

seranews

The magazine for **sera Group** customers

Issue 2024





> 500.000

A4 PAGES WERE SAVED

Thanks to our digitalisation activities, we have been able to save more than half a million pages of A4 paper this year. As part of our 'sera goes digital' mission and thanks to our employees' increased environmental awareness, we have printed more than 200,000 fewer pages internally in the past year, thus reducing our paper consumption by 17%. In addition, we have consistently switched our external communication to paperless, thereby reducing paper consumption by a further 300,000 pages. For this reason, you are receiving this **seranews** in digital form for the first time.

This not only saves costs, but also makes an important contribution to environmental protection. These savings have resulted in approx. 2,500 kg fewer CO₂ emissions, 125,000 litres less water consumption and almost 30,000 kWh less energy use. This success underlines how digitalisation and sustainability go hand in hand. With every small step, we are creating a future in which the conservation of resources and environmental protection are at the centre.



Dear readers,

Today you are receiving a new edition of the **seranews**, which this year has been created under the influence of our ongoing digitisation project. For the first time, we are delivering our **seranews** exclusively as a digital edition. By dispensing with the previous high-quality, environmentally friendly print edition and delivery, we would like to make a further important contribution to greater climate protection and sustainability. It is also the result of two of our corporate missions: ‘**sera** goes green’ and ‘**sera** goes digital’.

The world is going through a phase of profound upheaval that challenges us all. The ongoing conflicts in Ukraine and the Middle East are not only a burden on the affected regions, but also have a global impact. Supply chains remain disrupted, raw material prices fluctuate, and uncertainty characterises the markets. At the same time, the world is looking with concern at the return of Donald Trump to the forefront of US politics. The trade restrictions and protectionist measures he has announced could have far-reaching implications for the German export economy and free world trade.

In Europe, we are also seeing significant political changes. The vote to oust the government in France has triggered uncertainties that not only affect economic cooperation between Germany and France – at the core of the EU – but also jeopardise European stability. On top of this, there is the government crisis in Germany itself, which could

bring new challenges but also opportunities with the new elections. The current tense economic situation is reflected in a stagnating economy, rising unemployment despite the demographic need for skilled workers, increasing insolvencies and, last but not least, weak growth forecasts for 2025.

Germany is facing serious structural problems. The competitiveness of our location is dwindling – high labour and energy costs, as well as excessive bureaucracy, are making it difficult for our companies to compete on a global level. The investment backlog is particularly critical: our infrastructure is outdated, and the backlog in transport routes is becoming apparent every day. Many companies are further reducing their investment plans. Nevertheless, we must not give in to resignation. It is precisely in times like these that the importance of resilience and innovation becomes apparent. Despite these geopolitical, socio-economic and ecological challenges, our focus at **sera** remains clear: we are consistently geared towards the future. With innovative products and pioneering solutions, we are proactively addressing change, seeking out our opportunities and thus shaping the future.

In this edition of **seranews**, we would like to show you how we are pursuing our missions. Learn more about our new technologies for efficient biocide dosing, modular solutions for hydrogen storage and our progress in our ‘**sera** goes green’ mission. We will also be giving you insights into our social and societal engagement and into numerous other projects that drive us. All of this is guided by the principle: ‘**We create added value for people and the environment.**’

I warmly invite you to join us on this journey into the future and hope you enjoy reading this issue.

Yours,
Carsten Rahier



 **sera**

sera goes international

Review IFAT 2024

Successful river water treatment in chemical production

Digital manufacturing – efficiency and innovation in production

A success for the future – the HNA Training Award

Hydrogen production and utilisation –
maximum flexibility thanks to modular system

An insight into the **sera** world –
sera Technology Austria impresses customers and interested visitors

Customised high-pressure cleaning system
for EMR Elektromaschinenbau in Bavaria

sera once again among the Top 100 innovators

Efficient biocide dosing for safe cooling water

Our exhibition year 2024

Flexible und efficient – innovative dosing systems for KARL SCHNELL

sera goes green – Together for a sustainable future

sera Environmental Award 2024: Honouring sustainable innovations

Sustainable light replacement – another step towards future

sera Environmental Day and Social Day 2024

50 years with **sera** –
Herbert Schmidt celebrates extraordinary anniversary

New training area in plant II –
a big step for the future

Precision meets efficiency: new turning-milling machine in operation

Bright children`s eyes, smiling Bundesliga professionals and lots of power

Shaping the future – the next round of the **sera** FUTURE CHALLENGE

80 years **sera** – a success story full of innovation,
passion and collaboration!

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sera GOES INTERNATIONAL

The establishment of subsidiaries in the United Arab Emirates (UAE) and Italy is a strategically important step in further expanding the market presence of the sera Group.



*Sagar Deshpande,
Regional Sales Director
Middle East*

The United Arab Emirates is the economic centre of the Middle East and a pioneer in the implementation of sustainable energy solutions. The strong promotion of hydrogen projects and the increasing demand for efficient dosing technology provide ideal conditions for sera. In addition, the water treatment sector offers enormous market potential, as water scarcity and innovative solutions for clean water are of great importance in the region. This year, we were actively involved in WETEX in Dubai, one of the leading trade fairs for energy, water and environmental technologies. As an exhibitor, we were able to present our innovative solutions in the field of hydrogen and

dosing technology to an international audience of experts. The trade fair not only gave us the opportunity to showcase our expertise, but also to make valuable contacts and set the course for future collaborations in the region.

Together with Sagar Deshpande and our local network, we are creating the basis for long-term partnerships and a successful future in the region.



Italy is one of Europe's most important industrial centres, with strong demand for innovative solutions in the fields of dosing technology and hydrogen technology. In particular, the chemical industry, the environmental sector and the rapidly growing renewable energy sector offer enormous potential for our technologies. With Davide Piccoli on site as an experienced expert, we can respond even more quickly and directly to the needs of our Italian customers and expand long-term partnerships. With these locations and our local experts, we are committed to customer proximity, individual advice and the ability to react quickly and flexibly to the requirements of regional markets. This is how we create the basis for sustainable growth and strengthen our position as a leading global supplier of dosing and hydrogen technology.



*Davide Piccoli,
Regional Sales Director Italy*

Sagar and Davide were part of our IFAT crew as experts and contacts for their respective regions shortly after they started at **sera**. Read more about the world's largest platform for environmental technologies and the solutions we presented on the following pages.





Our smart and compact solution for preparing polymers: PolyLine Flow Compact.

REVIEW IFAT 2024

Outstanding solutions for environmental technologies

IFAT 2024, the world's largest platform for environmental technologies, has once again demonstrated its importance as the central meeting place for the industry. With over 3,000 exhibitors and 119,000 visitors from 155 countries, the trade fair was an impressive success. Sustainability, resource conservation and innovation were the focus of the event.

At the sera stand in Hall A3, we proudly presented our innovative solutions, including high-performance dosing pumps such as the iSTEP XS Pro+ and our PolyLine Flow Compact polymer preparation station. Particular emphasis was placed on our water treatment applications and the use of hydrogen technologies in the wastewater sector – an area that is becoming increasingly relevant. Our exhibits impressively demonstrated how we, as a partner for precise and sustainable environmental technologies, offer solutions for global challenges.



Great interest in our hydrogen technologies for the waste water sector.



The new stand concept was not only met with enthusiasm by our stand crew.

Our participation not only allowed us to establish new contacts, but also to strengthen our role as a reliable partner in water and wastewater treatment. The numerous discussions and encounters were inspiring and show that together we are making the future more sustainable!



Our experts are already looking forward to IFAT 2026 and to meeting you there!

SAVE THE DATE NOW
 See you in Munich from 4 to 7 May 2026
 at IFAT 2026.



SUCCESSFUL RIVER WATER TREATMENT IN CHEMICAL PRODUCTION

How innovative technology increases sustainability and efficiency! Water is the basis for many industrial processes – and its quality plays a key role in the production of chemicals. A plant in Poland is an impressive example of how modern water treatment systems can increase production reliability and support sustainability goals.

From river to plant: the water's journey

The plant draws its process water directly from a nearby river. However, this water is not immediately usable – it must first be treated. In the first step of the treatment, larger impurities are removed by precipitation and flocculation processes. Special chemicals such as iron (III) chloride are used to destabilise suspended solids and promote their aggregation into larger particles that can then be separated. This pre-treatment improves the water quality and creates optimal conditions for the subsequent treatment steps.

The water is then subjected to a process to reduce the hardness. This is done in a targeted manner to prevent deposits and corrosion in the systems. These measures not only ensure the quality of the production water, but also protect the sensitive system components.

The key role of sera dosing technology

The precise dosing systems from **sera** are a central element of this system. These provide exact dosing of chemicals such as iron (III) chloride and sulphuric acid. Iron (III) chloride ensures that suspended matter is precipitated, while sulphuric acid is used to neutralise the pH value after sedimentation. Thanks to the high precision of the **sera** systems, the water quality remains constantly at the desired level, which increases the efficiency of the entire system.

In addition, two **sera** polymer preparation stations are used. They produce and dispense special polymer solutions that further improve the flocculation process. These technologies optimise sedimentation and help to further increase the purity of the water.



Modern control for maximum efficiency

All dosing systems are integrated into a modern control system. This allows the supply of chemicals to be monitored and adjusted in real time. This automation not only ensures safe operation, but also helps to minimise chemical consumption – a win-win situation for the environment and operating costs.

Optimal use of treated water

The treated water is finally divided into two streams: one part is fed directly into the production process, while the other is further processed into boiler feed water. Both uses ensure a reliable water supply for the plant.

Conclusion: efficiency meets sustainability

With its combination of innovative dosing technology, automated control and a well-thought-out treatment process, this plant shows how industrial efficiency and environmental responsibility can go hand in hand. **sera**'s technologies play a crucial role here – not only do they ensure consistent water quality, but they also extend the service life of the production facilities and reduce operating costs. A prime example of sustainable chemical production!



*The **sera** PolyLine is a series of simple, flexible, economical and powerful systems for the preparation of polymers.*

The systems are equipped with precise flow measurement for solution preparation and level measurement to ensure efficient and economical operation of the systems.



DIGITAL MANUFACTURING

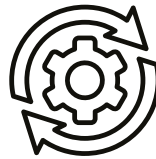
EFFICIENCY AND INNOVATION IN PRODUCTION

Digital production is revolutionising industry by integrating modern technologies such as automation, mobile devices and data analysis. At sera, we use these approaches to make processes more efficient, flexible and sustainable. But what exactly is digital production – and what advantages does it offer?



Transparent and efficient processes

With networked machines and systems, seamless communication is established along the entire value chain. Real-time data analysis makes it possible to optimise production steps, identify bottlenecks at an early stage and make decisions faster. This leads to increased productivity and more precise use of resources.



Flexibility and adaptability

In digital manufacturing, production lines can be flexibly adapted to respond to changing market requirements or customer preferences. With the help of simulations, changes can first be tested virtually, which saves time and money. In addition, we are able to respond quickly and flexibly to individual customer requests.



Quality assurance with digital tools

Continuous monitoring and analysis minimises production errors and improves product quality. Intelligent systems detect deviations and automatically suggest adjustments to ensure the highest standards.



Sustainability and resource conservation

Digital manufacturing contributes significantly to the reduction of waste and energy consumption. Smart systems optimise the use of materials and improve energy efficiency. This not only protects the environment, but also increases economic efficiency. With the conversion, our production has become almost completely paperless and we avoid unnecessary use of resources.



Competitive advantage through innovation

Companies that rely on digital manufacturing secure a decisive competitive advantage. With forward-looking technologies, we can not only produce faster and more cost-effectively, but also offer products and solutions that are individually tailored to the needs of our customers.



Digital progress at sera

At **sera**, we rely on the most advanced manufacturing technologies to offer our customers reliable and innovative products. The integration of digital processes enables us to act in an agile and sustainable manner – while breaking new ground. Digital manufacturing is not just a step forward, but a promise for a smarter and more sustainable industry. By implementing it, we are paving the way for the production of the future.



A SUCCESS FOR THE FUTURE

We are proud to have achieved second place in this year's HNA Training Award! This award underlines our commitment to training and shows that we are on the right track to inspiring young talent for the professional world and providing them with optimal support.

The prize, which was established by the HNA newspaper together with partners such as the Kassel-Marburg Chamber of Industry and Commerce, the Kassel Chamber of Trade and the Kassel Employment Agency, honours creative approaches to attracting trainees. Our holistic training concept was particularly highlighted among the 39 participating companies.

Why we were able to convince

Our concept goes far beyond the imparting of specialist knowledge.

At **sera**, we see our apprentices as employees and learners at the same time. We attach great importance to making contact with young people at an early stage – for example, through cooperation with schools or events such as handball days and sustainability competitions. It is equally important to us to create an environment in which apprentices feel comfortable and can develop. Independent projects, barbecue parties and social activities





strengthen the sense of community and identification with our company. Comprehensive support from mentors and coaches is another building block of our success. This concept was particularly praised in the jury's laudatory speech: We have 'built a really great communication concept with young people,' as Thomas Fölsch from the Chamber of Industry and Commerce emphasised at the award ceremony.

A look into the future

For us, the training prize is not

only an award, but also an incentive to continue investing in the future. As a company that employs an above-average number of apprentices, we see it as our responsibility to give young people the best possible start to their careers.

We congratulate the other prizewinners, especially Richter Gebäude-dienste from Niestetal, which came first, and we thank the organisers for the great event at the FunXperience in Kassel. After the festive awards ceremony, our apprentices had the

opportunity to try out the leisure centre's facilities – a nice way to round off a successful evening.



Our success shows: training at sera is more than just a job – it is the first step in a promising career!

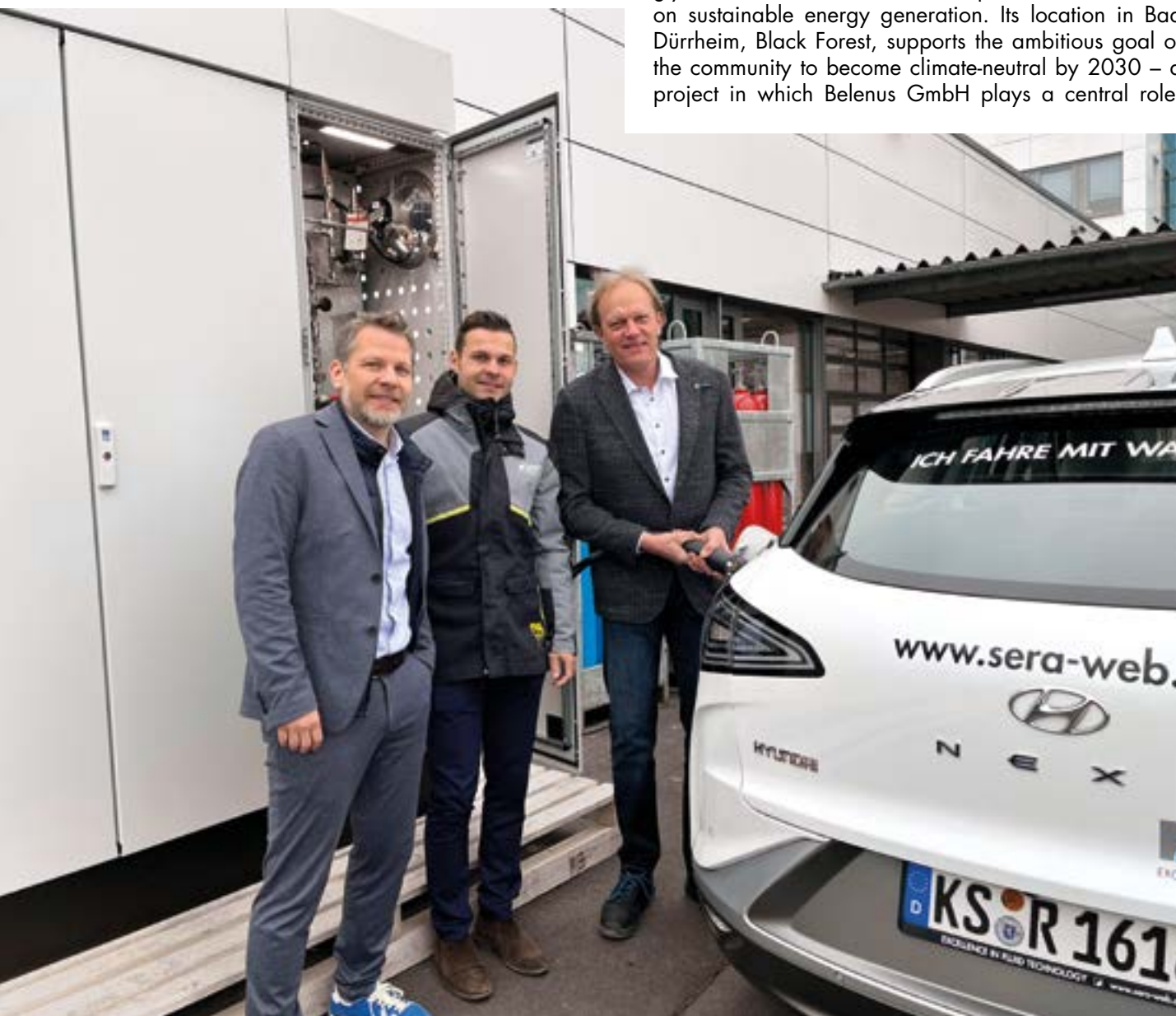
HYDROGEN PRODUCTION AND UTILISATION

MAXIMUM FLEXIBILITY THANKS TO MODULAR SYSTEM

*Practical test passed: Alexander Theinert (Belenus) refuels a **sera** hydrogen car during the acceptance of the system*

Hydrogen production and use in the Black Forest

Belenus GmbH, managed by Alexander Theinert, is a highly specialised company in the fields of sheet metal processing, welding and assembly. They not only manufacture tanks for the aerospace industry, but also laser parts and welded assemblies in different series sizes. With its modern machines and systems, Belenus is strongly committed to environmental protection and relies on sustainable energy generation. Its location in Bad Dürkheim, Black Forest, supports the ambitious goal of the community to become climate-neutral by 2030 – a project in which Belenus GmbH plays a central role.





The smart, modular energy system from **sera**: hydrogen production and supply for a wide range of applications – from industry to mobility and process gases.

Our role in the project: The **sera** Smart Energy System supports the on-site production and use of hydrogen. Initially, the water required for electrolysis is treated, which for the time being comes from the public water supply. The hydrogen produced is dried, processed and compressed by our compressor (AG300.1) from around 30 bar to 300 bar, and then stored in cylinder bundles. A manual overflow unit allows the customer to use the hydrogen to refuel their vehicle – without having to make a detour to a distant petrol station. By using cistern water, Belenus also aims to conserve valuable water resources in the future.

Why our solution is convincing: Our modular system offers maximum flexibility. The customer can expand it with additional electrolyzers and compressors as needed. The manual refuelling unit can easily be upgraded with more advanced solutions, such as fuel cells or a hydrogen heater. The system also impresses with its compact design and cost-effective refuelling solution, which makes it possible to handle the entire H₂ production and storage process in one efficient system.

Special features: The next step is to integrate our dosing technology to enable water treatment so that cistern water can also be used for hydrogen production.



The dry-running piston compressor compresses the hydrogen from 30 to 300 bar.



AN INSIGHT INTO THE WORLD OF sera

sera TECHNOLOGY AUSTRIA IMPRESSES CUSTOMERS AND INTERESTED VISITORS

On 11 October 2024, sera Technology Austria GmbH invited to its branch in St. Marienkirchen. Around 200 guests – employees, customers, partners and friends – accepted the invitation to get to know the world of sera better. It was a day full of innovations, exchange and regional highlights that exceeded all expectations.





The event began with warm words of welcome from Marco Kisch, Managing Director of **sera Technology Austria**, and Mayor Bernhard Fischer. Particularly moving was the contribution from Theresa Hummer of the Ronald McDonald House Passau, with whom sera works together on various social projects.



Afterwards, an in-house exhibition offered exciting insights into the core competencies of the sera Group, including pumping and dosing technology, hydrogen technology and high-pressure cleaning. A raffle and a careers area rounded off the programme. For younger guests, a bouncy castle and face painting provided entertainment, while catering from Bachbauer Gewölbe and music from Your Musik pampered all visitors with culinary delights and cultural entertainment. The day was enriched by the participation of local partners, such as Frauscher Sensortechnik, and regional associations.



Thanks to the commitment of everyone involved, the 'Insight into the sera world' was a complete success, impressively presenting the connection between innovation, community and regional strength.



CUSTOMISED HIGH-PRESSURE CLEANING SYSTEM FOR EMR ELEKTROMASCHINENBAU IN BAVARIA

The sera Group stands for innovative and application-orientated solutions. A current example is the development and delivery of a customised high-pressure cleaning system to Elektromaschinenbau Ruhstorf (EMR) in Bavaria.

From the outset, the focus of the collaboration was on developing a solution that is precisely tailored to EMR's specific requirements. Continuous dialogue between the companies played a central role in this. EMR had clear requirements – including the highest standards of quality and efficiency. These were not only met, but exceeded through technical innovation and precise customisation.

The result of the collaboration is a continuous flow system that has been specially designed for cleaning special profiles for powder coating. The system combines the latest dosing and conveying technology and ensures optimal cleaning results thanks to the precise interplay of pressure, water volume and specially adapted nozzles.

Technical details of the system

The high-pressure cleaning system is equipped with two flexibly deployable nozzle rings that can handle different types of profiles and paintwork – both in single and parallel operation. At the heart of the system is a high-performance unit with four high-pressure pumps that work at a pressure of 250 bar and a delivery rate of 31 litres per minute. With dimensions of 2,600 mm x 1,400 mm x 800 mm, the system is designed for high performance and efficiency. One particular advantage of the system is the drastic reduction in cleaning times. Where EMR previously needed around eight hours a day for cleaning, it now takes just two hours. The cycle time per profile is only about a minute. At the same time, an integrated water treatment system ensures resource-efficient operation – a decisive contribution to greater sustainability in industrial cleaning.



Customised continuous system for cleaning special profiles for powder coating.



Significantly better cleaning results with lower water consumption and significantly less time required.

Innovation meets environmental awareness

This project is an impressive example of how technological excellence and environmental awareness can go hand in hand. The new solution not only enables EMR to implement more efficient work processes, but also reduces the company's environmental footprint. The collaboration with EMR underscores the importance of partnership relations between equals. Clear communication, professional implementation and the shared aspiration to realise innovative and sustainable solutions made this project a success.

sera is proud to have supported EMR in this pioneering solution and looks forward to future joint projects that further advance innovation and sustainability.

sera ONCE AGAIN AMONG THE TOP 100 INNOVATORS

We are proud to have been recognised as one of Germany's most innovative medium-sized companies in 2024 as well!

At the German SME Summit in Weimar, the renowned science journalist and mentor of the TOP 100 competition, Ranga Yogeshwar, congratulated us personally on this award. This is the second time that we have received the TOP 100 seal, which confirms our continuous innovative strength and our commitment to sustainable solutions.





Innovation and responsibility

For us, innovation is not an end in itself – it is part of our commitment to taking responsibility for people and the environment. In addition to technological advances, we are committed to sustainability projects such as the 'sera Future Challenge', in which young people submit ideas for a greener future. Reforestation projects and local environment days are also close to our hearts.

A strong team for strong innovations

The fact that we have once again been awarded the TOP 100 seal is a tribute to the commitment of all **seranians**. It is our incentive to continue to shape the future with courage and innovation.

Our strength: external orientation and cooperation

In the scientific selection process, we particularly impressed in the category 'Outward-looking orientation / Open Innovation'. Our consistent focus on the needs of our customers and our cooperation with start-ups and innovative partners show how new ideas can be created through targeted collaboration. One example is the development of a groundbreaking hydrogen-based energy storage system for homes – a step towards a sustainable energy transition.

Technology for the future

With our expertise in dosing, hydrogen and compressor technology, we create solutions for a wide range of applications, from seawater desalination plants to breweries and system solutions for hydrogen applications. This breadth demonstrates our versatility and clear focus on the needs of a changing world.





EFFICIENT BIOCIDES DOSING FOR SAFE COOLING WATER

The biocide dosing plays a central role in ensuring hygienic and safe conditions in open cooling systems, which are widely used in various industries, particularly in breweries.

These systems often use evaporative cooling. The temperature conditions of around 35 degrees that prevail in such systems provide ideal conditions for the growth of legionella bacteria, which can cause serious illnesses such as legionellosis. This respiratory disease is particularly dangerous for immunocompromised people and can be fatal. The risk arises in particular from the spread of the bacteria via aerosols that are released into the environment and can endanger people there.

To prevent such hazards, the 42nd Ordinance for the Federal Immission Control Act (42nd BImSchV) came into force in 2017. This ordinance imposes strict conditions on operators of evaporative cooling systems. These include registering the systems, regular microbiological monitoring and external analyses by accredited laboratories. If the results are abnormal,

the operators must take immediate countermeasures and arrange for follow-up checks. These legal requirements present many companies with considerable challenges, as they tie up time as well as human and financial resources.

One proven measure for controlling legionella is the dosing of biocides. These chemical substances are specifically effective against microbiological contamination by killing bacteria such as legionella. However, this dosage must not be continuous, but must be carried out intermittently to achieve the desired effectiveness. Manual dosing, which is still practised in many companies, however, entails numerous risks: it is time-consuming, prone to error and can endanger safety in the event of irregularities.





The sera solution

With its automated biocide dosing system, **sera** offers an innovative and efficient solution that has been specially developed for open cooling systems. **sera** systems are designed to seamlessly integrate into existing pipework, providing precise and on-demand dosing of liquid biocides that meets regulatory requirements and hygiene standards. Unlike manual processes, automated dosing eliminates the risk of human error and ensures consistent water treatment quality.

Key features of the sera biocide dosing systems

Automated and precise dosing: The automated pump systems dose biocides with pinpoint accuracy and in precisely the amount required to effectively control legionella growth. This maximises the efficiency of the treatment and eliminates the risk of insufficient dosing.

Independent control: **sera**'s integrated control technology allows the systems to be operated without being connected to a central process control system. This offers a high degree of flexibility when integrating into existing systems and significantly reduces installation costs.

Minimisation of health risks: The risk of legionella findings and the associated health risks for employees and residents is significantly reduced by the regular, automated dosing.

Easy integration and operation: the compact design and user-friendly operation of the systems enable easy installation and handling, even in existing systems.



Advantages for operators

The automated biocide dosing system from **sera** helps operators to efficiently meet legal requirements without incurring excessive time or personnel costs. At the same time, it reduces operating costs by avoiding unnecessary dosing and errors. In addition, the continuous compliance with hygienic standards ensures the safety of employees, production processes and the environment.



ACHEMA



WETEX



BrauBeviale

OUR EXHIBITION YEAR 2024 EXPERIENCE INNOVATION LIVE!

At the end of the year, we can look back proudly on a successful trade fair year in 2024! Whether at trade fairs such as BrauBeviale and Hydrogen Technology Expo or at personal and training fairs, we have shown what sets sera apart: innovative solutions, personal advice and a commitment to always being close to our customers and partners.

In addition to exciting discussions and new contacts, we were also able to gather valuable ideas for the further development of our products and services. At the same time, we successfully presented **sera** as an excellent employer at career fairs. A big thank you to everyone who has accompanied us on this journey – 2025 can come!

My
Future



BrauBeviale



BFD career fair
Baunatal



Hydrogen
Technology
Expo

WIR. DU. PASST.

Hyvolution
Paris



Pumps and
Valves

Vocatium





MODULAR AND EFFICIENT: INNOVATIVE DOSING SYSTEMS FOR KARL SCHNELL

Im Jahr 2023 konnte sera die KARL SCHNELL GmbH & Co. KG als Neukunden gewinnen – ein Unternehmen mit großem Potenzial. KARL SCHNELL ist ein renommierter Zulieferer im Maschinen- und Anlagenbau für die industrielle Verarbeitung von Fleischwaren, Tiernahrung, Feinkost- und Schmelzkäseprodukten und zählt somit zur Food & Beverage (F&B)-Branche.

Challenge: Flexible and compact CIP solutions

The engineers and technicians at KS were looking for compact stations for dosing lye, acid and disinfectants – essential components of a classic cleaning-in-place (CIP) process. One key requirement was the modular design of the dosing systems. This should provide the option of implementing future projects either with or without disinfection, ensuring maximum flexibility.

Solution-oriented partnership

Right from the first meetings, the sera team impressed with fast response times, sound pre-engineering and competent, solution-oriented advice. The first draft of a three-part dosing system with storage space for small delivery containers was further developed in close cooperation with the customer. The result was a self-sufficient and extremely compact system that significantly simplified the change of containers and operability.

The solution: plug-and-play systems

The final design comprises three separate, very similar IBC emptying stations with an integrated dosing system. Thanks to this design, KS can flexibly combine the systems. Only the onward pressure line and the power supply via a directly attached terminal box are required on site as a central interface – a true plug-and-play system.

Implementation and outlook

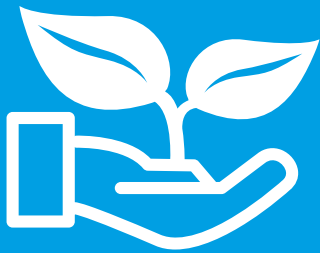
In June 2024, the first three systems were successfully delivered to KARL SCHNELL. They were then put into operation at a cheese processing plant in South America. As part of a joint on-site event, the sera team evaluated the status quo together with the customer. The positive feedback and the results of this collaboration led to KS planning to include these dosing systems as a standard solution in its own product portfolio.

Joint success

The consistently positive feedback from KS regarding performance and cooperation with sera underlines the success of this project. With modular, flexible and efficient dosing systems, sera has created a solution that not only meets current requirements but is also ideally suited for future projects. We look forward to continuing our cooperation with KARL SCHNELL and are proud to be part of their success story.



sera goes green



TOGETHER FOR A SUSTAINABLE FUTURE

We see the impact of climate change on all our lives every day and are aware that everyone must do their bit to counteract it.

At **sera**, we take responsibility for a sustainable future worth living in. Our actions are guided by ambitious goals – such as reducing CO₂ emissions to a minimum by 2030. We want to achieve this goal by optimising production, making targeted conversions and implementing further measures.

Our products focus on the topic of water: dosing systems and pumps are used in waste water and industrial water treatment and are therefore an important part of the water cycle. With the development of hydrogen technologies, we are also helping to shape a sustainable future by crea-

ting solutions for the use of alternative energies – for logistics, passenger transport, but also for the self-sufficient energy supply of buildings.

But our understanding of sustainability extends beyond the environment. We take a holistic view of sustainability, incorporating economic and social issues alongside the environment. This approach is reflected in our selection of Sustainable Development Goals (SDGs), which we have been actively pursuing since joining the UN Global Compact in 2022. By participating in the UN Global Compact, we are committed to aligning our strategies with the ten principles

in the areas of human rights, labour standards, environmental protection and anti-corruption.

From these goals, we have defined five key areas on which we are focusing: health, education, gender equality, sustainability, climate and resources. Our specific implementation measures are based on these priorities and our holistic understanding of sustainability.



ENSURE HEALTHY LIVES
AND PROMOTE WELL-BEING
FOR ALL AT ALL AGES

Health is our most important asset. To keep our **seranians** healthy and to support them, we have set ourselves the following goals:

- Operational health management
- Establish accessibility
- Support for sports programmes
- Funding for sports clubs
- On-site health activities

Last year, we took numerous measures to further strengthen the health and well-being of our employees. We encourage movement in our daily work through walking meetings and the use of our stand-up rooms. We also help finance an extensive sports programme that includes, for example, discounted offers at gyms and participation in regional sporting events such as city cycling, the Great Barrier Run and the Kassel Marathon. In addition, our yoga and fitness room at the site has been expanded and redesigned to enable even better use. We also support numerous sports clubs in the region because we are convinced of their positive influence on our employees as well as on all other club members.

We have also made progress in the area of nutrition: in addition to providing free fruit and water, we now offer a more diverse selection of vegetarian and vegan dishes in collaboration with our cafeteria team.

In addition, we launched a comprehensive health programme last year, partly in collaboration with the Techniker Krankenkasse health insurance fund. Campaigns such as vitamin D testing in the spring and small-group training sessions led by the physiotherapist of a regional handball Bundesliga team provided targeted support for our employees.





ENSURE INCLUSIVE AND EQUITABLE
 QUALITY EDUCATION AND
 PROMOTE LIFELONG LEARNING
 OPPORTUNITIES FOR ALL

Everyone at **sera** can become an expert - we ensure this at different levels and with the following goals:

- Flexible working
- In-house learning opportunities
- Further education support
- Continuous improvement of training at **sera**

Not only, but especially in times of a shortage of skilled workers, well-trained em-

ployees are the key to consistent business success. That is why, in addition to in-house coaching by experienced specialists and managers, we also offer open seminars on agile working methods or product training that any **seranian** can attend and apply what they have learned to their area of work. Of course, external seminars and further training are also encouraged.

We are very proud of our training rate and are constantly working to further improve training at **sera**. Regular feedback discussions with trainers and trainee coaches are conducted under a 360-degree approach: not only the trainee receives feedback – the trainers and thus the company are also evaluated – because only in this way can we continuously improve our training. In trainee projects, the junior staff have the opportunity to directly implement what they have

learned – both in theory and in practice. In the last year, we have also anchored the topic of the environment and sustainability more firmly in our training. Various projects were carried out in this area last year, such as experiments with the LMU climate case, the upcycling of old benches or the optimisation of the cooling water system. Furthermore, a training area has been set up in our Plant II. We are proud of the fact that the majority of our apprentices decide to stay with **sera** after completing their training.

At **sera**, too, great importance is placed on reconciling professional and private needs. Since 2011, we have been working on the basis of trust-based working hours and have developed individual working time solutions for the needs of our **seranians**. Mobile working is regularly possible in consultation with the team.





ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

As an environmental technology company, **sera** is strongly anchored in traditional industry. Even today, more men than women work in the manufacturing sector. Our goal:

- Wage equality through fixed pay grades
- Balancing private life and work through various time models
- Support for initiatives such as Girl's Day and I am MINT
- School visits and company tours for the activation of girls in technical professions

We ensure that there are no pay differences based on gender by means of clearly defined job descriptions and fixed pay grades.

Our commitment to equality is also reflected in the proportion of women at our headquarters, which stands at 27% – above the average of 21% in the metal and electrical industry. Although this is a significant achievement, we are aware that more can and must be done. We are therefore continuously implementing measures to inspire women to join **sera** and the metal and electrical industry. To do this, we use our various social media channels (Instagram, TikTok) to show, with the help of practical exercises such as assembling pumps, that women can do these jobs just as well as men. We also explain that the industrial sector and the comple-

xity of the tasks are not as large and unknown as non-specialists often think. We are involved in various STEM initiatives to inspire young girls to take up apprenticeships in technical occupations. Through a wide range of offers such as company tours, internships, school visits and participation in training fairs, we aim to introduce girls in particular to technical occupations and help them overcome their inhibitions. In addition, we use Girls' Day to give young female students the opportunity to discover their talents in the technical field, for example in milling or assembly.

Our ongoing efforts in the area of equality and the promotion of young talent not only contribute to social sustainability, but also strengthen the future viability of our company and the entire industry. We remain committed to our goal of creating a fair working environment that promotes and supports talent regardless of gender.





ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION

As a manufacturing company, we have a duty to scrutinise every step of our production processes and evaluate their sustainability. We also need to identify areas where we can and must improve. Our goals for sustainable consumption and production:

- Revision of the recycling concept
- Switching packaging materials to sustainable alternatives
- Waste reduction
- Take-back concept for end-of-life appliances



sera is certified according to DIN EN ISO 14001:2015. The environmental management system includes the life cycle assessment of the products sold by **sera**. We are therefore committed to taking back all products and devices, testing them and, depending on the result, recycling them.

Last year, a major focus was on revising our company-wide recycling concept. Waste separation and recycling remains a matter of course in both production and office areas. By implementing a comprehensive recycling concept, we are pursuing the overarching goals of conserving resources, reducing CO₂ and increasing acceptance within the company. This requires a holistic view of the recyclable material flows. To further anchor the importance of resource conservation and waste avoidance at **sera** and among employees in general, we have created an online marketplace for all **seranians**. This marketplace is designed to encourage everyone to pass on usable items that are no longer needed to other colleagues instead of disposing of them.

Another step towards sustainability is the switch to recycled packaging materials. One example of this is the use of paper packaging tape. Further measures in this area are already being planned. This year, we have also started using a 'Refilomat' from Würth. This enables the refilling of spray cans that are completely free of aromatic hydrocarbons. In line with our 'sera goes green' mission, we are not only reducing the disposal of spray cans, but also the use of toxic propellants used in conventional aerosol cans.

Thanks to various digitalisation programmes as part of our 'sera goes digital' mission and the increased awareness of our employees, we printed 200,000 pages less last year. This has not only reduced our costs, but also made an important contribution to environmental protection. These savings have enabled us to save 660 kg of CO₂, 43 m³ of water and 4,000 kWh of energy. This success shows how we are achieving greater sustainability with every step and actively contributing to the conservation of our resources.





TAKE URGENT ACTION TO COMBAT CLIMATE CHANGE AND ITS IMPACT

With our mission „sera goes green“, we have committed ourselves to acting and operating sustainably in small and large ways.

We have been implementing climate protection measures for years, but we want to continue contributing to a sustainable future for us all. By 2030, we want to minimise our CO₂ emissions. Our goals:

- Hydrogen technology for CO₂ reduction
- Dosing pumps for resource conservation
- Energy transformation at the main location
- A greener mobility strategy

Last year, we initiated an energy transformation project at our Immenhausen site. A central component of this project is the introduction of sustainability software that records and calculates our carbon footprint. This software also enables us to take targeted measures to reduce our emissions. The measures already implemented include the installation of a photovoltaic system at our main plant, which covers a large proportion of our electricity needs, as well as the switch to energy-saving LED lighting and the integration of motion sensors. In the coming year, we plan to equip our second plant at the main site with a photovoltaic system as well, in order to operate further parts of our

production with renewable energies.

Furthermore, we are working on a more environmentally friendly mobility strategy. **sera** started to convert the fleet to alternative drive concepts several years ago. We are consistently pursuing this path with the aim of relying primarily on hybrid, hydrogen and electric vehicles in the next few years. Transport between our production sites is carried out using cargo e-bikes wherever possible. With our products and solutions, we are helping to combat water scarcity: dosing systems and pumps are used in waste water and process water treatment and are therefore an important part of the water cycle. **sera** systems also efficiently clean and disinfect production facilities in a wide range of industries. In large seawater desalination plants, **sera** systems ensure that drinking and process water can be obtained from seawater.

With the development of hydrogen technologies, we are helping to shape a sustainable future by creating solutions for the use of alternative energies – for logistics, passenger transport, but also for the self-sufficient energy supply of buildings.





sera ENVIRONMENTAL AWARD 2024: HONOURING SUSTAINABLE INNOVATIONS

The world is facing major challenges: climate change, scarcity of resources and a growing urban population require new solutions for a sustainable future. For nine years now, we have been honouring forward-looking projects that contribute to environmental protection through innovative approaches with the sera Environmental Award, as part of the promotion nordhessen start-up competition organised by Regionalmanagement Nordhessen. This year, the award went to Pflanzentheke GmbH, which is striving to revolutionise vegetable production with its hydroponic system.



FUTURE-ORIENTED AGRICULTURE

Pflanzentheke (Plant counter)

Pflanzentheke has developed an impressive modular farming system that uses soilless cultivation and closed circuits. Their approach makes it possible to cultivate vegetables in a resource-efficient way and independently of conventional soil cultivation areas. This technology opens up new perspectives, particularly in urban areas and for farmers. Cultivation is automated, with lower water and fertiliser consumption, while at the same time delivering higher yields. In this way, the plant counter is responding to global trends such as urbanisation and climate change, while promoting local and sustainable food production.

Why Pflanzentheke is so convincing

The jury of the **sera** Environmental Award was particularly impressed by the system's scalability and its environmental contribution. The plant counter combines technical innovation with practicality and proves that environmental protection and economic efficiency can go hand in hand. Projects like this one epitomise the vision of the **sera** Environmental Award: to promote solutions that benefit both people and the environment.



An award for the future

With the **sera** Environmental Award, we are setting an example for responsibility and innovation. The award underlines the company's commitment to sustainable development and motivates others to implement courageous and pioneering ideas. Together with partners such as Pflanzentheke, **sera** aims to continue actively shaping the change towards a sustainable world in the future.

Further information about Pflanzentheke

If you would like to find out more about this inspiring project, you can find details on their website [pflanzentheke.de](https://www.pflanzentheke.de).



Working at lofty heights: a Grünlicht employee during assembly in one of our modern production halls.



SUSTAINABLE LIGHT REPLACEMENT

ANOTHER STEP TOWARDS THE FUTURE

Sustainability and energy efficiency are at the heart of the sera Group's corporate strategy. With the recent replacement of the lights at its headquarters in Immenhausen, the company is sending a further signal of its commitment to acting in an ecologically responsible manner while also creating optimal working conditions.



During ongoing operations, the lights were professionally replaced and almost unnoticed – perfect timing and commitment from the Grünlicht team!

Within a few weeks, hundreds of lights in the halls, offices and outdoor areas were replaced by modern LED systems – a measure that not only reduces energy consumption but also improves the working environment.

Light replacement as a milestone in sustainability

Replacing old lighting with energy-efficient LED lights marks another significant milestone in the sera Group's sustainability strategy. The new lights not only significantly reduce energy consumption, but also provide a more pleasant, even light and about 300% better illumination. These improvements help employees to concentrate and

contribute to a more productive and healthier working environment. A central aspect of the project was the quick and smooth implementation in order not to interfere with ongoing operations. The cooperation with Grünlicht Beleuchtungskonzepte GmbH proved to be particularly successful in this regard.


Grünlicht: A reliable partner for well-thought-out solutions

The sera Group relies on partners who share its high standards for sustainability and efficiency. Grünlicht Beleuchtungskonzepte GmbH meets these requirements and exceeds them in many respects. The Kassel-based company offers a comprehensive range of services that

ENERGY SAVINGS IN DETAIL

The switch to LED technology has enabled impressive savings:

- The new LED lighting has achieved a **35 % reduction in energy consumption** in the halls.
- **Outdoor lighting** saw a **67 % reduction in consumption** by replacing old 150-watt and 400-watt bulbs with efficient LEDs.
- The offices have seen a **38 % reduction in energy consumption**, which significantly reduces their running costs.



goes far beyond the mere supply of lighting systems. From the initial site survey and detailed lighting design to professional installation, Grünlicht has taken on the entire process. The company's expertise in proactively integrating legal requirements such as the new Ecodesign Directive into the planning is particularly appreciated. This directive, which came into force in July 2024, places high demands on the efficiency, durability and resource conservation of products. Grünlicht has optimally implemented the project not only with regard to current, but also future standards. Its proximity to Kassel enabled Grünlicht to react flexibly and quickly to the requirements of the project. This reliability and the holistic understanding of sustainable lighting solutions make Grünlicht an ideal partner for the sera Group.

Technical innovation: DALI and MacBright

In addition to the collaboration with Grünlicht, the **sera Group** also relies on innovative technologies and quality products. The hall lighting was equipped with the DALI system, which enables precise control of light intensity. This system supports various scenarios and dimming options, thus ensuring maximum energy savings while maintaining the same quality of light. The light band luminaires used are from the renowned manufacturer MacBright GmbH, which is known for sustainable and high-quality lighting solutions. An outstanding feature of MacBright is its in-house lighting laboratory, where products are developed and tested to ensure maximum efficiency and performance. 80% of the luminaires and components are produced in Europe, which guarantees the highest quality and short delivery times. The high quality of workmanship of the luminaires and their adaptability to different requirements were decisive factors in their selection.

Sustainability in the sera Group

The light replacement is part of a comprehensive approach that the **sera Group** is pursuing to reduce its carbon footprint. In addition to energy-efficient buildings, a modern mobility strategy with electric vehicles and a strong circular economy, this project shows how targeted measures can create added value for people and the environment. The close cooperation with Grünlicht and the choice of high-quality technologies and partners underline the **sera Group's** commitment to combining innovation and responsibility. The replacement of luminaires at the **sera Group** is more than just a technical upgrade. It is another important step on the road to a sustainable future.

With Grünlicht as a competent partner, the consideration of the latest legal requirements and the use of the latest technologies, the sera group shows how sustainability and efficiency can harmonise. This project is a prime example of the implementation of ecological responsibility in industry.



By switching to modern LED lights, we are saving an impressive 35% of energy in our production halls – another step towards sustainability.



‘We create added value for people and the environment’

ENVIRONMENTAL DAY

Motivated **seranians** and lots of power – our traditional **sera** Environmental Day!

For years, we have been living our motto: ‘We create added value for people and the environment’. That is why we are actively committed to our environment and get involved where we can really make a difference. On 26 April, it was that time again: together with landesbetrieb.hessenforst, we got involved in protecting nature in the Reinhardswald. Our mission: to counteract the extinction of species and to promote young trees! We removed unwanted accompanying vegetation to create more space and light for cultivated plants such as oaks and firs. It was a day full of commitment, sweat and teamwork! Hardly any **seranian** was left without a scratch, but the motivation and team spirit were unbroken. Everyone knew that this work is an important contribution to the preservation of our forest. After all the hard work, there was a well-deserved reward: a delicious grilled sausage that perfectly rounded off the effort. Doing good feels good – especially when you achieve a lasting impact together with professionals like Landesbetrieb.HessenForst. We are proud to actively combat forest dieback and to put our responsibility for the environment into practice.





SOCIAL DAY

Social engagement is very important to us! At **sera**, we are particularly keen to be active not only for our environment but also for our society.

Every year, our apprentices and managers join forces to do something good. This year, our Social Day took us to the AKKU youth centre in Immenhausen – with a very special mission: to design a new bouldering wall! From the initial idea to the implementation, our apprentices were fully involved: they planned and prefabricated the bouldering wall independently. On Social Day, we then installed it together, step by step. The result: a colourful, stable and, above all, fun wall that was enthusiastically received by the young people at the centre. Of course, team spirit was not neglected either. At the end, we fired up the barbecue, raised our glasses and let the day come to a relaxed close. A huge thank you to everyone who was there! Your commitment shows how much we can achieve together.

Doing good is good – especially when you work together to create something sustainable for the community.



50 YEARS WITH sera

HERBERT SCHMIDT CELEBRATES AN EXTRAORDINARY ANNIVERSARY

On 1 August 1974, Herbert Schmidt began his impressive career at the former Seybert & Rahier OHG, the company we know today as sera. At just 16 years old, he started his training as a technical draftsman, without knowing that half a century later he would be one of the company's longest-standing and most experienced employees.

At that time, the company had around 80 employees and generated a turnover of approx. 6 million German Marks. The design department, Herbert Schmidt's first professional home, was located in today's

Creative Hub in building 1. During this time, he learned from colleagues such as the 'pump pope' Rudolf Mendel and helped shape **sera's** technical progress from an early stage.

My



years



A decade of change and personal growth

After his training and military service, Herbert initially worked in construction before moving into compressor technology. There he continuously expanded his knowledge and successfully completed his further training as a state-certified mechanical engineer in 1989. From the 1990s onwards, he devoted himself entirely to dosing technology – an area that became

not only for his professional expertise, but also for his humanity and team spirit. Whether as a mentor for young employees or as a reliable point of contact for long-standing companions, Herbert is a role model. He has made a name for himself in particular in his work with customers in the brewing industry. With tireless commitment and a constant willingness to listen, he has played a major role in successfully positioning sera in this field worldwide.

Thank you for 50 years of commitment

50 years at **sera** – that's countless projects, 10,000 pots of tea and shared experiences that Herbert has enriched with his commitment and personality. We thank him from the bottom of our hearts for his loyalty and dedication and look forward to continuing to have him in our midst in the future – whether in an advisory capacity or as a welcome guest. Congratulations, dear Herbert, on this special anniversary!



ckenbauer, won the football World Cup, while the first McDonald's restaurant opened in Munich. The Watergate Affair and the resignation of US President Richard Nixon caused a stir worldwide. In the world of technology, Hewlett-Packard's first calculator set new standards.

his true passion. To this day, he continues to impress customers with his expertise and ability to solve technical challenges in a practical way. A team player through and through His colleagues appreciate Herbert

1974 – a look back

The year 1974 not only marks the beginning of Herbert Schmidt's career, but also an exciting chapter in world history. In Germany, the national team, captained by Franz Be-





NEW TRAINING AREA IN PLANT II: BIG STEP FOR THE FUTURE

sera GmbH has reached an important milestone: the new training area in Plant II is completed and has already been implemented. With a surface area of 214 m², it offers state-of-the-art facilities for basic training, machining and mechatronics. The area includes new office containers for our apprentices as well as a dedicated project area that promotes creative work and innovative ideas. This expansion underlines our commitment to training and developing young talent.



Training to become a mechatronics engineer – practical exercise at the control panel.

Our goals

With the new training area, we are pursuing a clear vision based on several central aspects:

Developing talent: We create an environment in which young people can develop their skills and realise their full potential.

Building expertise: Our modern equipment and targeted training lay the foundation for developing the specialised knowledge and practical skills that are essential in today's industry.

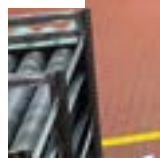
Promoting innovation: We foster creativity and problem-solving skills in our apprentices through real-world projects and practice-oriented learning.

Quality improvement: High-quality training not only ensures the personal development of our apprentices, but also the continuous improvement of our work quality.

Retention of skilled workers: Well-trained specialists are indispensable, and we do everything we can to retain talented young employees in our company in the long term.

Why training is our priority

As a family-run company, the future of our employees is particularly important to us. For us, training is more than just imparting knowledge – it is a matter close to our hearts. We see it as our responsibility to offer young people prospects and support them in pursuing a fulfilling





career. Furthermore, skilled workers are a crucial factor for the success of companies, especially in times of technological change and skills shortages. By providing high-quality training, we not only secure our own future, but also strengthen the economy of our region. Today's apprentices are tomorrow's experts – and we want to prepare them for this role in the best possible way.

The development process in detail

The implementation of the new training area was an extensive task that was realised with precise planning and a great deal of commitment. The most important milestones included:

- Moving machines such as the Hexagon, the milling machine and the drilling machine to create a modern working environment.
- The retrofit measures on the turning machine to bring it up to the latest technical standard.
- The ordering and assembly of workbenches, cabinets and shelves to make the area functional and practical.
- The branding of the training area to create an inspiring atmosphere in which learning is fun. All these steps were completed on schedule by the end of the third quarter – a complete success of which we are proud.

Hands-on learning directly on the machine – experience and expertise meet young curiosity!

Training at sera: Shaping the future

With our new training area in Plant II, we are sending a clear signal about the importance of training in our company. The new area offers the perfect setting for preparing apprentices for the challenges of the future. They are not only encouraged, but also actively involved in our work processes, thus experiencing how exciting technical professions can be.

At **sera**, we are convinced that training skilled workers is the key to innovation, growth and sustainability. That is why we create the best conditions for the start of their careers. Our new area offers space for experiments, practical learning and the implementation of innovative ideas.



Instructor and trainee work hand in hand



PRECISION MEETS EFFICIENCY:

NEW TURNING-MILLING MACHINE SUCCESSFULLY IN OPERATION!



Spindle unit for axial and radial machining

In the last few weeks, we have successfully put our new DMG MORI turning-milling machine with integrated robot into operation. After intensive training of our employees, the machine is now running in series production to manufacture high-precision components for our fluid and hydrogen systems.

With this new technology, we are ideally equipped to optimise our manufacturing process and further improve the quality of our products.

With our DMG MORI CLX 450 TC in combination with the Robo2Go system, we have implemented a state-of-the-art solution that offers an optimal combination of turning-milling and flexible automation. This new turning-milling machine takes our manufacturing to a new level.

Here are the specific advantages that this combination brings to our production:

1. Higher productivity

Automated workpiece loading and unloading: The robot ensures fast and precise loading of the machine, minimising downtime.

Operation: Automation allows the machine to operate without interruption, even without an operator.

2. Precision and quality

Consistent process quality: Automation reduces human error and ensures consistently high manufacturing quality.

Combination of turning and milling operations: Complex components can be manufactured in a single operation using a single machine, which increases accuracy and efficiency.



Fully machined H2 cylinder head

DMG MORI CLX 450 TC in combination with the Robo2Go system





Preliminary acceptance at DMG in Bielefeld on the assembly line.

Repeatability: Ideal for series production where consistently high quality is required.

Reduced error rate: The robot ensures consistent processes, as human operating errors in workpiece handling are avoided.

3. Time and cost savings

Fewer set-up times: Since the robot prepares the workpieces, only a few manual interventions are necessary, which significantly reduces the changeover time.

Labour savings: Routine tasks such as loading and unloading are taken over, so that skilled workers can concentrate on more demanding tasks.

4. Flexibility

Versatility: The robot can handle different workpieces and be equipped with additional functions such as marking, assembly or cleaning.

Wide range of parts: the CLX 450 TC can process a wide range of materials and geometries, while the Robo2Go can be flexibly adapted to suit them.

Fast adaptation: The system can be easily reprogrammed for changing batch sizes and product requirements.

5. Space and resource savings

Compact design: The turn-mill centre with robot saves space compared to separate machines and handling systems.

Fewer transport routes: Workpieces no longer have to be transported between different machines.

6. Competitive advantage and future-proof

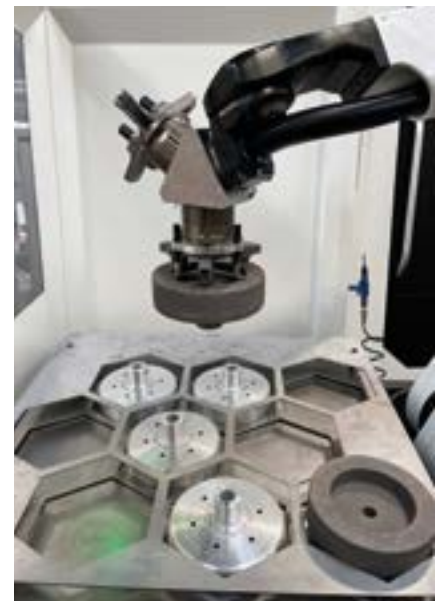
Innovative technology: The use of modern automation makes our company future-proof and increases our attractiveness for customers.

Shorter throughput times: Faster processes enable faster delivery.

Attractive for new projects: The increased production capacity and automation make us more interesting for demanding customers and projects.



Our new turning and milling machine takes our production to a new level!



The Robo2Go in action

Conclusion: successful integration and sustainable success

The successful commissioning of the DMG MORI CLX 450 TC with Robo2Go shows that we are not only investing in modern technology but also in the future viability of our company. This machine combines precision, efficiency and flexibility, while the Robo2Go system provides the necessary automation to take our production to the next level.

The turn-mill centre with robot support is the perfect solution for reducing costs and throughput times while ensuring the highest quality.



BRIGHT CHILDREN'S EYES, SMILING BUNDESLIGA PROFESSIONALS AND LOTS OF POWER!

For more than thirteen years, **sera** has been a proud partner of the Bundesliga handball club MT Melsungen, regularly making children's eyes light up.

The annual **sera** handball day has long since become a tradition and offers 64 children between the ages of ten and 14 the unique opportunity to train with the pros for a day. At various stations, the kids learn tricks and tips from their idols – and the players also enjoy this special day. Demand is huge every year, and places are allocated by lottery. The focus is on fun and personal encounters with the handball stars.

In addition, **sera** has launched the handball camps in collaboration with MT Melsungen, which specifically promote young talent. During three intensive training days, the young players work with coaches from MT-Talents and Finn Lemke, one of the faces of MT. Each camp has a special focus – from defence to





offence – so that multiple participations are not only possible, but also useful. The handball-loving kids train twice in the morning, enjoy lunch together and complete two further units in the afternoon. The next camp will take place in the holidays in January 2025 in Kassel's Task-Halle.



Ambition and fun were the focus of the sera handball day – a great opportunity to promote team spirit and athletic ability!



HANDBALL CAMP

powered by  sera

There was no shortage of fun at the three-day handball camp – even the most strenuous exercises were met with plenty of laughter!

SHAPING THE FUTURE

THE NEXT ROUND OF THE **sera** FUTURE CHALLENGE

The **sera** Future Challenge is entering the next round and once again inviting students to contribute their creative ideas for making the world a more sustainable place. What began four years ago with a new format has become an established and exciting platform for raising awareness among children and young people about the big issues of our time: climate change, water scarcity and future mobility.

FROM HANDBALL DAY TO FUTURE CHALLENGE

The **sera** handball day has been inspiring hundreds of children and young people for many years, giving them the opportunity to train with the professionals from MT Melsungen and experience their idols up close. However, during the pandemic, we were challenged to break new ground and create alternatives to continue engaging with young people. The solution: the **sera** Future Challenge – an innovative format that invites children and young people to share their perspectives on global challenges such as climate change and sustainability. Fortunately, the handball day could be resumed after a two-year break and since then, as usual, it has been bringing smiles to the faces of the participating children and the MT professionals. Nevertheless, we would like to further strengthen the **sera** Future Challenge. It has established itself as a valuable platform, and the creativity and commitment of the participants inspire us every year.

A FORMAT THAT INSPIRES

In line with our guiding principle **'We create added value for people and the environment'**, we have created a platform with the challenge that goes beyond handball. In recent years, we have been impressed by the creative and well-thought-out contributions of the participants, which highlighted the potential and energy of the young generation. In this round, too, we are targeting primary and secondary schools in grades one to ten. We are inviting everyone to take part in this unique project by directly addressing schools in the Kassel region, the Schwalm-Eder district and the Kassel district, as well as through our social media channels and the match day magazines of MT Melsungen.

IN ZUSAMMENARBEIT
MIT DER MT MELSUNGEN



 **sera**

FUTURE
CHALLENGE

 2024





SHAPING SUSTAINABILITY – STARTING AT SCHOOL

Our focus is on the question of how schools can be made more sustainable. We are not only supported by our partner MT Melsungen, but also by the national handball player Finn Lemke, who is the patron of the challenge. Pupils are invited to submit their ideas in the form of presentations, videos or posters.

VALUABLE PRIZES FOR VALUABLE IDEAS

As well as the chance to make a real contribution to shaping the future, exciting prizes await the winning teams. The best entries from primary and secondary schools will receive cash prizes of up to 300 and will be able to attend a home game of MT Melsungen together – an exciting and bonding experience.

MAKING THE WORLD A BETTER PLACE TOGETHER

The Challenge runs until **31 March 2025** to give schools enough time to implement their ideas. Whether digitally via our website www.sera-futurechallenge.de or by post: every entry counts. Because for us, all participants are winners who make the world a better place with their ideas. We look forward to receiving all entries and to working with the younger generation to find ways to make our future more sustainable. Join us and make it happen: **The future starts now – with the sera Future Challenge!**

THE TOP THREE IN EACH OF THE PRIMARY AND SECONDARY SCHOOLS WIN:

PRIMARY SCHOOL

1st place:

Visit a home game of MT Melsungen
+ meet MT professionals
plus a 300 Euro cash bonus

2nd place:

Visit a home game of MT Melsungen
+ sera/MT fan package
plus a 200 Euro cash bonus

3rd place:

Visit a home game of MT Melsungen
plus a 100 Euro cash bonus

SECONDARY SCHOOL (CLASSES 5-10)

1st place:

Visit a home game of MT Melsungen
+ meet MT professionals
plus a 300 Euro cash bonus

2nd place:

Visit a home game of MT Melsungen
+ sera/MT fan package
plus a 200 Euro cash bonus

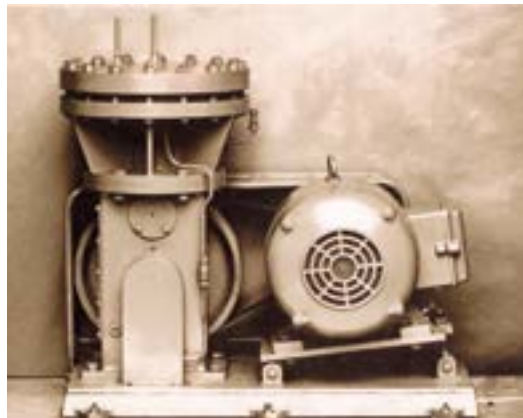
3rd place:

Visit a home game of MT Melsungen
plus a 100 Euro cash bonus



sera

YESTERDAY · TODAY · TOMORROW





But this anniversary is not only a reason for us to celebrate, but also an opportunity to say thank you: thank you to our customers and partners who have been with us for many years. Thank you to our **seranians**, who, with their commitment and passion, help us to live innovation and reliability every day. And thank you to everyone who supports us in working together for a sustainable and future-oriented world.

80 YEARS sera

A SUCCESS STORY FULL OF INNOVATION, PASSION AND COLLABORATION!

The year 2025 marks a special milestone for us: 80 years of **sera**! Since our foundation in 1945, we have grown from a small family business to one of the leading German companies in the field of dosing and hydrogen technology. With over 300 employees worldwide, innovative technologies and a strong network of partners and customers, we can proudly look back on eight decades of growth, challenges and shared success.

On **28 May**, the date of our foundation, we will celebrate a day full of insights into our company at our central anniversary celebration together with our employees, their families and friends, and partners of the **sera Group**. In addition, we will set a few highlights throughout the year. It will be exciting. However, we don't want our anniversary to be just about looking back; we also want to look forward: together, we want to shape the future – innovatively, sustainably and in partnership.



The future of communication:

Printed brochures are giving way to digital alternatives

At a time when sustainability and environmental protection are increasingly coming into focus, companies like **sera** are being challenged to take responsibility for the planet. With our 'sera goes green' initiative, we are actively committed to protecting our resources and a more sustainable future. A decisive step in this direction is the decision to replace printed brochures with digital alternatives.

Why rethink printed brochures?

Printed materials have always been an important means of communication in the business world. They offer a haptic appeal that is often missing in the digital age. But this advantage comes at a high price – for the environment. Producing paper requires enormous amounts of water, energy and wood. Added to this are printing inks that leave chemical residues, as well as the logistical challenge of distributing brochures worldwide. These factors lead to significant CO₂ emissions and a strain on our natural resources. As a company that develops innovative and sustainable solutions, we are determined to take action.

The advantages of digital alternatives

Digital brochures offer numerous advantages that go far beyond the environmental aspect. They enable greater flexibility and timeliness, as content can be adapted and updated in real time. Unlike printed materials, information is always up to date. In addition, digital brochures are cost-efficient: without printing and shipping costs, financial resources can be used more sensibly. Another decisive advantage is the worldwide accessibility of digital content. It can be accessed anytime and from any device, which greatly increases the reach of our communication.

'We create added value for people and the environment'

Our company motto is not only a guiding principle, but also a promise. The switch to digital brochures is a further step in fulfilling this promise. Not only do we create added value for our customers through innovative solutions, but we also make an active contribution to protecting the environment and conserving resources. By providing our brochures in digital form, we are significantly reducing our company's ecological footprint. At the same time, we are ensuring that all relevant information remains easily accessible – and in a modern, future-oriented way.

A shared path to the future

We hope that this decision is not only perceived as a step towards greater sustainability, but also as an invitation to share our vision of a greener economy. With 'sera goes green', we are setting an example that change is possible – if we tackle it together.

We warmly invite you to continue to benefit from our comprehensive information and exciting insights into our work. Your support and interest are an essential part of our success. Stay tuned, read our articles and be part of our journey towards a more sustainable future.

Together we can create added value – for people and the environment.



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