EXPERT NEWS

NO2 2022 | FOR YOU WHO DELIVER INDOOR COMFORT

IT'S UPLIFTING TO BUILD A HOME IN AN OLD WATER TOWER

"You have to be a bit crazy to rebuild a water tower!"

"It's nice that things are back as they used to be"

Henrik Henningsson Sales Manager Sweden, NIBE Energy Systems

Hello to all our friends out there!
Well, maybe not everything is as it used to be – I'm certainly not. Though I'm anything but new at NIBE, I certainly am new to the position of Sales Manager for Sweden, which I've held since April this year. Things have got off to a flying start, with the Nordbygg fair in Stockholm and meetings with new and familiar faces. World-class products. Focus on innovation, sustainability and efficiency.

And great to be able to meet up again!

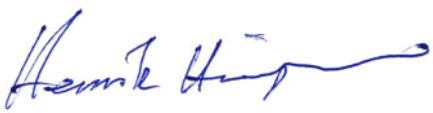
Having now let all the impressions from the Nordbygg week settle, I am even more convinced that we at NIBE are part of the solution for creating a sustainable society. Being able to present highly efficient climate products while investing in expanded production capacity, innovation centres and training centres in Markaryd demonstrates our ambition to give the market what it wants for many years to come.

Though my conversations and meetings have filled me with energy, I can't help but reflect on the strained situation in the world, which affects us all a little differently depending on the industry we're in and each of our life situations. One day we will look back on this time as part of history.

But in the here and now, we will continue to focus on our task of providing you with as many heat pumps and heaters as we can. Because that's what we do. Nothing else!

As you'll see here in the magazine, I'm not the only one who's new to the job. Replacing my predecessor with two people is a good solution for all of us. I get the opportunity to give my full support and focus to the Swedish market so we can offer our very best support and products, and Stefan can fully focus on our international business.

Have a great summer, and happy reading!



22

MARKO TESTS THE THS 10
How smart and simple are NIBE's wireless accessories?

Publisher:
Andreas Johnsson

Editorial staff:
Andreas Johnsson
Sandra Björklund
Eva Linetti
Marko Hietaharju

Graphic design:
Amanda Henling

Illustration:
Ulf Nilsson

Text: Eva Linetti

Photos:
Krister Tuveros
Mathias Blom
Jerry Gladh
KAN

Production:
NIBE Energy Systems
Markaryd

Printing:
Optimal Kommunikation

Address:
NIBE Energy Systems
NIBE Marketing Dept.
BOX 14
SE-285 21 Markaryd,
Sweden

What would you like to read about? Please let us know!

marknad@nibe.se

5

NEW! CONTROL YOUR HEATING ROOM BY ROOM
There is now a new smart accessory in the S family that will help make our customers' lives easier and help them live more sustainably and save energy. With this wireless radiator thermostat, customers can control and monitor temperature with even more precision.

12

THE MOOD WAS EXUBERANT!
After 4 years without Nordbygg, a lot people were looking forward to visiting the Nordic region's largest meeting place for the construction industry. This was reflected in the interest and commitment of both visitors and our own operations.

22

STATE-OF-THE-ART BUS COMPANY
In August, Veinge Buss AB moved to state-of-the-art premises. Ventilation recovery and passive cooling from the borehole contribute to high energy efficiency and the company's environmental profile.

NIBE HOLIDAY SWITCHBOARD HOURS

The summer holidays are upon us, but the switchboard staff will take turns answering calls between 11 July and 5 August.

Every day
8:00 am to 4:00 pm

Closed for lunch
12:00 pm – 1:00 pm

Other opening hours as per usual
7:30 am – 5:00 pm.

NIBE CELEBRATES 70 YEARS

In this article, you'll meet Gerteric Lindquist, CEO of NIBE, another player in the success story of Swedish energy technology.

With over 34 years as CEO and with his purposeful but tactful and human approach to entrepreneurship, he has come to personalise the brand.

What does he find so fascinating about heat pumps, and why is Sweden the country with the greatest concentration of heat pumps? How has it all developed, what are the challenges and will we succeed with the climate transition? These are some of the questions we put to him.

NIBE AB came into existence on 23 January 1952. That was the date when Nils Bernerup registered the company and began operations in Markaryd, with four employees and a workshop manager. There are now some 1,500 employees in Markaryd and 3,000 more at 12 subsidiaries. Today, NIBE AB consists of NIBE Energy Systems and Contura. The company is part of the NIBE Group, which has a turnover of just over SEK 30 billion and more than 20,000 employees in over 30 countries.

Read part 2 of the article series about NIBE's 70 years on Page 8!

NEW AT NIBE

STRENGTHENING OUR SALES ORGANISATION.

We welcome Henrik Henningsson and Stefan Nordenfors to their new positions. Henrik, who has previously worked with our German-speaking markets, will focus all his attention on our home market and Stefan will manage Europe, the Middle East and Africa.

From left: Henrik Henningsson, Sales Manager Sweden and Stefan Nordenfors, Sales Manager Europe, Middle East and Africa.

HENRIK HENNINGSSON started his new position as Sales Manager for the Swedish market on 1 April. He joined NIBE in 2015 and has, until recently, worked with our German-speaking markets and sales there.
"My original motivation to start working here was based specifically on NIBE as a company. That is, a company with a clear forward-looking, future-oriented spirit and a solid culture. I can really identify with our values and am fully convinced that by offering sustainable energy solutions and cutting-edge product development, our products are perfectly positioned."

"The fact that I can now turn my focus to Sweden is exciting."

Henrik has worked with heat pumps for 16 years, including three years in Switzerland as a product manager.
"Heat pumps and sustainable energy solutions have basically always been close to me. I'm a good mix of practitioner and theorist, and I like that mix. I've held positions in sales, service, production and product management."

His knowledge of German brought him closer to the day-to-day business of the German-speaking market.
"My new role will be more operational, and the pulse from the market will be even closer.The fact that Sweden is also our home market, and an incredibly important market for us, makes it even more motivating.But even though I've been working with our products for several years, each market has its own kind of identity. Getting a feel for the Swedish market and how it works is a high priority now."
Henrik spends his free time with his family and the sports his four children play.
"I live in a house in Ljungby with my wife Therese and our four boys, aged 3–11.

"It's important for me to work in a company that has a business with a clear, positive purpose."

Everyone in the family is interested in sports, so it takes up a lot of our free time. Our interests cover most things connected with balls or pucks. We also like to go out to our cabin just outside Ljungby."

STEFAN NORDENFORS started as Sales Manager for Europe on 2 May.
"I've worked in energy and automation technology throughout my career, in Sweden, Slovenia and Hungary."

He found NIBE attractive for several reasons. "For one thing, it's important for me to work in a company that has a business with a clear, positive purpose. Sustainable, renewable energy is a key piece of the puzzle if we are to solve the problems facing the world. NIBE is a company that is truly making a contribution to a fossil-free future. Another key reason was the good impression I got of the people I met in the recruitment process, and of the corporate culture."

When Expert News met Stefan, he had only been at NIBE for a short time and was busy getting to know his colleagues, the company and the business. But naturally, we asked him what he wants to achieve in his new role.
"I'm really looking forward to getting to know all my new colleagues and customers. My role will be to continue to propel NIBE's position in a market that is experiencing substantial growth. The aim is to continue to be number one in our home markets, but also to expand significantly in our less mature markets. I also want our customers to feel that we have the market's best sales and support function; customer focus is something that permeates all of NIBE, and that is an incredibly important aspect for me."

Stefan spends his free time at home with his family, on the padel court, on the ski slopes or out in the countryside in one way or another.
"I live in Vejbystrand with my wife and three children, a son who still lives at home and two daughters who have flown the coop. While we were living abroad, we bought a summer cottage, which we later converted into a house. In 2019, we moved here permanently after fourteen years on tour." ■

SRV 10 COMING SOON!

Control your heating room by room, automatically

The S family is growing with another wireless accessory that will make the lives of our customers easier, help them live more sustainably and save energy. With this wireless radiator thermostat, customers can control and monitor temperature with even more precision.

With the smart home accessories we launched in 2021, customers can use the myUplink app to monitor and control the indoor climate of up to eight climate systems (which in turn can be divided into zones). With the new SRV 10 radiator thermostat, heating and energy consumption can be controlled room by room.
"The idea is to enable you to only heat rooms when you need them, thereby saving energy," says Sven Hallbeck, Product Manager for smart accessories. "For example, by having a lower temperature in your bedroom at night."

The wireless radiator thermostat has a M30 x 1.5 connection, and a Danfoss RA adapter is included so that it fits most heating systems. Adapter ARV 10 for M28 x 1.5 is available as an accessory, sold separately.
"It's easy to get started. Just replace your old thermostats with a SRV 10, pair it with the heat pump in the S series and set a suitable temperature," says Sven. "The heat pump will take care of the rest."

Read more about our smart accessories at proffs.nibe.se

NEWS

ENERGY KICK AT NORDBYGG.

"Finally, we get to show you our new products and meet face-to-face!"

After four years without Nordbygg, we finally get to meet in person again. In our booth, filled to the brim with goodies, we showed several new products for better indoor comfort, reduced heating costs, making everyday life easier and reducing the climate footprint. We also held seminars in the booth, every day.

Many people were looking forward to visiting the Nordic region's largest meeting place for the construction industry. This was reflected in the interest and commitment of both visitors and our own operations.
"I would really like to thank all of you who came to the fair and our booth. Having the opportunity to talk about our products face-to-face with you makes listening and responding to reactions so much easier, as well as having fruitful discussions," says Andreas Johnsson, Marketing Manager at NIBE.

More climate-friendly than ever
This year we presented our most efficient ground source heat pump ever, the S1256. Our visitors were also able to learn about a new generation of exhaust air heat pumps, the S735, which has a low noise level and lots of hot water, as well as a new powerful, quiet air source heat pump, the S2125 – both with the natural R290 refrigerant, which has a GWP of only 3. We also brought along a new ventilation unit we developed with rotating heat exchangers. They are all part of the S series and the digital platform, which provide new ways of lowering energy consumption while maintaining comfort.
"For us, sustainable refrigerants are nothing new. Our experience with them goes back to the late 1990s, and they can be found in our old faithful F370/F470 exhaust air heat pumps. The development of new refrigerants is moving forward, and here we want to be at the forefront, which we are," says Andreas Johnsson.

In our booth, we also showed our wireless accessories for the S series, which make it even easier for you to adjust your indoor climate and your energy consumption even more precisely. With the new SRV 10 wireless radiator thermostat, you can now adjust each room individually.
The trend towards more energy-efficient systems for apartment blocks, retirement homes and other commercial properties is still strong. For these markets, we showed customised heat pump solutions cleverly combined with solar electricity, ventilation, cooling and high hot water capacity, which have been increasingly in demand, and which make better financial sense and increase comfort. And they have connectivity to cloud services for full control, 24/7.
"The fact that our solar panels have improved and gone down in price, and the green tax reduction of 15%,
gives us new opportunities to offer our solar packages as a system combined with the heat pump – helping our customers cut their energy consumption even more," says Andreas. ■

"The Nordbygg fair is always fun, and this one definitely lived up to my expectations. Your booth was great, and there are always lots of interesting people to meet. Your S1256 ground source heat pump was the new product I found most interesting."

– Markus Edvinsson, Unnaryds Värme & Sanitet AB

FIVE QUESTIONS FOR KLAS HELLGREN, DISTRICT MANAGER AT NIBE

How was the fair?
"People were keen to see each other, and it was great to be able to show off our new products and meet people in the industry."

What interested visitors most?
"Our new ground source heat pump, the new exhaust air heat pump and the hunt for low GWP levels."

What's trending?
"At NIBE, the trend is definitely sustainability. It's a strong position that we work for every day."

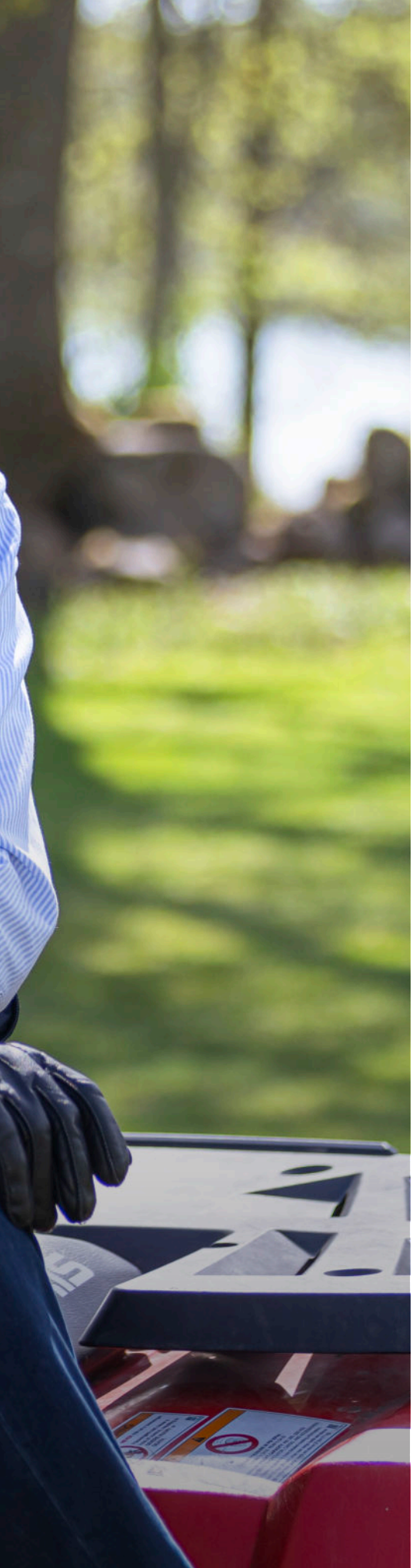
Did we live up to our customers' expectations?
"Absolutely. We had new products in all segments, which is what they're here to learn about."

How were the seminars?
"It's interesting for our customers to hear about NIBE's long history, that it started with hot plates for pigs and seeders. But also about the synergies of combining solar and cooling with our heat pumps, and developing such efficient solutions. I think that impressed a lot of people."

A CHAT WITH GERTERIC LINDQUIST.

Gerteric Lindquist became CEO of NIBE in 1988 at the age of 37. Here he tells us what is fascinating about heat pumps, why Sweden is the country with the greatest concentration of heat pumps, how it has all developed and what the challenges are – yet another piece of the puzzle in a Swedish energy technology success story.

With over 34 years as CEO, and with his purposeful but tactful and human approach to entrepreneurship, Gerteric Lindquist has come to personalise the brand.



A SWEDISH SUCCESS STORY TURNS 70 – PART 2.

NIBE's success is the result of long-term teamwork under the Gerteric's leadership. With over 34 years as CEO, and with his purposeful but tactful and human approach to entrepreneurship, he has come to personalise the brand. Stubbornly and passionately, he has maintained core values such as conserving resources, taking one step at a time, greeting everyone personally, thanking people naturally and always being prepared to apologise if he's done something wrong or had the wrong impression. He is a role model for our corporate culture, which is both entrepreneurial and like a family.

Within months of each other, both you and the company turned 70. What's your take on that?
"It's a great favour to still be here running the company at the age of 70. The fact that my own seventieth birthday and the company's are only three months apart is totally coincidental, of course. Still, you can make the point that while people, as organisms, have a finite life, a company, as an organism, can in principle live on infinitely. This can only happen, though if management and employees are prepared to constantly adapt to new market conditions by looking forward with curiosity and never getting too comfortable."

There's something magical about being able to extract energy from air at a temperature below freezing, isn't there?
"It's a fascinating technology, as revolutionary as refrigerators and freezers working both in the tropics and in Sweden, but heat pump technology has still not had the same impact all over the world because the fossil heating industry and its lobbyists have been so incredibly strong."

What was NIBE like when you started in 1988 and the heat pump market was in its infancy?
"At that time, the entire NIBE Group had a turnover of SEK 250 million, of which NIBE in Markaryd accounted for around two thirds, and the Group was wholly owned by the Bernerup family. The range of products consisted of water heaters, wood-burning stoves and exhaust air heat pumps. The following year, a number of senior executives from Backer in Sösdala and NIBE acquired the two companies Backer Elektro-Värme and NIBE-Verken from the four Bernerup siblings. NIBE Industrier AB became the parent company. We were already considering an IPO at the time, and began to work purposefully towards it. We aimed to develop our own products and acquire other companies to accelerate our growth. At that time, the Group's overseas sales accounted for about 10% of turnover. The corresponding figure today is 90%, and turnover in 2021 was just over SEK 30 billion.

"Naturally, the company was a bit different then, but in terms of values, we have remained the same, with our feet on the ground. It's important not to do anything too bizarre or off the beaten track. Simplicity is the key."

Sweden has the most heat pumps per capita – 60% of households, compared with 14% in the USA. How did Sweden become a pioneer in heat pumps?
"The main reasons are the availability and pricing of different energy sources, but also a lack of factual information. In some countries, people are still sceptical about heat pump technology and ask themselves whether heat pumps can really be so good.
When it comes to the availability of gas and oil, Sweden has never had its own resources, which is why it has been more natural for us as a country to invest in generating electricity, originally by means of hydro power and eventually also nuclear power. In recent years, wind power has also made a significant contribution to the generation of electricity, though with the weakness that it lacks stability. When it comes to oil and gas prices in countries with their own resources, such as the USA, they have in most cases been far too low in relation to the damage they cause to the environment. On the other hand, the price of electricity has been relatively high, which in turn has made the heat pump less popular from a purely financial point of view. In Sweden, on the other hand, we have had various taxes that have ensured that the price per kWh of oil and electricity has been fairly similar, which of course paved the way for heat pump technology as it could save a lot of money and is environmentally friendly.

"When we started looking at the heat pump concept more than 40 years ago, Sweden had just experienced a number of energy crises. We insulated houses with plastic and window strips, which unfortunately often resulted in poor air quality and mould. So new building regulations came into force requiring houses to be ventilated for health reasons, but without energy being wasted in the exhaust air. Every one and a half hours, the total air volume in a house was to be replaced, with at least half the energy content of the exhaust air being recovered. NIBE's strong en-

> *"Our vision is to achieve savings of more than 85%, and we're almost there."*

trepreneurial spirit came in handy in this era, and in 1981 the first exhaust air heat pump from NIBE came onto the market.

"I became fascinated with heat pumps when I worked at NIBE for the first time, from 1978 to 1981. When I returned as CEO, it was exciting to see how the exhaust air heat pump had achieved such great success in newly constructed small houses. The obvious question was therefore: 'Shouldn't we have other heat pump categories too, especially for the renovation market?' As a result, ground source heat pumps arrived in 1997, and air source heat pumps soon after that."

How much better are heat pumps today? There has been a lot of technological progress.
"In the heat pump's infancy, savings were not substantial. At best it was 50%, compared with 75% to 80% today. Refrigerants, compressors, expansion valves, heat exchangers, all the critical components have developed. And not least, as well as this, control – the brains of the heat pump, in other words – has developed. Increasing savings further will naturally be more and more difficult, but our vision is to take it to over 85% as a first step, and we will soon reach this figure. This can be compared to the LED light bulb, which is about 85% more efficient than a traditional light bulb and whose inventor was awarded a Nobel Prize!

"Just think what it will mean, for personal finances and for the world, to reduce energy consumption for heating/ventilation/cooling of our homes by 85%. Then we will have really made a contribution to society, which should make even the most notorious heat pump sceptics give in."

Where do you see potential for development?
"Today, heat pumps are no longer just a technical product, it's about the entire climate system with links to the internet and apps. Software development has come into focus and heat pumps have gone from being a product to a system. That's the major change in product development. For example, the fact that we can easily update the software in our customers' heat pumps is a huge step forward. This means that you can have an older pump that is regularly updated with new software instead of having to replace the entire heat pump. This is a very visible example of sustainability."

What does the future hold for heat pumps? What are the biggest challenges?
"The future has never looked brighter for heat pumps than it does today. The whole of Europe is literally crying out for heat pumps, and North America will follow suit within a few years. It is from this perspective that we should see our very large investment projects here in Markaryd and in the other heat pump companies within the Group. As I see it, there are no limitations to our continued expansion on the market, but what will be important is to maintain and pass on our entrepreneurial spirit, passion and commitment internally within the Group.

"It's true that we are currently experiencing a very difficult situation characterised by shortages in semiconductors and other components, which is causing problems for us manufacturers as well as for wholesalers, installers, house manufacturers and end consumers. But in due course this will of course correct itself, and in a few years' time we will hardly remember this difficult period, just as we are now putting the pandemic behind us."

"The future has never looked brighter for heat pumps than it does today!"

Will the world manage to get through the climate crisis?
"Definitely! Heat pumps are one of several natural solutions to climate change. Another example is the electrification of the automotive industry. All driven by curious and forward-thinking tech professionals who have understood that new technically sustainable solutions should also be perceived as an improvement by consumers. However, when pol-

NIBE 1952-2022

NIBE AB came into existence on 23 January 1952. That was the date when Nils Bernerup registered the company and started operations in Markaryd, with four employees and a workshop manager. There are now some 1,500 employees in Markaryd and 3,000 more at 12 subsidiaries in Europe. Today, NIBE AB consists of NIBE Energy Systems and Contura. The company is part of the NIBE Group, which has a turnover of just over SEK 30 billion and more than 20,500 employees in over 30 countries.

FOUR QUICK QUESTIONS FOR GERTERIC

Driving force
"To be involved in the development and creation of something good for the future."

Morning routine
"Hearty breakfast of porridge, eggs, whole-grain bread and coffee while reading two newspapers."

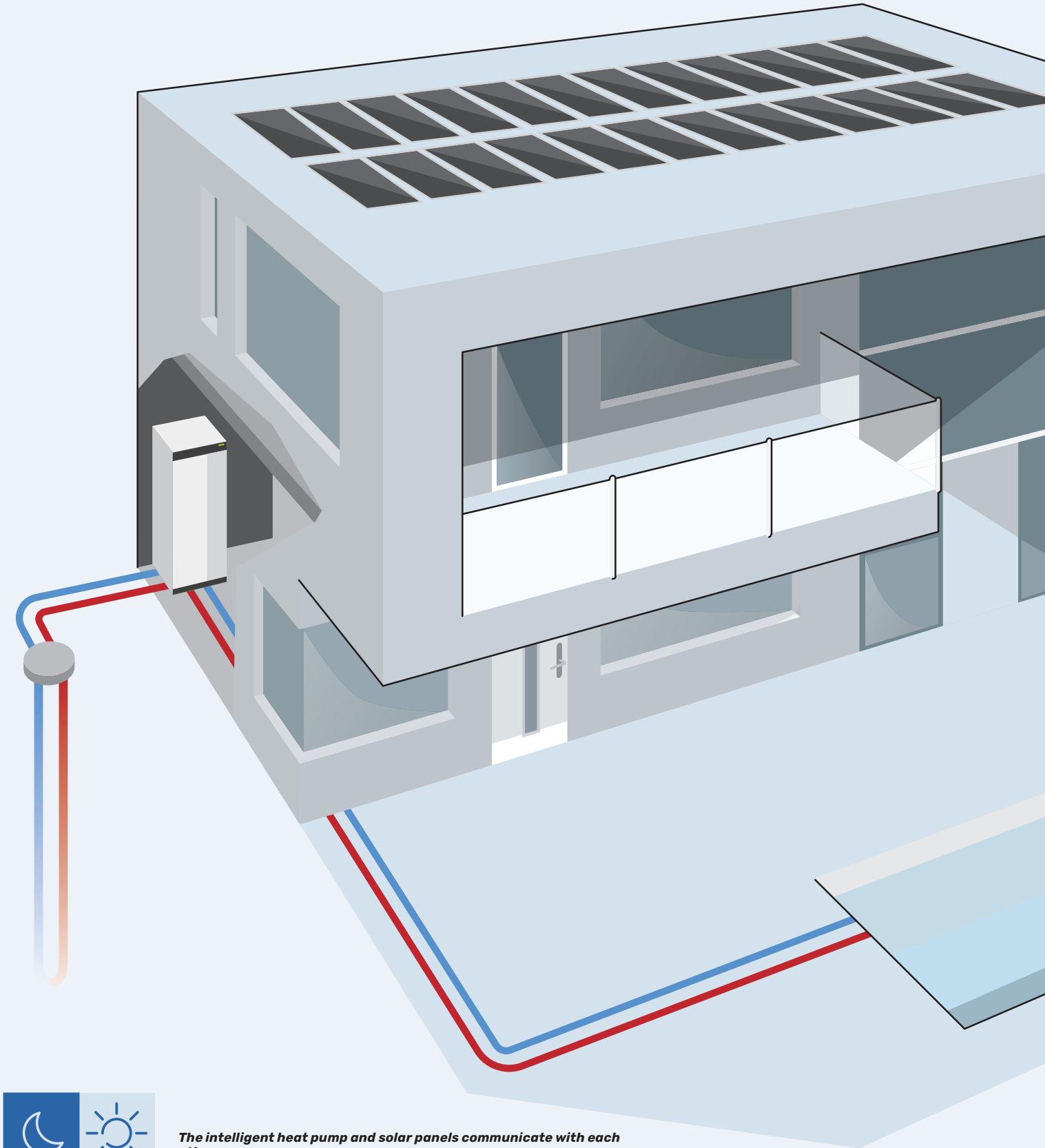
Last book read
"'Where the Oak Still Stands' and 'The Red Address Book' by Sofia Lundberg."

TV series
"'All Creatures Great and Small' by James Herriot".

iticians embark on micromanaging a problem, it usually has a poor outcome. Attempting to phase out nuclear power is a good example of a purely political experiment that has proved to be unsuccessful, in terms of both supply and safety.

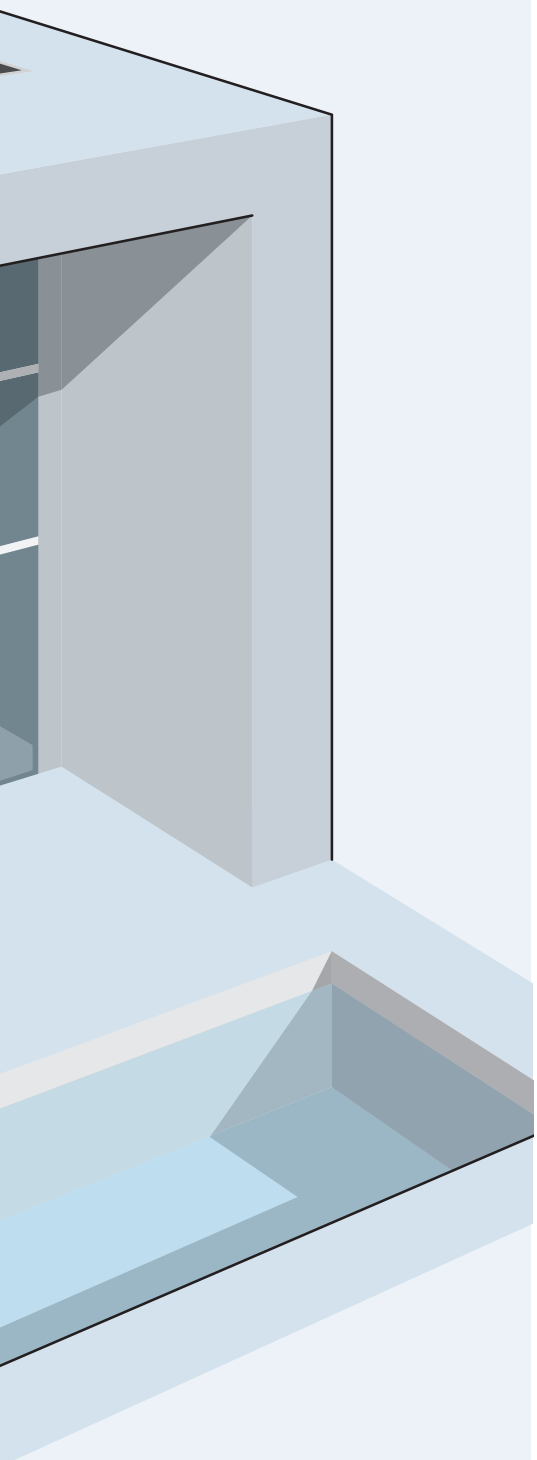
"However, I am absolutely convinced that we will be able to resolve climate change if only we let common sense prevail. It isn't possible to scare people back into a poorer standard of living. The solution is to solve the problem and raise the standard of living at the same time.

"As always, it will be curious, free-thinking tech professionals and scientists who solve the issue. This was how the threat to the ozone layer was resolved, as were so many other doomsday scenarios that science recognised, such as polio, forest dieback, overpopulation, AIDS and access to clean water, to name but a few. The most recent tangible example of how fast and effective science can be at solving a problem is that it succeeded in developing a COVID vaccine in less than a couple of months and, following customary testing, had it on the market within less than a year after the outbreak of the pandemic." ■



The intelligent heat pump and solar panels communicate with each other.

You can allow the solar panels to overproduce electricity and use it yourself instead of selling it. The heat pump senses that the solar panels are overproducing electricity and can top up on heating, for your pool for example. If, for example, you want to keep your pool at 28°, you can set a maximum temperature of 29° and a minimum temperature of 27°, and then you can manage on the solar panels that charge during the day and avoid buying electricity at night.



FOCUS ON SOLAR CELLS

FUTURE-PROOF SOLAR SYSTEMS.

Are your customers, like so many others, considering solar panels? Then NIBE PV is your first step towards a smart, efficient system solution, no matter what your current heat pump is.
"We can offer a great future-proof system solution," says Richard Carlholmer at NIBE.

Solar cells are hotter than ever. Many people are looking to become independent of today's electricity prices and want to generate their own electricity to run their heat pump. Richard Carlholmer has been working with solar panels for eight years. His advice to you as an installer is to help customers make a good long-term choice. "Remember that solar cells will likely be on your customers' roofs for 30 years and that they will replace their heat pump at least once during this time. With NIBE PV on their roof, they can benefit from a system solution the next time they replace it if they switch to an S series heat pump. Connectivity and smart technology allow the customer to optimise the distribution of solar electricity. And with updated software, the customer can continue to benefit from new improvements that enhance the system to save more money and energy."

"We can make sure that over-generated, free solar electricity is used at home instead of being sold, which will pay off considering current electricity prices."

Utilising the solar surplus
Even today, heat sources can communicate with one another to balance energy consumption without reducing comfort. Depending on what the future holds, you can make use of the solar surplus in different ways, and adapt to it. "During the day, when the solar cells overproduce electricity, the heat pump will sense this, and can use the surplus to produce extra hot water, for example. Topping up is otherwise expensive, but not with free electricity. The hot water will last longer and the customer can avoid buying expensive electricity."

Richard gives other examples of how customers can utilise the solar surplus.
"Those who have an older house with a basement can use it to pump in some summer heat to keep the dampness away. It's even better for those who have a pool. In this case, the pool is only warmed to the desired temperature during the day, and then the heat pump is allowed to top up when the solar panels are overproducing. This extra heat can be used during the night, before starting the process over again the next day. In this way, you can make better use of the sun in your own facility, avoid buying more than you need and avoid selling solar electricity unnecessarily. Instead, you retain most of it as 'non-purchased electricity'."

A bright future
"When you sell a NIBE PV unit today, you've sold a technology that's primed for a smarter future," says Richard. "We already have functions such as Weather Forecast Control and Smart Price Adaption that can optimise costs. In the next step, our heating systems will be securely connected to weather data in real time. As our homes become ever more connected, the systems will learn more about the family's heating, cooling and hot water requirements and be able to fine-tune what they produce as a result.

Just imagine when your entire heating system can match tomorrow's weather forecast with your family's typical behaviour on a Thursday at the end of the month. For example, not making hot water immediately in the morning, but waiting until it's bright enough for the solar cells to drive the compressor and thereby make hot water a little later in the morning instead. It's an easy and free alternative to expensive battery storage!

And, because our heat pumps are inverter controlled, they can start off slowly in the morning as the sunlight increases the amount of electricity produced and power up when the energy from the sun is at its peak, storing the energy that is generated.

"Solar electricity is definitely the future and I think it looks fantastic for NIBE PV," Richard concludes. ■

*Learn more about our solar cell solutions at *proffs.nibe.se*

EXPERT PROFILE

THE HOUSE MANUFACTURERS WHO PRACTISE WHAT THEY PREACH.

500 solar panels on the Åsbohus factory roof. It is like an advertisement for their own housing concept, where solar panels and the heat pump are a given combination.
"Better to be sustainable than to just talk about it," says Mats Olsson, CEO of Åsbohus in Örkelljunga, who has noticed that the company's green profile contributes to their housing business.

There's a pleasant smell of freshly sawn pine when we enter the housing factory. 9,000 m² is a large area, but you need plenty of space when you're building houses. Wooden walls are waiting for windows to be installed. Large load-bearing timber structures are ready for delivery to other housing manufacturers. Everything is done by hand, no production lines, and it's clean and attractive.
"We care about craftsmanship and think it's important to have a good working environment," says Mats Olsson, who has run the company together with Viktor, Kristoffer and his brother Patrik since their father retired.

Started in 1963
The company's history dates back to 1963, when Gösta Olsson started a construction company. Gösta built many of the renowned Traryd houses in Markaryd in the 1960s. In 1994 the company had a new beginning and started out early as a turnkey contractor for wooden houses. The name Åsbohus became synonymous with personal service and quality.

Åsbohus, Örkelljunga
Owners: brothers Patrik and Mats Olsson, Viktor Olson and Kristoffer Almkvist Founded: In 1963 by Gösta Olsson
Employees: 45
Housing factory: 9,000 m²
Solar cells: 500 NIBE PV units totalling 184 kW
Turnover: approx SEK 120 million

"Now, with our new NIBE S735 exhaust air heat pump, with connectivity and weather forecast control, Åsbohusen can have an even better system solution that utilises solar electricity to the maximum."

– Richard Carlholmer is responsible for small home manufacturers at NIBE.

"We were early adopters of total timber house construction and have made a name for ourselves and created a good reputation," says Mats.

The company specialises in wooden houses, and also supplies timber frames to other housing manufacturers.
"Wooden houses are more environmentally friendly, and we buy our timber as locally as possible," says Mats. Our market for wooden houses is primarily in north-west Skåne. But we have also, for example, built a six-storey wooden residential building in Örkelljunga, and a house in Växjö which in 2008 was regarded as the world's tallest 'passive' residential building with a wooden frame.

Pioneers of green electricity
How did it come about that Åsbohus was on board with climate-friendly energy so early on, for both itself and its customers? Mats' explanation is that he is a trained electrician and has always had a great interest in technology.
"I think electricity is fun, and I thought solar cells were something we could use. So when we built the factory in 2001, I made sure that there were empty conduits in the ground for our employees to charge their electric cars. We need to reduce our carbon footprint, and it's better to be a little ahead of the game."

There are currently 250 NIBE PV units on the factory roof, and 250 more have been ordered. Together they will produce around 160,000 kWh/year.
"Our goal is to generate more electricity than we consume. We're not there yet, but will be in a couple of years. Environmental profile is important for many, especially younger people. It's important for us that the solar panels are visible when customers come to

Solar panels as standard
Since 2017, Åsbohus has also been able to help customers enhance their environmental profile. For instance, it is standard to include a solar cell package of ten panels to supplement NIBE's heat pump.
"We started cautiously back in 2014, when the panels were blue. Once they were completely black, they gained more and more acceptance, and now that the price of electricity has shot up, they're very popular. Ten panels are the standard, but we recommend 20, which provides approximately 7,000 kWh." This is sufficient for annual heating, hot water and ventilation combined.

On Mats' own roof there are 55 solar panels, and 20 on his holiday home. More and more of his colleagues are doing the same. It seems to be contagious.
"I think it's better to be sustainable rather than just talk about it," Mats concludes. ■

Åsbohus specialises in wooden houses. Since 2017, the solar cell package for NIBE heat pumps has been standard in their offering.

CASE STUDY: THE S SERIES

"You have to be a bit crazy to rebuild a water tower!"

We at NIBE are pleased that Henry Tervahauta and Pari Aria chose our largest S series home heat pump when they built their dream home – an exciting transformation, to say the least, which many people were able to follow on Grand Designs Sweden on TV4. "Anything's possible, and masterpieces take a little longer," says Henry Tervahauta with a big smile.

Henry would never build a standard pitched roof house. He describes himself as a retired industrialist and entrepreneur who loves challenges. To illustrate this, he shows us a newspaper article from the 1980s, when he introduced aluminium windows and insulating glass production in China. He shares these qualities with his wife Pari.
"We wanted to build something all our own, and we were looking at plots of land," says Henry. So we went onto Hemnet and saw that there was a water tower for sale in Knivsta. We saw the potential and got excited.

They paid SEK 1 million for the 24 metre high water tower from 1958, including 700 m² of land, in the middle of the oldest neighbourhood in Knivsta.
"There's a fantastic view, you can see all the way to Arlanda," Henry continues, looking out into the distance.

"Anything's possible!"
The project started five years ago with the planning permit process and architectural drawings. The idea was to retain the industrial character of the exterior, apart from the windows.
"We wanted to build a three-storey dwelling for ourselves and prepare for another four-floor home underneath it. *Continued on next page*

Old water tower in Knivsta Henry Tervahauta and Pari Aria live on three floors, 172 m², planned for another equally large home on four new floors.
Energy solution: 1 NIBE S1155-25 with passive cooling. 2 boreholes at 250 m each. Water heater 500 l. 42 solar panels with a total of 16 kW. NIBE Inverter PVI 20–10 converts the power from the solar panels to the grid.

Henry Tervahauta leaning against our largest home heat pump in the S series, NIBE S1155-25.

Want to watch the programme? It's on TV4, Grand Designs Sweden, season 2, episode 6.

Our largest home heat pump, the NIBE S1155-25, will heat and cool Henry and Pari's new home as well as another flat, a total of 350 m².

It’s been a full-time job, but anything's possible, and masterpieces take a little longer, as I usually say."

The concrete facade was cleaned of graffiti and red algae with a 340 bar hot water pressure washer and then impregnated with a silicate product. Holes for panoramic windows were cut into the 60 cm thick concrete walls with a diamond saw and 200 tonnes of concrete were removed. A completely new storey was built on the top. Four large glass sections, 4 metres wide and 3 metres high, weighing 1 tonne each, were raised and assembled using a self-designed winch assembly.
"I put safety first and stayed in control all the time. It probably looked worse than it was," says Henry, who remained optimistic throughout.

Henry himself project managed the work, made all purchases and participated actively in the construction.
"I have construction industry knowledge. It’s been a full-time job, but anything's possible, and masterpieces take a little longer, as I usually say."

Largest home heat pump
When it was time to choose an energy solution, Henry contacted NIBE.
"At first, Henry had his eye on our F750 exhaust air heat pump," says Richard Carlholmer, product area manager for exhaust air heat pumps. But once I realised the extent of the home, I got him to understand that nothing other than ground-source heating would do.Instead, I suggested an S1155-25, a really big heat pump for a relatively 'small' living area of about 170 m². But Henry told us that there would be another flat, about the same size. And then with a bit of a margin to what might be needed, an S1155-25 seemed like the clear choice."

"I’m very satisfied with the NIBE products we chose, and with the advice and support I received from Richard Carlholmer," Henry says. "It was very professional and I was treated well."

The heat pump is now located on the first floor, 17 metres up in the tower, and the solar

The view is fantastic from the 24 m high water tower and you can see all the way to Arlanda Airport.

SYSTEM SOLUTION
NIBE S1155-25, NIBE PV,
Water heater VPB 500

cells, which will generate a significant part of the energy required, are installed on the south facade. There is underfloor heating on every floor. Two boreholes at a total of 500 metres were drilled for the ground-source heating. Passive cooling has also been activated to provide pleasant, affordable cooling when the summer sun is shining through the large glass sections.
"We've just got the system up and running, basically everything's ready," Henry explains. "We've connected all the distribution boxes, water, the heat pump and we've drawn pipes the whole way up. And now I'm going to connect it to the myUplink app!"

A home at last
Henry and Pari's bedroom is on the top floor, with balconies facing three different directions. The middle floor consists of an open-plan kitchen and living room with two kitchen islands in the middle. On the bottom floor there is a relaxation area with a bathroom, sauna and laundry room. With woodwork in oak, warm hues on the concrete walls and the interior design in place, it feels like a home at last.
"In order to retain some of the industrial feel, we have a diamond-polished concrete floor in the kitchen and living room, and the tabletop is also in polished concrete."

There are many fire and other safety regulations to comply with, and it will soon be time for an inspection.
"We've installed a dry riser pipe that will push water up to fire hydrants on several floors and we'll be installing extra evacuation doors and smoke screens on the evacuation staircase, which we need to have in place before the inspection after Easter. Then we can move in!"

It's been a long, exciting journey for Henry and Pari. They hope to be able to move in at the beginning of May.
"It feels fantastic! We've revamped the water tower into a modern home," says a proud and happy Henry. ■

IN FOCUS: COOLING

CAN YOUR HEAT PUMP PROVIDE COOLING?

The heat of summer is almost upon us and we are starting to receive questions about cooling. Can NIBE's heat pumps provide cooling? Is it possible to install it later, or when replacing your heat pump? "YES is the obvious answer!" says Staffan Berg, who also runs courses on cooling at NIBE.

Passive cooling, almost free
Passive cooling is extracted almost free of charge by allowing the ground source heat pump to pump cooling from the bedrock and spread it through the house via a cooling convector on the wall or ceiling.
"There's about 25 W of free cooling per metre of active borehole," Staffan explains. In other words, a 200 m deep borehole can offer the same amount of cooling as a traditional air/air heat pump can produce. If the cooling requirement is greater than the passive cooling from the borehole, you can always build an active cooling system. The compressor in the heat pump then starts to produce cooling.

"Active cooling is particularly suitable when you want to be able to set a precise temperature, for example in a food or wine cellar or in a bedroom. For greater requirements and more precise settings, you can supplement it with an air/air heat pump.

By using cooling from the rock, the borehole will also be recharged in one summer, which will make the ground source heat pump perform better in the autumn. Operating the circulation pumps for passive cooling during the summer is estimated to draw about 200 kWh, which is almost free of charge. Even if you have an existing ground-source heating system, passive cooling can still be added.

"For those who are facing a new installation or replacement of a ground source heat pump, I would really recommend cooling as well. The additional cost will give you a total system that creates a very pleasant indoor climate and can both heat and cool," says Staffan.

Active cooling, like air conditioning
For those with ground source or geothermal heating, passive cooling may work well during May and June but then become less effective as the ground warms up.

The active cooling function allows your heat pump to continue to cool your home to the desired temperature.
"Active cooling is particularly suitable when you want to be able to set a precise temperature, for example in a food or wine cellar or in a bedroom. If you have an air source heat pump, you can use active cooling in the same way as above, i.e. on hot summer days the heat pump switches from producing heat to producing cooling."

Cooling is carried via pipes to a cooling convector, which you place in the house, for example under a window, or more discreetly in the ceiling.
"Just keep in mind that when you produce cooling, condensation forms and must be managed, for example through connection to the nearest drain," Staffan adds.

Cooling by fan at night
If you have an exhaust air heat pump, you can select "night cool" mode to get increased cooling ventilation at night when it is cooler outdoors than indoors.
"Then you force the fan into the extract air flow to bring in cooler air," Staffan concludes. ■

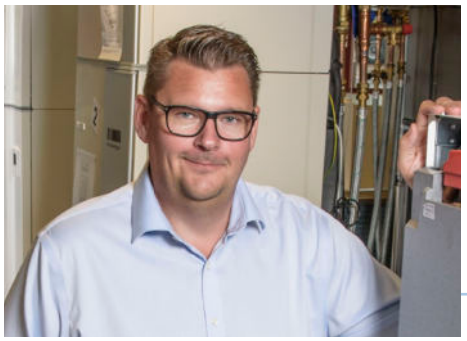
COOL FACTS

Passive cooling
- Makes use of the cool rock temperature of the borehole.
- The heat transfer fluid that normally collects heat in the bedrock now collects cooling instead.
- Stores heat in the borehole.
- Low operating costs.

Accessories: NIBE PCS 44. Suitable for our ground source heat pumps NIBE S1155, S1255, F1145, F1245, F1155 and F1255.

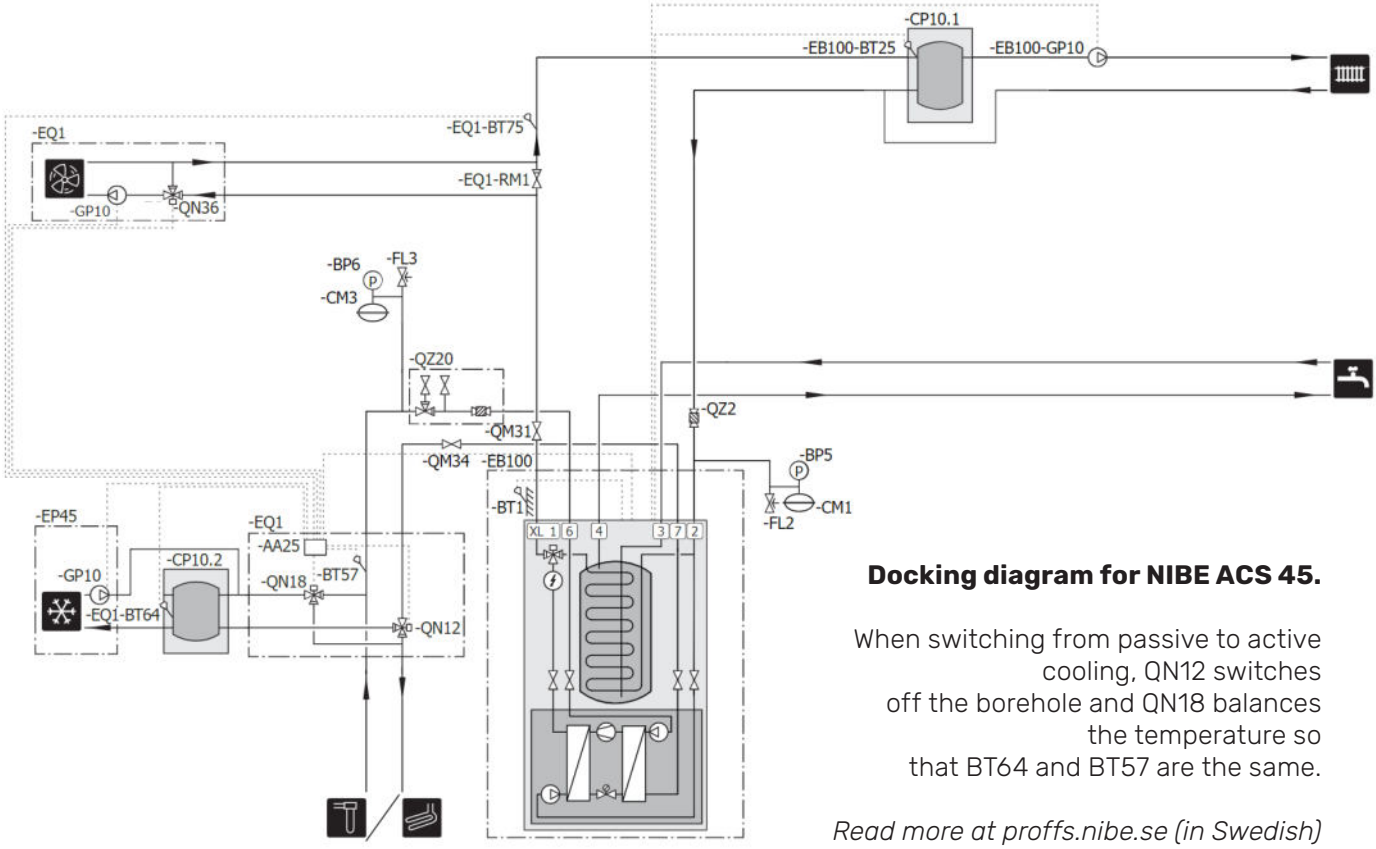
Active cooling
- If there is a greater need for cooling and passive cooling is not sufficient.
- The compressor works actively to create cooling and is best suited when you want to set a more precise temperature.
- Similar to classic air conditioning.

Accessories: NIBE ACS 45 with ground source heat pump. For air source heat pumps, ASC 310 is suitable for NIBE VVM S320, S325, F225, F310, F320, F325 and F500.



"There's about 25 W of free cooling per metre of active borehole," Staffan Berg explains. In other words, a 200 m borehole can offer the same amount of cooling as a traditional air/air heat pump can produce."

–Staffan Berg, NIBE Training.

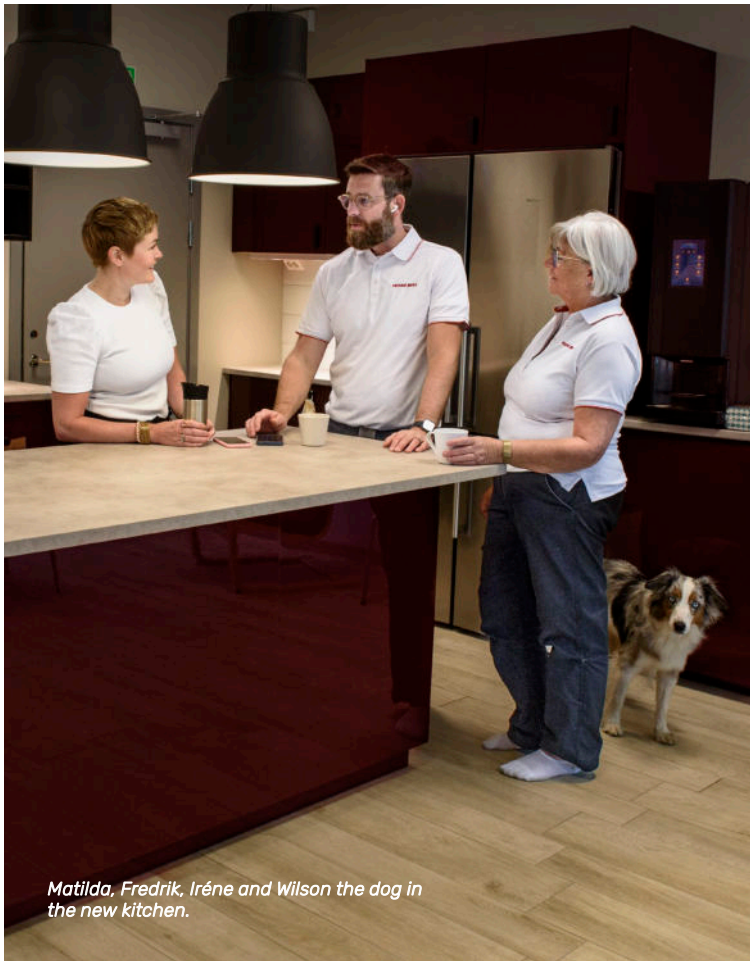


Docking diagram for NIBE ACS 45.

When switching from passive to active cooling, QN12 switches off the borehole and QN18 balances the temperature so that BT64 and BT57 are the same.

Read more at proffs.nibe.se (in Swedish)

The entire family drives buses. From left: Karl-Johan Karlsson, Iréne Karlsson, Matilda Karlsson Wennström and Fredrik Karlsson.



Matilda, Fredrik, Iréne and Wilson the dog in the new kitchen.

Jonas Karlsson and Johan Persson from Bäckströms El and VVS in the utility room.

CASE STUDY

"VEINGE BUSS" NEW STATE-OF-THE-ART, ENERGY-EFFICIENT BUILDINGS.

Before the pandemic, the company had seven buses and ran their business from their family property. In August, they moved their now 17 buses to new state-of-the-art premises. It has a garage, workshop, washing plant, offices and kitchen – and underfloor heating everywhere. "We've built energy-efficiently and we recycle all the energy that can be recycled," says Fredrik Karlsson, third generation CEO and owner of Veinge Buss.

Buses in burgundy and grey metallic paint are all parked in a row, shining in the sun outside the new premises. Here, just outside Veinge, the company bought land to construct new buildings. Their previous premises were part of the family property where Fredrik Karlsson grew up. The new kitchen has burgundy doors that match their attractive buses.

Veinge Busstrafik AB started almost a hundred years ago, in 1927. There is a slight difference in comfort and safety today. At that time, passengers sat on wooden benches and there weren't any seat belts.
"My father drove tours to Helsingör, now we're driving to Bordershop," says Fredrik's father Kalle, who looks into the kitchen and shows a framed photograph of the first bus his father owned.

All time high in 2019
Before Fredrik took over the business, his father ran the company together with his brothers Bengt-Göran and Pelle. Fredrik's father, mother and wife also drive for the company. He started here in 2004 and has been driving ever since. There are school buses, tourist coaches, train replacements, regular-service buses and buses for events of various kinds. But with the expansion they have experienced, he doesn't get much of a chance to drive any more.
"2019 was an all time high", he continues.
"We'd just won a procurement agreement with Hallandstrafiken when the pandemic struck. We were in Zell am See at the time and brought Corona back with us on the bus journey home. All jobs were cancelled. But in August last year the pandemic slowed and business picked up immediately. Now we have all 17 buses up and running. Before the pandemic we had seven buses."

They moved to their new premises in August 2021, just in time for the pandemic to slow and business to increase again. The premises consist of 900 square metres of new space, with a kitchen, offices, washing plant, workshop and heated garage.

Environmental requirements from customers
Fredrik tells us that the importance of environmental measures has increased, and customers are making rather tough demands.
"All our buses meet the latest requirements and run on HVO, an environmental diesel that is a little more expensive and environmentally friendly than regular diesel. We've also built our new premises energy-efficiently, and we recycle all the energy that can be recycled. We use ventilation recovery and use the borehole for passive cooling. We also intend to install solar cells. Now we just need to keep track of our energy consumption so that we don't overproduce energy."

Bäckströms El och VVS is another family business in the Veinge area, and it has an even longer history. It started four generations ago, in 1916. Johan Persson, who carried out the installation and is an expert in the facility, works here. A NIBE F1355-43 with four boreholes does the basic work.
"We had a good dialogue with Fredrik Snygg at NIBE," says Johan. "Then we worked together with local builders and made a lot of decisions on site. We wanted cooling from a heat pump, underfloor heating everywhere, water for the washing plant from our own well, and statutory ventilation with fans that can preheat the air when it comes in and recover the heat before it goes out. Everything works and is in sync!"
When we start to talk about connectivity and apps for mobile phones, Fredrik's curiosity is sparked, even though he already has a couple of apps to keep track of the business. It's reassuring to have the heat pump in your mobile and get an alarm in the unlikely event that something goes wrong.
"I haven't connected the heat pump to NIBE Uplink yet, but it's easy to do," Johan tells Fredrik.

The energy solution in the old premises was a hot-air boiler with an oil burner. According to energy calculations, the total electricity consumption of the state-of-the-art facility should be just over 30,000 kWh per year, of which the heat pump accounts for 21,000 kWh. A figure that can drop significantly once the planned solar cells are in place.
"The roof is prepared for solar cells, so we look forward to becoming even more environmentally friendly," Fredrik concludes, looking up towards the sun. ■

Fredrik's grandfather Gösta started Veinge Buss. He drove people living in the countryside to shop in the city.

Veinge busstrafik AB
Started: 1927
Owner:
Fredrik Karlsson
Employees: approx. 25
Premises: 1,006 m² with kitchen, offices, washing plant, workshop, heated garage – all with underfloor heating
Energy solution: NIBE F1355-43, passive cooling, NIBE UKV 1000 l and ventilation recovery.
Electricity consumption according to energy calculation: 30,715 kWh/year, of which the heat pump consumes 21,002 kWh/year.

NIBE OUT IN THE WORLD

A FAMILY BUSINESS FROM URUGUAY CURIOUS ABOUT NIBE.

Lilian and Omar Vieytes with their son Pablo from Pressura on a guided tour in Vetenskapshuset.

Pressura is a company in Uruguay that has become interested in heat pumps and in NIBE. For the past couple of months, they have been testing one of our heat pumps for cooling. In March, they visited us to learn more.
"We've taken the opportunity to learn from each other and expand our contact networks," says Seved Demberg, International Sales, Regional Manager at NIBE.

"It's interesting that they have a Mediterranean climate, as our products are also suitable for southern Europe."

Lilian, Omar and Pablo Viyetes run a family-owned business with around 25 employees working with total water and energy solutions. They are very interested in solutions to reduce emissions and care for the environment, and in using quality products.
"There has recently been a major increase in the use of heat pumps to heat pools in the summer," says Seved Demberg. Pressura has a concept that is groundbreaking in the Uruguayan market. They use a new technology for home heating applications. They make professional assessments and offer tailor-made solutions.

95% green electricity
Uruguay is located on the Atlantic coast of South America and has a Mediterranean climate. The country is somewhat smaller than Götaland and Svealand together. When we read a report about Uruguay, we can see that almost 95% of their electricity is now sourced from renewable energy. In less than 10 years, they have reduced their carbon footprint and electricity costs, without state subsidies. Just five years ago, almost 40% of homes used wood for heating and 25% used gas or oil.
"Here is where we have joint ambitions to reduce emissions in order to achieve the global goals of Agenda 2030," says Seved.

The majority of Uruguay's renewable energy consists of hydro and wind power, but solar cells and biofuels are also used. When it comes to the share of wind power in the total amount of renewable energy per country, Uruguay is second in the world, after Denmark.

Cooling in a Mediterranean climate
After a number of meetings and reviews with NIBE, Pressura decided to test outdoor air heat pumps for cooling in their own premises. In November 2021, the delivery went from Skånes Fagerhult, was reloaded in Hamburg, continued by ship and arrived in Montevideo on 4 January, in the middle of the Uruguayan summer.
"It's interesting that they have a Mediterranean climate, as our products are also suitable for southern Europe. In Uruguay, it's summer when it's winter here, which gives us

at NIBE more time to further test this cooling operation solution in a summer climate.

Lilian, Omar and Pablo started their visit in Stockholm. They had the privilege of meeting Uruguay's ambassador in Stockholm. In Markaryd, they saw our modern production facilities and an example of a heat pump installation in a Swedish house. We had technical and commercial briefings with them and finally a guided tour of Vetenskapshuset and the Nobel Exhibition in Markaryd.
"We have together sown the seeds that may result in a long-term partnership and our being included in the growing interest in heat pumps in the Uruguayan market. We are now keeping tabs, step by step, with regular status checks.

"It was an honour to receive this committed family here in Markaryd. They were very impressed and grateful for the opportunity, just as we were," Seved concludes. ■

Pressura
Pressura's office is located in the town of Barros Blancos in southern Uruguay. They have solar panels on the roof, recover rainwater for irrigation and are currently testing an air/water heat pump solution from NIBE for heating and cooling of their premises.

MAXIMISE WITH MARKO!

NIBE's technical correspondent Marko Hietaharju shares his smart tips to make life simpler, more fun and possibly happier for NIBE installers. Do you have any issues that you'd like him to discuss here? Email Marko at maxa@nibe.se

MARKO TESTS THE THS 10 HUMIDITY AND TEMPERATURE SENSOR.

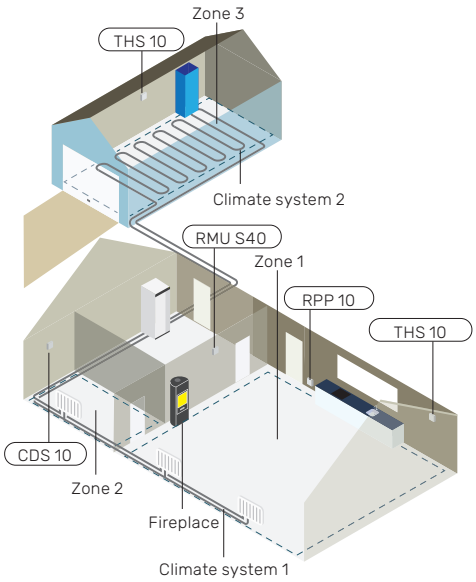
Is everything about the S series easy? Even the smart accessories? I already tested the RPP 10 circuit breaker and the RMU S40 room sensor in previous editions. Now it's time for the third in line. Join me!

What is the THS 10 humidity and temperature sensor good for?
The THS 10 replaces the BT50 wired room sensor. As the name suggests, it senses and monitors temperature and humidity. It's all about comfort! If it's too dry in your bedroom, you may wake up with a dry cough and a headache. If it's too humid, mould may form. So that's where THS 10 comes in. It keeps track of the temperature and humidity.

But my customer has no ventilation connected to their heat pump. Doesn't that mean that THS 10 will be useless?
Absolutely not! If it reads that it's too humid, it will increase the heat, which works wonders against moisture. But if you also have an exhaust air module connected to your heat pump, it can raise and lower the ventilation according to the humidity level. However, ventilation is not a must for controlling humidity.

The THS 10 will do its job with or without ventilation.

Should I have several THS 10 units?
It is absolutely possible to have several THS 10 units. Actually, we often recommend you do. Let's have a look at the image below to see what it might look like.



Here, there is both underfloor heating and radiators, and they each form a separate climate system. A climate system can be divided into several zones, and one or more sensors or other accessories can be assigned to each. A zone may be a specific room or part of a larger area. In the example above, we have two THS 10 units in Zone 1, which means that the heat pump will be able to react more quickly to add heat when the fireplace isn't producing. Several THS 10 units may be needed if you want an even, comfortable indoor climate at home. Time to connect a THS 10 to the heat pump.

Get started in a matter of minutes
But first, make sure that the heat pump is connected and has the latest software update. Let's get started!

1. Insert the batteries into the THS 10.
2. **In the main menu on the heat pump display, go to Connection, menu 5 and select Wireless Units, menu 5.4.**
3. Click Add Device and wait until it makes contact.
4. In the main menu on the heat pump display, go to menu 1.3.3 Room Sensor Settings.
5. Select which climate system the THS 10 is to work with. Click on the relevant climate system and select THS 10. Then click on the text Heat so that it lights up. The THS 10 unit will now control the climate system you chose.

ALL DONE! Now it can be mounted on the wall. Avoid placing it behind curtains, between shelves, near a heat source, in direct sunlight or in the draught of an exterior door, as these things may affect the sensor. It's a good idea to try it out before screwing it in place. Is there too great a distance between the THS 10 and the heat pump? Add an RPP 10, which amplifies the signal between wireless accessories.

Is there support for THS 10 in myUplink?
Absolutely, you will also be able to see the temperature and humidity in the app.

So how did the test go? In my opinion, the THS 10 also qualifies as a simple, smart accessory. We hope you agree! In the next issue, we'll test the CDS 10 wireless carbon dioxide sensor.

Good luck! / Marko

NIBE ENERGY SYSTEMS
BOX 14, 285 31 Markaryd
Sweden

Phone: +46 433 – 27 30 00
Opening hours:
Monday - Friday, 8.00 - 16.00
info@nibe.se

If you have questions about our products you should contact the NIBE subsidiary or partner in your country.

Find NIBE subsidiaries and partners at www.nibe.eu/en-eu/contact/contact-us

Seved Demberg
International Sales Area Manager
+46 (0) 433-73 138
seved.demberg@nibe.se

Andreas Hellstrand
International Sales Area Manager
+46 (0) 433-73 048
andreas.hellstrand@nibe.se

Henrik Henningsson
International Sales Area Manager
+46 (0) 433-27 35 53
henrik.henningsson@nibe.se

Catharina Erlingsdotter
International Sales Administrator
+46 (0) 433 - 27 33 20
catharina.erlingsdotter@nibe.se

Christoffer Roos
International Sales Administrator
+46 (0) 433 - 27 30 59
christoffer.roos@nibe.se

Julia Mikhaylova
International Sales Administrator
+46 (0) 433 - 27 36 70
julia.mikhaylova@nibe.se

Join us and put the future on the roof.

Deliver a high-efficiency solar panel package that takes advantage of every ray of sun. NIBE PV works with most roof types and, in conjunction with a heat pump, optimises energy consumption. With solar power and smart technology, you help your customers lower their energy costs and enjoy a comfortable indoor climate.

Discover NIBE PV at proffs.nibe.se