SOLUTIONS.

The company magazine of the Blumenbecker Group

Issue 2023/2024

BLUMENBECKER

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WE DELIVER **SOLUTIONS.**

Industrial Automation

In our switchgear production, we create switchgear in individual and series production according to the latest standards and regulations. We develop innovative robotics solutions and work as a system integrator for your projects.

Industrial Trade

Blumenbecker advises and supplies you with a comprehensive range – from C-parts to machine tools. With our modern logistics centre, we ensure a smooth and fast supply to our customers.

›30
Locations

›1,300
Employees

215
Mio. € Turnover*

*Figure comes from 2022.

Industrial Service

Blumenbecker offers you an all-round service: Maintenance, testing and professional servicing of crane and gate systems, lifting and loading technology, lifting platforms and many other machines and systems.

EDITORIAL

Dear customers and partners,

'Standing still is going backwards' - this well-known quote is more relevant today than ever before. In our fast-moving world, it is essential to deal with new technologies and to have the courage to break new ground. The tried and tested has its value, but the will to improve is often the key to success.

As an industrial service provider, it is therefore our goal to develop custom-fit and individual solutions for our customers and partners.

In this issue, we focus on topics such as robot cells, artificial intelligence and sustainable energy. We also present a city that uniquely combines historical charm with modern flair.

In industrial service we prove that we are able to supply 'heavyweight for wire' and deliver know-how - not only for giants. Our industrial trade is burning for the perfect seam with innovations in welding technology. We implement 'projects with power' with a new customer in industrial automation.

We hope you enjoy immersing yourself in the moving world of Blumenbecker. Let yourself be inspired!

Olaf Lingnau

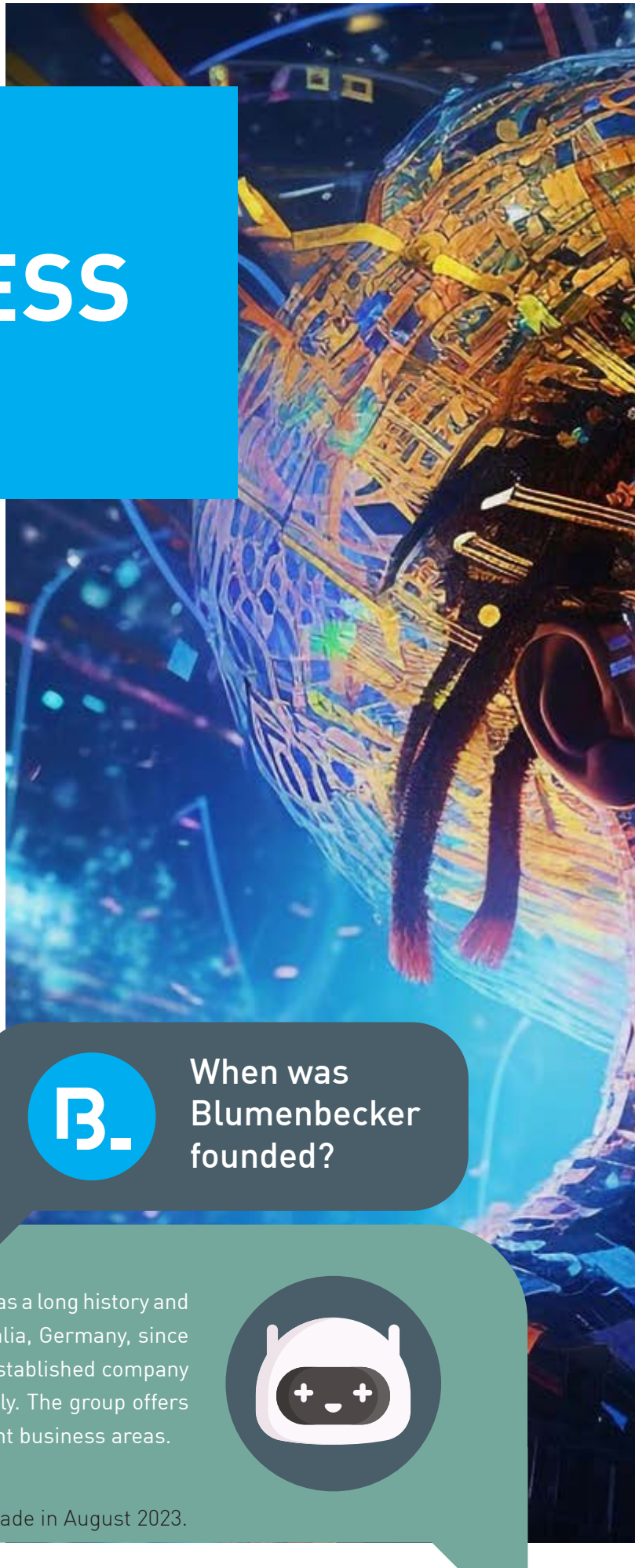
Richard Mayer

Harald Golombek

CONTENT

Artificial intelligence

A BORDERLESS JOURNEY?



The streaming service recommends the 'right' series, the smartphone recognises the face and search engines are becoming increasingly precise. Smart family members such as Alexa, Siri and Co. have now moved into many homes. For some, the home is even fully smart.

And professionally? Artificial intelligence (AI) helps as an interpreter, navigator, image creator and preparer of presentations, among other things.

What can AI do? Is it better than human intelligence? We dared to test ourselves and asked ChatGPT - the AI that has been on everyone's lips and on many smartphones since the beginning of 2023 - the following:

When was Blumenbecker founded?

The Blumenbecker Group was founded in 1872. It has a long history and has been active in Beckum, North Rhine-Westphalia, Germany, since its foundation. Over the years, it has become an established company in the German industry and is active internationally. The group offers various industrial services and products in different business areas.

The query was made in August 2023.

In 1872, a lot of things happened in the world. Yellowstone National Park was founded and the metric system was introduced in the then German Empire as a system of units for measuring length and weight. Karl Ludwig Nessler was born - the inventor of the perm.

What did not happen in 1872, however, is that Blumenbecker was founded in 1922. Only ChatGPT itself probably knows where it got this information. The other information about Blumenbecker, on the other hand, is correct.

So how reliable and trustworthy are the answers? We talked to Dr Christian Temath, managing director of the competence platform KI.NRW, about opportunities and challenges in the application of 'AI as a popular sport'.

4 Questions for
Dr Christian Temath

Do you use ChatGPT?
What was your last input command?

Dr Christian Temath: Both out of personal interest and of course for my work, I regularly use ChatGPT. Most recently, I tried out a plug-in that allows you to book hotels from chat. I combined this with the question whether ChatGPT knows ' Commissioner Dupin ' from Brittany - this is a crime book series, by the way - and if so, which cities are particularly significant in this book series. ChatGPT told me four cities, including Concarneau. I then asked for suitable hotels in this city, which were checked for availability in real time via the plug-in. I could also have booked a room directly. It is really exciting to see what is now possible with ChatGPT.

ChatGPT is a language model and is based on probabilities. How do I know that the answers are true?

Dr Christian Temath: You raise an important point here: ChatGPT is a language model, but not a knowledge model. The lack of factual fidelity is therefore still a major shortcoming. I say still, because work is currently being done to eliminate this problem, for example by connecting it to the Internet and other knowledge databases. My ChatGPT search query mentioned at the beginning shows that a lot has already been done here. Nevertheless, for us users it still means that we have to critically question and revise the texts of ChatGPT. Because although the results often sound good and plausible, their content is simply wrong. To make matters worse, ChatGPT does not provide sources for its answers, which makes it difficult for users to check the information and thus recognise whether it is true or false.

What are the most important applications of AI from today's perspective?

Dr Christian Temath: To start with, we at KI.NRW are of the opinion that AI is there to help - whether in coping with the shortage of skilled workers or as a booster for sustainability: As things stand today, the lack of skilled personnel means that certain topics can no longer be dealt with or that individual employees are burdened with more and more activities. And it is precisely these people who will gradually retire in the next few years. We have dealt intensively with the second major complex of topics ' AI and sustainability ' in recent years. We have identified examples of how AI can save 10 to 20 percent of energy in building energy management - for example, in ventilation and heating settings. Artificial intelligence provides similar support in resource consumption or food production. If bakeries produce too many baked goods, for example, they are thrown away at the end of the day. This can be avoided through better forecasting using AI.

© KI.NRW

About Dr Christian Temath

Dr Christian Temath has been managing director of the KI.NRW competence platform since September 2020 and works at Fraunhofer IAIS in Sankt Augustin with his team to establish the 'AI made in NRW' brand and strengthen the technological sovereignty of NRW. As a doctor of business informatics, he has many years of experience in management consulting in the field of technology as well as in the practical application of AI technologies at an international e-commerce company.

www.ki.nrw

In addition to the example from retail, other best practices can also be cited from production, where thanks to AI, tool wear can be determined in real time and costs can be saved through predictive maintenance. In the area of logistics, AI-based route planning can reduce travel times and thus CO_2 emissions.

What is the biggest challenge for companies in dealing with AI? What do you recommend to companies?

Dr Christian Temath: Many entrepreneurs have already realised that they cannot avoid artificial intelligence. Large companies in particular are already using AI or developing it themselves. But more needs to happen with SMEs. It is often not clear to companies what artificial intelligence is exactly, where the opportunities and challenges lie, which are important for a trustworthy use of artificial intelligence. There is still a high degree of mystification and uncertainty. At the same time, the speed of technological developments of AI models is currently very high. Those who completely ignore this

development will find it difficult to catch up with the lead and quality level of other companies in the next two to three years. That's why entrepreneurs should actively deal with it now and ask themselves: 'What can AI do and where are the limits? And what should AI do in my specific context?'

So I recommend that companies have the courage to get involved with artificial intelligence and start their AI journey. To this end, KI.NRW has specific offers for companies that are available free of charge. These include, for example, initial advisory services such as the 'KI.Schnellstart', the 'KI.Sprechstunde', but also the introductory lecture 'KI.Kick-off'. There are also concrete workshop formats such as the 'AI Design Sprint™', in which AI concepts are developed. And in the 'AI.Shadowing' format, AI experts go into companies and observe processes and procedures in order to identify, evaluate and utilise AI potential. But regardless of which industry a company belongs to, the following applies: for the use of AI to be successful, it is important to understand AI as a team sport in which all employees are involved.

PROJECTS **WITH POWER**

Automation technology for INTILION

Do I need a photovoltaic system on the roof? Should the new car be an electric car? And what should I do with my old heating system? These are thoughts that many of us are currently grappling with. The prerequisites are different, and so are the solutions. Only the goal should be the same: safe and clean energy available at all times. This is exactly what INTILION AG has written on its banner, or rather battery.

INTILION AG is a company with a young history and fresh ideas. In 2019, INTILION was spun off from the HOPPECKE group of companies. The premises on Wollmarktstraße in Paderborn reflect the spirit of the company. A large room with many desks arranged in small groups, various meeting points and, in the middle, the open kitchen. INTILION fosters open cooperation and quick exchange among each other.

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The company is a supplier of energy storage solutions. It relies on sustainable and intelligent solutions for industry in the form of stationary and energy storage systems for wind power or photovoltaic plants, for example - and on Blumenbecker as a partner.

INTILION

scalebloc
Ca. 70 kWh bis 1.170 kWh

scalestac
154–616 kWh bis 1.200 kWh

scalecube
Ab 1 MWh bis zu 100 MWh

‘The Blumenbecker team quickly got to grips with the new field and showed that they understood energy beyond the technology.’

Boris Langerbein, Chief Innovation Officer, INTILION AG

The first meeting

In 2021, INTILION was looking for a reliable switchgear supplier through a call for tenders. After the first contact shortly before Christmas between INTILION and Thomas Schmitz, Head of Key Account Management at Blumenbecker, everything went very quickly: getting to know each other, negotiations, offer and finally the order in spring 2022.

Why did INTILION choose Blumenbecker? 'The selection process was complex. Do we want to commit to a new partner? Is the market up to it and is Blumenbecker a good fit for us? These were all questions we dealt with intensively,' explains Head of Purchasing Christina Rüsing. Quality, production and local proximity were the decisive criteria for Blumenbecker. And that was despite the fact that Blumenbecker was entering new territory with the industry.

'Energy management, i.e. electricity that is not consumed where it is generated, is completely new territory for Blumenbecker,' says Schmitz, 'and a challenge in terms of sustainability that we are happy to take on.

With success, as Chief Innovation Officer Boris Langerbein from INTILION confirms: 'The Blumenbecker team quickly got to grips with the new field and showed that they understood energy beyond the technology. It's the potpourri of features that convinced us.' Rüsing can only agree: 'Cooperation, expertise, the flexibility to respond to special requests and of course the results. The all-round package fits 100 %,' she explains.


INTILION
100 JAHRE

180

switchgear cabinets for ‘scaleblocs’

The first major order

After the starting signal, Hall 4 at the headquarters in Beckum was converted into the new 'INTILION Hall' and provided enough space for the first order: 180 switchgear units. It is not only thanks to the available space that Blumenbecker can support INTILION's growth. 'We are looking for partners who will grow with us. We can't rest on what we have. The market is shaping itself and that's how we have to act,' explains Rüsing. Her colleague Langerbein adds: 'Without energy storage, the energy transition will not work. With our portfolio, we will participate in the energy transition and want to become the player on the market.'

Since then, Blumenbecker employees have been manufacturing control cabinets for the INTILION 'scalebloc' line. These are stationary energy storage units from 70 kwh to 1,170 kwh for commercial use. The battery storage system is designed for both indoor and outdoor use; including weather-resistant housing and air conditioning. The possible applications are manifold: whether for optimising own demand, for peak load management or as a system for grid replacement. In addition, the 'scalebloc' serves as a support for the charging station of the e-car. The dimensions of the 'scalebloc' are still manageable at around 2 metres x 1.60 metres x 1 metre.

Large-scale storage with up to 100 MWh

This changed with the second order from INTILION. Two large 40-foot containers, the 'scalecubes', were delivered to Beckum in August 2022 and equipped by the Blumenbecker team. The large-scale storage units have capacities of up to 100 MWh. In November, they could be collected again, naturally by heavy transport, including escort vehicle and special permit.

In the new partnership, however, the paths are easier, both geographically and mentally. 'The mindset is what counts. INTILION is a young company. Blumenbecker has a lot of experience. But both are open to discovering the industry and thus benefit from each other. We live the same values,' says Rüsing. The distances are short - a good 55 kilometres separate INTILION and Blumenbecker. A plus point for INTILION. 'Many development steps still lie ahead of us. We need a partner who is within easy reach,' says Rüsing. Looking at production or even showing it to customers, audits - all easy to implement. Schmitz also appreciates the dialogue of short distances: 'I think it's good that INTILION comes to us with the customers. That is a great distinction for us.'

From the 'small' energy storage units such as 'scaleblocs' to the 'large' container solutions 'scalecubes': Blumenbecker and INTILION combine a partnership with potential and projects with power - a win-win situation for both companies.

'Cooperation, expertise, the flexibility to respond to special requests and of course the results. The all-round package fits 100 %.'

Christina Rüsing, Head of Purchasing, INTILION AG

Contact person

Thomas Schmitz
Head of Key Account Management
Blumenbecker
Automatisierungstechnik GmbH
T: +49 231 532047-66
tschmitz@blumenbecker.com

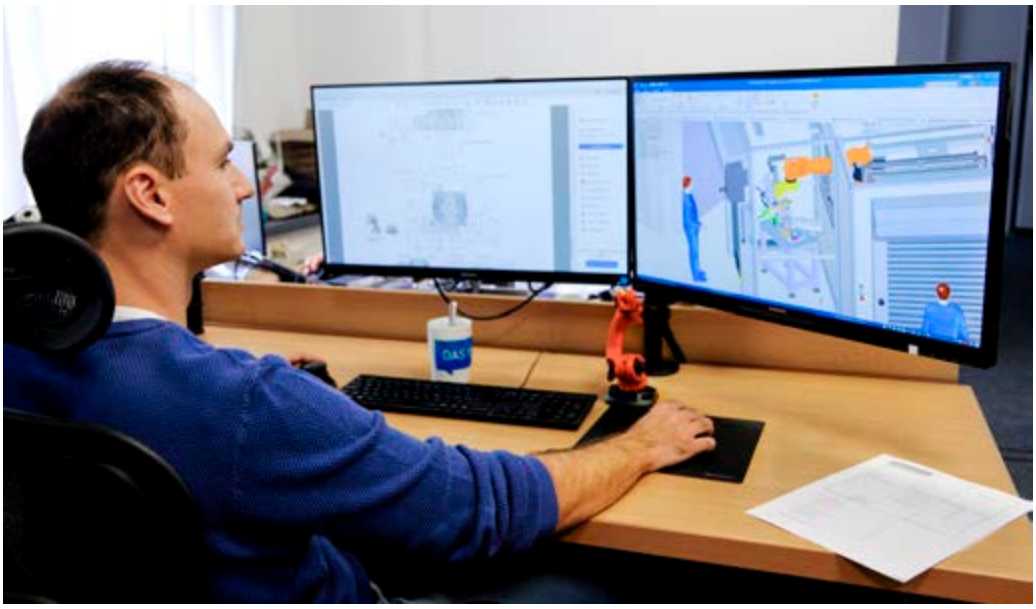
Blumenbecker Slovakia

RELIABLE FOR 22 YEARS

Slovakia was founded in 1993 after the peaceful division of Czechoslovakia. Since 2009, the approximately 5.5 million inhabitants have had the euro in their wallets. There are more than 200 castles and palaces in the country, which covers an area of almost 50,000 km². And Blumenbecker has also been represented in this landlocked country in Central Europe for over 20 years.

On the road to success in Slovakia since 2001

The company was founded in 2001 as a subsidiary of Blumenbecker Prag s.r.o. Today, 32 employees work at two locations in Bratislava. Engineering and assembly are under one roof. The robot service is only a few minutes' walk away. The proximity to the university is a great advantage for attracting qualified junior staff.



In the offline simulation of robotics solutions, manufacturing processes are designed and checked.

Commissioning at the customer

Blumenbecker Slovakia covers the entire spectrum of automation technology for new plants. This includes 3D planning of robot cells as well as offline simulation. This makes it possible to design and check manufacturing processes in a dynamic 3D environment.

Qualified technicians take over the robot service: Whether maintenance, repair or reprogramming and retooling - and that independent of the manufacturer.

Likewise, there is a robot training centre and a laser welding laboratory. Robot training courses for customers are offered in the company's own modern training centre, focusing on programming, control and maintenance.

'In the engineering department, we can supply ready-made, customised systems. In the service department, we offer all-round service for robots ', says Managing Director Peter Grňo.

Reliable and strong partner for the industry

The customers come from both domestic and international industry; with a focus on the automotive and metalworking sectors.

Blumenbecker Slovakia has successfully implemented many projects over the past 22 years. One of them was the development of a robot welding system for the customer Tatramat. The highly sensitive seams of the hot water tanks are welded fully automatically by robots. The 360° service ranged from extensive testing to maintenance of the robot workstations, including a service hotline and just-in-time delivery of spare parts.

Or the delivery of laser welding robots for the automotive supplier Martinrea. The company was looking for a solution for welding extremely thin stainless steel pipes for fuel lines. At the time, a series of tests were carried out in the welding laboratory in Bratislava to adapt the technology to the rough everyday production conditions.

For the customer Farguell Group, they developed the first robotic cell in the production in Nitra. Farguell specialises in the development and production of metal components for the industrial sector.

All-round service for robots: maintenance, repair, reprogramming and retooling

The Blumenbecker team in Slovakia

'We have remained down-to-earth,' Grňo explains, adding proudly, 'and we are following our course and have developed into a reliable and strong partner for companies from the industry.'

This is also demonstrated by the latest project: Blumenbecker developed a prototype for bonding U-profiles for new customer PORFIX - pórobetón, a.s. in close cooperation with PORFIX (see next page).

32
Employees

3.4
Mio. € Turnover

2001
Year of Foundation

Robot cell for new customer PORFIX

PRECISE PROTOTYPE

Aerated concrete is light but stable, resilient but non-combustible and provides good thermal insulation. No wonder that shaped blocks made of aerated concrete are very popular in house construction. PORFIX - pórobetón, a.s. is the leading manufacturer in Slovakia of plane and partition blocks, lintels and U-profiles made of this mineral building material. A robot cell has recently been installed in the production hall in Zemianske Kostolany, in the heart of Slovakia: Blumenbecker Slovakia s.r.o. developed a prototype for bonding U-profiles in close cooperation with Porfix.

Automation in production - more efficiency, less waste

This project is also the first collaboration between the two companies. When the order came for the development of the prototype, the real work began: 'This is not a standard application and is completely new territory for us,' explains Peter Grňo, Managing Director of Blumenbecker Slovakia.

The new production method is fundamentally different from the traditional variant. Previously, the U-profile was milled from a block of aerated concrete. On the one hand, this resulted in a lot of waste. On the other hand, broken edges were created. In addition, the work process was a dusty affair. Now the U-profile is no longer made from one piece, but from three.

How a U-profile is created

There are two Kuka robots in the robot cell. Robot 1 picks up the centre piece from the stack and places it on the gluing station. The adhesive is applied there. It then picks up the centre piece again and places it on the conveyor belt. Robot two, meanwhile, picks up the two side pieces and places them on the conveyor belt as well. A machine glues the three parts together as a U-profile and the adhesive dries. Finally, robot 2 picks up the finished U-profile and places it on a pallet.

'The advantage is that you get a very cleanly worked end product. You can saw the centre piece to different widths and get different sizes,' Grňo explains.

Here the three concrete parts are glued together to form a U-profile.

‘This automated line will increase production efficiency and significantly reduce the amount of waste generated by the previous production method by milling.’

Erik Hojč, Production Manager, PORFIX – pórobetón, a.s.

Compressed air and the right adhesive

One challenge was the selection of the perfect adhesive. Many tests were carried out together with the customer. 'Not only the hold was important. The drying time also had to be integrated into the work process,' Grňo knows.

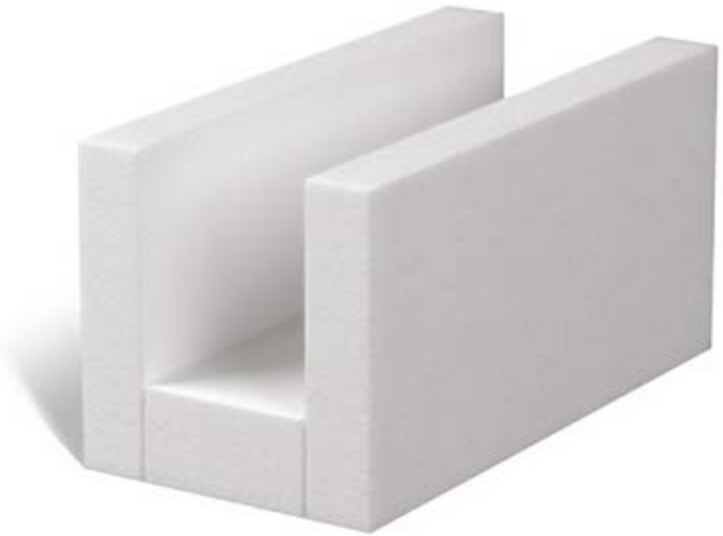
The Blumenbecker engineers came up with something special to transport the three sections: The robots were given a compressed air attachment. This allows the parts to be sucked in. However, the air flow can also be reversed.

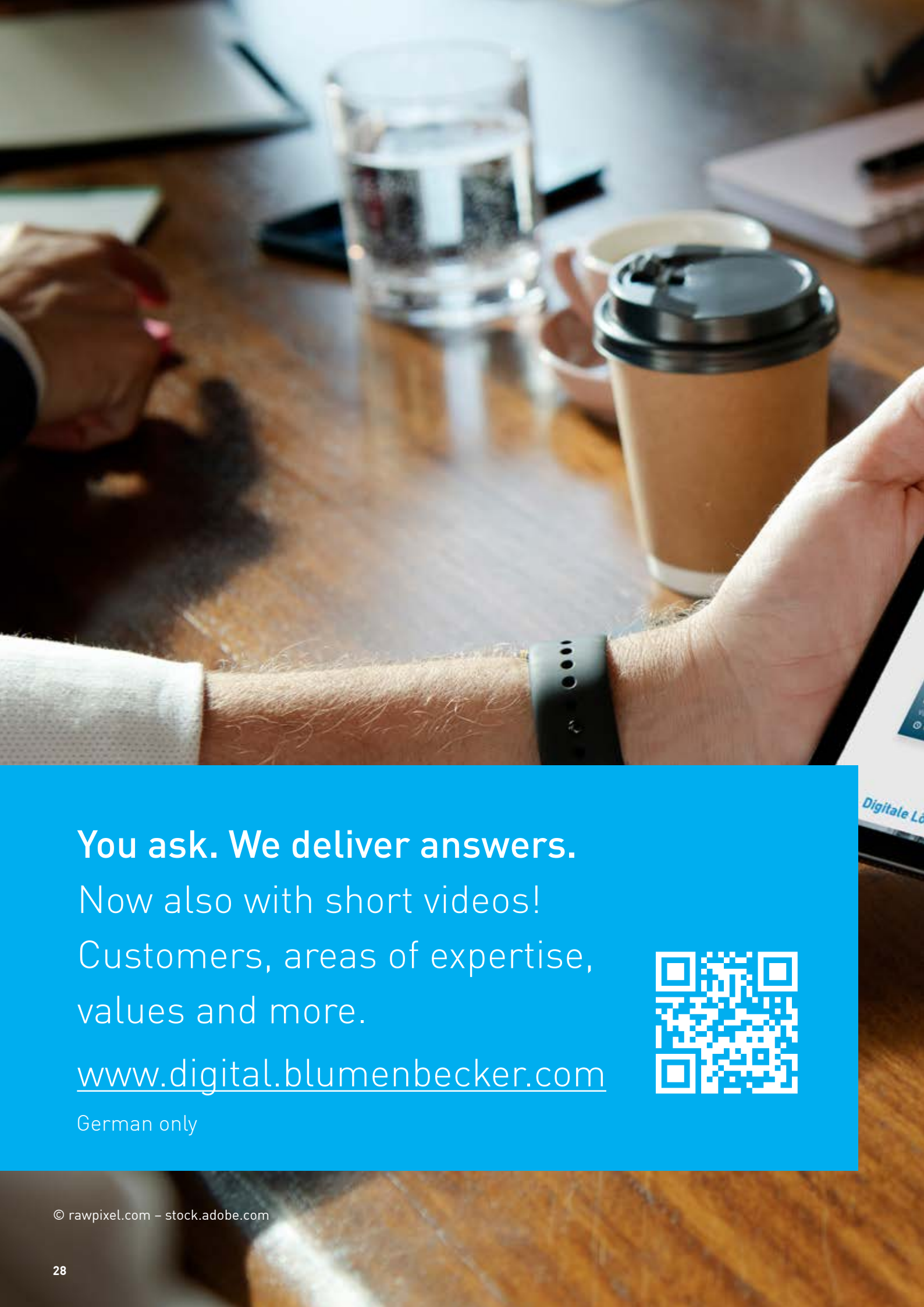
When the pieces are sawn into the right sizes, a lot of dust is produced that still sticks to the pieces. The compressed air attachment blows the dust away beforehand. Only then is the respective piece picked up. It is free of sawdust and thus perfectly prepared for the work process.

And what does the customer say? Erik Hojč, Production Manager at PORFIX - pórobetón, a.s. is delighted: 'I would like to thank Blumenbecker and my production colleagues who developed this prototype together. This automated line will increase production efficiency and significantly reduce the amount of waste generated by the previous production method by milling. Thank you very much! We will be happy to try it out elsewhere in production.'

Contact person

Peter Grňo
Managing Director
Blumenbecker Slovakia s.r.o.
T: +421 905 346 961
pgrno@blumenbecker.com





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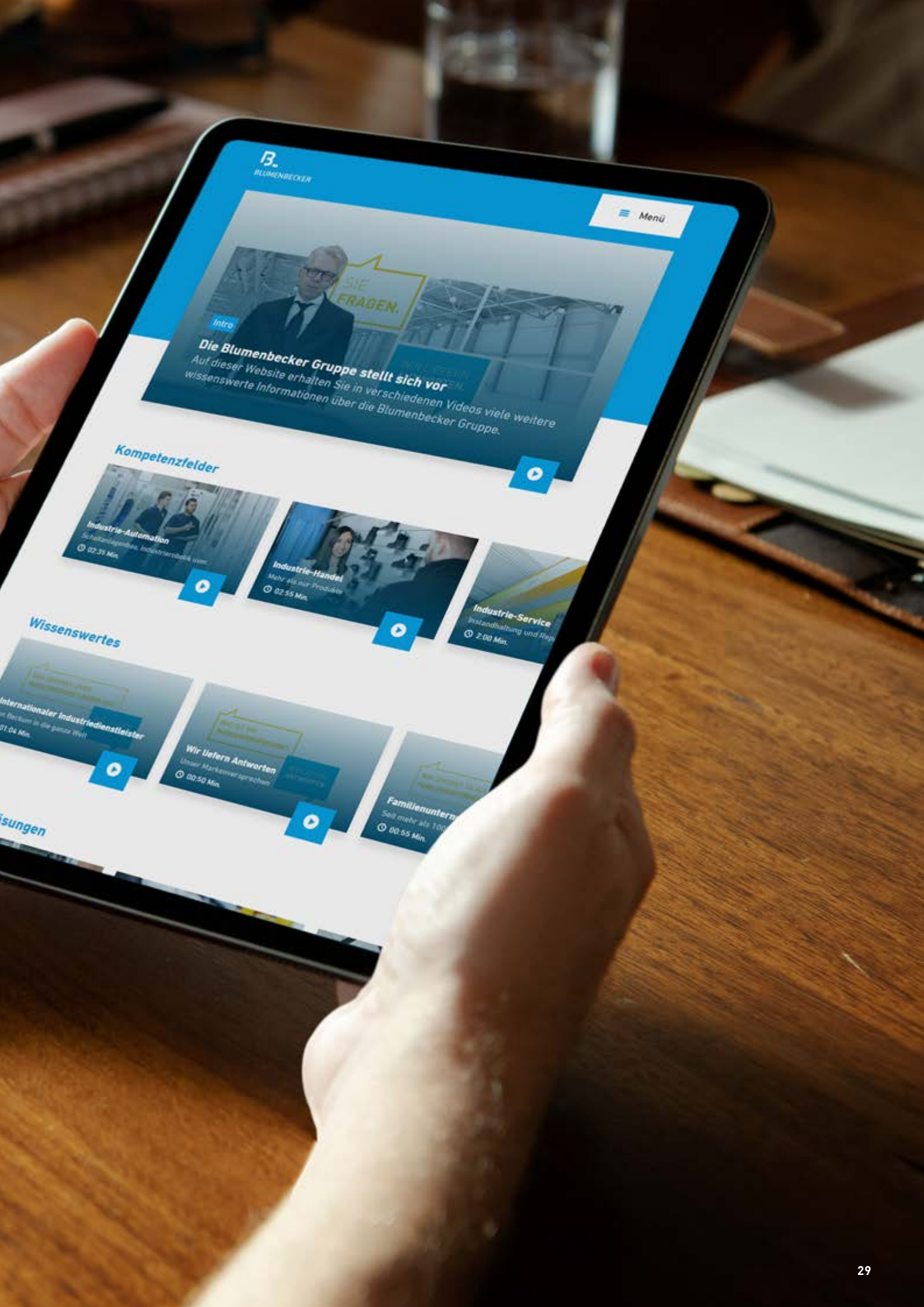
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Intro
Die Blumenbecker Gruppe stellt sich vor
Auf dieser Website erhalten Sie in verschiedenen Videos viele weitere wissenswerte Informationen über die Blumenbecker Gruppe.
Kompetenzfelder
Industrie-Automation
07:35 Min.
Industrie-Handel
Mehr als nur Produkte
02:55 Min.
Industrie-Service
2:00 Min.
Wissenswertes
Internationaler Industriedienstleister
Wir liefern Antworten
Unser Markenversprechen
00:50 Min.
Familienunternehmen
00:55 Min.

A city between historical charm and modernity

BRATISLAVA

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It has been the capital of Slovakia since 1993 and, with over 470,000 inhabitants, is also the largest. The Danube flows right through the city. A metropolis that unites many things.

View of two countries

Perched on a rock 85 metres above the banks of the Danube, Bratislava Castle is square, with four corner towers and a smooth white front with red roof tiles. Today, the imposing building is home to the historical museum. One of the oldest preserved parts of the castle is the crown tower. If the view is good, you can see as far as Austria and Hungary from up here. Bratislava is the only capital city in the world that borders two countries.

Walk around the UFO

Not quite so far away and always clearly visible, a UFO has apparently docked at the bridge railing of the Danube. In 45 seconds, the lift takes its visitors up to the observation tower and to the restaurant. The 'Skywalk' offers the intrepid an extraordinary adrenaline kick: accompanied by a professional instructor and secured with a wire rope, one enters the window sill of the observation tower behind the windows of the restaurant. From there, you can walk around the dome from the outside. The futuristic building - called Ufo - is a drastic contrast to the historic old town, not only in terms of its name.

From castle to UFO -
the panorama of Bratislava
combines history and modernity.

Old Town with 'Observer'

Here, narrow alleys and picturesque squares dominate the townscape. Impressive buildings from different eras characterise the old town, including the Miachael Gate with its onion roof, the only surviving town gate. A path leads from there to the old town hall. During a walk, you can discover interesting and whimsical statues. The most popular among tourists is undoubtedly Čumil ('The Observer'). With his arms propped up, the bronze journeyman watches passers-by from a manhole cover. He even has his own street sign pointing to him.

East of the old town, somewhat hidden in a residential area, stands a church with rarity value. Whitewashed in sky blue and richly decorated, it was completed in 1913. It is dedicated to Elisabeth of Hungary and is also called the 'Blue Church'.

Bronze statue Čumil ('The Observer')

The old town with the Miachael Gate

Saint Elisabeth Church – 'Blue Church'

Young and dynamic

Bratislava is one of the youngest capitals in the world. This is also reflected in the population. The city is home to renowned universities. Especially at the weekends, students cavort in the bars and clubs of the metropolis. The city has experienced dynamic development in recent years. Numerous international companies are located here. There are industrial parks, technology centres and start-ups that contribute to economic development.

Bratislava - a mixture of history, culture and progress. Modern business centres meet historical charm. Or: A blue church meets a UFO.

INSIDER TIPS

Panorama trip on the Danube

If you want to get to know Bratislava from a different perspective, I recommend a trip on the excursion boat on the Danube. The trip under the bridges offers interesting insights from the water side. You pass under the New Bridge, the only bridge without piers in the Danube.

In addition to the historic part of the city, you get a glimpse of the new Riverpark district and the modern Eurovea shopping centre. And to immerse yourself in Bratislava, you can take a tour of the old town on the Blaváčik train.

RADOVAN PAPÍK
Robots Service Manager
Blumenbecker Slovakia

Hike through Devínska Kobyla (Small Carpathians)

The Devínska Kobyla nature reserve is located only a few kilometres northwest of Bratislava. And yet one has the feeling of being in a completely different world and time. The highlight of any hike is the towering Sand Mountain, a remnant of a sea reef whose origins date back over 15 million years. The 514-metre-high Sand Mountain consists of sandstone, gravel and limestone, among other things. Over the course of time, weather influences have given the Sand Mountain its unique shape. Steep cliffs, rugged rocks and a breathtaking view impress every hiker.

PETER GRŇO
Managing Director
Blumenbecker Slovakia

Crane technology for Finkernagel

Finkernagel

HEAVYWEIGHT FOR WIRE

The traditional company from Sauerland produces 3,000 tonnes of wire every month. In addition, there are around 850 tools - all of the highest quality. Fritz Finkernagel Drahtwerk GmbH & Co. KG supplies suppliers from the automotive, construction, electrical and mechanical engineering industries with cold heading wire and forming tools. For the production process, the family-owned company relies on Blumenbecker's crane technology and industrial services. The latest project is a real heavyweight: 15 tonnes of structural steelwork ensure that everything runs smoothly in the production of wire.

A total of 36 cranes are spread over 25,000 square metres of production space at the company's headquarters in Altena. Two new crane systems, each with a lifting capacity of four tonnes and a span of over nine metres, were recently added. 'Blumenbecker offered the "all-round carefree package", consisting of structural engineering, crane runway, crane systems, conductor line and crane technology,' says Uwe Packruhn, Technical Manager at Finkernagel.

Crane technology for the new wire drawing plant

The overall package was convincing. At the beginning of 2023, Finkernagel commissioned Blumenbecker to plan, manufacture and install a crane runway and two parallel crane systems. 'The crane system supplies a newly built wire-drawing plant that can produce wire in the dimensional range Ø 4.0-12.0 mm in several forming stages using a downstream bending winder in various delivery forms. The investment was necessary to meet our customers' increased demand for high-quality cold heading wire,' explains Packruhn.

Blumenbecker took over the engineering services, such as production drawings and analytical verifications and calculations in accordance with DIN standards. Installation planning and execution of the work based on DIN EN 1090-2 EXC 3 and DIN EN 1993-6 were also part of the job. The production-oriented interfaces had to be coordinated and taken into account in the tight schedule. After all, the assembly was to be completed just four months after the order was placed.

‘The new crane system is the largest single project that Blumenbecker and Finkernagel have handled to our complete satisfaction.’

Uwe Packruhn, Technical Manager,
Fritz Finkernagel Drahtwerk GmbH & Co. KG

A sure instinct in the former warehouse

The service technicians had to be on their toes during assembly: the hall used to serve as a warehouse. A good five years ago, the wire warehouse was expanded and the production area increased. The company invested in the machinery in order to be able to realise the increases in volume. However, the former warehouse is not very high. It was not possible to erect it with a truck-mounted crane. 'We had to work from below with a forklift truck, which required more manoeuvring and a sure instinct,' explains Michael Piechaczek, project manager at Blumenbecker Industrie-Service GmbH. 'It is always challenging to integrate new equipment into an old building stock,' Packruhn also knows. 'For example, there were important cable routes in the area of the crane runway that could not be relocated. Here, the crane runway construction had to be adapted accordingly. In addition, it was necessary to adapt the working area of the new crane system to a layout of the wire drawing plant that was not yet fully available at the time the contract was awarded.' These were all challenges that Blumenbecker solved.

The assembly was carried out with a forklift truck and a sure instinct.

Satisfaction and a good connection

'The teamwork was perfect, so that we were able to successfully complete the first major project,' says Piechaczek, who is also pleased about the good relationship with the client. And what does the client say? Packruhn sums up the project as follows: 'Blumenbecker has been one of our partners in supporting our crane systems for years. The contact persons on both sides work hand in hand in a spirit of trust. The new crane system is the largest single project that Blumenbecker and Finkernagel have handled to our complete satisfaction.'

Project Manager
Michael Piechaczek
has everything under control.

Contact person

Martin Bausen
Branch Manager
Blumenbecker
Industrie-Service GmbH
T: +49 2371 4305-24
mbausen@blumenbecker.com

Blumenbecker service technicians ensure
smooth operation in MIBRAG opencast mines

KNOW-HOW NOT ONLY FOR GIANTS

They are called 'Vereinigtes Schleenhain' and 'Profen'. They are located in the south of Leipzig. They belong to MIBRAG GmbH. The two open-cast mines are also places where Blumenbecker works - every day.

Dusty grey, coal brown and green power

Steffen Wiedemann, a Blumenbecker service technician in Zeitz, drives his pick-up truck through the barrier at the 'Vereinigtes Schleenhain' opencast mine. He is on his way to the 1119 skip loader, his place of work today. At first the road is still asphalted. After a few kilometres, the road becomes bumpier and finally ends in mud. It had rained the day before, as can be easily seen.

Time to switch on the all-wheel drive function. On we go. Past kilometre-long conveyor belts for overburden and lignite, past bucket-wheel excavators and drive stations. But the dominant colour of the surroundings is not just dusty grey and coal brown. Birch trees and bushes grow here. Once the lignite has been mined in one place, the area is planted with vegetation. That helps against the dust. Even green electricity is produced here through solar energy. In 2023, the photovoltaic plant will go into operation. At the beginning of August, the construction of 15 wind turbines was also approved by the district of Leipzig. The Breunsdorf wind farm will soon be built on a recultivation area.

'Vereinigtes Schleenhain' opencast mine

Green electricity in the opencast mine: the photovoltaic plant will go into operation in 2023.

‘I particularly appreciate the high level of quality work and the know-how in all aspects of lifting and slinging equipment.’

Denny Mai, Machine Technology Foremann, MIBRAG GmbH


MIBRAG

Steffen Wiedemann on the arm of the giant weanling

High up for the service technicians

The stacker 1119 juts out of the pit like a giant with oversized arms. The colossus is over 200 metres long, 50 metres high and weighs 2,500 tonnes. Destination reached. Steffen Wiedemann parks his pick-up, gets out and sinks centimetres deep into the mud. Equipped with a helmet and safety goggles, he is going high up today. At about 40 metres, crane systems are waiting to be checked. 'You have to be fit to drive and fit for heights for this job,' Wiedemann smiles.

5,400 objects for inspection, maintenance and repair

Since 2018, he has been working for the customer MIBRAG in various opencast mines, not only here in Schleenhain. He always starts work at 5:45 am. Together with two colleagues, he sets off after the work meeting to inspect and repair the facilities - and there are quite a few. The three fitters check around 5,400 objects for MIBRAG at the various opencast mines. These include over 150 crane systems and as many gate systems. Blumenbecker also inspects and repairs the 'small' equipment, such as 200 small hoists and over 1,400 load handling devices. 'The tasks are many and varied. We have to work conscientiously and very precisely to ensure that all the equipment does its job reliably,' explains Wiedemann.

Denny Mai, a machine technology foreman who has been with MIBRAG since 2012, can also confirm that Wiedemann and his two colleagues work conscientiously and accurately: 'Blumenbecker has been a partner for many years. I particularly appreciate the high level of quality work and the expertise in all matters relating to lifting and slinging equipment.'

Customer portal is a real relief

One challenge is the weather. If it is dry, the work is dusty. If it is wet, the equipment sometimes becomes clogged with mud. If it's too cold, the equipment freezes. And if it is hot, it is hot.

Recently, Blumenbecker service technician Frank Oeser had to repair a crane system in the production plant. The cable on the coal conveyor had broken. The call from Mai came at 8 pm in the evening. Oeser came, dismantled, repaired and within a few hours the fault was fixed - including a load test. 'The Blumenbecker service technicians do excellent work that you can rely on,' says Mai.

The steward also praises Blumenbecker's customer portal for maintenance. In the past, there were endless Excel lists in which the systems were listed. Inspection records were made of paper and had to be archived. 'Now I have the history of every object digitally available everywhere - a real relief,' says Mai happily.

Contact person

Andreas Bez
Head of Department
Blumenbecker Technik GmbH
T: +49 3441 8074-42
abez@blumenbecker.com

Steffen Wiedemann (left) and Denny Mai at the weanling 1119

Cobot welding robot and hand laser welding in focus

BURNING FOR THE PERFECT SEAM

'Welding is like sewing, only with fire. Anyone who has ever tried it knows that it is not easy. And it's more dangerous than sewing. It's not for nothing that there are countless training and further education courses on the subject of welding. But the welding industry is also complaining about a shortage of skilled workers. Companies are increasingly faced with the challenge of finding well-trained skilled personnel. How do you still get the perfect welds?

This was the question facing Jan Weiß, deputy branch manager of Blumenbecker Technik in Haiger. Among other things, the site specialises in the production of airport ground support equipment, such as so-called dollies. The answer has been in production in Haiger for about a year and is called 'Cobot'.

Cobot welding robot - robots and employees complement each other perfectly

Weiß sought help from Michael Kerßenfischer, head of welding technology at the sister company Blumenbecker Industriebedarf GmbH. He recommended the collaborative robot, or Cobot for short. It consists of a robot arm equipped with force sensors. 'The user simply pulls the Cobot by hand to where the welding is to take place. You don't need any previous knowledge of programming to set up the robot. But, you do need to know about the welding process, for example, to set the arc correctly,' Kerßenfischer explains. The robot arm comes from Universal Robots (UR), the market leader for collaborative systems. The supplier for the complete cobot is Lorch Schweißtechnik, market leader for welding equipment.

In October 2022, the Blumenbecker site in Haiger received the Cobot for testing. After two days of training led by Kerßenfischer and his team, the Cobot was put to use for the first time; with success. 'The device is easy to operate and the welding result is of consistently high quality,' says Weiß happily. A small drop of bitterness: the system is limited to two free axes and pre-production errors are not compensated. Employees and Cobot have to work hand in hand; then they complement each other optimally.

Easy handling: The user simply pulls the Cobot by hand to where the welding is to take place. You don't need any previous knowledge of programming to set up the robot.

No enclosure is needed for the Cobot. This lowers the costs. In addition, there is the time saving.Weiß and his team were convinced after the test phase. The system takes over the physical strain of welding caused by UV radiation, awkward posture and welding fumes for the employees.

'Automating welding processes brings many advantages. The most obvious is the increase in productivity,' Kerßenfischer knows. 'We have already sold a few cobots and all customers were thrilled.'

Hand laser welding - for filigree seams without distortion

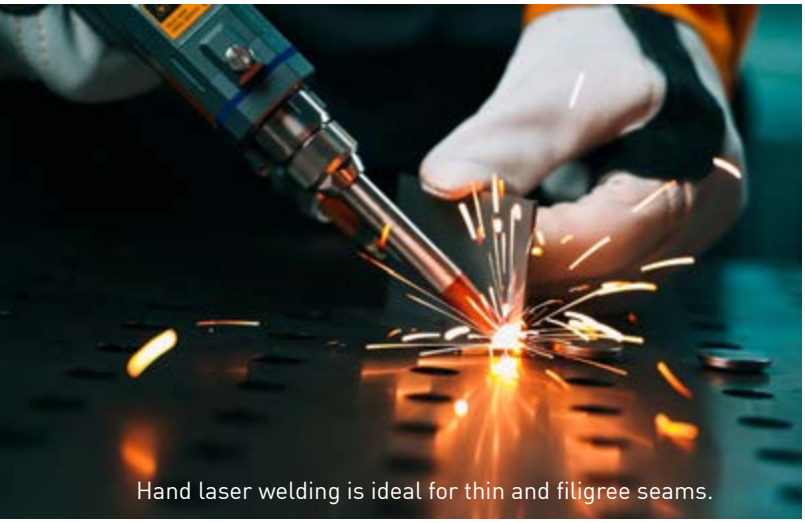
If narrow and filigree seams are required, Kerßenfischer usually recommends hand laser welding to customers. The energy source here is bundled light, which is applied by means of a 'gun'. Less heat is generated in the welding process, he explains: 'You can weld with welding wire or completely without. Then only the materials are joined.' The advantage is obvious: hardly any distortion of the materials - no reworking, no cleaning, no straightening. And the process is four times faster than TIG welding.

Training of the welder is sufficient. In addition, the safety technology must be observed for this procedure. You need a protective housing for the hand laser, suitable PPE and in any case a laser safety officer in the company. The result is perfect, high-strength welds of consistent quality. 'Compared to the normal welding process, hand laser welding is much more energy-efficient, faster and more precise. It can be used where thin and filigree seams are needed.'

Competence centre in Beckum

Since 2023, interested parties and customers have been able to test hand laser welding at the in-house competence centre for welding technology in Beckum - under expert guidance, of course. Cobot welding and all common MIG/MAG and TIG processes can also be tried out here. 'Testing new welding technologies your-

New welding technologies can be tested in the competence centre for welding technology in Beckum.

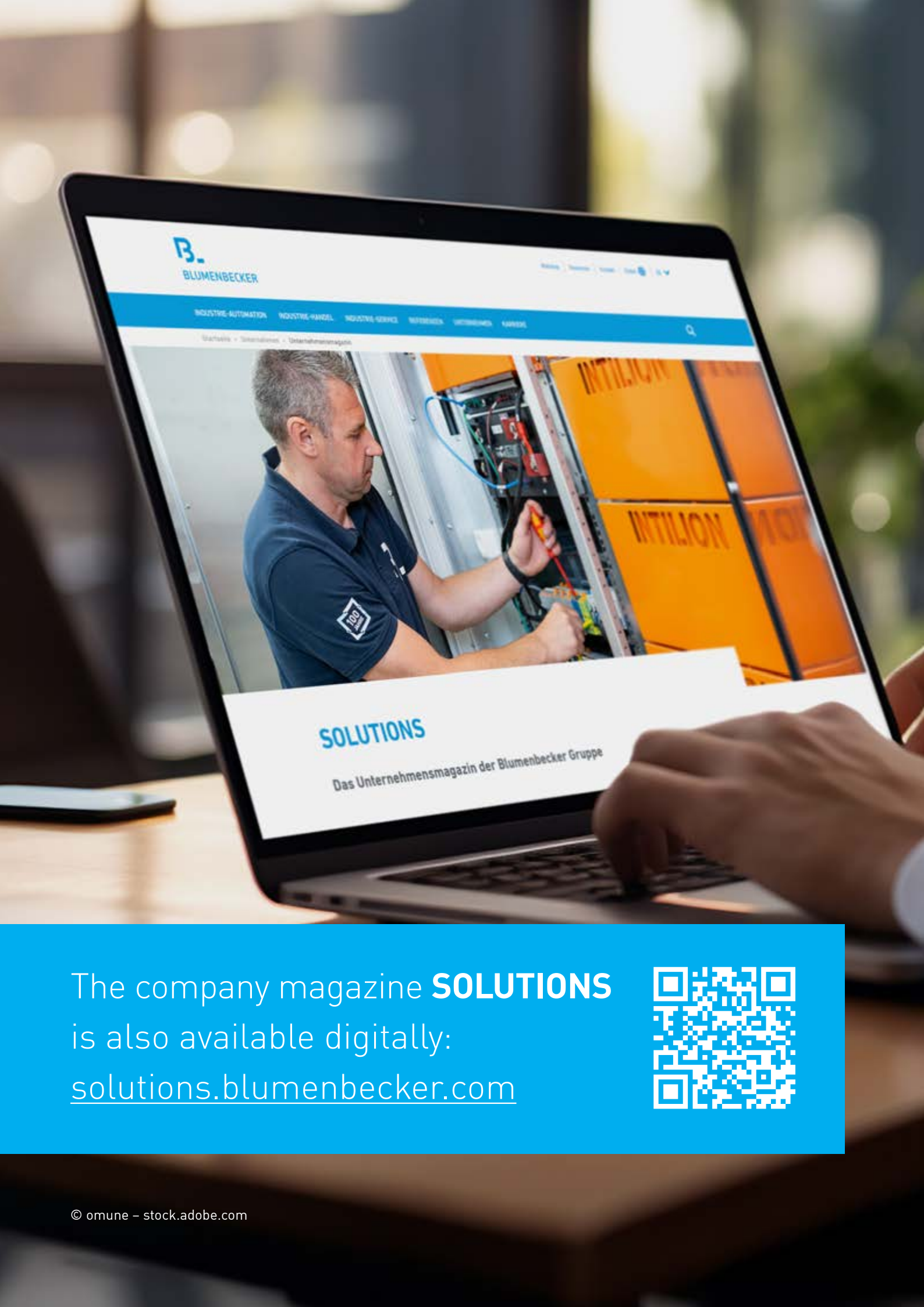


Hand laser welding is ideal for thin and filigree seams.

self is often worth a thousand words. We analyse the requirements and recommend the optimally suitable products. We also carry out the training of the users,' Kerßenfischer summarises.

Contact person

Michael Kerßenfischer
Head of Welding
Technology Department
Blumenbecker
Industriebedarf GmbH
T: +49 2521 8406-131
mkerssenfischer@blumenbecker.com



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