times the input value. This can be further fine-tuned through the "userfriendly" control panel and NIBE Uplink service, providing key information on the heat pump and associated systems, and enabling full monitoring, control and optimisation of the ventilation, heating and hot water production

Finally, as a testament to the project and its execution, Dominic and Shamim's home has become not only Passivhaus certified, but the first officially certified Passivhaus in the local





### Why use a NIBE Pro Installer?

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

Our installers will assist you in choosing the right NIBE system to meet your heating needs, ensuring your heat pump is installed correctly so it can perform to its full potential.

| P.G | NIBE product trained                                 |
|-----|------------------------------------------------------|
|     | Offer extended warranties                            |
|     | Experienced fitting NIBE technology                  |
|     | Offer full home solution                             |
|     | MCS certified, giving you<br>access to the BUS Grant |





## Every day, we work to make the world better

Right from the start, we have been committed and focused on developing new methods for better energy efficiency. In this way, NIBE plays an important role in the global transition to a more sustainable society. And we're proud of that.

We also know how complex the issue of sustainability is and how important it is to act responsibly as a company when it comes to our own employees and suppliers, and the impact our products have on the climate and society around us throughout their life cycle - a task we take very seriously.

#### Sustainability in different areas

We work with business responsibility throughout our entire value chain, and ethics is an important part of our business. As a customer, you should be able to trust us. Environmental responsibility is also an important part of our entire processing chain, which begins with our suppliers and ends with you, the customer. This means that we strive to reduce the environmental and climate impact of our products throughout their entire life cycle.

The key to achieving our goals today and in the future is also to be able to retain and attract new, competent, committed employees. As part of society, we must also act responsibly as a company, for example by engaging in social projects, both locally and globally.

### We support the UNGC and the goals adopted by the UN as part of the 2030 **Agenda for Sustainable Development**

Since 2014, NIBE has been committed to following the 10 principles of the United Nations Global Compact (UNGC). The UNGC is a voluntary initiative based on commitments from company management to implement sustainability principles and actively enter into a partnership to support the UN's long-term goals.

In September 2015, the member states of the UN adopted the Sustainable Development Goals (SDGs). The 17 sustainability goals guide every member's commitment in establishing a clear plan and, by 2030, taking the necessary measures to create long-term sustainable development, end extreme poverty, combat the climate crisis and reduce inequalities and injustices in the world. We have chosen to work primarily with 6 of the 17 global goals set out in Agenda 2030.

#### NIBE's commitment to Agenda 2030

| ×  | 7  | Increase the proportion of products based<br>energy-efficient and clean energy solution                                       |
|----|----|-------------------------------------------------------------------------------------------------------------------------------|
|    | 8  | Promote a safe and secure working enviro conditions in both their own activities and                                          |
|    | 9  | Make production more sustainable by usin technologies, and providing resources for                                            |
|    | 11 | Provide resource-efficient and climate-ada<br>to sustainable cities and secure infrastruc                                     |
| 60 | 12 | Apply sustainable methods of chemical ma<br>Economise resources, minimise waste, rec<br>transparently in our reporting cycle. |
|    | 16 | Respect and maintain national and cross-l<br>corruption. Create systems for internal co<br>principles.                        |

on renewable energy and meet the market's need for ٦S.

nment, protect workers' rights and ensure decent working l in the supply chain, along with protecting jobs and growth.

g resources efficiently, using clean and eco-friendly research and development.

apted components, products and solutions that contribute cture.

anagement and reduce emissions to air, water and soil. cycle and reuse more. Report sustainability information

border legislation, and actively work against all forms of ntrol of compliance with legislation and ethical business



### Read more about our sustainable energy solutions at www.nibe.co.uk

### Ground source heat pumps

Ground source heat is stored solar energy harvested from deep within the ground, the bottom of lakes or just a few metres below your lawn. With a ground source heat system, you can create a pleasant indoor climate, and not only supply your home with heating and hot water but also cool it down on warm summer days. This kind of renewable energy means that you can lower your energy bills AND help the planet at the same time.

### Air source heat pumps

With the help of an air source heat pump, you can keep your home warm in winter and cool in summer, while lowering your energy bills at the same time. By harnessing one of nature's free and renewable energy sources, you can create a pleasant indoor climate with a low environmental impact.

### Exhaust air heat pumps

By installing an exhaust air heat pump, you can easily and effectively supply your home with heating, hot water and ventilation. Create a pleasant indoor climate by reusing the energy from the warm air as it passes through your ventilation system.

#### Solar panels

Start generating your own energy with solar products from NIBE. Plus, connecting the system to your intelligent heat pump will multiply the energy you harvest. By integrating the products in one system, you can reduce your energy bills and use renewable energy effectively.

#### Water heater

NIBE has been creating water solutions for over 60 years. Our complete range of hot water solutions complements our selection of heat pumps.



# Sustainable energy solutions since 1952

For over 70 years, NIBE has been manufacturing energy-efficient and sustainable climate solutions for your home. It all started in Markaryd in Sweden and we value our Nordic heritage by harnessing the power of nature. We combine renewable energy with smart technology in order to offer effective solutions so that together we can build a more sustainable future.

Whether it's a chilly winter's day or a hot summer's afternoon, we need a well-balanced indoor climate for a comfortable everyday life, whatever the weather. Our wide range of products supplies your home with cooling, heating, ventilation and hot water, so that you can create a pleasant indoor climate with a low impact on nature.

NIBE Energy Systems Ltd

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