

seranews

The magazine for **sera Group** customers

Issue 2022



290 / 244

Employees worldwide / in GER

26

Apprentices and
trainees

17

Nationalities

83

Women at HQ

39

Age average

Some things are difficult to put into figures. What is it like to work at **sera**? Who are the people behind the four letters? Nevertheless, we have tried and collected a few data about the people at **sera** and the cooperation at **sera**. We are continuously developing and have grown steadily in recent years. In doing so, we attach great importance to reconciling our long-standing tradition with the will to change. This is expressed in our high training rate and the great loyalty of our employees to the company. Daring to try something new and continuing on the path together - that is **sera**.

10,21

Average employment with **sera**



Dear readers,

Today you are holding a new issue of **seranews** in your hands, which has been produced under special conditions again this year. In addition to the COVID-19 pandemic, which has still not been overcome, another crisis is keeping people on their toes all over the world this year.

With Russia's military attack on Ukraine, a global crisis has become reality that we could not have imagined just a few years ago. The effects are being felt more or less directly and personally by everyone around the world. Energy has become a very expensive and scarce commodity and saving energy is suddenly on everyone's lips. As a result, we have entered a global economic downward spiral, which in all likelihood could lead to a severe recession in Europe and especially in Germany. The cost increases and global supply shortages caused by the COVID-19 pandemic have thus been considerably exacerbated. The supply dependencies and bottlenecks built up over three decades on individual countries and global players have already been painfully demonstrated to us since the beginning of the pandemic. Inflationary price developments are the result of this ongoing supply shortage.

All this is happening against the backdrop of even greater long-term challenges for us humans, such as climate change, global population growth, resource bottlenecks, digital transformation and much more.

Successfully managing these complex, volatile and constantly dynamically changing environmental influences will be the central task of people and companies in the coming years. We can only achieve all this together. For this, we need people who are courageous and determined to follow this future path.

Our motto for this year's issue is therefore: People and the Future. Because, as we know, in every crisis there is always an opportunity to change and improve things. We will give you a brief insight into the many large and small measures we have taken to prepare ourselves for the future. For example, get to know our new Managing Director for the hydrogen and compressor technology sector and read how we are developing our trainees as employees of the future or how we are implementing our "**sera goes green**" mission in the company.

In addition, as always, you will also find insights into our social commitment and many other projects that drive us every day in this **seranews**. All true to our motto:

We create added value for people and the environment!

I wish you an inspiring read and much pleasure with the latest issue of **seranews**! Stay healthy everyone!

Yours, Carsten Rahier



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INTO THE FUTURE HYDROGEN MARKET

Our hydrogen technology division has been operating under the name sera Hydrogen GmbH for several years now. Since the middle of this year, sera Hydrogen GmbH has had a new managing director in Roland Tittel. We spoke to him about his first impressions and the goals of sera Hydrogen GmbH for the coming years.

Dear Roland, you have now been with the company for the famous first 100 days. Time to take stock. What were your reasons and expectations when you joined sera Hydrogen GmbH?

The main reason was that I was able to get to know the hydrogen market very well at my last station. This was, on the one hand, hydrogen fuelling, the synthesis of hydrogen for eFuels and, on the other hand, processes for storing hydrogen, e.g. in methanol or ammonia.

Overall, however, I had the impression that the possibilities to fully enter this market and to make the corresponding changes and investments were not quite there.

Through a loose contact, the opportunity arose to talk to **sera**. From the discussions, it very quickly emerged that **sera** was looking for someone who had a deep expertise in the field of compressors, but also an understanding of the plants and systems, and who had a high affinity to the market.

With the compressor for the HomePowerSolution, there was also an exciting project that was to be taken to large-scale production.

I quickly realised that Carsten Rahier was an entrepreneur who had a high level of understanding for the market and the products and who had a clear vision for his company. In the discussions with Carsten and the team, I immediately had the feeling that I was trusted to accompany and support the growth strategy. The entire framework simply fit.

What were your first impressions at sera?

My impression was that as an experienced old hand, you were very well welcomed into the team. The team is extremely young and I was surprised at how big the age difference was. The pleasant thing was that right from the start you had the impression that all colleagues were very interested in exchange and that their own expertise was also valued and in demand. My approach is therefore to develop the young colleagues in such a way that in a few years they will be able to act in the market with a very high level of expertise and we will form a

powerful team.

What makes sera special for you?

For me, **sera** is a company with a clear strategy for the future. This is reflected in the product strategy and the markets we are working on. No matter whether that is hydrogen technology, drinking water treatment or the many other environmental processes. These are the topics of the future and we have very good growth opportunities there. In addition, we are always concerned with and very committed to the topics of environment and social issues beyond the product area. In all these topics, I think our philosophy "We create added value for people and the environment" is reflected quite well.

How do you see the perspective for the hydrogen market in general?

The hydrogen market can no longer be explained away. In the context of mobility, hydrogen will develop very strongly in the direction of heavy-duty vehicles. The passenger car sector will develop more in the direction of electric vehicles. Hydrogen will prevail above all where high storage capacities are needed for long distances and heavy loads are moved. This ranges from trucks to shipbuilding, where there is also great potential. The ideas and applications for this are already in the starting blocks.

Another important future market will be hydrogen as a storage medium for wind or solar energy. Energy-autonomous systems are also a strong growth market. This can currently be seen in many publications. There are a multitude of applications and possible uses. Overall, sector coupling, the connection of the individual systems

from intermediate storage to refuelling or electricity generation, will become a completely new field of technology.

What is your idea of where sera Hydrogen GmbH should develop?

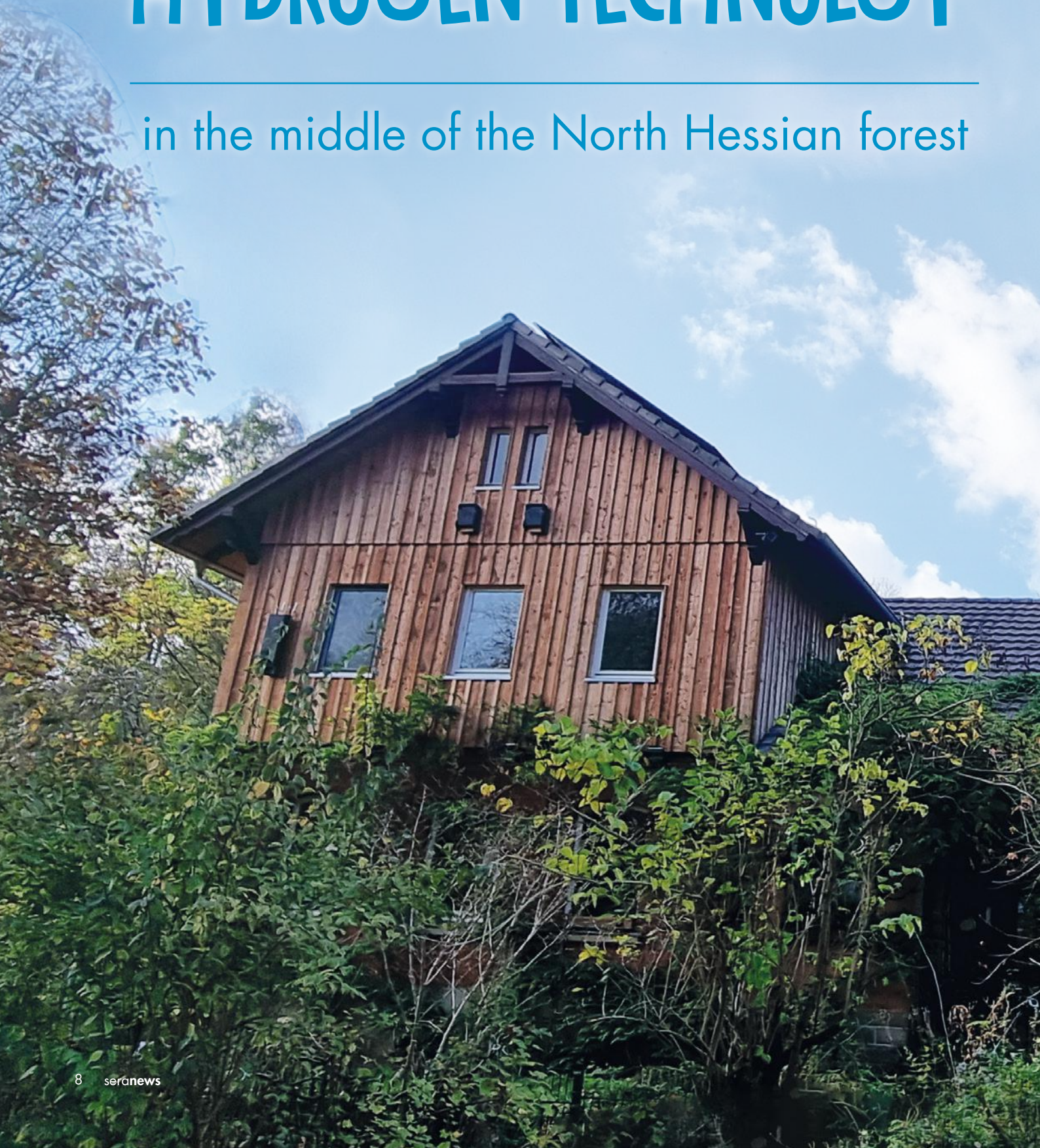
In our size as a medium-sized company, it is extremely important to find the right applications and sizes for ourselves in the market. Our goal must be to be the supplier that delivers the core component for every hydrogen plant. This ranges from individual compressors, to extended solutions on base frames, etc., to container solutions for larger applications. In addition, we will certainly continue to develop and build company filling stations, but we will focus on the core component and develop and produce it for every possible application. We offer the heart of every hydrogen system. That's where I want to be in ten years' time.

Dear Roland, thank you very much for the conversation.



INNOVATIVE HYDROGEN TECHNOLOGY

in the middle of the North Hessian forest



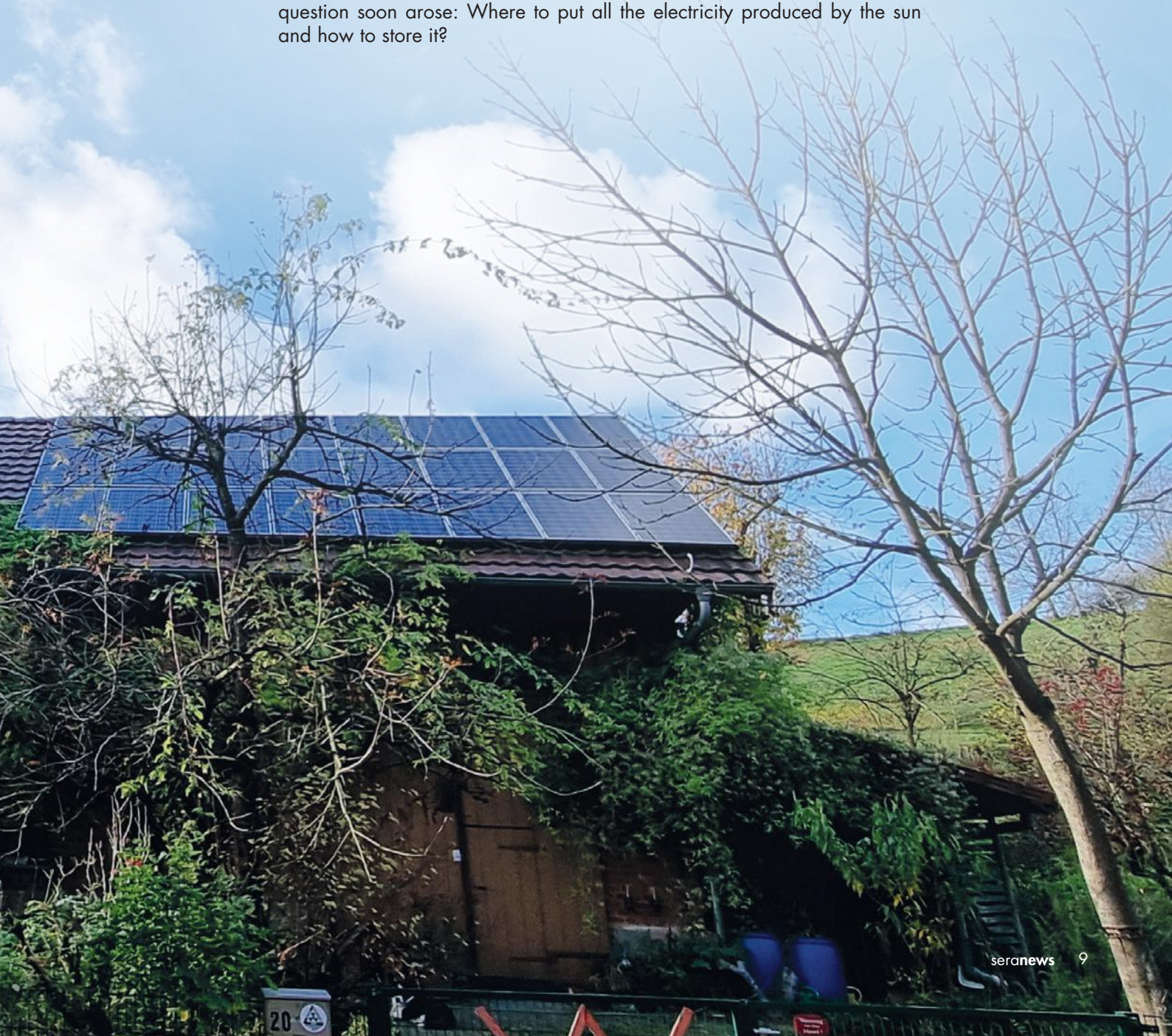
***New technology always needs pioneers who lead the way,
to try things out with conviction.***

(This is also the case with hydrogen technology.)

Reinhard Vollmer is one such pioneer. He lives with his wife in an old forester's lodge (built in 1870) in the middle of the forest in Trendelburg-Langenthal in northern Hesse.

But even an old house can be supplied with energy using state-of-the-art technology. It is now heated by a pellet boiler and a fireplace. The chimney also has a water tank which, together with a solar thermal system, heats the domestic water. Since 2006, several photovoltaic modules have also been able to produce up to 30KW of electricity.

Since this clever mix of technology more than covers their own needs, the question soon arose: Where to put all the electricity produced by the sun and how to store it?



POWER STORAGE INNOVATION - HOME POWER SOLUTION PLANT PICEA

Nature is not only close to his heart because Reinhard Vollmer is responsible for nature conservation at the forestry office. He is a conservationist with heart and soul. So it was obvious to look for a sustainable, innovative idea to store the surplus electricity.

After some research, the forester came across the "Picea" system from our cooperation partner HPS in Berlin.

Surplus electricity, which is mainly produced in summer, is converted into hydrogen (and oxygen) by an electrolyser. This is stored in hydrogen bundles.

In winter, as soon as the solar panels on the roof do not generate enough electricity to cover the building's own needs due to fewer hours of sunshine, the hydrogen is "reconverted" to electricity via a fuel cell.

The heat generated in the plant is also used in the process itself and is thus not lost.

The old forester's lodge is completely self-sufficient and a kind of power island independent of the grid.

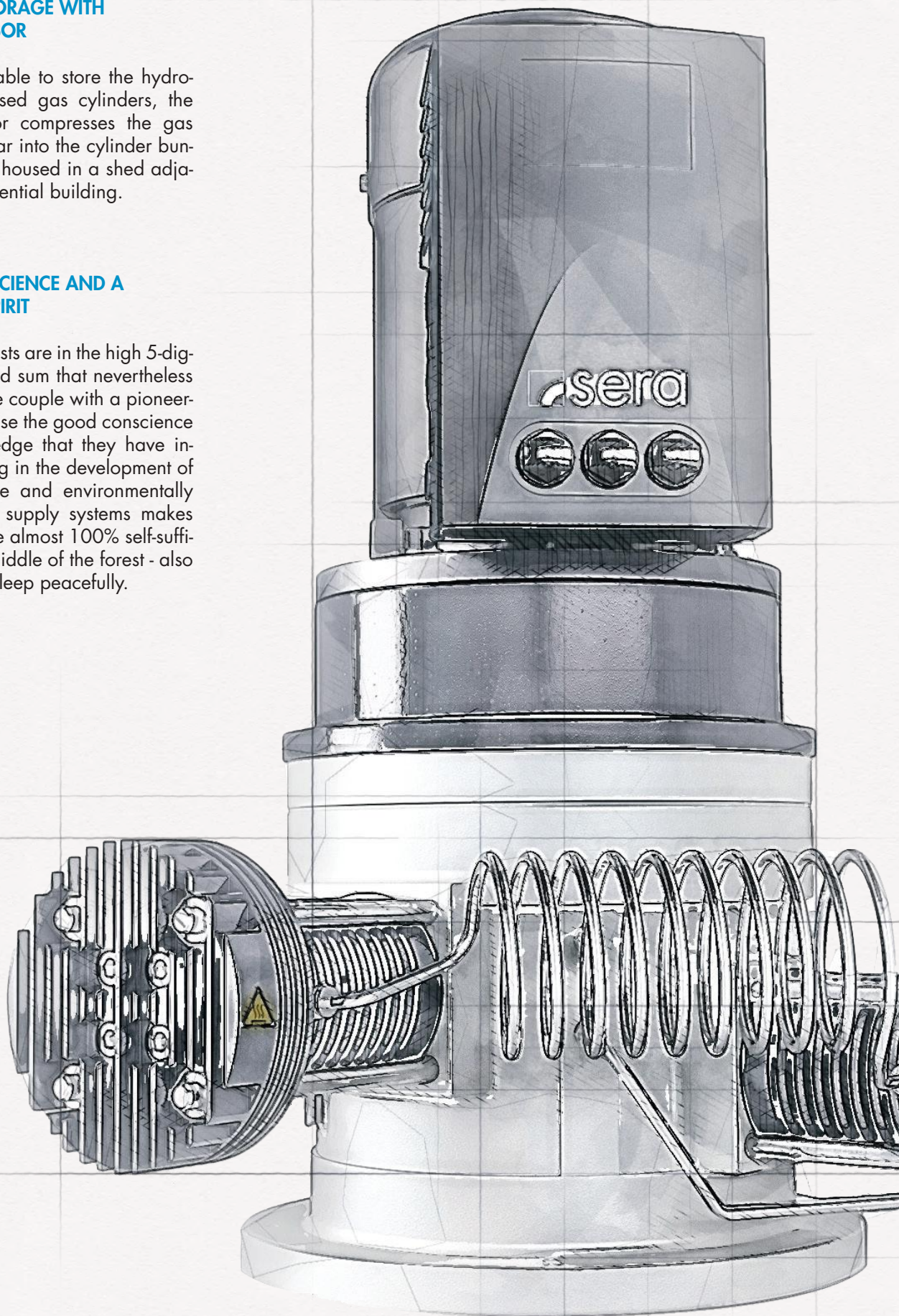


HYDROGEN STORAGE WITH sera COMPRESSOR

In order to be able to store the hydrogen in pressurised gas cylinders, the **sera** compressor compresses the gas at about 300 bar into the cylinder bundles, which are housed in a shed adjacent to the residential building.

A GOOD CONSCIENCE AND A PIONEERING SPIRIT

The purchase costs are in the high 5-digit range, a proud sum that nevertheless did not deter the couple with a pioneering spirit. Because the good conscience and the knowledge that they have invested something in the development of new, sustainable and environmentally friendly energy supply systems makes them happy. The almost 100% self-sufficiency - in the middle of the forest - also lets the couple sleep peacefully.



POLYLINE

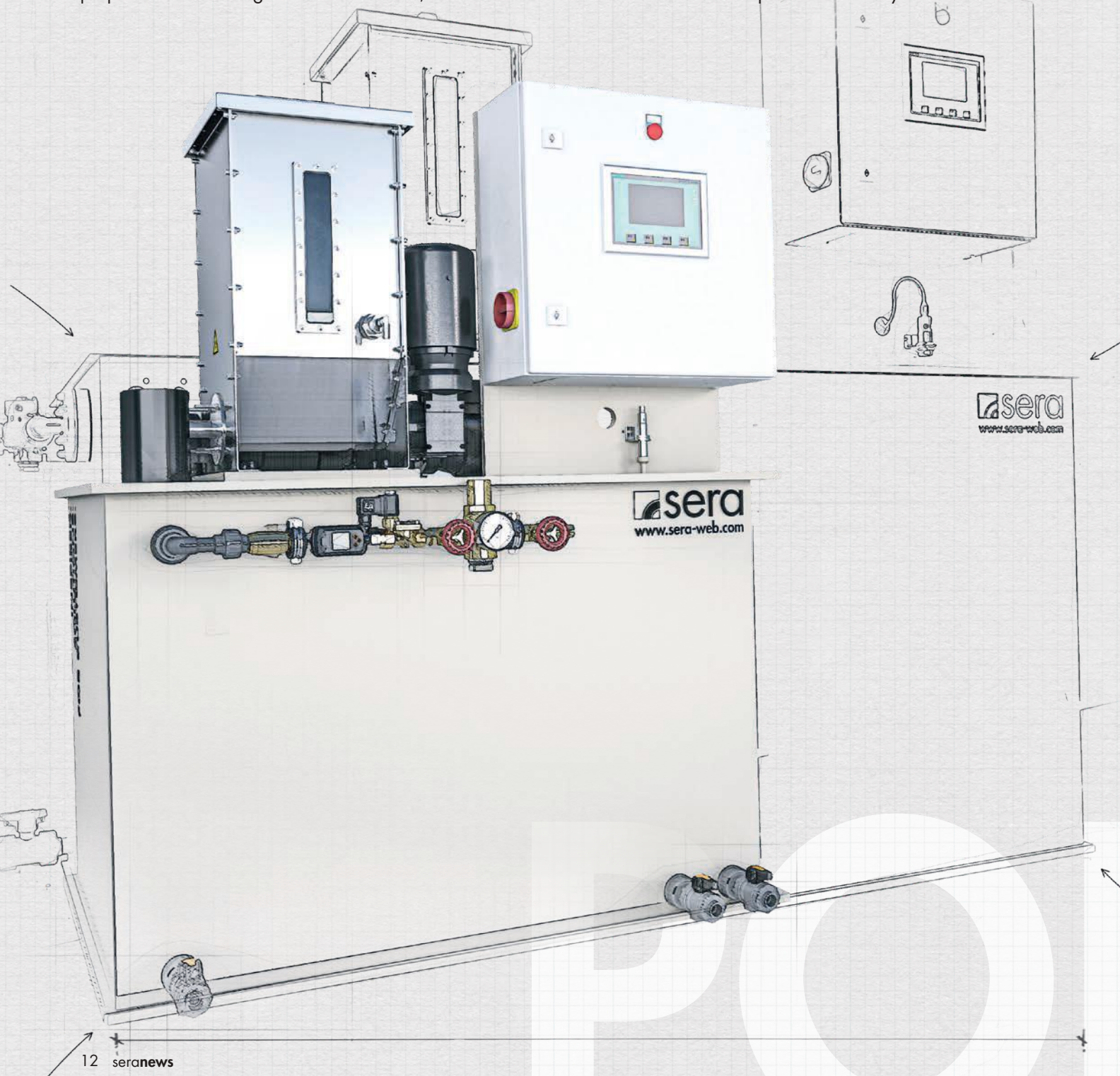
Never change a running system...

YES, WE DO.

We have downsized our PolyLine Flow polymer preparation station.

Polymer solutions are used everywhere where sedimentation or flotation of suspended solids in water is to be accelerated and the dewatering behaviour of thickened sludge improved, such as in wastewater treatment, paper manufacture, drinking water treatment, and sewage sludge dewatering.

The PolyLine from **sera** is a series of simple and flexible as well as economical and efficient systems for the preparation of polymers, whether liquid or solid. The stations are equipped with a precise flow measurement for solution preparation and filling level measurement, to ensure the efficient and economical operation of the systems.



POLYMER PREPARATION STATIONS

The PolyLine is available in three different variants, each for use with liquid (variant L) or powdered polymer (variant S) or as a variant for both polymer forms (S/L):



In the 3-chamber system, the polymer is dissolved with water in the first chamber. The product matures in the second chamber. The finished solution reaches the third chamber via the overflow, where removal takes place. Product entrainment is minimised by a process that is optimally tailored to the task.



The pendulum system tank consists of two separate chambers. The polymer solution is prepared successively in the chambers. After a defined maturing time, the polymer solution is available for extraction. Product entrainment is excluded.



In the double-deck variant, the chambers are arranged one on top of the other. The polymer is prepared in the upper chamber. After the maturing time is complete, the fully matured product is drained into the lower chamber. Product entrainment is prevented through the process.

POLYLINE

Our customers highly appreciate the PolyLine polymer preparation stations and are enthusiastic about their reliability, precision and performance. At the same time, they are safe and easy to operate.

We create added value for people and the environment - we are committed to this credo, and so we work every day to make our customers' lives easier while contributing to sustainable business.

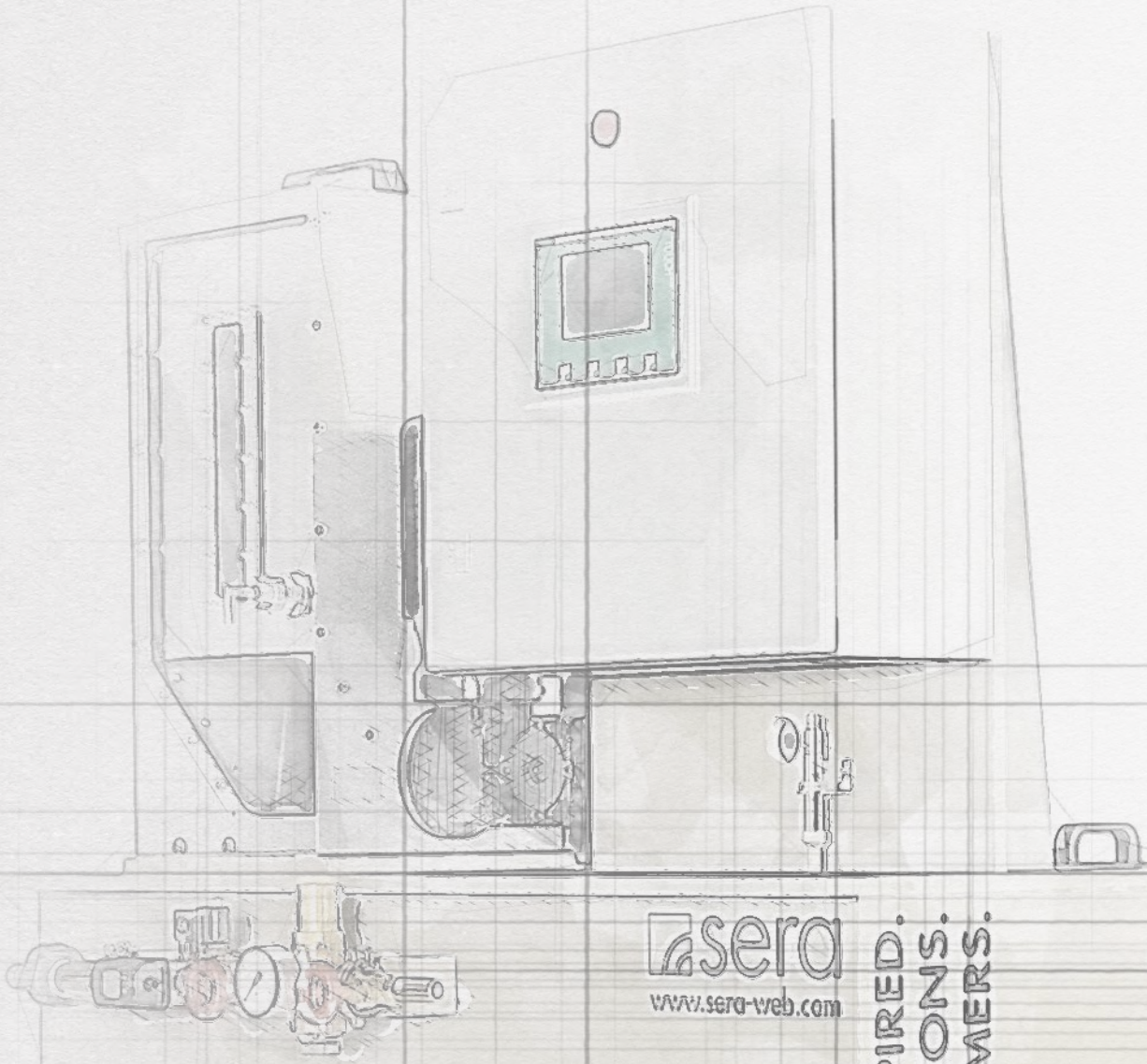
In some cases, our PolyLine Flow was a little too big for the desired customer application. After all, the smallest version PolyLine Flow 500 is already one metre wide, almost two and a half metres long and about one and a half metres high. Very compact for what it can do, but somewhat oversized in some applications. Known for implementing customer wishes, we did not hesitate and designed a smaller version of the PolyLine: The PolyLine Flow Compact. Like all other polymer preparation stations, it is built in the Spanish subsidiary **sera Tecnología Iberia S.L.**

With a footprint of just 120 x 80 cm, the PolyLine Flow Compact fits exactly on a Euro pallet. This not only makes it cheaper to transport, it is also easier to place on site at the customer's premises and finds its place in every room and every application.

The wall thickness of the PolyLine Flow Compact is also somewhat thinner than that of its big sisters. The lower material costs and less work at **sera** ensure lower production costs overall. This also makes it more economical for our customers to procure and conserves resources.

We proudly presented the PolyLine Flow Compact as a new product at this year's IFAT in Munich. Visitors and customers alike were enthusiastic about the compact polymer preparation station and welcomed our approach of not only reducing their costs through material savings, but also creating added value for the environment.





sera
www.sera-web.com

INSPIRED.
SOLUTIONS.
FOR CUSTOMERS.



Project DIGITALazubi Plus

Employees usually know best where exactly the development potential within a company lies with regard to digitalisation. The DIGITALazubi Plus (digital trainee) programme, which is being carried out in cooperation with the Hessian Chambers of Industry and Commerce in various regions of Hesse, focuses on precisely this resource.



Our trainees Colin and Felix worked together with our trainers on a digitalisation project. They created the learning platform "Digital Learning Workshop" to make information available to all trainees and students. This is particularly suitable for new trainees or students. It is meant to make their start in the working world easier. However, this platform is also well suited for all other trainees and students. They can access the platform independently at any time to refresh their memories.

1. HOW DID YOU COME UP WITH THIS PROJECT?

We already had many ideas, but together with our trainee coaches we were able to find even more ideas. Taking into account the skills we have acquired so far and our time management, we sifted out some ideas. The learning platform finally stood out as it would achieve the most added value for us.

2. HOW DID YOU PROCEED DURING THE PROJECT?

At the beginning, we looked together at what possibilities there were to build up the project and set some framework conditions. In doing so, we made sure that we set ourselves realistic goals in order to avoid being overwhelmed.

After that, we independently determined the extent of the content-related topics and areas for the project. Now we were able to draw up a timetable and agreed on the progress of the project in regular meetings.

3. WHAT DIFFICULTIES DID YOU ENCOUNTER?

During the project, we noticed that despite detailed planning, it was difficult to make time for this project regularly in addition to the daily business. Also, the scheduled meetings could not always take place due to the holiday season and the related planning.

We also encountered some technical challenges, such as setting up the website. However, we were able to find a solution quickly with the help of some **seranians**.

4. WHAT DID YOU LEARN FROM THIS PROJECT?

We were able to learn a lot from this project. We learned to take on a lot of personal responsibility. In the area of project management, we were also able to take away a lot of new knowledge, from planning to implementation.

We also gained a wide range of technical knowledge, especially through the learning content on the topic of "digitalisation", which was carried out by the Chamber of Industry and Commerce.

Some topics that caused difficulties during the project we would do differently in the next project.

The project is not finished, the platform is kept open for extensions so that new topics can be added as needed. This means that new ideas can always be incorporated and realised.

There is a lot to learn about each department, which is why the platform is constantly growing. Trainees also have the opportunity to fill the platform. In this way, for example, the industrial trainees also get an insight into a department that is not part of their work schedule. This gives them a good all-round view of the process chain of an industrial company.

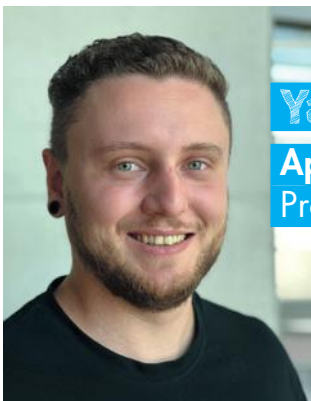


Yesterday still a trainee, today already a permanent seranian

These seranians all have something in common. They have completed their training or studies at sera and passed all their exams. The start of their professional life has begun, and together with sera.

The questions

1. What were your first impressions of **sera**?
2. What were your expectations of the training/studies at **sera**?
3. What were your highlights during your training/studies?
4. What is it like to work at **sera**?
5. Your quote/conclusion about the training at **sera**?
6. Why did you decide to stay at **sera** after your training?



Yannik Przibilla

Apprenticeship:
Production technologist

1 Through family and friends, I had already heard a lot about **sera** and therefore had a rough idea of what to expect. These expectations were confirmed by the introductory interview and the first few days.

sera is a very open and progressive company that welcomes new employees in a very friendly way and gives them a feeling of belonging.

2 Through a good friend who was already in the middle of his training as a production technologist, I knew roughly how the training would go. This meant that my expectations were very close to reality and came

true. However, the training is very different from the work you do as a skilled worker, even though you are in the same profession.

3 I have not only found colleagues in the other trainees, but also friends with whom I meet outside of work. Otherwise, the company parties and excursions are among my highlights.

4 Determined, varied and friendly in a team.

5 The training at **sera** is fun and you get to know the entire company and various activities. The training to become a production technologist is very comprehensive.

6 I was offered an attractive position in a good team, which offers a lot of variety and a great learning factor.

NOW I WORK AS A PRODUCTION TECHNOLOGIST AT **sera GmbH.**

1 I encountered a particularly positive atmosphere, both in correspondence but especially in personal conversations from the first day at **sera**.

Addressing everyone with "you" was a little unusual at the beginning, but it reinforced the feeling of working together as equals.

2 Due to the positive, first impressions during the recruitment process, I was looking forward to the start of my training and went into it with positive, high expectations.

My expectations were more than fulfilled. I was able to get to know many different activities and departments. Forming and contributing my own ideas was encouraged in many areas. In my opinion, the "learning by doing" is particularly great at **sera**. Through exciting tasks and acting on my own responsibility, I was able to take away a lot from my training.

3 It is difficult to single out a single highlight from my training. What was special for me was how quickly I was allowed to work on the processes. I was also given many exciting tasks and projects. For example, a service assignment lasting several days for the assembly and installation of a **sera** product directly at the customer's site.

Another highlight is the joint development and implementation of a trainee project for the planning, renovation and redesign of two new recreation and meeting rooms at **sera**. Here, together with some other trainees and students, I was able to take on tasks ranging from planning and procurement to implementation and inauguration.

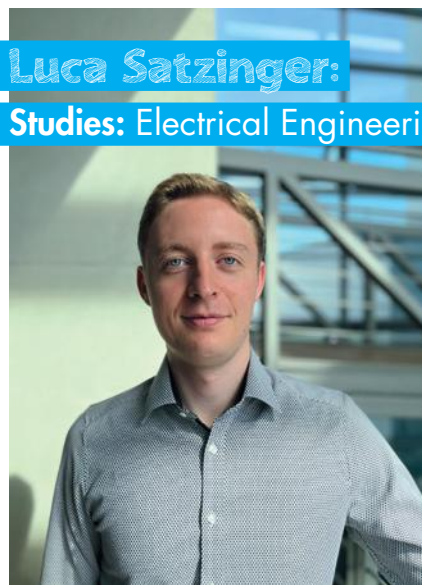


Tom Haeder

Apprenticeship: Industrial clerk

- 4 Flexible, varied and exciting.
- 5 A varied and exciting apprenticeship, which I would definitely do again!
- 6 I really enjoyed the training at **sera**. This and the prospect of further exciting tasks encouraged me to want to pursue my further career together with **sera**.

NOW I WORK AS A JUNIOR PROCUREMENT COORDINATOR AT **sera GmbH**.

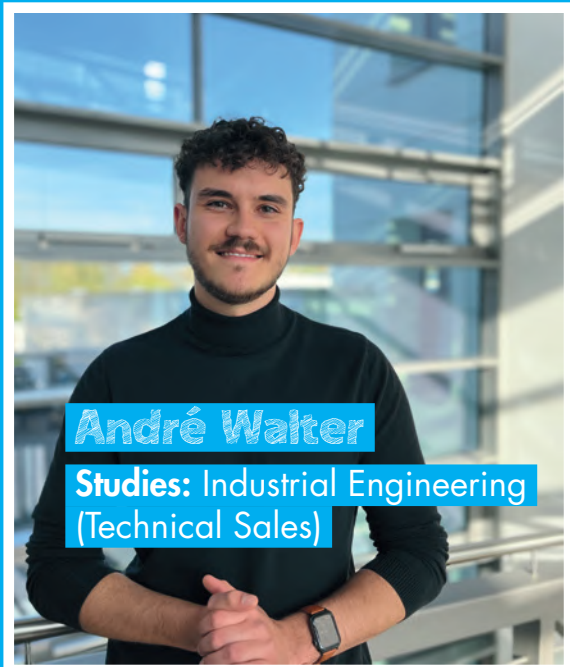


Luca Satzinger:

Studies: Electrical Engineering

- 1 A company with many open employees and a good culture of communication.
- 2 That you simply have a good time, in which you learn a lot and become competent. That also proved to be true.
- 3 The lecture times were very varied and the work in the research and development department at **sera ProDos GmbH** fitted in well.
- 4 Varied and wide-ranging.
- 5 He who has once made it so far that he no longer errs, has also ceased to work. (Max Planck)

NOW I AM WORKING AS A JUNIOR ELECTRICAL ENGINEER AT **sera Hydrogen GmbH**.



André Walter

Studies: Industrial Engineering
(Technical Sales)

1 Very positive, I especially liked the barbecue we had together before the start of the training. You got to know the other trainees before your first day at work, which made the start easier.

The onboarding week was also very well structured and also contributed to a smooth start at **sera**.

2 I chose the dual study programme at **sera** because I wanted to gain practical experience in the professional world as early as possible. By going through almost all departments during my training, I got a very good insight into all functions and processes of the company.

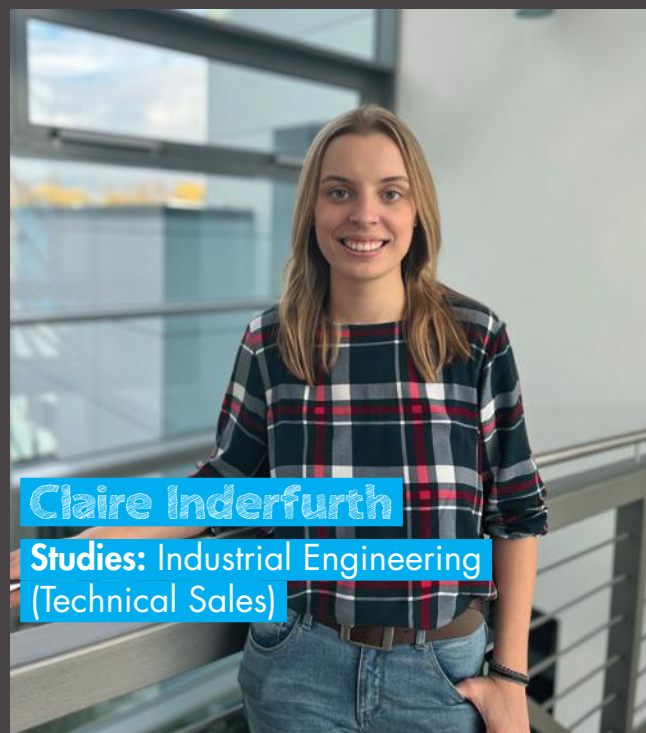
3 The first Christmas party! I had previously imagined the company Christmas party to be a rather boring event. But I was convinced otherwise at the first Christmas party. It was fun to get to know my colleagues in a relaxed and informal environment.

In addition, the Social Days were always a highlight for me. On the one hand, we realised nice projects with the team, for example the redesign of the outdoor area of a kindergarten. On the other hand, the combination of managers and trainees was a good opportunity to get to know the colleagues and the company better.

4 Challenging, collaborative and varied.

5 By going through all the departments in the company, I was able to combine my theoretical knowledge with practical experience. I would not have achieved this synergy with a classic university degree.

NOW I WORK AS A JUNIOR PRODUCT
MANAGEMENT ENGINEER AT **sera ProDos GmbH**.



Claire Inderfurth

Studies: Industrial Engineering
(Technical Sales)

1 **sera** seemed modern and friendly to me. Especially during the first personal conversation, I directly encountered the friendly interaction. Many **seranians** greeted me, even though I was not yet part of the **sera Group** at that time. And I also have particularly positive memories of the first meeting with all the trainees before the start.

2 The get-to-know-you barbecue with all the trainees before the start of the training eased many of my concerns before the start. This made me look forward to a nice and instructive time. It was especially important to me that I get as many insights as possible into different departments so that I can gain a lot of practical experience. These expectations were fulfilled very well. During the training, I was able to see very well in which direction I would like to go professionally.

3 I can't limit myself to one specific event. I found it particularly positive that I was quickly given responsibility and that contributing my own ideas was not only desired, but

1 It started with the speedy application process, followed by getting to know the contact persons personally. In the first few days after starting the programme, I already got to know the products in the various assembly departments and had a quick start in the day-to-day business.

2 My expectation was that I would be involved in the day-to-day business. That I would see the theory in practice, get to know it and be able to put it into practice. And that I would thus complete a practice-oriented degree.

3 Working on the bachelor's thesis, in which a practically relevant topic for operation is elaborated. I dealt with the topic "Preparation of a feasibility analysis for the introduction of a hydrogen infrastructure: analysis of feasibility and benefits as well as preparation of an economic efficiency calculation".

I also enjoyed working together in the individual departments.

4 Varied, future-oriented, teamwork.

5 For me, it was exactly the right decision - you already get to know the professional world during your studies, you can find content from the university in the company and gain initial experience.

6 **sera** is an innovative, forward-looking employer with a focus on people.

NOW I WORK AS A JUNIOR SALES ACCOUNT MANAGER AT **sera Hydrogen GmbH**.

also heard. Be it in everyday work, in the individual departments or in many projects with other trainees and students.

Or also that I was able to participate in the social media team during my training.

4 Varied, flexible and supportive

5 He who takes pleasure in his work is able to achieve much. (Marion Countess Dönhoff)

6 As I really liked the working atmosphere during my training, I decided to shape my future career together with **sera**.

I was open to a new position, new tasks, new challenges and was looking forward to a new phase in my life together with **sera**. Since **sera** was also planning a position for me, it was a great fit.

NOW I WORK AS A SOCIAL MEDIA MANAGER AT **sera GmbH**.



Training at sera – in a



constant state of change

Due to the changed requirements for trained specialist personnel and the training company, the in-house training at the **sera Group** has also changed somewhat in recent years.

We have introduced some standardised processes, such as the scheduled probationary period interviews. Within the four-month probationary period in our apprenticeships, we hold a total of two probationary period talks at two-month intervals to find out as early as possible how onboarding is going and whether the apprenticeship idea matches reality. During the probationary period, for example, agreements are also made to optimise the training process. As a further instrument for exchange beyond the probationary period interviews, we conduct so-called check-up interviews at three-month intervals over the entire duration of the training or studies. The check-up talks provide a platform for exchanging information on, for example, current training topics or the rotation plan. In addition to the check-up talks, we have introduced a 180-degree feedback system for the feedback talks within the departmental rounds, thus replacing the one-sided "appraisal talk". In addition to the feedback from the trainee coaches to the respective trainees, all trainees now also give their feedback on the training in the respective departments to the trainee coach.

Identical to the training in the commercial area and the dual study programme, we have introduced a rotation plan for our industrial-technical trainees, which favours a structured rotation through the area and can be adapted to individual wishes and interests. Generally speaking, the rotation plan for all our trainees and students is only to be seen as a framework and will be flexibly expanded to offer as many insights as possible.

In order to enrich our training somewhat independently of the departmental rotations, we have introduced larger projects in which our trainees can work together across departments and training areas and contribute their strengths. One of the first projects was the redesign of two creative rooms in the **sera Group**, at the headquarters in Immenhausen. The results of the room redesigns, including the project planning and implementation, can be admired on our social media channels. Two little-used rooms have been transformed into beautiful workspaces that are almost permanently occupied and used by **sera** employees.

Since this year, there is also another novelty: the training of trainee coaches. Within the departments and divisions, there are trainee coaches who, in addition to their work, have the honourable and responsible task of guiding, training and educating the trainees, students and interns. The trainee coaches' workshops serve to refresh and convey different topics and also for a uniform understanding of the importance of training.

These are just a few examples of processes and tools that have changed in recent years.

Since the training of our colleagues of tomorrow is close to our hearts, the optimisation of training is an ongoing process and is constantly enriched and expanded.



STEFANIE VOGEL

Trainer in the commercial area and the dual study programme

1. WHY ARE YOU A TRAINER AT **sera**?

After my training as an industrial clerk, I gradually got involved in the coordination and management of training at **sera**. Even during my training, I had ideas about how this could be enriched and modernised. I particularly enjoy the visits to schools, trade fairs or internal company events such as Girls' Days and company tours. I have an incredible amount of fun advising pupils who are looking for a connection to school and presenting them with the diverse possibilities of an apprenticeship at **sera**.

Not only with the pupils but also with our students, trainees and interns, I like to engage in exchange and do my best to facilitate an individual training process in order to offer diverse insights into our company and to impart the broadest possible knowledge.

Through my networks with other training companies, the chambers and schools, I take in new input and changes in the field of training and the labour market and try to implement them in our processes. I also try to incorporate the ideas and feedback from our trainees and trainee coaches into our processes and procedures.

In a nutshell, I am a trainer because I have recognised how important training is in today's world and would like to proactively promote, drive and implement this and because I am on fire for the subject!

2. WHAT ARE THE CHALLENGES IN COORDINATING THE TRAINING?

One of the biggest challenges for me is to balance the need for trainees with the capacities in the individual departments. Every trainee, student and intern makes a departmental rotation within his or her in-company training in order to gain as many insights and broad knowledge as possible. When planning the rotation, I always follow the recommendations and specifications for the individual job profiles, as well as the information from the exchange with **seranians** who have already completed their training and the wishes of each individual. Of course, I also take into account the capacities of the individual areas and possible workloads due to order peaks or absences within the holiday period. It is not always easy to reconcile these factors. Nevertheless, it is important to me that every single trainee, student and intern has become familiar with all the relevant areas by the end of his or her training period and understands how a medium-sized industrial company works, which interfaces there are between individual areas and why each individual area is important for the big picture.

3. WHAT ARE YOUR HIGHLIGHTS THAT YOU HAVE ALREADY EXPERIENCED AS A TRAINER AT **sera**?

I actually have some highlights, as apprenticeship is a process that never stands still, but is always in flux. Let's start with the annual recruitments, which have worked really well so far, despite the oversupply of apprenticeships. Every year we train new apprentices based on demand, which makes it all the more important to secure our need for skilled personnel for the coming years and, if possible, to fill all apprenticeship positions.

The development of the **sera Group's** level of awareness as an employer and training company is also very positive here. Within my work, I have noticed a great development in this area, especially at training fairs.

A recurring highlight for me are the onboarding days at the beginning of the training. Every year I am positively excited to welcome our new **seranians** and to observe how a group, a team, emerges from the most diverse

characters and training professions. A team in which not only each individual adds value in his or her field, but which functions as a group. We have already been able to observe this group work in several training projects, and the results have been fantastic.

In addition to the trainee projects, the training of our trainee coaches is also one of my highlights.

A final highlight, which is also repeated every year, is the transition from apprenticeship to employment. At the end of the training period, every trainee and student has a final interview to find out in which direction or in which area they want to develop and can imagine starting as a trained **seranian**. After our trainees and students have

successfully completed their training and passed their exams, we accompany them to their first job in one of our departments. The moment when a trainee becomes a colleague is a new highlight for me every year!

IRIS SEEGER

Trainer in the industrial-technical area



1. WHY ARE YOU A TRAINER AT sera?

Through my acquisition of the trainer qualification, it was my wish to become a trainer. At that time, I was already hired with the possibility of taking over our training topics later on. I was trained and already entrusted with some of the training tasks by Volker Schübler (then training manager for industrial-technical training). I prepared our trainees for their exams and helped them to pass their Part 2 final exams. It is very important to me to accompany our young trainees in their professional development and to encourage and challenge them.

2. WHAT ARE THE CHALLENGES IN COORDINATING THE TRAINING?

Finding the balance between the wishes of the trainees, the production and the learning content of the framework curriculum. The preparations for the final exams, parts 1 and 2, are also demanding and always take place in spring and winter.

3. WHAT ARE YOUR HIGHLIGHTS THAT YOU HAVE ALREADY EXPERIENCED AS A TRAINER AT sera?

The onboarding days of the new trainees are one of my highlights every year. I was also able to take part in a training fair for the first time and introduce young people to our training professions and opportunities in our company.



From Immenhausen to Burton-upon-Trent and back



Gaining experience abroad, improving language skills, getting to know the culture and everyday working life in another country within a two-week internship and all this with financial support from the Erasmus+ project. Paulina, an industrial clerk trainee at sera, reports on her stay at our sera Technology UK branch in Burton-upon-Trent, England.

In autumn 2022, I had the opportunity to take part in Erasmus+ and travel to Burton-upon-Trent in England to visit the subsidiary **sera Technology UK** and get a taste of everyday working life at the British branch. Even though I could have done the exchange at any **sera** subsidiary, for example in Spain or Switzerland, it was quickly clear to me that my Erasmus+ should take me to England: I had never been to England before and wanted to improve my language skills. Besides, I had already dealt with the British **seranians** in my training and knew that I would get on well with them.



Erasmus+

Enriching lives, opening minds.

The promotion of Europe-wide cooperation in all areas of education is an important concern of the European Union. The successful EU programme Erasmus+ for Education, Youth and Sport will therefore be continued. The programme plays a key role on the way to a common European education area. Between 2021 and 2027, a total budget of approximately 26 billion euros will be available for this purpose.

Erasmus+ is intended to promote lifelong learning, enable sustainable growth, strengthen social cohesion and European identity, and drive innovation. The programme focuses on the closely interlinked themes of inclusion and diversity, digitalisation, civic education and sustainability.

My journey to the branch in England began with the flight from Frankfurt to Birmingham. Once there, I was picked up by a taxi and taken to Burton-upon-Trent. Fortunately, the Airbnb I booked was right in the pedestrian zone and the **sera Technology UK** office was only a 15-minute walk away. I was very happy when I reached "my" flat and everything went smoothly - after all, I had never travelled alone before.

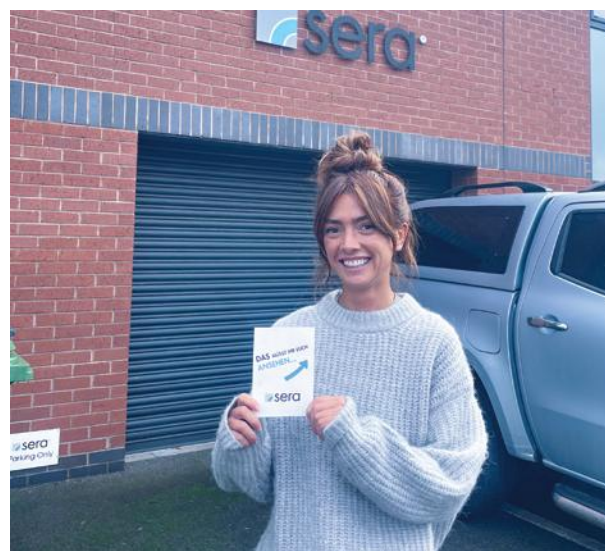


On the first morning, I started at 8:30 in the office. In England, the working hours are from 9 to 5, which was a bit unusual for me at first, as we start much earlier at the headquarters in Immenhausen - but we also finish earlier. If you

add in the time difference to the UK, my working day started almost two hours later than at home. Paul and Roz, the colleagues who spend most of their time on site

in the office, greeted me straight away with a big grin and a coffee. I felt very welcome. Of course, I had read up on the customs and traditions of English culture before my stay in England, and when they drank about ten cups of coffee a day, I was quite surprised - stereotypically, I had expected tea. (By the way, it didn't even rain!).

After I was shown my workplace and the office, I was able to support directly and took over the first to-dos. In addition to sales activities, such as processing enquiries, creating offers and sending order confirmations, I was also able to gain insight into various tasks. Since **sera Technology UK** also has a small warehouse, we carried out an inventory, packed goods and created delivery notes for dispatch to the end customer. I also got to help customise an article on the PolyLine polymer preparation stations and take videos and pictures of colleagues for our social media channels. Every lunchtime we got lunch together and ate together in the office or sometimes outside. After lunch, the tasks continued and at 5 p.m. we finished our work together. So I spent two instructive, exciting and entertaining working weeks with my colleagues in England.





Paul and Roz took a lot of time for me - even in their free time. What was unusual for me was that we sometimes went to a pub together after work. In England, it's probably customary to end the working day together among colleagues. It was also a great opportunity to talk to colleagues about topics outside of work. There was always one thing - a story to laugh about. Especially when I had to pronounce English terms or tried to teach my colleagues the German technical terms for the **sera** products.

A highlight for me was the visit to the brewery museum in Burton, because Burton is very famous in England for the production of beer. We all walked through the museum together and were amazed at how complex the process of beer production used to be, without technical aids such as our pumps. Afterwards, of course, we had to try the beer while we were there.

At the weekend, I went to Birmingham alone by train, as it is only 30 minutes away. I was amazed when I saw that the "Frankfurt Christmas Market" had just been set up: A typical German Christmas market with German food stalls and German lettering. A bit of home in the UK - it's a shame it wasn't open yet, I would have loved a bratwurst.

It was also special to experience a Sunday in England, because there the shops are open every Sunday. Although not at the same opening hours as during the week, it made everyday life more relaxed.

After two weeks, the wonderful time in England was over again, and we ended the last working day together with a "German Döner Kebap". I am very happy that I was able to gain this experience in the UK and would recommend it to anyone immediately. Our subsidiary in England is definitely worth a visit. Not only, but especially because of the great, open colleagues.

Thanks!

sera DOSING TECHNOLOGY SUPPORTS THE DEVELOPMENT OF NEW FOODS

Our meat consumption as we currently live it not only devours vast amounts of water, but also the majority of agricultural land. Sustainable food is therefore not just a trend, but above all the basis of a future worth living and an important factor in the fight against climate change. More and more companies are therefore looking at alternatives: whether chemically produced meat or protein-rich alternatives such as algae - research and testing is currently being carried out in all directions.

A well-known **sera** customer is also currently testing a new alternative. To set up his "test factory", he needed **sera**'s expertise in overcoming three challenges:

CONTINUOUS DOSING OF CONCENTRATES FOR CLEANING IN PLACE (CIP)

- Sodium hydroxide 50%
- Nitric acid 62
- Oxonia Active (disinfectant, max. 30% hydrogen peroxide)

sera is a specialist in CIP, which is essential in the production of food. Thanks to "Cleaning in Place", production facilities can be cleaned automatically. Hygienically clean and also very economical thanks to precise dosing of cleaning agents such as lye or acid.

In this specific case, **sera** supplied dosing stations completely in stainless steel (Hy-Lok) with piping on the suction side incl. dirt trap, pulsation damper, non-return valve and overflow valve.

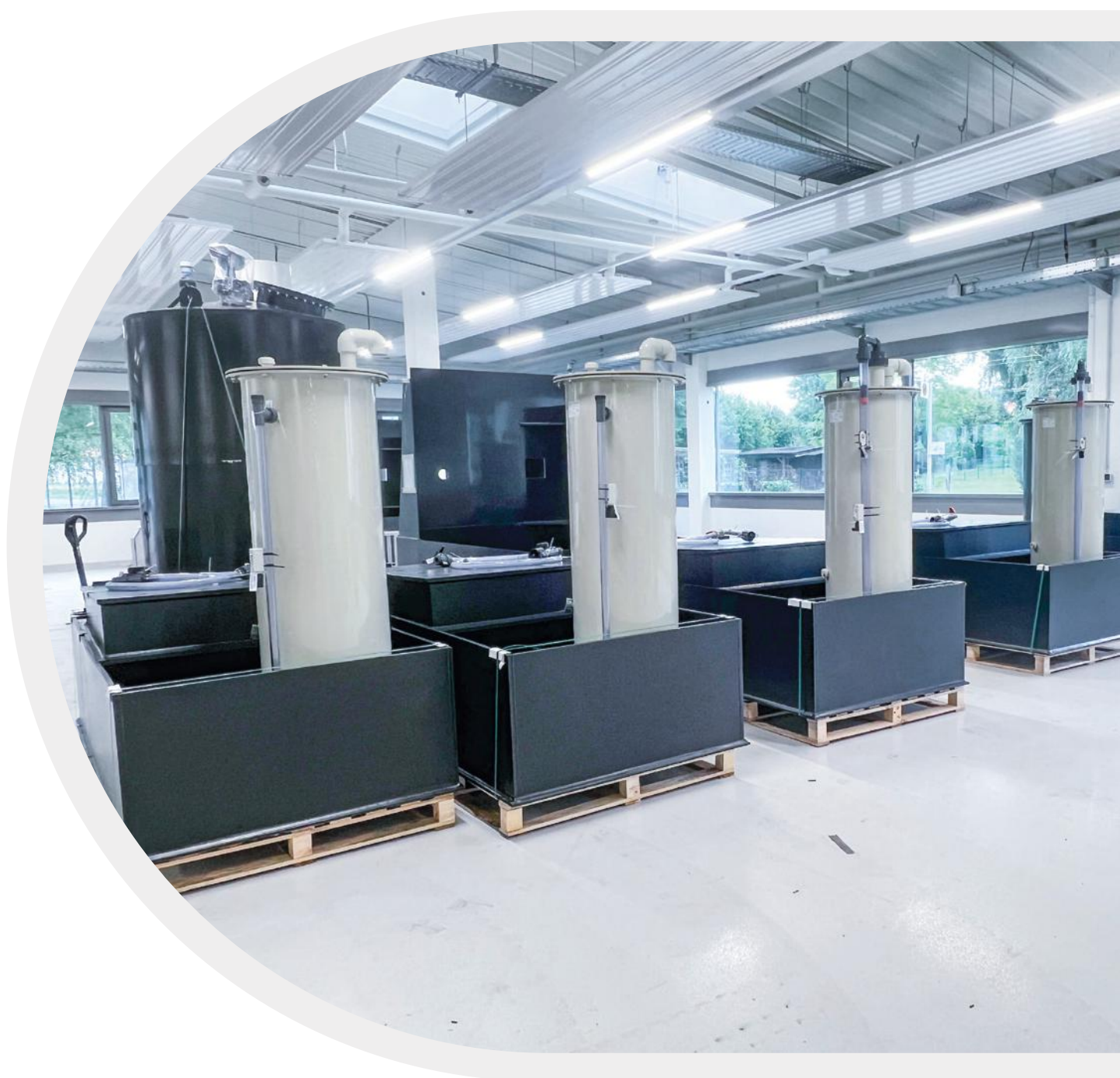


The overflow valve is installed behind the check valve before the end ball valve to protect the continuing line and its own station.

The dosing stations for caustic and acid are equipped with airPUMPS AP05 compressed-air diaphragm pumps and the appropriate compressed-air supply, the dosing station for disinfectant is equipped with an RF409.2-250e diaphragm pump. The dosing station for disinfectants is additionally equipped with a pneumatic valve for start-up relief because of the medium's tendency to outgas. All stations are equipped with an additional connection for possible flushing.



An IBC collection station is used for the continuous supply of chemicals. This consists of a storage surface for the IBC, as well as a receiving vessel and a collecting tray. The installation surface of the IBC is bevelled because the outlet of the IBC is higher than that of the receiving vessel. The IBC empties into the receiving vessel by gravity. Since the outlet of the receiving vessel is lower than the outlet of the IBC, there is always a defined residual volume in the receiving vessel after the IBC has been completely emptied. This allows the IBC to be replaced without disturbing the process. For monitoring purposes, the receiver vessel has an optical fill level indicator and two float switches, so that a message is sent when the IBC is empty and when the receiver vessel is empty. These comprehensive dosing stations now enable hygienically pure cleaning in place of the equipment used to produce the new food.



CONTINUOUS DOSING OF LYE AND ACID FOR PH ADJUSTMENT IN FOODS

- Sodium hydroxide solution 50%
- Citric acid 50%
- Phosphoric acid 85%

Many foods have to be processed or enriched with salts or acids to make them digestible and to achieve a constant pH value. For this purpose, the customer was supplied with:

Dosing stations completely made of stainless steel (Hy-Lok), the design corresponds to the dosing stations for CIP concentrates, they are equipped with diaphragm pumps of the type RF409.2-90e. All elastomers are FDA- and EC-compliant, i.e. suitable for foods.

An IBC withdrawal station is used for continuous chemical supply, as for the CIP concentrates. The only difference is that all components that come into contact with the media (e.g. hose, receiver tank, ball valves) are FDA- and EC-compliant. The optical level indicator has been changed to a level indicator with a cable pull.

The dosing stations continuously dose caustic soda, citric acid and phosphoric acid according to specifications and thus ensure a constant pH quality of the food.



DOSING OF LYE AND ACID FOR PH ADJUSTMENT IN FOOD FROM 200L CONTAINERS

- Caustic soda 20%
- Potassium hydroxide 20%
- Calcium hydroxide 20%

As this is an experimental factory, the customer wants to be able to make further adjustments to the pH of the food using other chemicals as required. This is now possible thanks to the delivery of further dosing stations:

These dosing stations are also completely made of stainless steel (Hy-Lok) and the construction is again the same as the dosing stations for the CIP concentrates. They are equipped with diaphragm pumps of the type RF409.2-25e and again all elastomers are FDA- and EC-compliant.

The 200L containers are to be filled by hand and only have a fill level indicator and a float switch. **sera** has fulfilled these requirements. In order to be prepared for future automatic filling, additional nozzles have been installed on the container to make this possible.

The container and all components in contact with the medium are FDA and EC compliant.

With this extensive delivery, the customer is now in a position to research new foodstuffs in his test factory. **sera** wishes him every success in this and is proud to be part of this project, which will create added value for people and the environment in the future.





sera Technology Austria GmbH

STARTS THE YEAR 2022 AT A NEW LOCATION

For our Austrian branch, the year began at a new location. Marco Kisch, Managing Partner of sera Technology Austria GmbH, tells us why the move was necessary and what role an expansion of the sera product range played in this.



Dear Marco, you have been associated with sera for a long time. Tell us something about your stations with and at sera.

Marco Kisch: As a state-certified mechanical engineer, I first worked as a designer for bent parts at BMW, but after about a year I switched to an Austrian distributor who sold **sera** products, among other things. After three years, I became a department manager there and managed a team that only dealt with **sera** dosing technology and high-pressure technology. That's when I discovered my passion for sales.

In 2009, I went into business for myself with a partner and founded the company Arnhof & Kisch Technik GmbH (Aki.Tech), which specialised in the distribution of high-pressure and nozzle technology.

Two subsidiaries in Germany and Austria emerged from the company and we expanded the product portfolio of the German Aki.Tech to include **sera** dosing technology, as I already knew the products very well and was convinced of them. This allowed us to offer our customers everything from a single source. This also brought me back into contact with Sascha Attendorn, authorised signatory of **sera ProDos GmbH**, and through him we then had a forward-looking meeting with Carsten Rahier, the managing partner of the **sera Group**.



How was the meeting between you and Carsten Rahier forward-looking?

Marco Kisch: We both recognised a potential win-win situation: **sera** wanted to expand internationally and I was keen to become part of the environmental technology company because I saw more opportunities here to offer total solutions for our customers. Since both the products and the corporate culture of **sera** had excited me for a long time, I parted ways with my then business partner Arnhof in 2018 and took over two of the Aki.Tech

companies. In turn, **sera** took over the majority shares of both companies in 2018. Since then, I have been the managing partner of **sera Technology Austria GmbH** as well as the operations manager and authorised signatory of the German **sera Vertriebsservice Süd GmbH**.

Since then, I have been able to further develop myself and my teams and follow my passion, sales.

We are pleased that you are part of the sera Group. You have initiated the constant expansion of the product range of sera Austria and the whole sera Group. Whether high-pressure technology or feeding pumps - it is important to you that the customer can get everything from a single source. Right?

Marco Kisch: Yes, that is exactly my goal. The customer has a problem and we solve it. To achieve this, many specialists in the **sera Group** work hand in hand. We have specialists in the waste water sector, in the food sector, in the industrial sector and now also in high-pressure technology. What sets us apart from our competitors is that, as a manufacturer, we not only offer our pumps, but also customer-specific complete solutions and, of course, the necessary service to go with them.

With our solutions, we ensure that customer processes run smoothly.

We are close to our customers and have been in partnership with many of them for decades. Our customers really appreciate the **sera** hands-on mentality. In my view, personal contact and exchange are the be-all and end-all - it's the only way we know how to develop further and offer our customers everything from a single source.



Keyword high-pressure technology. The introduction of high-pressure cleaners was the decisive factor for the relocation of sera Technology Austria. Why?

Marco Kisch: It was clear to us that we could only offer customers **sera** quality if we produced ourselves. But that was not possible at our old location with just office space. We needed a production site. We found one in

Marienkirchen near Schärding and moved at the turn of the year. We now have a 700 m² production area for high-pressure technology.

But you don't only produce high-pressure units there.

Marco Kisch: The repair and production area is our absolute gamechanger! It not only enables us to produce our own high-pressure units, but also to build centrifugal and air-operated diaphragm pumps for the entire **sera Group**. We can also convert standard dosing systems here according to customer requirements. We can now

carry out repairs of systems and pumps in Austria, if this is not possible on site at the customer's premises - previously this had to be done at the **sera** headquarters in Immenhausen. Furthermore, we are proud that our production is completely paperless.

Why exactly did you choose this location?

Marco Kisch: The new location is only two kilometres from the border with Germany, and close to the motorway, so that we can process repair and service orders from Bavaria and Austria even faster.

We are now located in a very modern industrial park. Our neighbours are very successful companies with whom we enjoy exchanging ideas. In addition, we have the production space we want here.



How have you settled in at the new location in St. Marienkirchen?

How many colleagues are there and which positions do they fill?

Marco Kisch: We all feel really comfortable here. In addition to a production and service hall, the new location also has an office complex in modern architecture, where administrative activities such as internal sales are located. The **seranians** work there flexibly at mobile workstations - as long as they don't work from their home offices anyway. Because that is also possible.

At the moment we work with a team of 14 **seranians**. But since we want to keep expanding our services and the satisfaction of our customers is the most important thing,

we will keep expanding our team and plan to be about twice as big in the next five years.

Currently, we are still looking for an apprentice to become an office administrator, as well as a process technician for high-pressure technology and a service technician. We are a good employer and we are always aware that we are only as good as our employees. Therefore, I am very proud of my dedicated team that makes **sera Technology Austria GmbH** so successful.



It's great that you are always developing the subsidiary.

How do you do that?

Marco Kisch: Professionally, I learn from my colleagues in the **sera Group** every day. I am in constant exchange with the other managers of all **sera** subsidiaries. We support each other and learn from each other. As far as leading employees is concerned, I am in the final stages of my Master's degree in Leadership, which I am completing part-time in Vienna.

I can fully rely on my team here in Austria, but also on my colleagues in the entire **sera Group**. My wife Carmen - who, by the way, I met at the **sera** headquarters in

Immenhausen when she worked in sales there - manages the accounting department of **sera Technology Austria**. She is my haven of peace and without her I would not be able to manage the many topics that I work on.

All of us together look forward to the future with expectation and positivity, in which we will continue to create added value for people and the environment.

**Dear Marco,
thank you for this interview.**

THINK BIG —

Exhaust gas cleaning for large engines

Users of diesel vehicles are familiar with "AdBlue". The pollutants produced during combustion are usually effectively removed directly in the engine, the exhaust gas drives the turbocharger and then passes through the oxidation catalytic converter. Now the AdBlue - a mixture of synthetic urea and water - is added. Through a chemical reaction, the SCR catalytic converter then converts the nitrogen oxides into water and nitrogen. With the introduction of the EURO 6 emissions standard in 2015, the use of AdBlue in new cars has become mandatory - commercial vehicle owners and drivers have been obliged to do so for much longer.

Industrial and large engines, such as those on ships, are now also subject to increasingly stringent emission guidelines. Engine manufacturers are therefore forced to significantly reduce emissions of both soot particles and nitrogen oxides.

The reduction of nitrogen oxide emissions can be achieved on the one hand through lower-pollution combustion, i.e. an internal engine solution, and on the other hand through exhaust gas post-treatment with an SCR catalytic converter (SCR: selective catalytic reduction). Often, a combination is used - first lower-pollution combustion, then SCR.

The chemical reaction at the SCR catalytic converter is selective, i.e. the nitrogen oxides (NO , NO_2) are reduced preferentially, while undesirable side reactions such as the oxidation of sulphur dioxide to sulphur trioxide are largely suppressed.

The reaction requires ammonia (NH_3), which is mixed into the exhaust gas.

When urea is used, it must first be decomposed in a thermolysis and subsequent hydrolysis reaction in order to release the ammonia necessary for the SCR reaction.

The dimensions of industrial and large engines make the use of dosing systems possible and necessary. The dosing system from **sera** is used in exhaust gas post-treatment. The urea solution is dosed from a day tank with a **sera** dosing pump. The urea is finely atomised by means of a nozzle lance. The urea quantity required for optimum pollutant reduction is specified via a control system by means of a control signal of the iSTEP series metering pump.

The dosing of the urea is monitored with pressure and volume flow sensors.

Since optimal atomisation and evaporation of the aqueous urea solution is crucial for the process, the nozzle lance is also supplied with compressed air. The compressed air cools the nozzle lance. Furthermore, the compressed air is used to flush the urea line via a bypass function between the compressed air and the

urea line, so that blockages caused by crystallising urea are avoided.

In this way, **sera** products ensure clean air by post-treatment of exhaust gases from industrial and large engines. Once again, **sera** creates added value for people and the environment.





EXHIBITIONS

After many cancellations and postponements due to Corona, things finally got going again: We were able to present our products at various exhibitions in Germany and abroad. There, our experts showed what contribution our solutions can make to the customers' applications.

In the area of human resources, we were also able to present sera as an employer and training company and win over some talents for us.



IFAT



 **PUMPS
& VALVES**



US.
YOU.
THAT FITS.

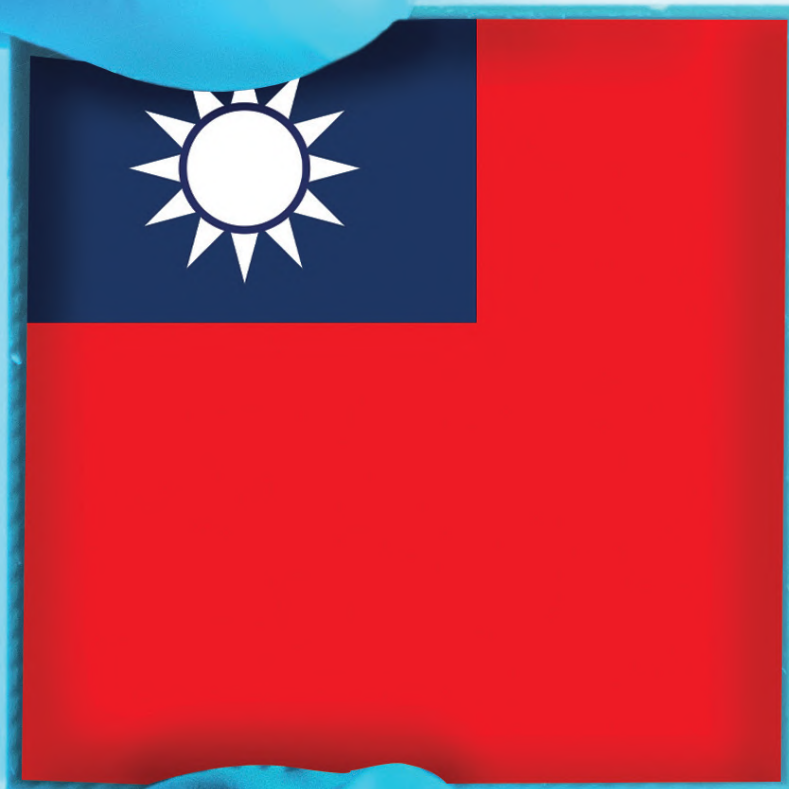
vocatium

**KASSELER
NACHT DER
AUSBILDUNG**
EINE NACHT FÜR DEINE ZUKUNFT



SMALL BUT POWERFUL - **MICROCHIP**

These tiny pieces of silicon are the
basis of our digital world



The production of microchips is highly complex and requires absolute purity.

Our customer, ECOVE Environment Services Corporation from Taiwan, who supports taiwanese ASML hard service factories, uses a brand new lithography system (EUV - extreme ultraviolet lithography) for this purpose, which, unlike conventional systems, does not use lenses. The new system uses ultra-smooth, multi-layer mirrors in a vacuum chamber. Each mirror consists of more than 100 layers of material. Flatness is crucial. The mirrors are polished to a smoothness of less than an atomic thickness.

FOR COMPARISON: IF THE MIRRORS WERE AS LARGE AS GERMANY, THE HIGHEST "MOUNTAIN" WOULD BE ONLY 1 MILLIMETRE HIGH.

sera puts pressure on the cleaning of the ultra-thin mirrors

The mirrors of the lithography system become dull over time, or the surface is no longer 100% clean, as metal vapours are produced during the process and light bundling.

The mirrors are cleaned with the help of gas. The gas pressure for the cleaning process is produced by a **sera** compressor.

But not only the mirrors have to be cleaned regularly, the **sera** compressor also receives maintenance at regular intervals.

To carry this out and to train the client, **seranian** Oliver Blank embarked on an exciting 14-day trip to Taiwan.



SERVICE TASK IN TAIWAN:

- A maintenance was carried out on the compressor. Minor problems were fixed.
- The compressor is located in a clean room that can only be entered with separate clothing: Full body protection - This protection is changed after each exit from the room.
- Practical training was conducted while working on the compressor.
- Theoretical training was conducted over two days with ten of the client's employees.

Immediately after entering the country, Oliver had to spend three days in quarantine at the hotel.



TRAVEL NOTES



Two weeks before entering the country there was an earthquake on site. During the stay there were further earthquake warnings.



The temperatures were around 30°C



The customer was great, he had street food brought to Oliver's hotel in the evening while he was in quarantine.



Taxi rides were very exciting, as there was hardly any adherence to speed limits.

SPEED

Communication in the country was not easy at times, because not everyone speaks English.



After work, Oli walked around the city and was able to gather so many impressions, also thanks to many tips for interesting places, which he also received from the contact person on site.

On the last day, the managing director invited all those involved in the maintenance to a meal. Many new and interesting dishes were to be tasted.



All the people are very friendly and accommodating.



seranews

THE PATH OF A DOSING SYSTEM

sera customers are used to placing an order and receiving a dosing system designed according to their requirements on the agreed date. Perhaps he has spoken to the responsible sales colleague or even a design engineer on the phone once or twice to clarify details. But has he ever asked himself who the people are who have worked on his system? Which departments and people accompany his dosing system until it leaves our factory? This is exactly what we are showing today...

THE WASTE RECYCLING PLANT IN BONN - ENERGY GENERATION WITH THE LATEST TECHNOLOGY

It is now illegal to deposit untreated waste on disposal sites in Germany. But new methods of waste recycling are required to cope with more than 400 million tonnes of refuse a year.

The statutory waste hierarchy specifies avoidance, reuse and recycling as the most effective approaches to dealing with waste. Conversion of waste into energy, i.e. incineration, is in fourth place in the hierarchy. Incineration of refuse is actually an important component in current waste management...

PROMOTING THE FUTURE - sera's ENVIRONMENTAL AWARD

sera has supported the promotion of Nordhessen business plan competition for many years. With our environmental award, we want to help young start-ups and companies in their innovative phase to implement their innovative ideas. With its 21st round, promotion Nordhessen is one of the long-running business plan competitions all over Germany and can look back on an extremely successful history. The competition is advertised and organised annually by Regionalmanagement Nordhessen GmbH,

sera MAKES SEAWATER DRINKABLE

Morocco is an arid country which is badly affected by climate change. Population growth, the progression of industrialisation, the growth of the tourism industry and agriculture have led to the groundwater table sinking continuously in recent years. Large seawater desalination projects for drinking water production are intended to counteract the drinking water scarcity, and **sera** is contributing to this.

ON THE WAY TO NEW OPPORTUNITIES - TRANSFORMATION OF THE COMPANY LOCATION

The climate protection goals of the German government and the European Union require massive efforts and investments in the coming years. By 2030, industry must emit up to 143 million tonnes of CO₂. Ambitions are not only...

KAMPF DEN PAPIEREN

THE PAPERS

of the „paperless office“ on everyone's lips for a new topic. **sera** has for some time now taking giant steps the future in this

og



THE sera FUTURE CHALLENGE

We have successfully organised the **sera** Handball Day together with MT Melsungen three times to date, and created truly special moments for hundreds of children and young people. They were allowed to spend an afternoon training with their idols, the MT Melsungen professionals, and see them up close. Unfortunately, the **sera** Handball Day was not allowed to take place again this year after 2020. These special times emphasize more than ever that new creative, sustainable and modern ideas are needed....



IN ACTION WITH HIGH PRESSURE - THE RIGHT SOLUTION FOR EVERY APPLICATION

The **sera Group** is constantly expanding its product range and has set itself the goal of offering its customers everything from a single source. As a logical consequence, it now also serves the high-pressure technology market, after all pumps play a major role here. In the Austrian subsidiary **sera Technology Austria GmbH**, complete high-pressure units and pump-motor units are therefore manufactured according to customer requirements...

CLEAN WATER FOR PEOPLE

At European level, the Framework Directive (WFD) Directive 2000/60/EC of 23 October 2000 sets out binding environmental targets for all Member States. One of the objectives outlined in this was to put all surface water and ground water into a good condition by the end of 2015. Unfortunately, this has not been achieved in any of the European Member States, including Germany. A new deadline has therefore been set for this important goal and it should now be achieved by 22 December 2021....



IN ACTION FOR THE FUTURE - RESEARCH AT THE TU GRAZ WITH THE HELP OF sera PRODUCTS

Research is the continuation of curiosity by other means." This is the motto of Hans-Jürgen Quadbeck-Seefeld. Graz is teeming with student curiosity. Without resources, no research is possible. For example, a pump in a membrane provided the power necessary for experiments in Chemistry...



seranews

Where are our products used? How do we create added value for people and the environment through our daily activities? What issues are we involved in? We report regularly on this and much more on our **seranews** blog: www.seranews.sera-web.com/en/

ON THE WAY TO ENERGY INDEPENDENCE

With the commissioning of the first large photovoltaic system on Plant 1 at the Immenhausen site, we have taken the first step towards energy independence. More than 330 MW peak ensure that we can produce most of our consumption ourselves.

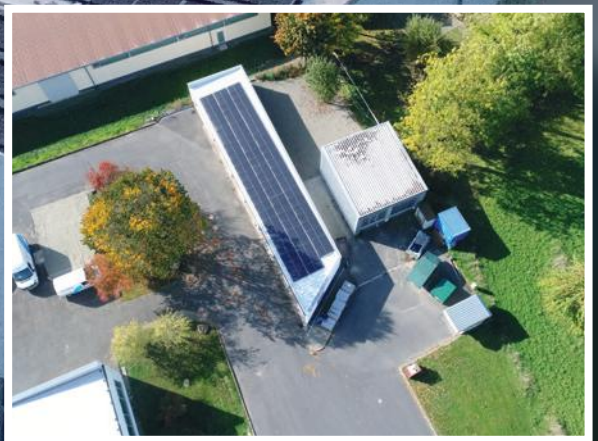


sera goes **green**



We want to position ourselves sustainably and independently in the long run. An important component of this is the generation of our own green electricity. For this purpose, a PV system was installed during the renovation of our main plant in Immenhausen, which will enable us to cover our energy consumption from green electricity in the future. In addition to the factory halls, garage halls were also covered with solar modules.

Another component will be a bike shelter (for the supply of our loads e-bikes and employee bicycles), which is also being built on the site. In a second construction phase, Plant 2 will also be equipped with a corresponding PV system to make us energy-independent there as well. All of this serves our goal of becoming CO₂ neutral in the coming years and supports our corporate mission **sera goes green**.







We think towards the future - Extensive charging options for e-vehicles

We have set ourselves ambitious goals and want to reduce our CO₂ emissions to a minimum by 2030. This also includes the use of an emission-free vehicle fleet and the offer to employees to charge their own electric vehicle. The charging infrastructure at the workplace is also an important factor for many employees when deciding to purchase an electric car. We want to actively support this sustainable decision and have therefore expanded our existing four charging points by 14 additional charging stations.

The charging stations are fed by the in-house photovoltaic system and thus offer 100% clean green electricity. Each charging point has a capacity of 22 kW.

Both the vehicles of the fleet and those of the **seranians** are authenticated via RFID chip and thus activate the charging stations for use.

The expansion of the charging infrastructure was urgently needed, as the existing four charging points were more than fully utilised with the current demand. Sustainable mobility is a cornerstone of our **sera goes green** goal and we hope that as many employees as possible will join us in this goal and also convert their own vehicles to electric - just as we will gradually convert our entire fleet to electric and hydrogen vehicles.



AWARDED AGAIN

Once again, we were able to reach the jury level in the Grand Prix of Medium-Sized Businesses ("Großer Preis des Mittelstandes") and were awarded the honorary plaque at the federal level for the year 2022. This is the second time, after our award in 2020, that we have been able to convince the jury with our achievements in the competition of the renowned Oskar Patzelt Foundation. No other business competition in Germany achieves such a large and now more than two decades lasting response as the "Grand Prix of Medium-Sized Businesses", which has been awarded since 1994.

In addition to promoting networks among small and medium-sized businesses, the competition aims above all to publicly recognise and confirm the achievements of the nominated companies; there is no prize money. In the 28th year of the competition in 2022, 4546 small and medium-sized enterprises were nominated throughout Germany.

Nominations of medium-sized companies can only be made via third parties. The **sera Group** was nominated for the fifth time in a row, among others by the Association of Metal and Electrical Companies in Hesse. The nominated companies were evaluated holistically according to the criteria of overall development of the company, creation and securing of jobs and apprenticeships, innovation and modernisation, commitment to the region as well as service, customer proximity and marketing. An independent jury of experts then decided on the prize winners and finalists.

During the festive gala event in Bonn, the **sera Group** was one of ten companies to receive the "Plaque of Honour" as a particularly impressive award winner at regional level in the competition year 2022. In his laudatory speech, Dr. Helfried Schmidt, founder of the Oskar Patzelt Foundation, highlighted **sera's** guiding principle - "We create added value for people and the environment" - which drives all the activities of the environmental technology company. Whether in the product range such as hydrogen technologies as part of renewable energies, dosing technology for the treatment of drinking water, but also as a responsible company that awards the **sera** environmental prize, supports sustainable projects in the region and is also socially committed.

Having already been one of five finalists in Hesse in 2018, the **sera Group** was named an award winner in 2020 - making it possible for it to be awarded the Badge of Honour this year.

This award shows that the recognised jury of experts considers the **sera Group** among the best medium-sized companies in Germany. "The Grand Prix of Medium-Sized Businesses is the award for companies of our size and proof that we have done many things right in recent years. It is a special appreciation of our work and confirmation that we have set the right course for the future with our strong values and a clear strategy", says the managing partner of the **sera Group**, Carsten Rahier, happily. "This is an award for all **seranians**. Each of them has contributed his or her part to the **sera Group** being where it is today - and where it belongs." "The Grand Prix of Medium-Sized Businesses is proof that we are acting in exactly the right way with our mix of tradition and modernity and creating actual added value. We couldn't be prouder." adds Stefan Merwar, authorised signatory of the **sera Group** and Head of Marketing and Communication. With the honorary plaque "Großer Preis des Mittelstandes 2022", the **sera Group** continues its success story.



„The Grand Prix of Medium-Sized Businesses“

The Grand Prix of Medium-Sized Businesses has been awarded by the Oskar Patzelt Foundation since 1994 and serves the goal of promoting small and medium-sized businesses under the motto "Healthy Small and Medium-Sized Businesses - Strong Economy - More Jobs". The Oskar Patzelt Foundation is set up as a non-profit organisation (NPO). More than 200 personalities from all areas of social life are currently actively involved in the foundation's committees on a voluntary basis. It was awarded the Federal Cross of Merit in 2008 and is also certified according to DIN ISO 9001:2015, just like the **sera Group**. In 2012, the prize reached the TOP 10 best list of the "European Business Promotion Award" of the European Commission. For the 28th competition in 2022, 4,546 companies from a total of more than 1,400 institutions were nominated nationwide. Together, these companies employ more than one million people and thus form an impressive picture of the strength and importance of Germany's small and medium-sized enterprises. At the federal level of the competition, a total of ten companies that had already received the award at the state level in previous years were honoured.



sera and MT Melsungen expand partnership

sera has been a sponsoring partner of the German Handball League team MT Melsungen since 2011. For the 2022/2023 season, sera expanded its commitment to the sporting flagship of North Hesse and is now also present as a premium sponsor on the jerseys, among other things.



Presence on the MT textiles: Stefan Merwar (authorised signatory **sera**), Carsten Rahier (managing partner **sera**), Axel Geerken (board member MT) present jersey and warm-up shirt with **sera** logo

Thus, young people will continue to be the focus of the planned measures outside of Bundesliga action. In addition to the **sera** Handball Day and the **sera** Future Challenge, there will, for example, also be several handball camps powered by **sera** for talented children and young people.

And **sera** will also be more present around the professional team. Since the 2022/23 season, the company logo has not only been featured in the indoor magazine and on various media in the Rothenbach-Halle, but also prominently on the front and back of the MT pros' home and away jerseys. A welcome effect: thanks to its TV presence, **sera**'s name recognition will continue to rise outside its own sector in the future.

The fact that the name **sera** is now not only known to experts in the technology sector is also due to the company's continuous commitment to MT Melsungen. The partnership, now in its twelfth year, has been constantly intensified and developed for the benefit of both sides. It has long since become more than a connection aimed at mere marketing effects. With the regular **sera** Handball Day and the **sera** Future Challenge, which took place for the second time this season, the company and the Bundesliga team convey values such as motivation, sustainability and future orientation to young people in a playful way.

"Both MT and **sera** are committed to these values. In doing so, they reflect the essence of this partnership, which is always 'lived' with innovative ideas and activities in the truest sense of the word. We are all the more pleased that we can expand our cooperation with the premium sponsorship we have now agreed upon and add further measures within the framework of our joint philosophy," explains MT board member Axel Geerken.

Stefan Merwar, Head of **sera Marketing:**

"For us, the long-term commitment to MT Melsungen is an investment in the future. Together with MT, we can pass on our values and content to many children and young people, but also to adult MT fans. True to our motto: "We create added value for people and the environment", we can keep developing and implementing new ideas with MT."







sera FUTURE CHALLENGE

(GOES INTO THE SECOND ROUND)

After the sera Handball Day had to be cancelled in 2020 and 2021 due to Corona, we had already come up with a modern alternative together with MT Melsungen last year:

A new format to interact with the kids.

Based on our guiding principle "We create added value for people and the environment", the children aged eight to 15 were asked to shed light on the topics of climate change, water scarcity and the mobility of the future from their point of view and could participate as a team or individually.

We were thrilled with how the participating children dealt with the topics and what excellent results we achieved last year.

sera FUTURE CHALLENGE 2022

IN COOPERATION
WITH MT MELSUNGEN





This year, we are targeting participation exclusively at primary and secondary schools in grades one to ten. To this end, we have written directly to schools (in the city and district of Kassel, as well as in the Schwalm-Eder district) and sent them brochures on the Challenge. At MT Melsungen's home games, we advertise the Challenge in the matchday magazine and also promote everything via our social media channels.

Together with our sponsor, the national handball player Finn Lemke, we would like to learn from the pupils how climate change can be

counteracted and have called on the school classes to consider how they can make their school more sustainable.

To ensure that as many classes as possible can participate and that there is sufficient time to develop the ideas, the campaign period from 8 September 2022 to 31 March 2023 has been chosen to extend beyond the first school semester.

During this period, primary schools in grades one to four can submit presentations or posters, and grades five to ten can submit presentations or videos.

Schools can register on our website www.sera-futurechallenge.de and upload their entries in digital form or alternatively send them by post.

THE TOP THREE FINISHERS FROM EACH PRIMARY AND SECONDARY SCHOOL WIN:

FIRST PLACE:

Visit to a home game of MT Melsungen
+ MT professionals visit the class during sports lessons
plus 300€ cash prize.

SECOND PLACE:

Visit to a home game of MT Melsungen
+ sera/MT fan package
plus 200€ cash prize.

THIRD PLACE:

Visit to a home game of MT Melsungen
plus 100€ cash prize.

We look forward to all entries and that together we can make our world a little better every day.

Of course, every participant is a winner, because we all want to make the world a little better. Therefore, all participating schools and classes receive a certificate of participation and a small gift.

DOING GOOD IS GOOD

Our **sera** Social Day has now become a great tradition. One Saturday a year, **sera** managers, trainees and students donate their free time to do good together. We dedicate this day to a social project in the region and create something new and useful on site.

In mid-September, we met at the Freestyle hall in Kassel. Freestyle is a multi-award-winning social project in the east of Kassel. The project promotes movement, integration, prevention of socially disadvantaged children aged 8-17. Up to 1,600 children and young people "train" there every month in a self-managed sports hall. Freestyle also acts as a contact, counselling and mediation point for children and young people in difficult situations and does youth work. Values such as fair play, respect, integration, tolerance, independence, creativity and cooperation are taught - values that also characterise **sera**.



sera SOCIAL DAY 2022



SOCIAL



DAY



Together with young people and Freestyle counsellors, almost 30 **seranians** lent a hand and beautified the outdoor area in front of the Freestyle hall on a Saturday in September. A newly designed "Welcome Park" now invites people to linger and offers space to sit together and exchange ideas. We redesigned the path leading to the hall and built a seating area made of pallet furniture. In addition, we designed and built a seating area around a tree and sawed stools out of tree trunks. Furthermore, we have spruced up the bed created by Somali refugees, embedded it and made it walkable with paving slabs.



At the end, the barbecue was fired up and we were all able to try Somali specialities cooked by the young people of the project - delicious!

The mood of all participants was great, everyone worked with great fun and enthusiasm and at the end of the day we were proud of what we had achieved. Many thanks for the great cooperation Freestyle!

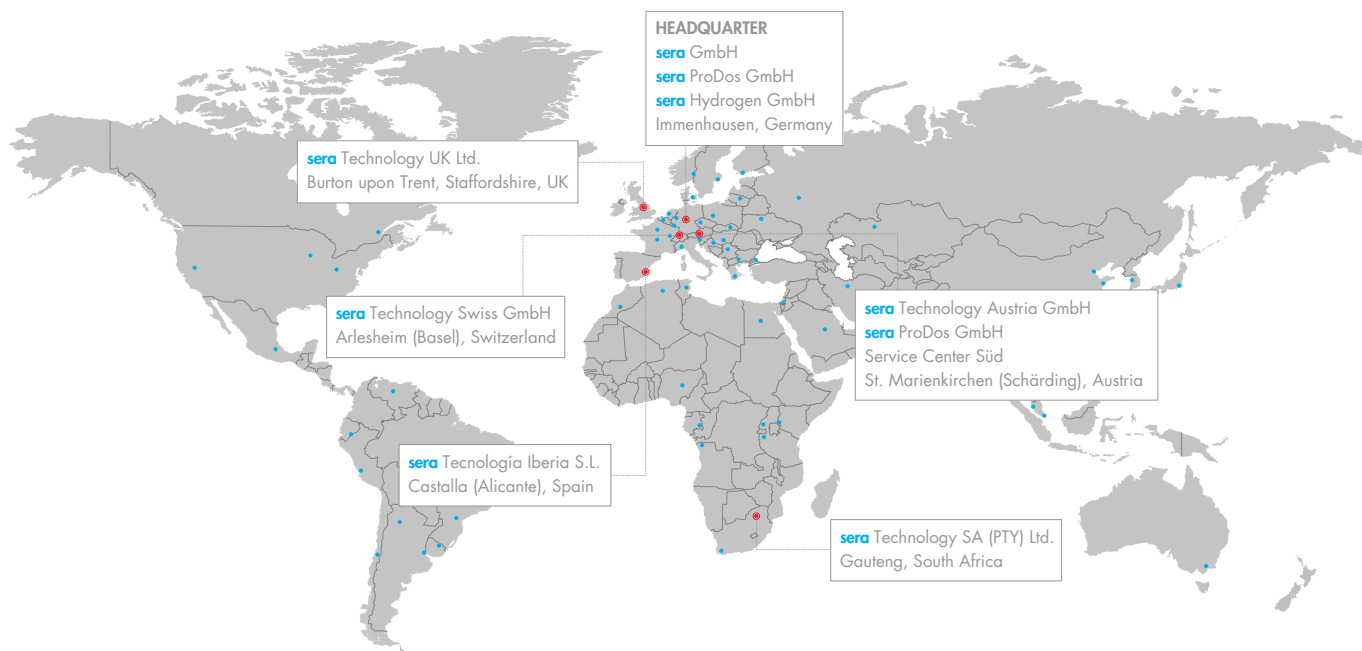
DOING GOOD IS GOOD!

WORKING FOR YOU ALL OVER THE WORLD

Your sera contacts

With headquarters in Germany and subsidiaries in the UK, Spain, Austria, Switzerland and South Africa, as well as a global sales and service network with over 30 partners in more than 80 countries all over the world, **sera** guarantees the best possible customer care on-site.





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“Print CO₂ -checked” initiative

In the print and media industry, too, awareness of climate change is ubiquitous at the moment. The “Print CO₂-checked” initiative, led by the associations of the printing and media industries, is raising awareness of harmful emissions in the sector. “Print CO₂-checked” was set up by the Bundesverband Druck und Medien (Federal Association of Print and Media (BVDM)).

The Association developed the principles for its approach and the CO₂ calculations in consultation with the Federal Ministry for the Environment and the Öko-Institut Freiburg. Companies interested in participating in the initiative simply have to be members of an association in the printing or media industries. Across Germany, more than 100 businesses are already working to improve their climate balance with the aid of “Print CO₂-checked”.

The “Print CO₂-checked” seal stands for three basic objectives:

- determining CO₂
- avoiding CO₂
- offsetting CO₂

If you wish to join the “Print CO₂-checked” initiative, you also undertake to review your energy consumption with the help of independent experts. Opportunities to make savings can often be identified in this process.

At the end of it, companies are shown ways to neutralise harmful emissions and thus to get involved actively in climate protection. The company First Climate, which promotes renewable energies in cooperation with the WWF, is responsible for neutralisation. The CO₂ certificates of this seranews support a project for the rehabilitation of well systems, Eritrea.

This edition of **seranews** was printed by our partner printshop in the region in a CO₂-neutral process. The waste heat from the printing machines, for example, is used to heat the building. In addition, only mineral-oil-free inks were used during printing, as they contain plant oils from sustainable agriculture that are easily bio-degradable and thus leave no residues when recycling used paper.



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