

NIBE AIR SOURCE

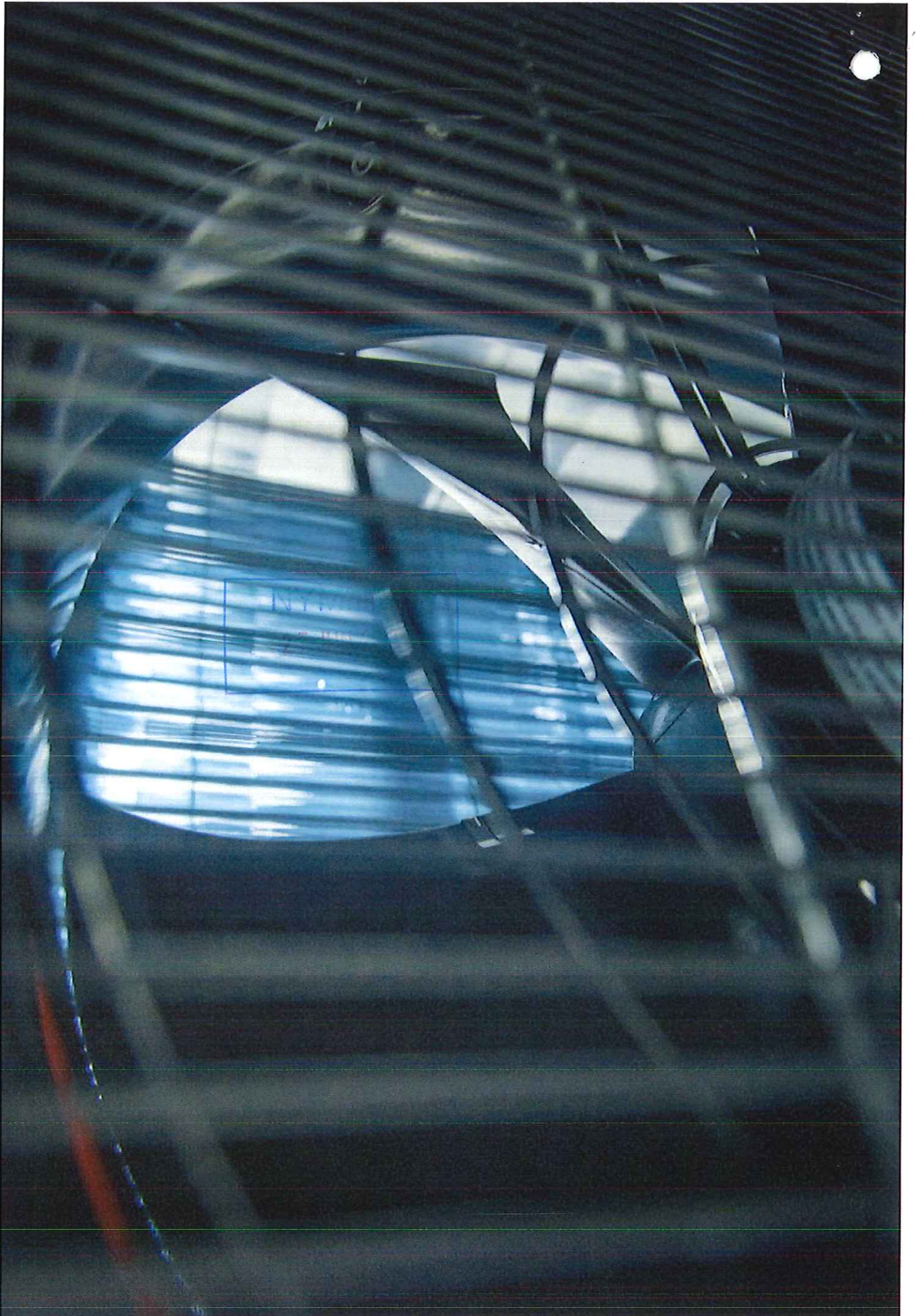


 **NIBE**

NYMNP
27 JUN 2017

NIBE Air source heat pumps

**CAPTURE FREE ENERGY
FROM THE OUTSIDE AIR**



FREE ENERGY, ANYONE?

Look out of your window and what do you see?
The street, the house opposite, the trees and fields?
What we at NIBE see is a free source of energy – the air.

Believe it or not, you can actually use the outside air, one of nature's totally free gifts, to heat, and indeed cool your home. Even at sub zero temperatures, ambient air contains heat and when you concentrate that heat using a NIBE air source heat pump, you can get enough out of it to heat up both your home's water-based radiators (or underfloor heating) and domestic hot water.

It's amazing, but true. We know, because we've already been using heat pump technology in Sweden for over 30 years.



NYMNP
27 JUN 2007

WHY CHOOSE A NIBE AIR SOURCE HEAT PUMP?

You save money

An air source heat pump makes heating your home and hot water much cheaper. You can reduce your heating costs by up to 65%, although the exact figure depends on several factors such as where you live, the size of your house and the fuel you are replacing.

The initial investment is relatively low since an air source heat pump, unlike a ground source heat pump, does not require any drilling.

And the efficiency of NIBE's heat pumps positively impacts the speed with which you recover your investment. With energy prices continually rising, you're unlikely to regret your decision. In fact, you'll start enjoying savings from the first month.

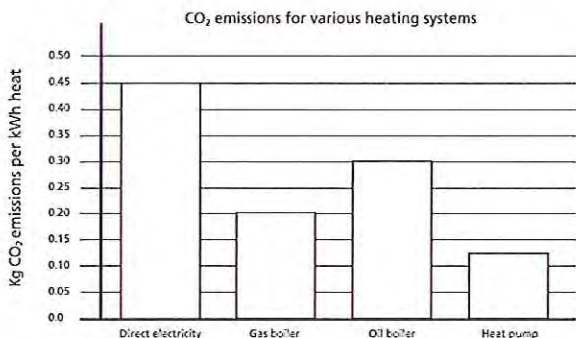
You reduce CO₂ emissions

Another very good reason for choosing a NIBE air source heat pump is that it has a very low environmental impact. In fact, installing a NIBE air source heat pump can cut your home's CO₂ emissions in half. This is mainly because there is no combustion process involved; the heat pump merely upgrades naturally occurring energy from the air outside to heat your home and hot water.

This leads to much lower CO₂ emissions than any traditional fossil-fuel based heating system, and explains why NIBE air source heat pumps are classified as a renewable energy source.



Wherever you live, you can install an air source heat pump and enjoy efficient, safe, problem-free heating and domestic hot water at a fraction of the alternative cost and a fraction of the environmental impact.

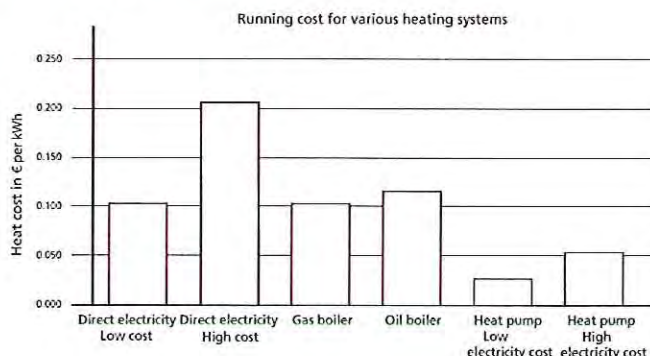


How do NIBE air source heat pumps compare with traditional boilers?

To put it simply, they're three times more efficient! With conventional oil and gas boilers, 1 kWh of input energy provides less than 1 kWh of output energy. Using a NIBE air source heat pump every 1 kWh of input energy is converted into an average of 3 kWh of output energy. There is no escaping the obvious conclusion – a heat pump is the absolute best way to get low cost heating and hot water.

Consider this

If all the approximately 1 million new houses built in Europe installed heat pumps, we would be saving over 3 600 000 tonnes of CO₂ emissions per year. That's the equivalent of taking about a million cars off the road!



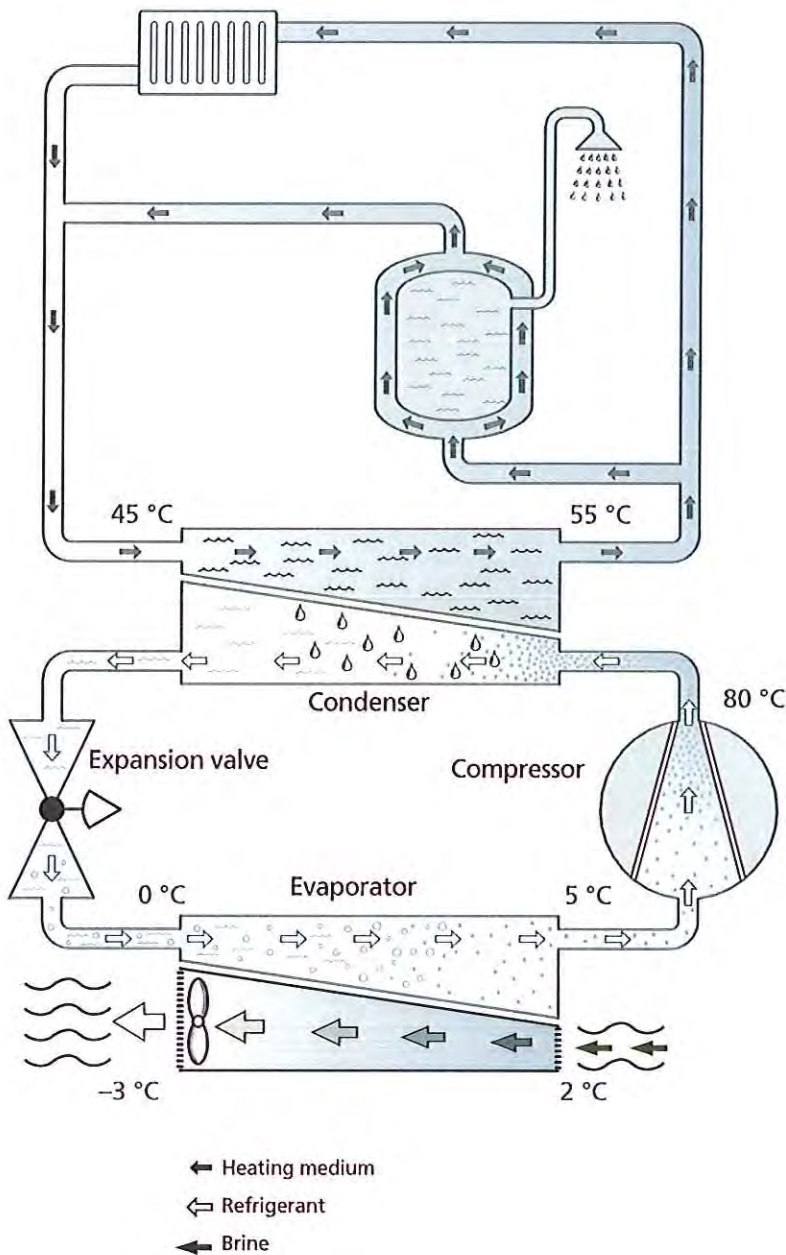
MORE GOOD REASONS TO INSTALL A NIBE AIR SOURCE HEAT PUMP

- NIBE air source heat pumps are easy to install, operate and maintain.
- They can be installed on almost any kind of terrain.
- They can be combined with a variety of different energy sources, depending on availability and price.
- Ideal for underfloor heating and water-filled radiators.
- No natural gas supply, flues, ventilation, or chimney are needed.
- NIBE air source heat pumps give you clean and discreet heating.
- They are built to last so you can relax and enjoy cost-effective, hassle free heating for years to come!



HOW DO YOU GET HEAT FROM COLD AIR?

Heat pump technology is actually based on a very simple, well-known principle. It works in a similar way to any domestic refrigerator, using a vapour compression cycle.



The main components in the heat pump are the compressor, the expansion valve and two heat exchangers (an evaporator and a condenser).

A fan draws the outdoor air into the heat pump where it meets the evaporator. When the outdoor air hits the evaporator the refrigerant will turn into gas.

Then, using a compressor, the gas reaches a high enough temperature to be transferred in the condenser to the house's heating system. At the same time the refrigerant reverts to liquid form, ready to turn into gas once more and to collect new heat.

The electrical energy to drive this process compared to the heating energy that is given to the house has a seasonal factor of about 3. This means that if you use 15,000 kWh for heating and domestic hot water after installation you only need about 5000 kWh. The exact saving depends on the climate and whether you have a low, medium or high temperature heating system. Let us make a calculation based on your house and needs.



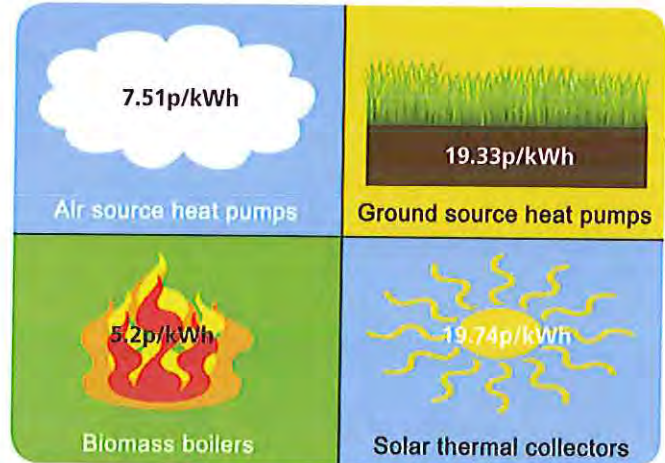
WHAT IS THE RENEWABLE HEAT INCENTIVE?

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, biomass or solar thermal 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). If you received a grant towards the cost of your system under the Renewable Heat Premium Payment (RHPP), this will be deducted from your RHI payments.

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.



References

*Actual figure £821.96 a year (£5,753.72 in total over the seven-year scheme). Based on a total annual energy demand of 15,000 kWh, system coefficient of performance (SCOP) of 3.7 and air source heat pump tariff payments of 7.51 p/kWh

Example

A NIBE air source heat pump fitted in a typical three-bedroom home could generate RHI payments of more than £820 per year (which works out as around £5,740 over the seven-year scheme)*

Who is eligible?

Anyone who retrofits an air source or ground source heat pump, biomass boiler or solar thermal system 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.



NIBE AIR SOURCE HEAT PUMPS
& ACCESSORIES

NY-NFA
27 JUL 2011

NIBE AIR SOURCE HEAT PUMP MONOBLOC RANGE

NIBE™ F2040

NIBE™ F2300

The new NIBE monobloc air source range consists of NIBE F2040 for residential use and NIBE F2300 for large properties and commercial use. Much effort has been made to create attractive system combinations.

The NIBE products have been developed with special attention to make the installation as smooth as possible. For example together with the outdoor unit we always include anti-vibration water connections. A broad accessory programme is available and a large number of recommended possible combinations.



Certificate number: MCS HP0003
Heat pumps

NIBE™ F2040



The NIBE monobloc air source range consists of the new NIBE F2040-8,12 and 16 for residential use.

The F2040 are new air source outdoor units that are particularly suitable for residential buildings. Great effort has been made to create attractive system combinations.

NIBE F2040

Max outgoing heating medium temperature	58 °C
Refrigerant quantity (R410A)	2.55/2.9/4.0 kg
Height (incl. feet)	900/995/1450 mm
Width	1025/1145/1145 mm
Depth	420/450/450 mm
Weight	90/105/135 kg

Models

Voltage	230 V~ 1-phase
NIBE F2040-8	
NIBE F2040-12	
NIBE F2040-16	



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NIBE™ F2300



The NIBE monobloc air source programme consists of the NIBE F2300, for large properties and commercial use.

F2300-14 and -20 are two air source outdoor units that are particularly suitable for large residential or commercial buildings. Great efforts have been made to create attractive system combinations.

Special attention has been given to minimizing the noise level. F2300-20 kW is one of the quietest units available on the market.

NIBE F2300

Heating systems up to	65 °C
Heating working range, outdoor temperature	-25 °C – +40 °C
Height (incl. feet)	1385 mm
Width	1455 mm
Depth	620 mm
Weight	225/230 kg

Models

Voltage 400 V~ 3-phase
NIBE F2300-14
NIBE F2300-20

NIBE™ SMO 20/40



NIBE SMO 20/40 is an advanced control module that supports a broad range of different hydraulic schemes. NIBE SMO 20/40 enables you to combine a NIBE air source heat pump with other equipment and create your own customised heating system. Start with one NIBE air source heat pump; if you need more power, you can install as many as nine NIBE air source heat pumps together in the same system. The addition of NIBE SMO 20/40 intelligent control module allows your NIBE air source heat pump to work smoothly in a variety of ways. For example:

- Connected to another heating system such as gas, oil, electricity or district heating.
- Connected to a NIBE water heater of the size required to meet your domestic hot water needs.
- If you have a swimming pool, NIBE SMO 40 can connect your heat pump to your pool and heat that too.
- Systems controlled by NIBE SMO 40 can also incorporate solar panels, enabling you to use solar energy as a complementary heat source when available.
- Multicolour display with user instructions and multilingual support
- Controlled charge pump as accessory from NIBE.
- Heating, cooling, pool heating, step controlled extra heat source.
- Clear information about status, operating time and all temperatures in the system is shown on the large and easy-to-read display.
- NIBE SMO is compatible with NIBE Uplink

FLEXIBLE SYSTEM SOLUTIONS

NIBE SMO 20/40 system

Outdoor unit	Indoor unit
NIBE F2040-8	NIBE SMO 20/40
NIBE F2040-12	NIBE SMO 20/40
NIBE F2040-16	NIBE SMO 20/40
NIBE F2300-14	NIBE SMO 20/40
NIBE F2300-20	NIBE SMO 20/40

FREEDOM – ANYWHERE, ANY TIME

NIBE UPLINK™

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.



NIBE Uplink also gives you the opportunity to control comfort in your property no matter where you are. **We call it NIBE freedom.**



- NIBE introducing a new, efficient tool that gives you quick and easy control over your property's heat pump – wherever you are.
- A web interface over the Internet offers you an instant view of e.g the temperature and current status of the heat pump in your property.
- Provides the benefit of external monitoring for several properties at the same time.
- Clear, easy way of monitoring and controlling heating and water temperatures for maximum comfort.
- In the unlikely event of a system malfunction you receive an alarm directly in your mail, allowing you to respond in the fastest possible time.
- Simple installation with a "click" of an ethernet cable.
- Provides logging of heat pump parameters presented in a user-friendly history chart.

New

- API functionality for external integration of e.g home management systems and BMS
- NIBE Uplink app for compatible smart phones



WHAT MAKES THE NIBE™ F2040 SUCH AN EFFICIENT AND VERSATILE HEAT PUMP?

1 Silent operation

Carefully-selected components ensure a low sound power level of F2040.

2 Compressor control

High efficiency at low ambient temperatures. The compressor is operated and controlled in such a way as to be efficient even at low ambient temperatures.

3 Hard-wearing materials

The NIBE F2040 heat pump is constructed using particularly hard-wearing materials to guarantee long service life even in harsh outdoor conditions.

4 Discreet design

The NIBE F2040 has a neutral appearance with compact dimensions which blend unobtrusively in with the surroundings outside your house.

5 Robust condensation water solution

The condensate water produced during the defrost operation is gathered in a built-in tray and can be transferred one to six metres to a collection point using the KVR 10 accessory.

6 Flexible system solutions

NIBE offers a choice of ready-made combinations with indoor modules that are designed to work optimally with the NIBE F2040.

7 Low start-up current

Prevents interference with other electronic devices. NIBE F2040 has an inverter-driven compressor for low start-up current. The slow start-up and gradual move up to required capacity prevents interference with other electronic devices in the building.

8 Fan (motor and blade)

Driven by an energy-saving motor, the fan's speed varies so only the required amount of air is utilised. The blades are specially designed to move as much air as possible at the lowest noise level.



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27 JUN 2017

NIBE™ F2040 TECHNICAL SPECIFICATION

Product specifications	F2040-8	F2040-12	F2040-16
COP according to EN14511 ΔT5K			
Delivered/supplied power/COP 7/35 °C**	3,85/0,84/4,58	5,12/1,08/4,74	7,22/1,55/4,65
Delivered/supplied power/COP 2/35 °C**	6,03/1,59/3,79	6,77/1,74/3,89	9,58/2,53/3,78
Delivered/supplied power/COP -7/35 °C**	5,91/2,08/2,84	7,95/2,69/2,95	10,79/3,76/2,86
Delivered/supplied power/COP 2/55 °C**	4,35/2,03/2,14	5,88/2,69/2,18	7,35/3,73/1,97
Delivered/supplied power/COP 7/45 °C**	3,58/1,03/3,47	4,99/1,36/3,66	6,64/1,85/3,58
Delivered/supplied power/COP 2/45 °C**	5,11/1,81/2,82	6,47/2,20/2,94	9,02/3,17/2,84
Delivered/supplied power/COP -7/45 °C**	5,61/2,27/2,47	7,78/3,14/2,47	10,98/4,52/2,42
Delivered/supplied power/COP -15/45 °C**	4,99/2,56/1,94	7,83/4,03/1,94	9,25/4,89/1,89
Delivered/supplied power/COP 7/55 °C**	3,46/1,11/3,11	4,71/1,52/3,09	5,97/2,05/2,91
Delivered/supplied power/COP -7/55 °C**	4,58/2,36/1,94	6,02/2,98/2,02	8,06/4,05/1,99

Heating capacity		F2040-8	F2040-12	F2040-16
Outdoor temp/ flow temp -3 °C/35 °C	kW	8,7	11,7	15,8
Outdoor temp/ flow temp -3 °C/45 °C	kW	8,8	11,9	14,4
Outdoor temp/ flow temp -3 °C/50 °C	kW	8	11,2	13,3
Outdoor temp/ flow temp -3 °C/55 °C	kW	7,3	10,5	12,2
Rated voltage		230V 50Hz, 230V 2AC 50Hz		
Max operating current heat pump	(A)	16	23	25
Max operating current compressor	(A)	15	22	24
Starting current	(A)	5	5	5
Nominal input fan	(W)	86	86	2x 86
Airflow	(m3/h)	3000	4380	6000
Height with stand	(mm)	895	995	1145
Width	(mm)	1025	1145	1145
Depth	(mm)	420	452	452

**outside temperature/flow temperature

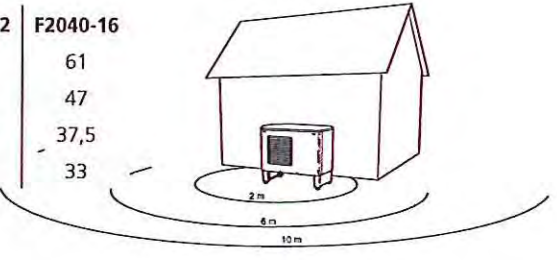
Products specifications	Hot Water Cylinder					
	NIBE VVM 320	Megacoil 160 L	Megacoil 200 L	Megacoil 300 L	Solar 200 L	Solar 300 L
Volume (net)	180	148,5	179	271	174,5	267,4
Output immersion heater	7	3	3	3	3	3
Height	1800	971	1129	1608	1135	1609
Width	600	585	585	585	585	585
Depth	615	-	-	-	-	-
Net weight	146	42	45	59	49	61

Hot Water Demand	NIBE VVM 320	Megacoil 160 L	Megacoil 200 L	Megacoil 300 L	Solar 200 L	Solar 300 L
1 Bathroom	✓	✓	✓	✓	✓	✓
1 Bathroom + En-Suite	✓		✓	✓	✓	✓
2 Bathrooms	✓		✓	✓		✓
3 Bathrooms				✓		

Guidance only – number of bedrooms, high flow showers, large baths etc. should be taken into consideration

	F2040-8	F2040-12	F2040-16
Sound power level* According to EN12102 at 7/45 (nominal) (Lw (A))	54	57	61
Sound pressure level at 2m free standing* (dB(A))	40	43	47
Sound pressure level at 6m free standing* (dB(A))	30,5	33,5	37,5
Sound pressure level at 10m free standing* (dB(A))	26	29	33

*free space



SYSTEMS USING THE NIBE™ F2040 AIR SOURCE HEAT PUMP

NIBE offers a broad selection of accessories and complete indoor modules. These have been developed along with our air source heat pumps to optimise their efficiency and achieve maximum savings. You will need to know the approximate annual energy requirements of your home before deciding which system to choose. Ask your local NIBE VIP installer to check out your current heating system and calculate your energy requirements.

FLEXIBLE SYSTEM SOLUTIONS

NIBE VVM 320 system

Outdoor unit	Indoor unit
NIBE F2040-8	NIBE VVM 320
NIBE F2040-12	NIBE VVM 320

All-in-one indoor unit cabinet solution NIBE VVM 320

NIBE VVM 320 indoor unit takes care of your hot water demand and ensures that the correct heating power is sent to your heating system in the most efficient way. Heat production is reliable and economical with integrated hot water heater, circulations pumps, control system and immersion heater.

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.

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. other external heat source, extra water heater, swimming pool and climate systems with different temperatures.



NIBE HA-WH5-Megacoil

Volume	160/200/300 Litre
Max. operating temperature	85/85/85 °C
Weight	42/45/59 kg
Max. pressure primary side	3/0,3 bar/MPa
Max. pressure water heater	5,5/0,55 bar/MPa

The NIBE HA-WH5-Megacoil is a range of stainless steel cylinders specifically designed for the NIBE F2040 air source heat pump range. The cylinders incorporate a large heating coil providing maximum heat transfer into the stored water.

NIBE HA-WH5-Megacoil-Solar

Volume	200/300 Litre
Max. operating temperature	75/75 °C
Weight	49/61 kg
Max. pressure primary side	3/0,3 bar/MPa
Max. pressure water heater	5,5/0,55 bar/MPa

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



Models

- NIBE HA-WH5016-2 F
- NIBE HA-WH5020-2 F
- NIBE HA-WH5030-2 F
- NIBE HA-WH5020-2 FS
- NIBE HA-WH5030-2 FS



SYSTEMS USING THE NIBE™ F2040 AIR SOURCE HEAT PUMP

With the new NIBE F2040 range we can provide solutions for all types of domestic dwellings. NIBE offers a broad selection of accessories and complete indoor modules. These have been developed with our air source heat pumps to optimize their efficiency and give you the highest possible savings.

Factors such as the size of your house, where you live and your domestic hot water demand will decide which system solution is most appropriate for you.

NIBE F2040 is delivered with flexible hoses, strainer and heated condensate tray.



PACK 1

The NIBE F2040 together with the VVM 320 creates a complete heating and hot water solution, ideal for new build homes taking up limited space with plug and play installation. The VVM 320 offers a host of features such as; intelligent user friendly new generation controller featuring NIBE Uplink, 180 litre stainless steel hot water cylinder, buffer vessel and low energy speed controlled circulation pumps.

	Pack 1A	Pack 1B
Air Source Heat Pump	NIBE F2040-8 kW	NIBE F2040-12 kW
Hot Water Cylinder	VVM320UK	VVM320UK
Articel Number	PAC20401A	PAC20401B



PACK 2

The NIBE F2040 together with the SMO 20 creates a complete heating and hot water solution, ideal for existing homes. The SMO 20 is part of the New Generation intelligent controllers and is designed for simple docking together with the NIBE HA-WH5-Megacoil single coil cylinders. With full intelligence the SMO 20 with weather compensating control also features temperature optimisation for a comfortable and stable indoor climate and NIBE Uplink.

	Pack 2A	Pack 2B	Pack 2C
Air Source Heat Pump	NIBE F2040-8 kW	NIBE F2040-12 kW	NIBE F2040-16 kW
Control module	SMO 20	SMO 20	SMO 20
3 port valve	VST 05	VST 05	VST 11
Articel Number	PAC20402A	PAC20402B	PAC20402C



PACK 3

The NIBE F2040 together with the SMO 40 creates a complete heating and hot water solution, ideal for existing homes. The SMO 40 is part of the New Generation intelligent controllers and is designed for advanced docking together with the NIBE HA-WH5-Megacoil range of cylinders. The SMO 40 can control up to eight heat pumps together in the same system, control swimming pool heating, separate heating zones and incorporate solar thermal panels. With full intelligence the SMO 40 with weather compensating control also features temperature optimisation for a comfortable and stable indoor climate and NIBE Uplink.

	Pack 3A	Pack 3B	Pack 3C
Air Source Heat Pump	NIBE F2040-8 kW	NIBE F2040-12 kW	NIBE F2040-16 kW
Control module	SMO 40	SMO 40	SMO 40
3 port valve	VST 05	VST 05	VST 11
Articel Number	PAC20403A	PAC20403B	PAC020403C

NIBE™ F2040 INSTALLED IN YOUR HOME

Triple function:

HEATING/COOLING/DOMESTIC HOT WATER
NIBE F2040 – a single system to meet all your heating, cooling and domestic hot water needs.

Indoor unit:

SINGLE, NEATLY PACKAGED MODULE
NIBE has used cutting-edge technology to create an integral system design. The neat indoor module fits into a standard 60 x 66 x 180 cm space.

Electrical installation:

CONTRIBUTES TO EASE OF INSTALLATION
the outdoor unit comes with a pre-wired power cable.

Outdoor unit:

COMPACT SMALL FOOTPRINT
The outdoor unit is small and has an appealing, timeless design.

Flexible positioning:

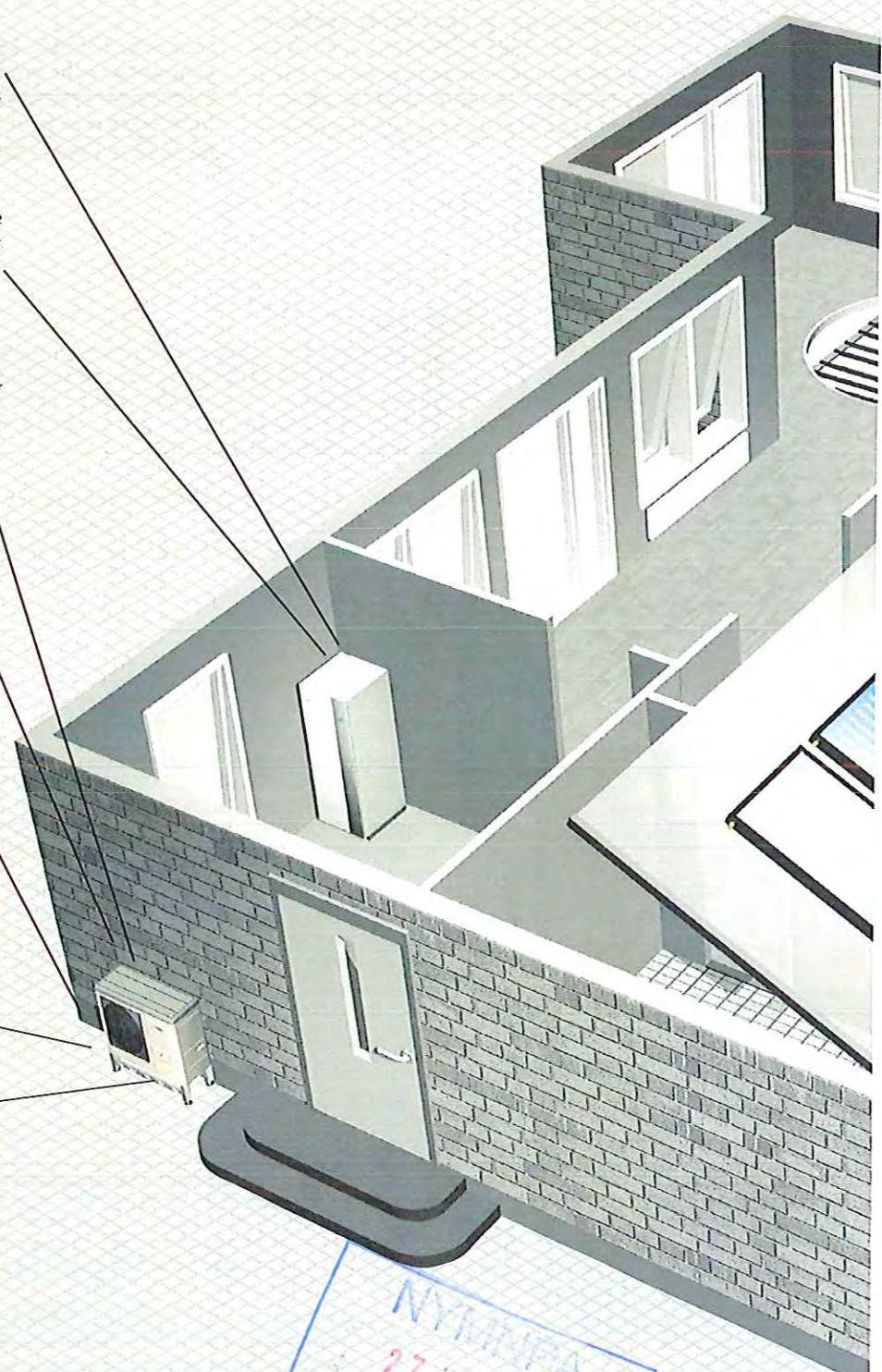
CHOOSE A DISCREET LOCATION
The outdoor unit can be moved to any location up to 12 metres from the indoor unit, giving you the freedom to select the most suitable position in your yard.

Outdoor unit pre-charged with refrigerant:

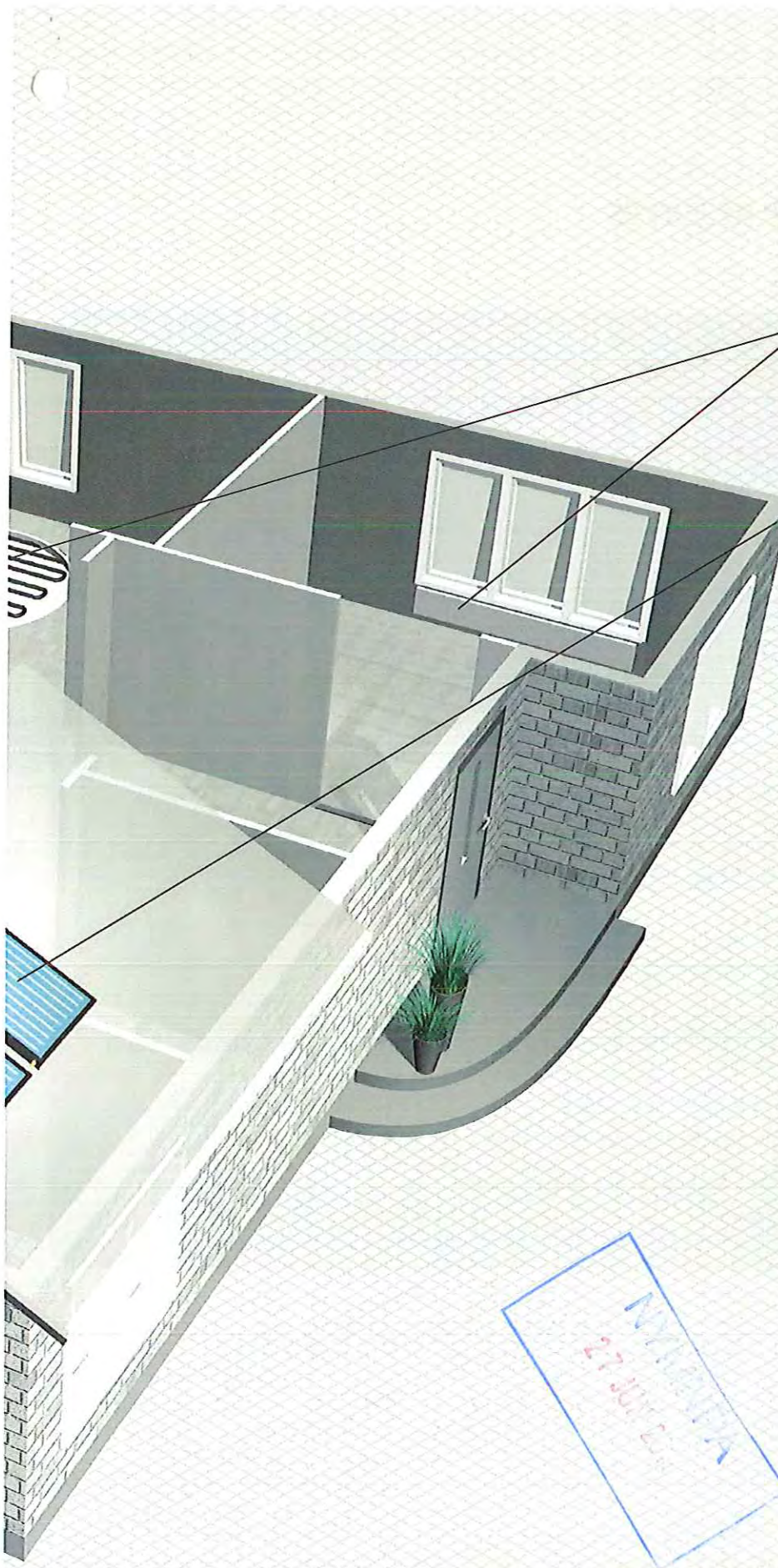
EASY INSTALLATION AND ENVIRONMENTALLY-FRIENDLY
The outdoor unit is pre-charged with a refrigerant which has a low environmental impact and does not harm the ozone layer.

Position of heat pump:

CHOICE OF TWO MOUNTINGS
Either wall-mounted or floor standing (using NIBE's stand accessory)



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Flexible indoor installation:

SWITCH THE FUNCTION TO SUIT THE SEASON
NIBE F2040 can be used for heating and cooling. Heat is distributed by water moving through radiators or underfloor systems and cooling via fan coils or underfloor systems.

Compatibility:

CONNECTS EASILY WITH OTHER ENERGY SOURCES

NIBE F2040 can be hooked up to solar heating panels or an existing boiler to provide an additional source of energy.

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. NIBE Uplink also gives you the opportunity to control comfort in your property no matter where you are. We call it NIBE freedom.

Pool heating:

ECONOMICAL POOL HEATING

When the weather is warm, and you do not need the heat pump's full capacity to supply your home's energy needs, why not use it to heat an outdoor swimming pool economically instead? The accessory NIBE Pool 40 is a control unit for this function. If you are planning on using the pump to heat up your pool, remember to inform your VIP installer from the start, as this will influence the size of heat pump required.

CASE 1
ISLE OF ERISKA HILLTOP RESERVES



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THE BACKGROUND

The Isle of Eriska Hilltop Reserves are two luxury eco holiday apartments on the west coast of Scotland. Set on an elevated ridge in the 300-acre grounds of the Isle of Eriska Hotel, the one-bedroom, one-bathroom apartments are completely off-grid. While space heating and hot water for the rest of the hotel comes from a large biomass system, piping this uphill to the hilltop development 600 m away was not a viable option – so the challenge was to find a reliable, on-site renewable heating system that would meet guests' heating and hot water needs all year round. Beppo Buchanan-Smith, managing director at the hotel, had done some research into NIBE air source heat pumps, and approached local renewable energy specialist Ferguson Energy for a bespoke solution.

SOLUTION

As the lodges are very well-insulated and fitted with water-based underfloor heating throughout, Barry Ferguson, director at Ferguson Energy, advised that they would be ideally suited to a NIBE F2040 air source heat pump (which operates at similarly low flow temperatures). Having worked with NIBE products before, Ferguson Energy was able to specifically recommend the F2040 as the best system to meet the project's needs – both in terms of performance and capital cost.

The team specified, designed, sized and installed the system – which consists of a 16 kW F2040 unit, a 500L VPB hot water cylinder, a UKV 200 buffer tank and SMO 20 intelligent controls. They sited the air source heat pump unit outside a separate, purpose-built plant room (and installed the accompanying hot water cylinder and buffer tank inside the room). This means the whole system is set apart from the lodges themselves.

RESULTS

The system is now fully up and running, and is specially set up to require minimal customer input. Its user-friendly controls are pre-programmed to keep the lodges at a consistent, comfortable temperature of 21 °C during daylight hours and 15 °C at nighttime, with hot water available on demand.

By opting for a 16 kW F2040 unit – which not only has enough capacity to serve the existing two lodges, but could also easily accommodate two more in the future – the Ferguson Energy team have also created a versatile, small-scale district heating system that fits in with plans to grow the development.

CUSTOMER TESTIMONIAL

"As luxury holiday homes, our Hilltop Reserves are sold on a ten-year basis with no maintenance fees. With this in mind, when it came to choosing the right heating system, we were conscious that it not only needed to be high-spec, reliable and easy to operate, but also as cost-effective to run as possible. Our guests expect luxury, and we wanted their heating system to reflect this – providing readily available and dependable hot water and heating whenever it is needed. The system is now fully operational, and we're delighted with the results!"

Beppo Buchanan-Smith, managing director at the Isle of Eriska Hotel.



CASE 2
GREENCROFT



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27 JUNI 2017

The background

Greencroft is a 19th century farmhouse in Kirkby, North Yorkshire. Owners Pat Battle and Duncan Kirkby, a retired couple, were looking for a more cost-effective alternative to replace their two old oil boilers, which were very inefficient and costly to run. Having heard about NIBE heat pumps from a friend at the local bridge club, they approached Yorkshire renewable heating specialist and NIBE VIP Installer HT Energy for advice on the best setup for their five-bedroom, two-bathroom property.

Solution

Howard Tribick, director at HT Energy, specified, designed and fitted a NIBE F2040 air source heat pump package system after carrying out a full site survey and heat loss calculation for the property.

The new system is made up of two 12 kW F2040 air source heat pumps, a 300 L NIBE Titanium Megacoil hot water storage cylinder and NIBE SMO40 intelligent controls. As part of the install, the loft, walls and floor of the farmhouse were insulated and extra double glazing was fitted. This brought the property to a modern heat-loss standard so that the heat pump could perform to its optimum efficiency. Since the F2040 works to a lower flow temperature than the property's previous system, HT Energy also fitted underfloor heating and re-sized all the radiators for a maximum flow temperature of 45 °C.

Results

The system is now fully up and running. As well as providing a consistent supply of comfortable heating and readily available hot water, it is also expected to cut the farmhouse's bills by more than £1,800 per year compared to the previous oil-based system.

Early calculations also show that the system could qualify for annual payments of up to £1,609 for seven years under the government's Renewable Heat Incentive (RHI) scheme, making it even more cost-effective in the long run.



FURTHER USES FOR YOUR HEAT PUMP

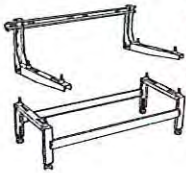
Discover how a NIBE air source heat pump can do more than just heat your home and hot water. Our broad range of accessories makes it possible for you to heat the pool, add solar panels and install a complete system solution in your home. Ask your NIBE VIP installer for more information.

NIBE™ F2040



NIBE KVR 10

The KVR 10 accessory is used to safely lead away most of the condensation water from the air source heat pump to a frost-free collection point.



NIBE BRACKET

Choose between two alternative mountings. Either wall-mounted or standing on the ground.



NIBE HR 10

Auxiliary relay HR 10 is a connection box housing a contactor and a rotary selector switch. It is used to control external 1 to 3-phase loads such as oil burners, immersion heaters and pumps.



NIBE UKV RANGE

Buffer vessels for heating systems.



NIBE MODULAR CABLE



NIBE CPD 11

Speed controlled circulation pump.



NIBE AXC 30

Accessory card for cascade dockings.

NIBE™ F2300



NIBE HR 10

Auxiliary relay HR 10 is a connection box housing a contactor and a rotary selector switch. It is used to control external 1 to 3-phase loads such as oil burners, immersion heaters and pumps.



NIBE KVR 10

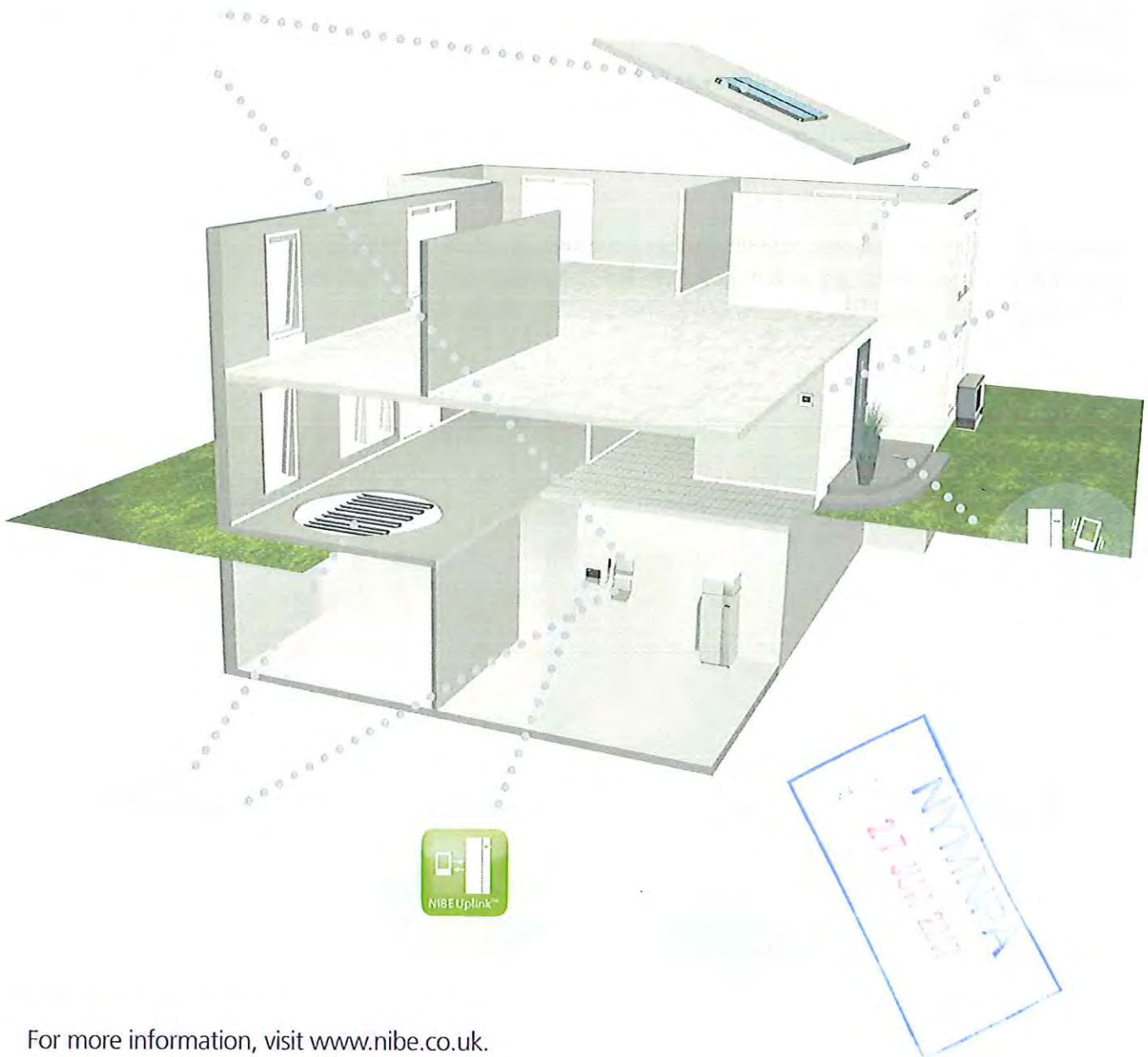
The KVR 10 accessory is used to safely lead away most of the condensation water from the air source heat pump to a frost-free collection point.



ACCESSORIES NIBE™ INDOOR MODULES

Even more options to choose from

A NIBE heat pump is not just for heating and hot water. With the addition of various accessories, our new 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 dimensioned to fit neatly together, giving the appearance of a single streamlined system. And since all accessories are controlled via the heat pump, you only have to learn to use one operating system.



For more information, visit www.nibe.co.uk.

NEW TIMES CALL FOR A NEW APPROACH

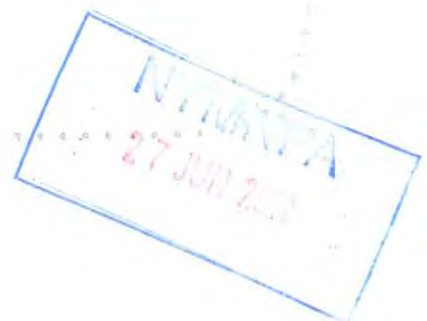
We all know we've got to reduce emissions.
The question is how.

'Green' thinking might once have been a luxury but nowadays it is a necessity that none of us can afford to ignore. Increasingly, the reduction of CO₂ emissions is becoming a legal obligation and environmental requirement.

Over 70% of the CO₂ emissions from an average home are caused by its heating and hot water systems. If we are to reduce this figure, we need to start implementing greener, more sustainable technologies across the board. Only then, will we see a significant reduction in CO₂ emissions.

Meanwhile the prices of traditional energy sources are rising steadily, with the result that more and more people are considering alternative, more efficient power sources.

Now that customers have started demanding a solution, builders, architects and property developers can no longer ignore the need to employ alternative technologies that make better use of our planet's energy resources.



START WITH A HEAT PUMP!

It is a proven fact that heating your house with a heat pump is the best environmental option.

One obvious reason is that a heat pump does not use a combustion process to generate heat. It simply extracts the heat that already exists in the outside air and puts it to use to heat your home. This greatly reduces emissions in comparison to traditional fossil fuel-based systems.

Secondly, the amount of electricity needed is relatively low. That's because electricity is not the main energy source. It is only needed to drive the pump and enable the heat extraction process.

Actual energy savings vary depending on the benchmark, but generally measure between 60% and 75%.

A third point to consider is that heat pumps, like every manufactured item, contain what we call 'embedded energy'. That's the energy required to make and transport the product from the factory to where it will be used. NIBE is continually improving its processes to minimise the amount of embedded energy in its products and seeking more environmentally-friendly ways to build and transport them.

Once installed in your home, a NIBE heat pump immediately starts to deliver an environmental payback in the form of reduced energy consumption and emissions.

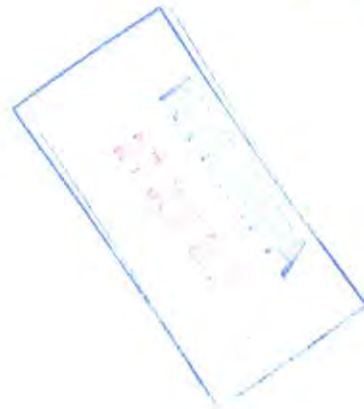
Towards a zero carbon future

The drive to reduce the consumption of energy and its impact on the environment is crucial and increasingly important to us all. If you switched to a renewable energy source, such as wind, solar or tidal, you would be taking a step closer towards a zero carbon future.

Classified as renewable energy

Some governments and regional authorities offer subsidies to home owners to switch from fossil fuel-based heating to renewable sources of energy. Since heat pumps are now officially classified as renewable energy, there couldn't be a better time to change!

For more information, please visit the NIBE website in your country.



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.

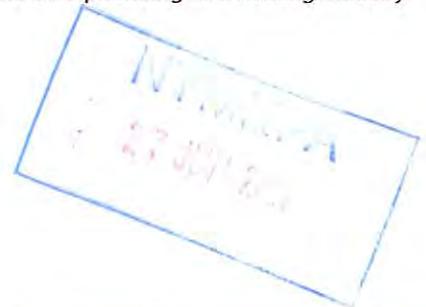


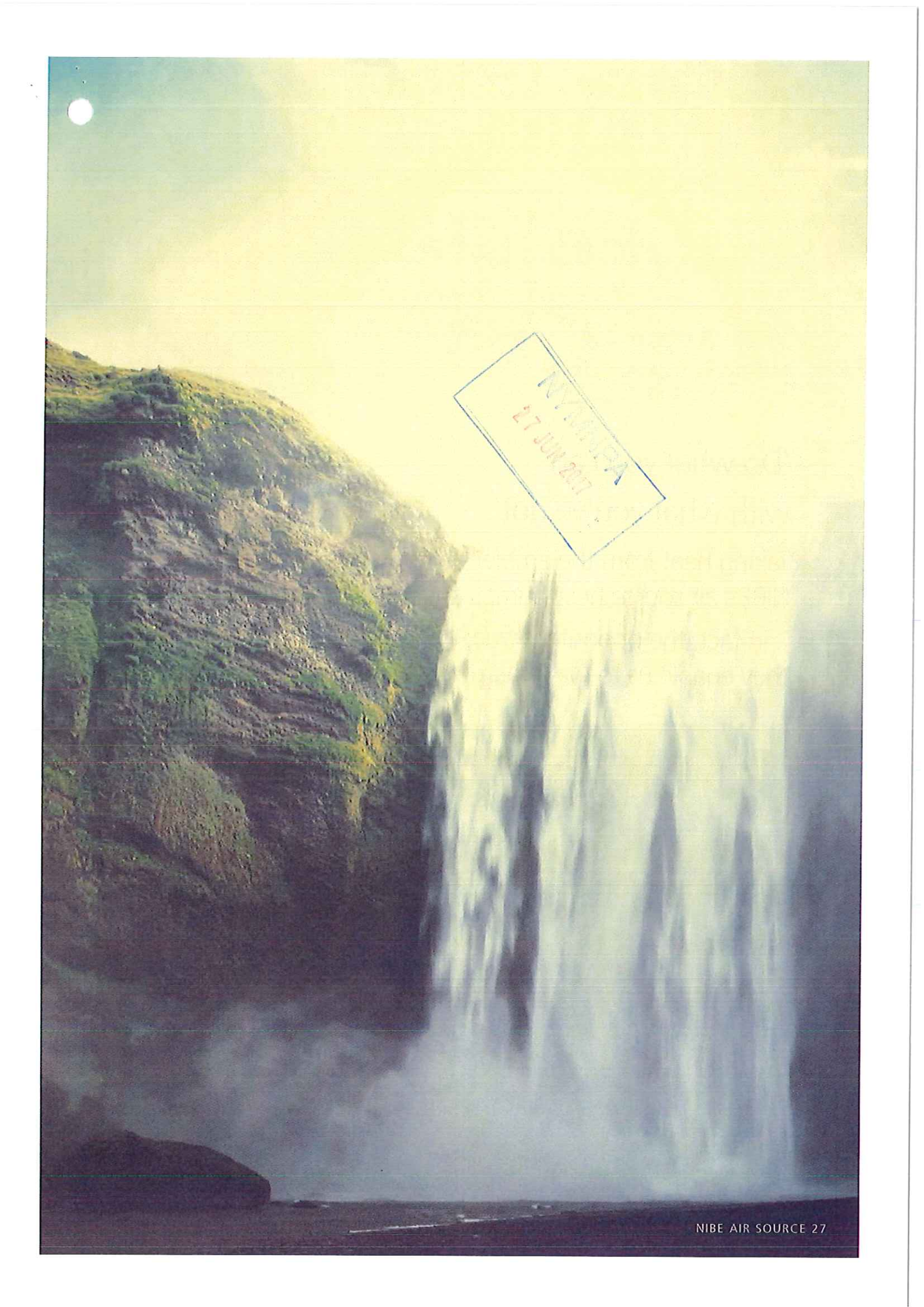
NIBE VIP installers:

- 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





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27 JUN 2017



'Do what you can
with what you've got'.

Taking heat from the ambient air outside your home,
NIBE's air source heat pumps appear to defy nature.

In fact, the opposite is true;
they enable us to live in harmony with nature.





NIBE OF SWEDEN

Living in harmony with nature

The Swedes have a long and impressive track record of clever, money-saving innovations that use resources sparingly. The simple reason for this is that Sweden was historically a poor agrarian country. A harsh winter climate made food scarce for many months, necessitating careful, forward planning.

Today, Sweden is a technologically advanced country with a successful economy, so this is no longer necessary. However, the mindset continues to be manifested in the form of fabulous, cost-saving innovations.

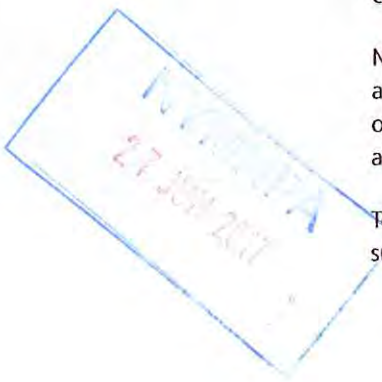
NIBE is a perfect example of the economical Swedish mind at work!

The company was founded by Nils Bernerup in 1952, after a particularly cold winter. Over the past 60 years, it has become Sweden's leading supplier of domestic heating products, continually driving the development of ever-more efficient heating methods.

Early products included water heaters and pressure vessels. Electric boilers joined the range in the 1970s. Heat pumps and a wide selection of other heating products that meet the needs of European markets have been added successively to the company's portfolio.

Nowadays, NIBE has a leading position in the market for heating and cooling solutions around Europe. We are committed to offering innovative solutions that not only save energy but which also reduce CO₂ emissions.

Together with our customers, we're working towards a more sustainable future, one home at a time.



NIBE OFFERS ENERGY FOR LIFE

NIBE is one of Europe's leading manufacturers in the domestic heating sector, offering a wide range of products and solutions to meet every individual need. Our range includes ground source and air source heat pumps, domestic boilers, water heaters and a variety of other products designed to generate and distribute heat.

Ground source heat pumps

Ground source heat pumps extract solar energy which is stored in the soil, bedrock or a nearby water source, thus providing an environmentally friendly alternative for the heating of houses, apartment buildings and other large properties. Our ground source heat pumps are available with or without an integrated water boiler.

Air source heat pumps

Air source heat pumps extract and upgrade the heat from the outside air. Unlike the simpler air/air heat pumps, they can be connected to the building's central heating system to provide both heat and hot water, and in some cases, cooling.

Exhaust air heat pumps

Exhaust air heat pumps can provide your home with heating, hot water and ventilation. Heat is extracted from the outgoing air in the ventilation system then recycled to heat the incoming air and hot water supply.

Biomass Boilers

NIBE offers a range of different boilers that run oil, electricity, pellets or wood. For those who fear dependence on one fuel source, we also offer a combination boiler. This makes it possible for you to choose the cheapest, most plentiful source of energy at any given time. Combine your boiler with an air source heat pump or solar panels for even greater savings.

Solar thermal

Our solar thermal collectors absorb the sun's rays, delivering free, clean energy to your heating system. They become an integral part of your total energy supply supported by our heat pumps which supply this extra free energy in a smart, controlled way. You can also use our solar collectors in combination with a NIBE biomass boiler (logs or pellets) or a NIBE water heater powered by electricity or gas.

Exhaust air heat pumps

Ground source heat pumps



Air source heat pumps



Biomass boilers



Solar thermal



YOUR NEXT STEP?

Find your local NIBE office at www.nibe.eu. They'll help you locate your nearest NIBE installer and select the best kind of heat pump for your needs.



20/20/20

European Directive 20/20/20

The 20/20/20 European directive imposes compulsory targets on the EU's 27 member states, specifying that 20% of energy consumption must be met by renewable sources by 2020. Since NIBE's heat pumps are now classified as a renewable energy source, their installation will help member states reach this ambitious target. And in many cases, local or regional authorities are offering home owners subsidies to switch their existing heating systems to a renewable source such as a heat pump.



ENERGY FOR LIFE



This brochure is a publication from NIBE. 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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