NIBE

EXPERT NEWS

NO. 1 2023 | FOR PROVIDERS OF INDOOR COMFORT

SIMPLE, SECURE AND TAILORED.

"At NIBE Property, we want to meet your needs of energy-efficient integrated solutions and more support for larger real estate projects."

“We are just at the beginning of a new energy saving journey.”

Hello, friends of NIBE,
During the Christmas and New Year holidays, I ended up in a discussion about the replacement of an existing ground source heat pump that is 16 years old. When it was installed, the decision was based on a positive calculation and the electric boiler was replaced with an efficient ground source heat pump. We are now at the beginning of a new energy saving journey that can be compared with the transition from an electric boiler to a heat pump 15–20 years ago. Because it certainly pays to switch to a new S series heat pump. We have helped you calculate that here. Want to know how much? Read the article on page 12.

In another interesting article, "From idea to reality", you will meet those who know the market and order our innovative product development. It brings me unprompted to a new product that hasn't yet reached the market, but that we showed for the first time at Nordbygg 2022 – our most efficient ground source heat pump ever with a SCOP of 6.22. When introduced, it will provide the opportunity for further energy savings.

Here in Markaryd it is full speed ahead on all fronts, which is noticeable for anyone passing by. Building and creating technical production conditions is one of the areas we work frenetically with. If you’re just passing by, please get in touch. We’d be happy to show you around, so you can see for yourself how our new factories and premises are developing. If you are unable to do so, we will show you newly taken photos from the construction here in the magazine.

We hope you enjoy reading it and that it will inspire you to do more great deals this spring!

Henrik Henningsson Sales Manager Sweden NIBE Energy Systems

Subject to printing errors and misprints.

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MEASURING IS KNOWING At Backer in Sösdala, they have thoroughly done their energy homework. Instead of carrying out a standard solution with 130 boreholes for five industrial plants, they pressed pause and started a feasibility study. They chose to map all energy flows in the property in order to utilise the residual heat.

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PROFITABLE TO REPLACE A HEAT PUMP? With today's energy prices and power debate, it's interesting to take a closer look at how efficient heat pumps are today compared with before – and what your customers can save by switching to our latest models. Join us as we count and compare!

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AFTERMARKET IS GOOD A lot of heat pumps are installed and Enbergs VVS wanted to access this with service and maintenance and got the opportunity. "You want to move forward, that's what spurs you on as a business owner. The aftermarket is good to have," says René Enberg, CEO.

ISH FAIR IN FRANKFURT

WORLD-CLASS SUSTAINABLE ENERGY SOLUTIONS AT ISH

After a 4-year break, we finally got to meet up again here at ISH and focus on what we do best: Making life easier for installers and property owners, while helping create a more sustainable world.

Read more on page 10

NEW SERIES: FROM IDEA TO REALITY.

In four articles, we follow the path from idea to finished product. We start by meeting those who listen to the market.
"Sweden is a mature market that provides very good input into product development," says Stefan Calling, who is responsible for the product manager department in Markaryd.

The role of the product department is to act as the customer or client of the development department. They are the ones who find out what the market wants.
"We work methodically, listen to you installers, to our end customers, consultants and experts," Stefan explains. We conduct business intelligence analyses and look at competitors, features, price, new technology, new niches, new markets or new market segments.

"Market demands drive our products forward."

Read more on page 18

NIBE COMMERCIAL PROPERTY

"We enable sustainable energy solutions for larger properties."

In order to meet the increased demand for energy-efficient system solutions and smoother work processes for larger property projects, we are now strengthening the organisation with a special department for the Swedish market called NIBE Property. "We can now offer the right skills that can be involved throughout the entire process, develop an efficient overall solution and be available to make everyday life easier for our customers and partners," says Kalle Silén, sales manager at NIBE Property.

At NIBE, we have been working with climate solutions since the beginning in 1952. It started with hot water tanks and has been expanded to, above all, high-performance heat pumps. For many years now, we have had a property team that offers system solutions in larger property projects. The new department, NIBE Property, is a development of this.
"It's actually a way of clarifying and improving our offering," says Kalle. We want to meet customers' needs for energy-efficient total solutions and greater support during the course of the project. We are needed both on site to take care of the projects, but also to provide quick answers to various questions. We now have an organisation customised for this.

"We have a long history of developing world-class product proposals, and we will continue to do so. The property team is now in place and together we can develop solutions for the entire property."

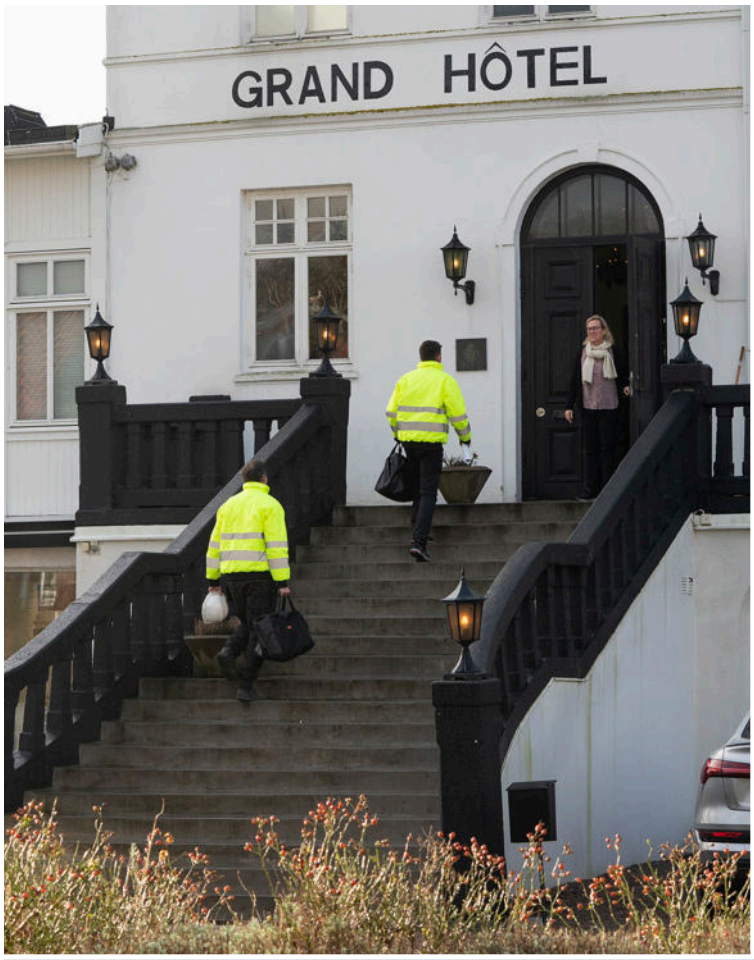
The NIBE model
The offer is based on the concept that the best results are achieved through close collaboration. Together with our customers and partners.
"We are facilitators, and we call this way of working the NIBE model," Kalle explains. To make things easier for our partners, we have a contact person who is responsible for the project, and we put together a team where we bring in the right expertise from our various product areas. We have also strengthened our organisation with plumbing engineers to better support the overall solution.

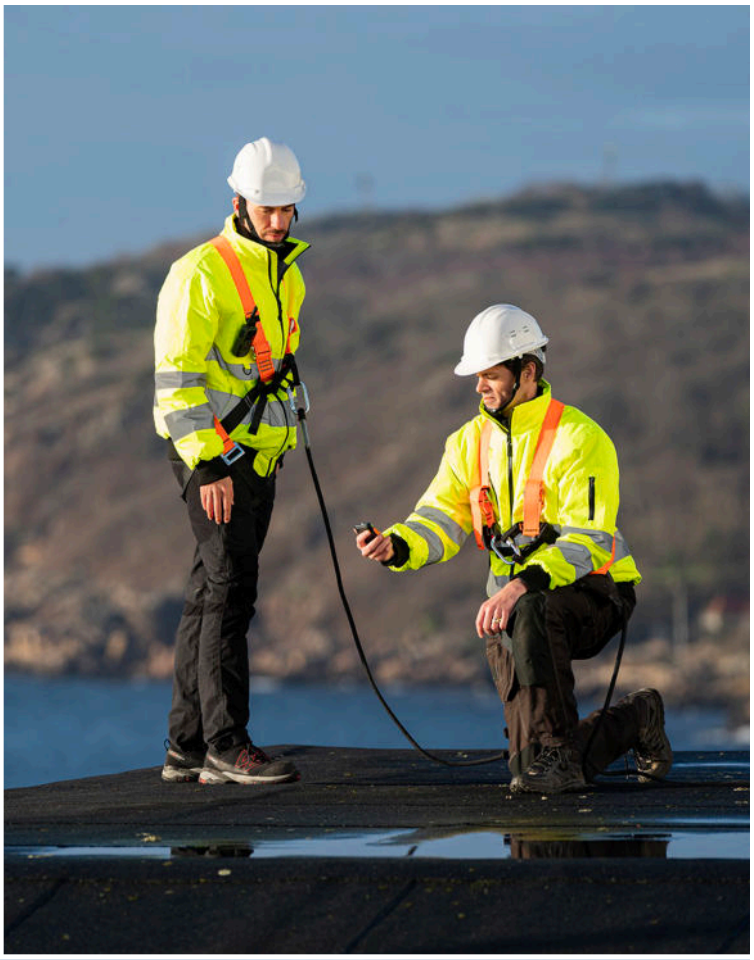
Kalle Silén is sales manager of the new commercial properties department, NIBE Property. Kalle has more than 20 years' experience in this field, and has worked at NIBE since December 2019.

Solving the entire power requirement
NIBE Property is a one-stop supplier of energy solutions for heating, hot water, cooling, solar energy, ventilation and power.
"We deliver a solution that enables the total power requirement of the property. The earlier we come into the project, the better the results! The purpose is not only to create sustainable energy solutions and contribute to a good indoor climate. It's also about making everyday life easier for all of you who work on projects and for those of you who manage, install and maintain our energy solutions."

An experienced team
The property team consists of a sales team, a technical team and an aftersales team who together meet up before, during and after the project and are available throughout the lifespan of the system. You probably recognise some of them!
"We've gathered together people with solid experience of heat pumps and system solutions from NIBE, and reinforced them with several people from outside. For example, our regional sales representatives Fredrik Snygg, David Möller and Mikael Andersson, and product specialists Per Törnkvist for ground source heat pumps and Arvid Johansson for air/water heat pumps."

NIBE Property will be presented in more detail at the Kista property fair in March.
"It'll be really exciting to meet industry friends and discuss energy solutions and the NIBE model. The energy issue is hotter than ever, so I hope for many exciting meetings, but also feedback on how we can become even better at developing new products and solutions for the properties of tomorrow," says Kalle. ■





150,000 kWh of renewable energy from the rock replaces 52 m3 of oil per year in one of Sweden's most magnificent hotels in Mölle. An initiative that shows that they are at the forefront of environmental issues.

"We're just as geeky, which is why it's been so much fun to work together."
Bengt Carlsson, property manager at Backer (on the right), thanks Leif Rydell, energy consultant, for a great collaboration.

CASE BACKER

UNIQUE HEAT PUMP TECHNOLOGY.
"Now we move low-value energy and turn it into high-quality energy."

Backer in Sösdala has done their energy homework thoroughly. Instead of implementing a standard solution with 130 boreholes for five industrial plants, they pressed pause and started a preliminary study.

Opposite the newly built marketing centre, and a good distance to the north, there are five properties with an area of 30,000 m². Tubular heating elements have been manufactured here since 1949. Today, everything from intelligent heating and control solutions to energy, vehicle and process control are produced here in Sösdala and worldwide.

In 2016, NIBE announced new energy-saving targets and that they would heat and cool their own properties using NIBE's products. Since Backer is a company in the NIBE Group, they follow our policy when it comes to the efficiency of energy solutions for properties.

We have spoken to some of the key people who have together created this super-efficient plant, where ground-source heating forms the basis. They are Bengt Carlsson at Backer, Leif Rydell, energy consultant with knowledge and equipment for energy surveying and Olle Andersson who calculated the borehole repository. And from NIBE's side Fredrik Snygg from the property team. All with long and solid experience of energy optimisation.

Pre-study break
Bengt Carlsson, who has been at Backer since 1985, is responsible for the properties' maintenance and electricity supply.
"It's been many years since we started discussing energy efficiency improvements with Fredrik at NIBE," says Bengt. In 2016, I contacted him again and we started to sketch out a renovation of the entire Backer energy system, which involved a standardised heat pump solution. But before we

had time to implement it in the first of five substations, we pressed the pause button. The property team at NIBE, led by Fredrik Snygg, had recently completed a similar project at Xylem in Emmaboda (read the article in Expert News #3 2018). The unique thing about the project was that they moved low-value energy and converted it into high-value energy where it could be useful. A project that led to considerable energy savings and has become a textbook example of how modern heat pump technology can be utilised.
"We started to look at Backer the same way and realised that we had to map all our energy flows before we move on," says Bengt. So we contacted the energy consultant, who was one of the key people in the successful project, and initiated a pilot study.

"If we raise our sights, there is so much energy to be recycle rather than just adding new heating and cooling."

At the same time, the new marketing centre at Backer was built with the ambition of being certified as a Gold environmental building, according to the Sweden Green Building Council. (Read the article in Expert News #1 2022.)
"This gave us the opportunity to get it right from the start and we invested in ground-source heating with passive and active cooling, solar cells and ventilation with highly efficient energy recovery," explains Bengt, "in order to keep consumption down as much as possible and to live as we preach."

Pool heats office
Over a full year, energy flows were measured, mapped and analysed at Backer. Fixed and mobile meters were used here, which were moved around to different measuring points and substations.
"We measured and measured, plus and minus, and we started to move the energy that was already there," Bengt continues. "We wanted to map the energy for both the heating season and the cooling season, so we needed to do this for at least a year. And we found that the potential was greater than we thought."

The low-value energy was in both offices and in production. Bengt explains:
For example, we have a 25-degree cooling water pool that is used to cool production. We used to send excess heat straight into the air through our cooling towers and units. We are now using heat pump technology that cools production and simultaneously heats the premises. Another example is the excess heat from the air compressors, which is also recycled with heat pump technology. Previously, the cooling air went straight out into the atmosphere. Since the commissioning of this substation, we have a net amount of SEK 150,000 per year, which means that it will be paid off in a few years. We have generated heat and hot water equivalent to 190,000 kWh, while the heat pumps have only consumed 40,000 kWh.

Measuring is knowing
There are different methods for measuring energy flows for a pilot study, but also for follow-up and continuous development. Consultant Leif Rydell, who has been working with energy optimisation for more than 30 years, helped in this case.
"Ultrasonic measurement is a convenient way to measure flows in hydronic systems," explains Leif. "The measuring equipment is secured to the outside of the pipes, avoiding the need to go in and interrupt the pipe systems and consequently production. As the equipment is mobile, we have been able to move it around to different places where there has been energy to measure and collect."

Another way of measuring is to put power meters on the outside of the cables.
"They measure electricity consumption and are easy to work with," Leif continues. "They are small and compact, and not a big investment. There is a lot of technology →

"Ultrasonic measurement is a convenient way to measure flows in hydronic systems. Then you attach the measuring equipment to the outside of the pipes, avoiding the need to go in and interrupt the pipe systems and thereby production."
-Leif Rydell, energy consultant

Fredrik Snygg from NIBE Property, together with Mikael Andersson from KN VVS- och Energikonsult

CASE BACKER

available today, and it's important to be able to show facts if you want to achieve something. Measuring is knowing!"

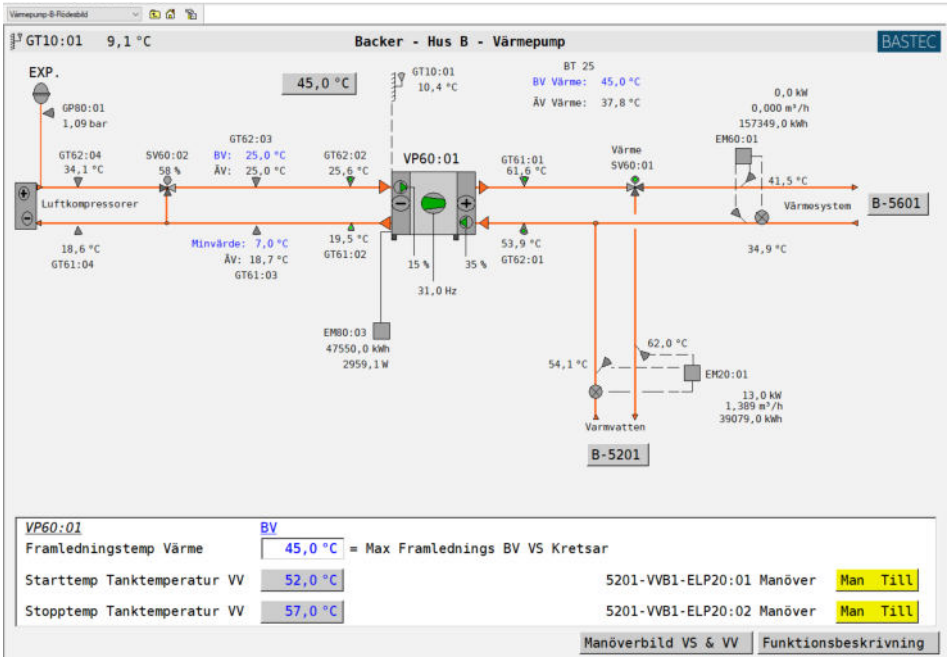
Measuring electricity output today has become much cheaper and the technology is also more accurate.
"This gives a very good picture of what it is profitable to do, and it is valuable to help with the dimensioning of the system," Leif continues.

"Now we are moving low-value unwanted energy and converting it into high-value desired energy with modern heat pump technology."

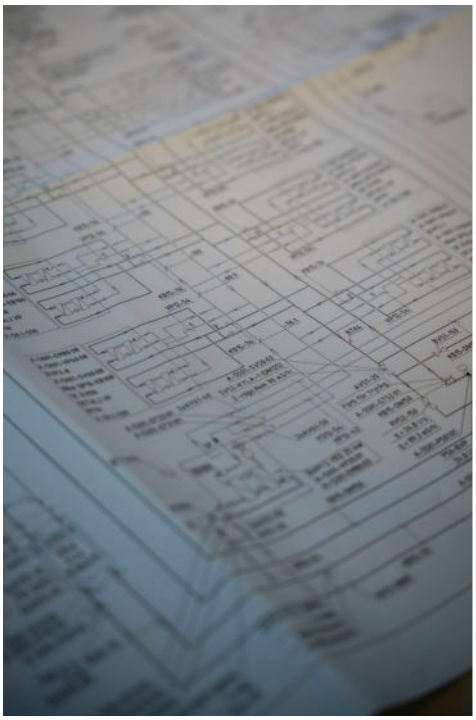
From 130 boreholes to 45
When the energy mapping was complete and the amount of cooling and heating needed was understood, the calculation of the borehole repository began. They brought in additional expertise in the team, Olle Andersson, professor of geology.
"The boreholes, or borehole repository as it is actually called, work much like a battery," explains Olle. "In the summer, it is charged with waste heat from the cooling system, and in the winter the heat is recovered.

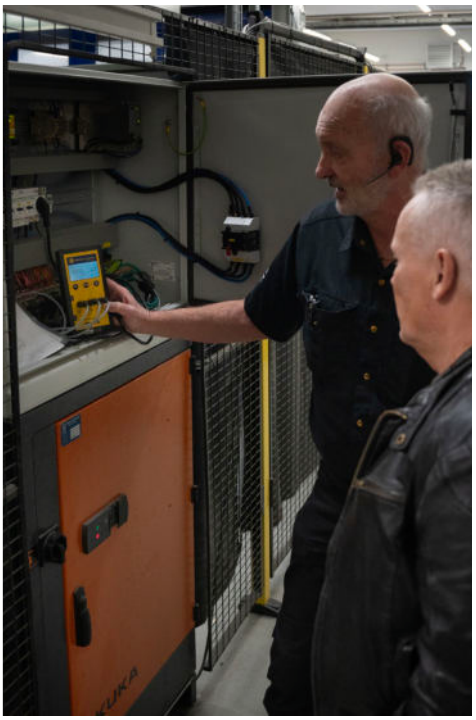
There are several factors that determine how large a borehole repository to make, how many are needed, and how deep they should be. The most important are the heat conductivity of the rock, and how much annual energy is expected to be transported to and from the repository.
"In this case, I made two investigation holes to check the conditions," continues Olle. "Because we had a good grip on the amount of energy, it was quite easy to calculate the number of holes and their spacing. I used the calculation program EED, which is used for such systems.

"This is a good example of larger borehole repositories in an industrial application," says Olle.



Above: Screenshot from Bastec showing recycling in air compressors.





Goodbye to oil and electricity
The winter of 2022/2023 was the first winter season with the new plant. Bengt continues: "Previously, the buildings were heated by oil-fired and electric boilers, and cooling was supplied by traditional cooling units. The system now consists of modern heat pump technology, where we move energy between buildings with an internal low-temperature network and new ventilation."

"Before, each factory lived its own life, now we transfer energy to those with a deficit."

Another key person in the project is Mikael Andersson from KN VVS- och Energi-konsult with NIBE's technical solutions and fifteen heat pumps as his foundation, he took care of and created the advanced design drawing. "Fredrik, Leif, Micke and I discussed our way to a solution principle, and Micke realised all our ideas," says Bengt. "A great and very complex job. It was about connecting all the heat systems, determining pipe dimensions and making all the fine adjustments. Before, each factory lived its own life, now we had to transfer energy to those with a deficit.

"The plumbing team in Hässleholm, which is our local plumbing contractor, did a great job and we did the electrical installation ourselves," says Bengt. "We are more than satisfied with the plant. In addition to energy savings and the positive impact on the environment, we also have a better process and production and a more pleasant working environment. We know exactly where we use up our energy and learn a lot in the process."

Control at the heart
With a superior control system, it is possible to see how much the entire system, or parts of the system, has generated and what it has consumed, in periods and in real time. "We have a well-developed communication system that includes NIBE's heat pumps and the SMO S40 control module. The overall control system from Bastec works really well with NIBE's new S platform."

"Things are happening here!"
It is natural that NIBE is a pioneer when it comes to sustainable energy solutions. But there are many elements that need to interact in order for it to be a successful project. The combination of skills and good cooperation has also been a success factor. "There's visionary thinking and innovative technical solutions here," says Leif Rydell. "Having management on your side, commitment and measurement are key for a successful project. We have the same vision and are passionate about this."

"There's of course an advantage in the fact that management knows the technology and sees the opportunities," Bengt adds. When we presented the project to the management, Gerteric said, 'It's like a good movie. All that's missing is the popcorn.' That says a lot. We have been given a lot of freedom and the decision-making paths have been short. I'm glad that I work at NIBE, there are things happening here. For me, this has been a real kick!"

"I can't imagine a better bunch. We had a good start in the analysis and complement each other very well in this group. We're just as geeky, which is why it's been so much fun to work together," Bengt Carlsson concludes. ■

Backer Element, Sösdala
Property: Industrial and office
Size: 30,000 m² in 5 buildings
NIBE energy solution: 5 substations with 14 ground source heat pumps, 45 boreholes.
Products: 1 NIBE S1255, 2 NIBE S1155, 1 NIBE F1355, 10 NIBE F1345, 2 SMO S40, NIBE PV Solar cells, 4 Osby Parca electric boilers 95 kW, 6 Airsite ventilation units

NEWS

SUSTAINABLE, WORLD-CLASS ENERGY SOLUTIONS AT THE ISH FAIR.

New product lines with climate-friendly refrigerants and battery storage with our smart solar system solution are some of the new products on display at the fair. "After a four-year break, we finally get to meet up at ISH and devote ourselves to what we do best: Making life easier for installers and property owners, while helping create a more sustainable world," says Andreas Johnsson, Marketing Manager at NIBE.

Over 510 m² NIBE will be showcasing several new climate-friendly products to 180,000 visitors from the industry.
"For the single-family housing market, you will get to see our most efficient ground source heat pump ever, the S1256, with a SCOP of 6.22, the highest class for hot water capacity at product level A+ and a climate-friendly refrigerant. We are also exhibiting 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 and quiet air source heat pump, the S2125 – both product lines feature the natural refrigerant R290 with a GWP of only 3," Andreas explains.

We will also be presenting the new VVM S330 and SVM S332 indoor modules at the fair, which significantly improve cooling options with our air/water heat pumps. Plus products for hybrid solutions, which are growing rapidly in Europe with the phasing out of gas.
"In response to the sharp rise we've been seeing in the demand for system solutions, we offer our solar packages as a system combined with the heat pump, helping our customers generate their own energy and reduce their electricity bills. Not least with our new software features that support battery storage and also include weather forecast control." Our connectivity products offer smart services that enable both installers and end customers to save money, increase comfort and protect the environment.
"We also have our wireless accessories for the S series heat pumps, making it even easier for you to adjust the indoor climate and energy consumption, and more precisely.

The trend for more energy-efficient systems for apartment blocks, retirement homes and other commercial properties is still strong.

Our 510 m² stand at the ISH fair in Frankfurt.

"Exporting our expertise and vast experience to the rest of the world is a logical course to take, and in the next few years, we will be investing more than ever in new products and expanding our manufacturing capacity."

Here we offer customised smart combinations with heat pumps at the heart.
"Demand for solar energy, active and passive cooling and high hot water capacity continues to rise, and contributes to a better economy or better comfort – or both. And they have connectivity to cloud services for full control, 24/7."

"Exporting our expertise and vast experience to the rest of the world is a logical course to take, and in the next few years, we will be investing more than ever in new products and expanding our manufacturing capacity," concludes Andreas Johnsson. ■


Andreas Johnsson is Marketing Manager at NIBE

EXCHANGE FOCUS

IS IT PROFITABLE TO SWITCH TO A NEW HEAT PUMP?

How much more efficient are today's heat pumps? And does it pay to think long-term when replacing a heat pump? We take a closer look at features and functions that make it easier for users to save energy – and calculate the effect it has on their wallets.

Replace with new exhaust air heat pump

Generally speaking, heat pumps have become better in terms of efficiency and intelligence, which makes it possible to achieve greater energy savings. Because today's heat pumps are generally fitted with modern components, such as circulation pumps, they consume less energy.

"Our exhaust air heat pumps have low-energy fans today, and several models also have much larger compressors that are also often speed-controlled. This gives the customer the opportunity to make greater energy savings with our new model," Stefan says.

Saves 5,000–8,000 kWh more!

If you have a 150–200 m² house and switch from the older NIBE FIGHTER 310 exhaust air heat pump to the new NIBE S735, you can save 5,000–8,000 kWh more every year.

Replace with new ground source heat pump

Most ground source heat pumps that are being replaced today are around 15–20 years old. Here, the capacity of the borehole plays a role in how much energy can be extracted and thereby saved.

"When it comes to ground source heat pumps, they've also become more efficient," Stefan continues. "If the customer has a correctly dimensioned borehole and switches from an on–off heat pump to an inverter-controlled one, it is possible to extract more energy from the borehole, which results in higher savings. Another aspect is that an older on–off machine uses its immersion heater on a regular basis at lower outdoor temperatures, which consumes more power. This means that an inverter-controlled heat pump can manage on a lower main fuse.

Saves up to 2,500 kWh/year!

If you have a 160 m² house and a consumption of 10,000 kW with an existing heat pump for heating and hot water, you can save up to 2,500 kWh/year with a correctly dimensioned borehole.

Replace with new air/water heat pump

The air/water heat pump is a product that has become much better compared with 15–20 years ago.

"They've become more energy-efficient thanks to a major investment in product development that has led to better components and better design. You could say that if you switch to our latest model, you can save 25% more than before."

Saves up to 2,500 kWh/year!

If you have a 160 m² house and a consumption of 10,000 kW with an existing heat pump for heating and hot water, you can save up to 2,500 kWh/year by switching from a 15–20 year-old air/water heat pump to a NIBE S2125.

"We can provide an attractive future-proof system solution, with solar panels and an S-series heat pump."

With today's energy prices and power debate, it's interesting to take a closer look at how efficient heat pumps are today compared with earlier types – and how much your customers can save by switching to our latest models.

The new digital platform and control provide general improvement of control and new opportunities for energy saving.
"An S-series heat pump has intelligent technology and wireless connectivity that helps the user to reduce energy consumption. The greatest effect is achieved through reducing energy consumption by turning down the heating indoors, and this can be done more easily and more individually with our smart accessories. They also allow you to check energy consumption room by room, which raises awareness and motivates greater savings," says Stefan.

Adjust the heating as required
Intelligent technology means that the heat pump automatically adjusts the temperature to the customer's heating requirements, and provides pleasant comfort and low energy consumption.
"The heat pump learns the household's consumption pattern of hot water in order to save energy. If you need to increase the hot water production temporarily, you just need to press a button. It's both greener and cheaper. If the customer has a Premium subscription, they can control the heat pump from their mobile phone and lower the temperature at home or in their summer cottage remotely – an easy way to reduce energy consumption and save money without being there."

Smart Price Adaptation and NIBE electricity contract
myUplink is our app that provides control of hot water and indoor climate from your mobile. For example with Smart Price Adaption (SPA)*.
"The heat pump then adapts its operation to the upcoming electricity price and enables your customer to reduce energy costs by 5–10% without affecting comfort. We also have a favourable hourly rate agreement that we offer our customers together with Skellefteå Kraft."

Smart solar system saves more
If you really want to reduce the amount of electricity you buy, you need to combine solar panels with a heat pump.
"We can offer an attractive future-proof system solution," says Sven.
The heat pump and the solar panels have long been able to talk to each other in order to balance energy consumption with no loss of comfort. Depending on how the future turns out, it's possible to utilise the solar surplus in different ways, and adapt to it. On days when the solar panels are generating surplus electricity, for example, the heat pump senses this and can charge extra hot water or extra cooling, or increase heating or raise the temperature in the swimming pool.

"The solar cells can often generate as much energy during the year as the heat pump needs in order to meet the entire heating and hot water requirements of the house. Smart technology also allows the heat sources to talk to each other in order to balance energy consumption without reducing comfort," concludes Stefan Oliv. ■

**Requires hourly tariff contract.*

"You want to move forward, that's what spurs you on as a business owner"

René and Rickard Enberg outside their premises in Örkelljunga.

EXPERT PROFILE:

“We’ve also been NIBE’s service representative for a year now.”

Nils Enberg was one of many plumbers who got a lot to do when central heating came. In 1952 he started Enbergs VVS in Örkelljunga. Today, the NIBE loyal company is run by grandsons René and Rickard, with a warehouse and store in premises measuring 660 m² and full order books. "There is usually a lot to do, but I enjoy my work and see the future in a positive light," says René Enberg.

The Enberg brothers' grandfather Nils started out as a plumber in the field and started selling products over the counter in 1958. Eventually, sons Olle and Bo took over Nils' role. After a few years, the company had grown and they started hiring.
"Rickard and I took over and are now in our eighteenth year," says René. We built new buildings and ended up in these premises thirteen years ago.

The aftermarket is good
In January 2022, it was time for the next step. They took over staff from EVT, a local plumbing company that went bankrupt. Enbergs VVS was then given the opportunity to continue the collaboration as a NIBE service representative.
"You want to move forward, that’s what spurs you on as a business owner. A lot of heat pumps are installed and we wanted to access service and maintenance, the aftermarket is good to have. We have now divided it up so that some of our employees work dedicated to service and maintenance, and the others work more on new installations.

There are certainly clouds of concern today about the world situation, high interest rates and electricity prices, but René is optimistic about the future.
"We have an order backlog that makes me feel secure. We are satisfied! And it’s eased up a little with deliveries, so I’m more positive about it, most things work as we wish!"

While we’re talking, René has missed eight phone calls.
"They weren't just for me, we also have a store, which my brother Rickard takes care of."

René is the CEO. Today, he spends most of his time taking on jobs from customers who phone, he generates quotes and invoices. Most jobs come from private customers, but also property companies and industries. Åsbo Hus and Gillebagaren are some of them.
"I enjoy my job, we’re problem-solvers and it’s fun when you solve problems for people."

"We want to do a job with quality"
Enbergs has been a customer of ours at NIBE for a long time and has installed many of our products over the years. René estimates the number of heat pumps to be 45–50 per year.
"NIBE has meant and means a lot to us. It’s a great company to work with. The knowledge we encounter when we call you is exemplary. We receive a pleasant reception and the support is good to discuss solutions with. Even when we’ve made mistakes, you’ve helped so that our customer is satisfied. After all, we want to do a job with quality. Customers are satisfied with the products and the installers think that the products are easy and great to work with."

René is seeing an increased interest in connections for new installations.
"In the store, we talk to customers about control and show them how the myUplink app and Smart Price Adaption work. Remote control via the app makes life easier and saves both us and the customer time and money. You get a completely different idea of the product when you can connect, see the history and follow what happens. It’s a huge advantage and it’s contemporary!" concludes René Enberg. ■

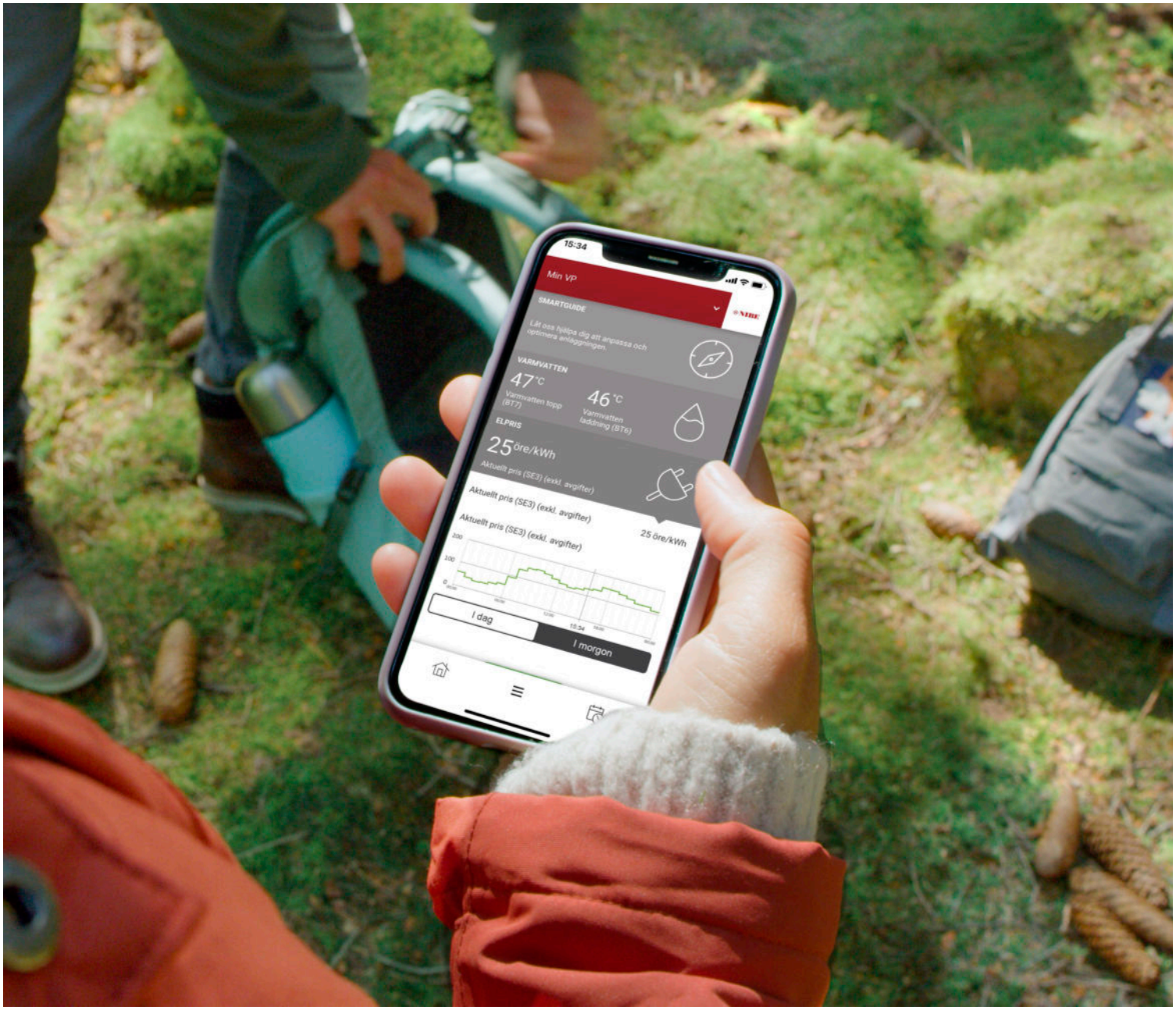
Enbergs VVS in Örkelljunga
Established: 1958
Owner/co-owner: René and Rickard Enberg
Employees: 16
Operations: Plumbing

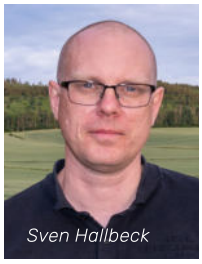
Most assignments come from private customers, but also property companies and industries. Åsbo Hus and Gillebagaren are some of them.

SMART PRICE ADAPTION

STEER THE HEAT PUMP TOWARDS GREEN ELECTRICITY.

The Swedish heat pump wonder is unique. Few, if any, other countries have converted as much of their heating from fossil fuels to renewable energy in as short a time as Sweden. For a long time, we have been working on refining the technology behind our system for remote control of the heat pump. "By using electricity at the right time, we can also reduce the use of fossil energy for electricity generation," says Sven Hallbeck at NIBE.




Sven Hallbeck

The work of skilled engineers and technicians in Sweden has meant that today we have had heat pumps as the best-selling heating method in the country for several years now. Despite a harsh climate, it has been shown that the technology not only works, but is by far the best for both economy and the environment. This is a development that began long before climate change was even on the agenda.

Ever since we launched our connected, intelligent heat pumps in 2014, we have been providing features based on new ways of thinking, for example including electricity prices in the calculations.

By using electricity at the right time, we can also reduce the use of fossil energy for electricity generation. All through a feature in the heat pump called Smart Price Adaption, a refinement of the technology behind our system for remote control of heat pumps from our connected services NIBE Uplink and myUplink. NIBE Uplink is available in our F series heat pumps and myUplink in our S series heat pumps, which we launched in 2019.

Price information online
Today you can control the heat pump remotely using the same type of controls that you normally have on the heat pump itself. Smart Price Adaptation provides another possibility in the system.

The feature is based on the server retrieving information about the coming day's electricity prices from the NordPool Spot power exchange and using these prices to automatically control the heat pump. Does this all sound complicated? It really isn't.
"A heat pump usually responds to temperature information it receives from room or outdoor temperature sensors," says Sven Hallbeck. "It will start up when it's cold, and when it's warm enough it will turn off. With Smart Price Adaptation, it also takes the electricity price into consideration before it does one or the other."

Generally speaking, electricity prices are higher in the daytime, when demand is greatest from industrial users, among others, but there are huge differences in when the expensive periods start and stop, and the electricity exchange 'knows' this 24 hours in advance.

Our heat pumps can make smart use of this information and use it to produce both heating and hot water at a lower price.
An example:
The temperature starts dropping at 4 pm. Normally, the heat pump would have started at that time, but if it 'knows' that the price drops at 5 pm, it can wait until then instead. It can also 'take advantage' of the low electricity prices in the wee small hours to charge the heating and hot water, so that it does not need to use as much energy when the dawn breaks and electricity prices rise.

As our new heat pumps also 'learn' the consumption patterns of residents, this can also be included in the calculation.

Let's say three people in a family shower every morning. In an ordinary heat pump, new water is then heated, even if no one is going to use it until 12 hours later. Our heat pumps know when showering is normally finished and with Smart Price Adaption's knowledge of electricity prices, it may delay heating up new water until late that afternoon.
"It's even more interesting when you have a speed-regulated heat pump which most of our heat pumps are," Sven Hallbeck continues.

A regular heat pump with only two modes is often running all winter in one mode. With a speed-regulated heat pump, you can have a "maintenance" feature running during the costly hours and then use the excess capacity, which is usually built in, when the electricity is inexpensive.

Greener energy
All it takes for Smart Price Adaptation to work is an hourly rate subscription with your electricity provider, a NIBE F series heat pump with NIBE Uplink or NIBE S series with myUplink. This results not only in lower costs, but also in more sustainable electricity generation. This means that heat pumps already helping to reduce emissions can make an even greater contribution.
"It's when electricity is at its most expensive that we use the most 'dirty electricity'," says Sven.
"That's when we import from the continent and start up our oil-fired and coal-fired power plants.

The more household consumption we can move to less expensive periods, the more we can manage with greener electricity. Now we can also include customer-generated electricity in the control parameters, so that we can, for example, get the heat pump to run when we have our own free electricity, for example from solar panels. The possibilities are endless." ■

"The heat pump will start up when it's cold, and when it's warm enough it will turn off. With Smart Price Adaptation, it also takes the electricity price into consideration before it does one or the other."

How Smart Price Adaption (SPA) works

- The heat pump follows the prices on the Nordic NordpoolSpot power exchange and can reduce the variable electricity cost on the electricity bill by 5–10%.
- The heat pump works the most when the electricity costs the least, and vice versa.
- It gets information on the electricity prices for the coming 24-hour period and then adjusts its operations based on the price and your expected heating and hot water needs.
- You need to be connected to myUplink/NIBE Uplink and have a variable electricity contract per hour.
- Together with Skellefteå Kraft, we offer a favourable variable hourly rate contract.

SPA with NIBE Electricity Contract

Together with Skellefteå Kraft, we have tailored a NIBE power agreement that enables your customers to get the most out of their heat pump. They will help you get an electricity meter that manages the hourly price of the power exchange so they can activate the SPA feature. This is a favourable agreement with 100% renewable electricity and no minimum contract period.

INSIDE THE WALLS OF NIBE

THREE NEW BUILDINGS IN PLACE. *“Now it’s finally starting to show!”*

That NIBE has been building like never before can't have gone unnoticed by anyone. Our investments in little Markaryd are unparalleled and are transforming the community more and more into a global epicentre for climate technology. "In 2023, we will essentially finish three large buildings," says Per Hanson, property manager at NIBE.

Per Hanson is responsible for the extensive construction which currently employs more than 120 people on the different buildings. "We thought we built big in 2007, when we built a 24,000 m² factory.

The new heat pump factory, Visitor Centre and Innovation Centre account for a total of 29,500 m² and there will also be new office buildings.
"In total, we'll get to just over 40,000 m²," says Per.

Heat pump factory
The large heat pump factory will be ready for production to start installing equipment in March-April. After that, it'll be quick to move in and start.
"Eventually, we'll be able to produce significantly more heat pumps than before."

“In due course we will be able to produce significantly more heat pumps than before.”

Visitor Centre
The new Visitor Centre is also well on its way. The opening is planned for 2024 and work is currently underway both indoors and outdoors on how it should look around the building.
"This is a major investment in conference and training activities, and it will be a very spectacular property where we will be welcoming visitors from all over the world. There are still some decisions to make, but things are moving forward," says Per.

Innovation Centre
The third major project is the new Innovation Centre where the first engineers will be on site by spring.
The Innovation Centre is a complex construction project with great demands of the premises. Early next year, the completion of a laboratory for EMC will begin, which sets very special requirements, as well as sound lab, premises for test rigs and more. Once completed, we will have a world-class development centre, one of the best of its kind, at least in Europe.


The new heat pump factory.

In addition to these three major projects, new office buildings will also be built.
"We're not just working on buildings. We must also consider the external environment so that green spaces and other areas are easy to maintain and inviting. The parking issue is also a challenge we need to solve, especially now that we are expanding so much. But we are satisfied, we are in phase and everything has gone well so far."

Sustainable, of course
Sustainability and local commitment have always been important to us at NIBE.
"Our overall strategy is that warehouse, lab and factories are in accordance with Green Building and will consume 25% less energy than before or compared with the Swedish National Board of Housing, Building and Planning's new building requirements." New construction and major additions to properties, such as offices, will be certified in accordance with Miljöbyggnad Guld and Energy Class A. Heating and cooling will be supplied using products from NIBE's own range, such as ground-source heating, solar cells and ventilation. And as far as possible, we will use local contractors for the construction and installation work," concludes Per Hanson. ■

The opening of the new Visitor Centre will be next year – a spectacular property of 4,500 m² for training activities and all our visitors.

The Innovation Centre of 8,500 m² is expected to be completed next spring.

Stefan Calling is Head of the Product Management Department. Stefan Oliv is Product Manager for the Swedish market.

NEW SERIES! FROM IDEA TO REALITY.

"The demands of the market drive our products forward"

In a series of articles, we follow the path from idea to finished product. In part one of four, we meet those who listen to the market. "We act as purchaser and pass on new market requirements to the development department," says Stefan Calling, Head of the Product Management Department in Markaryd.

Stefan Calling is in charge of the work of seven product managers who have a global role and are each responsible for their own product portfolio, such as air/water heat pumps and exhaust air heat pumps. In addition, there are local product managers in all European countries.
"Having local product manager organisations in all countries means that we include local solutions in our products," says Stefan Calling.

The Swedish product portfolio is managed by Stefan Oliv.
"Stefan works in the sales department, with our entire Swedish sales force, and is very close to the market," continues Stefan Calling.

> *"It's about having your ear to the ground, about fact-based listening, and finding good ideas."*

Sweden is a pioneer country
Stefan Oliv works closely with those responsible for the product portfolios and is involved throughout the entire development phase.
"Sweden is a mature market that provides very good input that, together with the requirements of the other countries, drives our products forward. We've focused on Sweden and the tough Nordic climate, and we've learned from it for more than 40 years. We can bring our extensive experience and lessons learned to markets that are not as mature. We also make country-specific adaptations and products, as well as variants for other countries. The products we use here are often suitable in our neighbouring countries, while in France, for example, they are not as suitable," explains Stefan Calling.

Own ideas and inquiries
The role of the product department is to act as the customer or purchaser of the development department. They start by finding out what the market wants.
"We work methodically, listen to you installers, to our end customers, consultants and experts. We conduct environmental analyses and look at competitors, features, price, new technology, new niches, new markets or new market segments," explains Stefan Calling.
"When we see a new market requirement, we review which components are available on the market and calculate the business benefit. We develop concepts that we believe in and go back to the market, or markets, for feedback. It's about having your ear to the ground, about fact-based listening and finding good ideas and taking them on. 'This was interesting, let's go to our research group and see if it holds up technically'," says Stefan.

When they consider the project to be feasible, they write a requirement specification for product development. Work will begin there on the development of the new product.
"We do everything together with Stefan Oliv and his counterparts in the different countries.

During the year, they accumulate a large research database and technical analysis.
"If a concept doesn't work right now, it may be feasible in the future. We also do a lot of testing, for example in a new market. If this goes well, we can take it to neighbouring countries."

When Stefan Calling and his team in the product department have evaluated which ideas are best and in which order they want to do everything, the development department takes over.
"Here we have a steering group that works on developing products where Stefan Oliv and product managers sit in as 'customer representatives'."

Future development areas
The trend is better and better user-friendliness and installer-friendliness, such as user interfaces.
"The innovative solutions we have implemented in recent years are the simplified start-up guide that facilitates commissioning, and that the heat pump communicates with the user when you open the cover, 'Hello your heat pump is working properly...'. But here we're making improvements all the time," says Stefan.
"When it comes to connectivity and smart functions, we're far ahead, with Smart Price Adaption, weather forecast control and Smart Energy Source. We focus extremely on always having the best performance. We are continuously working to reduce the products' carbon footprint to continue to develop world-class products, with more environmentally friendly refrigerants, more smart features that can help the user save energy and recycle materials."

If you look at ten years from now, there are several areas where Stefan can see that the requirements will change.
"There will be changes in electricity pricing and many new features will be added. When it comes to downloadable software, you will always have the latest update. As we become better and better at optimising products, you will benefit from this throughout the product's lifetime. This may not be as important when the product is new, but it is after 10 years!"

The major investments in future growth also mean development for the product management department.
"We're growing so fast because the market is. We have just brought in a new industrial designer to help us make our products even easier to use and install, but also to give them a beautiful appearance.

"It's important to link design and function together, for our installers and our end customers," concludes Stefan Calling. ■

NEWS

WORTH KNOWING!

1% 10% of all plumbers in Sweden are women. In total, there are about 21,500 trained professional plumbing installers in Sweden, according to the Swedish Public Employment Service. 215 women. The plumbing and heating industry's vocational committee is working to encourage more women to choose the plumbing and heating industry. In addition to supporting with a network and a Facebook group, they offer theoretical training during the apprenticeship period. *Read more at vvsyn.se*

Did you know...

Buildings account for 40% of all energy. That's why Martin Forsén, International Affairs at NIBE, now wants to launch a renovation wave: "The present rate of renovation of public and private buildings needs to at least double," he says. Many of the EU member states have created grants to increase the rate of renovation. Now let's see what the new government is doing about this.

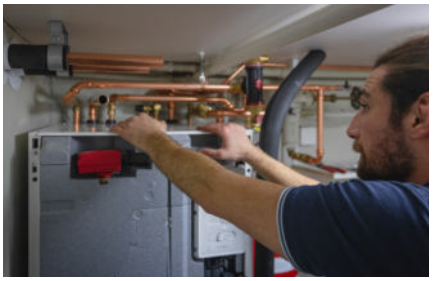
Source: Eurostat, Energy balances 2019.

NIBE S2125 wins awards!

Our new, quiet and powerful air/water heat pump is being praised throughout Europe. Most recently in Austria and also in the UK, where it was named "Best Heating System or Product" in the Build it Awards 2022 competition.

Plumbing and heating installer – a job of the future

The future looks bright when it comes to the possibility of work for plumbing and heating installers. It is estimated that plumbing and heating installers will have great opportunities for work in the coming years and that competition for jobs will be very low according to the Swedish Public Employment Service's occupational forecast. *Source: Framtid.se*

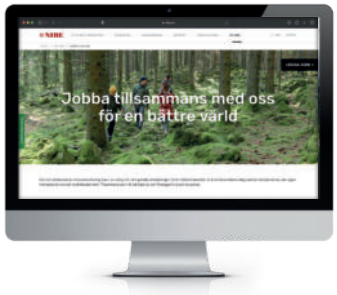


What do you know about pools and cooling?

Summer is fast approaching and many people are asking for pools and somewhere to cool off in the summer. For example, do you know how much extra drilling is needed for a pool, or how much cooling is there in the borehole? These and many other questions will be answered during the spring training courses.

You can find the entire training programme at proffs.nibe.se

26 April Pools 9 May Comfort cooling



We will have 520 new colleagues this year!

In our ambition for the future, it is important to have new, competent staff to increase production and achieve our ambitious goals. In 2022, we gained 470 new employees, and now in 2023 we need to employ an additional 520 people at NIBE AB. So feel free to tell your friends to go to nibe.se/lediga jobb.

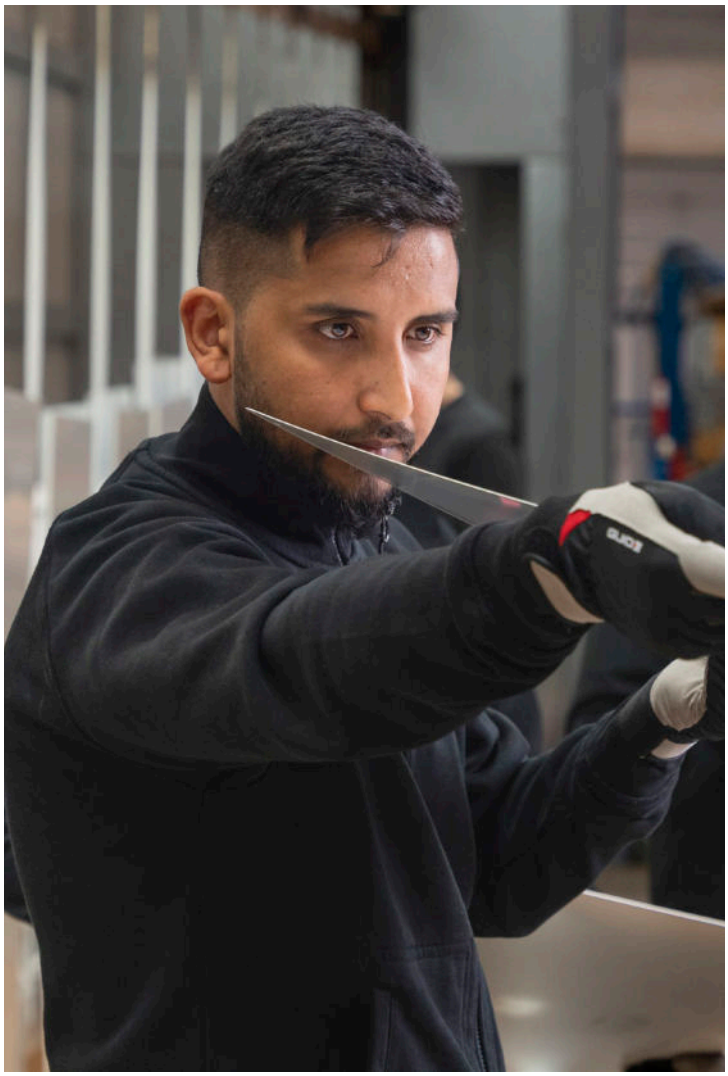
Green deduction **20%**

The green deduction is now 20% for the installation of solar cells and 50% for the storage of self-generated electricity. This applies to installations that are started, completed and paid from 1 January 2023. Up to SEK 50,000 per person per year. *Read more at Skatteverket.se*

You are welcome to order our new consumer brochures!

New brochures are now available and can easily be ordered free of charge at proffs.nibe.se. Complete your details at the top of the page and tick the brochures you want to order. Finish by clicking Submit!

Please feel free to contact your district sales representative to keep up to date with store and marketing materials!



Hi Ali Reza Mosawi!

You are featured in one of this spring's ads. How does it feel? Great, because I know my job. It's more fun and easier to be a model then.

What do you do? I work in the painting department. We paint parts for heat pumps and water heaters and make sure that they are painted in the right colours.

How does that work? First, we take them by forklift truck to the place where we are going to hang them. We then hang them on a conveyor. It's very important that we get it right. If I do something wrong here, I will ruin everything. They are then degreased and a rust inhibitor is applied. Once dry, they are sprayed with powder before going into the oven to cure. As soon as they have cooled down, we take them down and check them before we pack and take them to the next station.

What are you doing in the picture? Here I'm checking a sheet after painting to see that it is smooth and that the colour is even.

What do you enjoy most about your work? I like to hang up the sheets. It takes time to learn all the steps. It's a bit heavy sometimes and you have to find the right technique and be careful not to injure your back and hands – and the sheet.

What do you like doing when you are not working? I like to go to the gym, play football and be with my partner. I live with my family in Hässleholm.

Do you enjoy being at NIBE? It's great at NIBE, everyone is nice and fun. I have a good manager, he's also funny and he always has time to talk to me.

FOCUS ON HOT WATER

SPRINGTIME IS LOOMING FOR SUMMER COTTAGES AND HOT WATER HEATERS!

It is time to turn on the hot water and check your heaters. Many people will need help with everything from maintenance to replacement for the new season. Here are some tips and tricks for the summer cottage premiere, for you and your customers.

Harald Källstrand has been working with water heaters at NIBE for many years. Expert News met him to get answers to the most frequently asked questions at this time of year.

Why should you test the safety valve on the water heater?
"All summer cottages are being opened up again and water heaters that have been switched off are being switched on. This is a good time to test the safety valve by opening and closing it a few times. This is to ensure that it works and has not become jammed or similar. If the safety valve does not work properly, there is a risk of the pressure becoming too high inside the tank. If the valve is leaking continuously, it should be replaced."

"Spring is a good time to test the safety valve."

How often should a holiday home replace a water heater?
"A water heater can last anywhere from 10 to 25 years or more. The service life depends on the water quality, i.e. whether the hot water heater has the right material in relation to the actual water quality."

What should customers consider when buying a new water heater?
"Hot water consumption and family habits determine how big a heater is needed. If all family members shower every day and for a long time, a little more hot water may be needed. The age of the children, young children don't shower as long as teenagers, the size of the house and whether the family or the house will grow.

"Other factors affecting this are taps and water nozzles. By choosing energy-efficient alternatives, you reduce consumption. Another good thing to bear in mind is that it is adapted to our Nordic climate, that it is energy-efficient, and maybe even has energy-saving features, and that there is a good warranty. At NIBE we have a 3-year warranty on our water heaters."


Harald Källstrand, expert på varmvattenberedare.

Which water heaters would you recommend for a summer house?
"It depends on what the needs are, but everything from the smaller 35 litre water heater NIBE EMINENT to the large, smart NIBE COMPACT SC 300. The latter learns the household's hot water consumption to reduce energy consumption, and maintains the highest class of energy labelling for electric water heaters."

What is the point of a smart water heater?
"It has a smart thermostat that learns when the family tends to use large quantities of hot water and then the heater does not heat up water unnecessarily. This reduces idle losses. It is also possible to set the heater to holiday mode so that it maintains the lowest possible temperature without the risk of freezing. The potential savings are up to 9% compared to conventional technology. It is also developed with simplified troubleshooting for installers."

What corrosion protection does NIBE have?
"Copper, stainless steel and enamel, choose the corrosion protection that suits the water quality."
Copper is suitable for most municipal water, but it is sensitive to low pH values, which can cause corrosion. Stainless steel is insensitive to pH values in normal potable water but is sensitive to high chloride levels. Enamel, on the other hand, is a good alternative for water with a lot of limestone and a high chloride content, but is sensitive to soft and low-salt water. ■

If you are unsure, ask your customers to call us on 0433 – 27 31 85 and order a water testing kit to perform a water analysis. They send us the water sample and we will get back to them with a recommendation.

Tip!

You can find more information and instructions about water heater maintenance for your customers under SUPPORT at nibe.se

NIBE EMINENT
for smaller hot water requirements

Covers a wide range of hot water requirements with different sizes. With the smallest, you can take a quick shower and still have water for the dishes, and with the 100 litre model you can cover most of the hot water requirements during the summer months.

- Wall-mounted electrical water heater
- For holiday homes and smaller households
- Volume: 35-120 litres

NIBE COMPACT SC
Smart Control for greater hot water requirements

Has the highest class energy label, goes down in operation when you go on holiday and remembers when you usually shower.

- Floor-standing electrical water heater
- Smart Control which learns your hot water requirements for lowest energy consumption
- Volume: 140-269 litres

MAXIMISE WITH MARKO!

NIBE's technical correspondent Marko Hietaharju shares his smart tips to make life simpler, more fun... and just 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 WIRELESS ROOM THERMOSTAT ROT 10.

In the latest editions of Expert News, I have tested one of the new wireless accessories for the S series. Now it's time for the ROT 10 room thermostat. Join us and we'll see how smart it is and whether it's easy to get started with.

The wireless room thermostat makes it possible to read and adjust the temperature in the climate system directly from the display and via myUplink. It is a wireless variant of the fixed indoor sensor, an intermediate between THS 10 and RMU S40. With ROT 10, it is possible to activate extra hot water, boost ventilation when there is a party or activate home/away
mode to save energy if the house is empty.

The thermostat itself is powered by a rechargeable battery. As it has a magnet, you can, for example, attach it to the fridge door, or if you prefer, screw it onto a wall.

Get started in a matter of minutes
Follow the steps, and we'll see whether the ROT 10 is as easy to connect as the other smart accessories. But first make sure that the installation has the latest software update.

1. Recharge the battery in ROT 10.
2. Select the language using the arrow buttons and then select with the button on the far right.
3. It now says Connect to the network.
4. In the main menu on the heat pump display, go to Connection, menu 5 and select Wireless Units, menu 5.4.
5. Click Add device and select confirm when it has found the Room Thermostat.
6. Name the unit and confirm, then select OK.
7. In the main menu, go to menu 1.3.3 Room Sensor Settings.
8. Select which climate systems ROT 10 should apply to. Click on the relevant climate system and select ROT 10 or whatever you named the unit. Then click on the text Heat so that it lights up. ROT 10 now controls the current climate system.

All done!

Is there too much distance between the customer's ROT 10 and the heat pump? No problem, add an RPP 10, which amplifies the signal between wireless accessories. ROT 10 also supports myUplink so that you can see both the humidity and the temperature.

So how did the test go?
This was probably the fastest installation I've ever experienced with smart home accessories. Quick, easy and good! We have now gone through all of our smart accessories.

/Marko

Read about the other smart accessories!
Power switch and repeater RPP 10: Expert News #4 2021
Room unit RMU S40 Expert News #1 2022
THS 10 humidity and temperature sensor: Expert News #2 2022
Carbon dioxide, temperature and humidity sensor CDS 10. Expert News #3 2022
Radiator thermostat SRV 10: Expert News #4 2022

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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

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The easy choice.

Would you like to work with heat pumps that make your workday easier? Our S-Series heat pumps automatically adapt to meet the heating and hot water needs of your customers. They're just as simple for your customers to manage as they are for you to install. With the S-Series, you can provide service remotely and if you have any questions our expert support will be just a call away. An easy choice if you want to deliver quality and comfort for an upgraded feeling of home.

Discover more at partner.nibe.eu