

# SOLUTIONS.

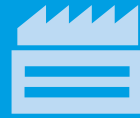
The company magazine of the Blumenbecker Group





1450

STAFF



20

COMPANIES



>30

LOCATIONS



9

COUNTRIES



>200

MILLION € TURNOVER (2018)

## WE DELIVER **SOLUTIONS**

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Surviving in today's globally competitive market means producing goods in a way that is flexible, reliable, fast and cost-effective. As an **international industry** service provider we have made it our mission to support our customers in this in the best possible way. We see ourselves as a **partner to our clients** and base our approach on intensive dialogue in line with the company philosophy: **listening carefully, finding the right answers and putting these into practice reliably and on-time.**



*From left: Olaf Lingnau, Richard Mayer, Harald Golombek*

### **New Managing Director at B+M Blumenbecker GmbH**

Effective January 1, 2019 Richard Mayer became the new managing director of Blumenbecker's holding company. Harald Golombek and Olaf Lingnau have also been appointed as additional managing directors of the holding. Mr Mayer will head the senior management team as its speaker and CFO.



# EDITORIAL



DEAR CUSTOMERS AND PARTNERS,

Welcome to the second issue of our company magazine SOLUTIONS.

Change is something that affects every one of us. Our company is currently going through a fundamental transformation that will take us into a digital, interconnected world. A place where new technologies will operate and where a different approach and a new way of thinking will be needed.

For Blumenbecker as an industrial services provider, seizing the opportunities presented by digitisation means entering uncharted territory. Our goal here is to develop perfectly tailored solutions that will give our customers the deciding edge in a competitive environment.

We want to invite you to do some thinking outside the box and to be inspired by the digital ideas, developments and experiences presented in this issue.

Read about how Industrial Service 4.0 is changing the face of industrial maintenance, what NRW Economic Affairs Minister Andreas Pinkwart thinks of the digitisation projects currently under way at the Blumenbecker Group, how customised bin picking solutions are helping out at brake specialists Intorq and why Prague is definitely worth a visit - and not just because Blumenbecker has an operations base there.

We wish you all an enjoyable read and hope that it will generate some creative thinking.

A handwritten signature in blue ink that reads "A. Blumenbecker". The signature is fluid and cursive, written in a professional style.

Astrid Blumenbecker  
Majority Shareholder



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# PIONEERS OF DIGITISATION

Economics Minister Pinkwart  
pays a fact-finding visit to Blumenbecker

**When NRW Minister of Economic Affairs Andreas Pinkwart goes on a fact-finding visit, those companies that are driving digital transformation in NRW will find themselves high on his agenda. The Minister had industrial services provider Blumenbecker on his itinerary in order to learn more about the firm's ongoing digitisation projects.**

The rain had stopped and the sun was shining through the grey clouds when Dr Pinkwart arrived at the Blumenbecker head office in Beckum. And things got even more enlightening for the NRW Minister during the subsequent podium discussion. It saw representatives from the Blumenbecker Group engage the Minister in talks on the digital challenges and tasks that would have to be tackled and overcome by the political and economic partners in NRW. Dr Pinkwart and the 60 or so invited guests from politics and business also had an opportunity to immerse themselves in the digital world of Blumenbecker.





VIDEO ABOUT  
THE EVENT



## DIGITAL SOLUTIONS – FROM AIRPORT LOGISTICS TO SWITCHGEAR PRODUCTION

Current digitisation projects were presented in three short video films showing new digital solutions that have been developed in the areas of airport logistics, industry services and switchgear production. These systems, which are sure to provide a beneficial outcome for customers, are to be incorporated as part of the Industry 4.0 initiative. Minister Pinkwart then participated in a ›live‹ podium test designed to demonstrate the practical application of ›digitised process steps for optimised automated switchgear manufacturing‹.

## THE SPIRIT OF DIGITAL INNOVATION IS SETTING AN EXAMPLE FOR THE WHOLE REGION

Dr Pinkwart seemed impressed by the spirit of innovation being shown by Blumenbecker in this area, which he said set an example for the entire region. He then went on to commend the company's efforts: »This is further evidence of the important role being played by mid-sized companies in supporting the Ministry in its drive towards greater digitisation of the NRW economy.«







The **Smart Dolly** is a digital tracking system for airport ground equipment that makes it much easier and cheaper to operate and maintain airside dollies.



**Industrial Service 4.0** facilitates the fully digitised identification, testing and documentation of operating equipment from any manufacturer, everything from cranes to desk lamps. [\(see page 10\)](#)



**Production-line digitisation** – Software-supported manufacturing and digital linkup of all production data make processes simpler, faster and more reliable.

VIDEO ON  
INDUSTRIAL  
SERVICE 4.0



**Object: Motor**  
ID Number: 104582  
Inspec. Date: 05.2022

**Object: Weld. machine**  
ID Number: 361754  
Inspec. Date: 07.2021

# INDUSTRIAL SERVICE 4.0





**Object: Crane**

ID Number: 25638

Inspec. Date: 10.2019

**Object: Robot**

ID Number: 803385

Inspec. Date: 02.2019

# Maintenance: the modern face



Installing, consolidating and developing digital processes has become part of the requirements specification of every industrial company. Procurement and manufacturing processes are now digitally optimised to a large degree. However the same cannot be said for operational maintenance – and this is set to change. With Industrial Service 4.0, Blumenbecker can now offer a digital maintenance service that covers all process levels. SOLUTIONS met up with Olaf Lingnau (Managing Director) and Marcel Horstmann (Head of Digital Services) of Blumenbecker Industrie-Service to talk about the digital product that has been on the market since September 2018.

### *What makes Industrial Service 4.0 so important?*

**Horstmann:** For a start, maintenance is something that affects almost every company, as every employer is legally obliged to provide safe working equipment and materials. If testing intervals are exceeded and equipment is not properly maintained on time, the resulting outage can prove expensive. Other serious consequences include the loss of insurance cover, prosecution and even claims for damages.

**Lingnau:** What is more, maintenance can pose a real challenge. Even in medium-sized firms there may be up to 10,000 individual items in both the production and administration areas that have to be tested for maintenance purposes. Industrial customers, who are more broadly positioned and have several production sites and more than one point of contact for servicing and maintenance work, tend in particular to demand end-to-end digital services that make maintenance routines faster, more reliable and more transparent.

*All process levels are recorded digitally – from order registration to the finished inspection report*





*Managing Director Olaf Lingnau*

*You define Industrial Service 4.0 as an end-to-end digital process. What does that really mean?*

**Lingnau:** With Blumenbecker Industrial Service 4.0 there is no longer a media break between the analogue and digital process levels. Order registration, scheduling, in-situ identification of plant and equipment, report compilation, customer acceptance and the submission of the inspection report – this is now all done digitally to create a process that is transparent and trackable for the customer.

*So does this spell the end of test reports on carbon paper?*

**Horstmann:** It certainly does. Digital reports not only save paper, but more importantly are less wasteful of time and resources as they do away with the laborious work of searching through endless files and folders when doing audits, for example. What is more, the customer can choose either to receive the inspection report by email for storing in his own data infrastructure or to make use of our maintenance portal.

*What are the benefits of the digital maintenance portal?*

**Lingnau:** For a start, the maintenance portal is an audit-proof repository. The customer has all his inspection records together in one place. Authorised members of staff can log into the online portal at any time and access the documents on demand. The new inspection report is immediately uploaded after each service. Each report is unalterable. If a fault is identified on a piece of equipment and a repair is effected, a new report will be prepared specifically documenting the work that has been done. This generates a transparent and continuous inspection history.

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»Thanks to digitisation and the maintenance portal we now have the best possible overall view of the status of our operating equipment at any point in time and can take preemptive action that will save time and money.«

**Norbert Siepker**, Head of Assembly and Bolt Technology, Volkswagen Osnabrück GmbH

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*Is this a maintenance portal for every item of equipment?*

**Horstmann:** Yes. The portal can display the customer's entire infrastructure: not only fixed objects such as motors, lifting platforms and door and gate systems but also all kinds of portable equipment – from high-pressure washers and soldering irons to desk lamps.

**Lingnau:** Assigning each maintenance object its own registration number makes for easy identification and allows all relevant data and documentation to be quickly retrieved. Even maintenance objects that are serviced by third parties can be included in the portal. The client therefore has a single tool for monitoring the maintenance status of all items of plant and equipment that are subject to inspection and can do this without overloading his own data infrastructure.

*But does the customer then have to think ahead to the next maintenance session?*

**Lingnau:** That depends. For equipment that is maintained by Blumenbecker, the system is proactive, and after each completed inspection it automatically arranges the next scheduled test. This makes it much easier to organise the maintenance routine and the customer can be sure of meeting the obligatory dates.

*Has Industrial Service 4.0 also changed things in-house?*

**Horstmann:** Absolutely. Developing this digital service has also allowed us to optimise our own procedures. The entire workflow has been speeded-up. Many of our outside activities have now been relocated back to the office. Our service engineers receive their orders digitally and they also collect and transmit the relevant data by digital means. The back-office team does the digital analysis work and then immediately makes the results available in digital form. Repair quotes can also be produced quickly this way.



*Where does your expertise in this field come from?*

**Lingnau:** Industrial Service 4.0 is a logical continuation of what we have been doing over recent years, for testing mobile and fixed electrical plant and equipment is our core business. We service and maintain every kind of electrical device and piece of equipment connected with our clients' production and administration work. And we are among the market leaders when it comes to door and gate systems and electrical machinery.

**Horstmann:** Unlike conventional testing establishments, we not only identify faults but can also repair equipment from any manufacturer and even develop optimisation solutions. This is an area where for some time now we have been using modules such as the digital order registration and materials entry system that digitally communicate the orders to the fitting engineer. When our client Volkswagen Osnabrück expressed an interest in digital collaboration two years ago, this spurred us on to digitising our own test reports and then to complete the process we had started.

*Looking ahead to the future, are plans being laid for Industrial Service 5.0?*

**Lingnau:** Our aim is to relieve our customers from all their worries over the smooth functioning of their machines. We want to be proactive in helping to eliminate downtime. Our preventive maintenance regime allows us to monitor plant and machinery on a virtual control panel and to collect and process operational data – which can then be made available to the customer in a visually edited format. A traffic-light system shows where things are in the green zone, where malfunctions are likely to occur in the near future, and which items of equipment are in immediate need of a response. The repair work can then be planned out in a way that best fits in with the operating schedule.



**CONTACT PERSON**

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Beumer Group

# 30 KILOMETRES PER HOUR

Baggage at Moscow's  
Sheremetyevo airport  
**goes high-speed**



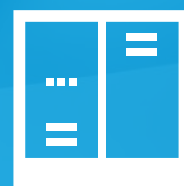
**30** years of  
cooperation



**2** kilometres  
of tunnel



**18** kilometres of energy cabling



**167** control cabinets



Looking out across the airport, it's difficult to believe that there is a high-speed transport system hidden several metres beneath the airfield with its planes taking off and landing. Two tunnels connect the northern and southern terminals – one is designated for passenger transport and in the other, baggage items streak along a track system at high speed to their destination. Requiring just four minutes to cover the two-kilometre distance, the high-speed baggage transport system is part of an ambitious expansion program at the airport and was scheduled for completion in time for the 2018 World Cup.

## FROM SUITCASES TO SURFBOARDS – SPEEDY AND SAFE TRANSPORT

A leading provider of individual logistics solutions, Beumer Group was awarded the contract for the prestigious project in December 2015. »Our Beumer auto-  
tover system® is already in use at international airports such as Montreal, Dubai, Nice and soon also in Denver. To meet the requirements for Sheremetyevo airport we had to develop our transport system further, « explains Thomas Frank, Senior Systems Manager Airport for the Beumer Group. The high-speed baggage transport system consists of a track system and individual vehicles that move independently along the tracks, each carrying a single item. With the new system, bulky items such as surfboards, sun umbrellas and skis now zoom to their destination not only just as efficiently as standard suitcases using the same tracks – but also, for the first time, at a speed of 30 kilometres per hour.



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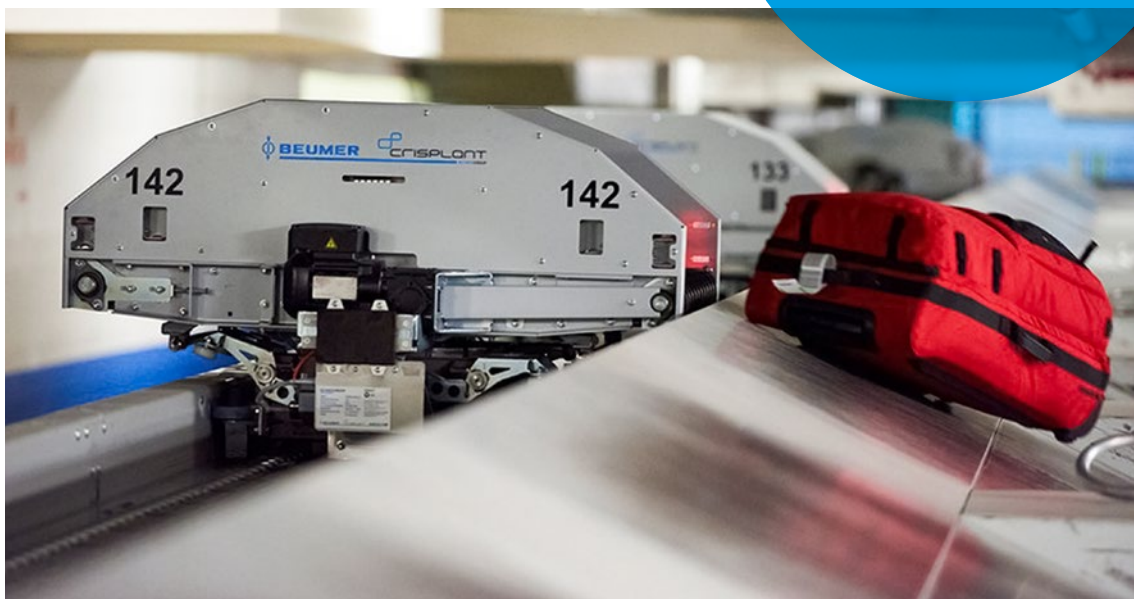
»The partnership and excellent cooperation between Beumer Group and Blumenbecker will certainly give rise to successful project executions in the future.«

**Thomas Frank**, Senior Systems Manager Airport, Beumer Group

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**30**  
**KILOMETRES**  
**PER HOUR**



*The Beumer autover system® in use*

## SWITCHGEAR TECHNOLOGY MADE BY BLUMENBECKER

For the baggage items to arrive at their destination safely, quickly and dependably Beumer Group sought, and found, a capable partner in Blumenbecker. Thomas Frank states the reason for choosing Blumenbecker as follows: »We have worked closely with Blumenbecker on a variety of projects for many years now, and they offer an extensive portfolio from a single source.« In the case of Sheremetyevo, Blumenbecker's remit comprised drawing up the wiring scheme, constructing the control cabinets and installing the electrics for the system on site. And thanks to three Blumenbecker companies from Germany, Poland and Russia working hand in hand, everything went according to plan.

## 80 TRUCKS HEADED FOR MOSCOW

For the assembly to commence, 80 trucks carrying conveying technology, control cabinets and assembly material headed to Moscow from Germany in spring of 2017. Facing tremendous time pressure, the team nevertheless installed 18 kilometres of energy cabling and 167 cabinets over a distance of two kilometres in the tunnel underneath the airfield in record time. Owing in part to this, Beumer Group was able to hand over the large-scale project right in time for the World Cup in February 2018, putting a smile on the customer's face and delighting football fans, who appreciated the faster connections and transfers at Sheremetyevo.

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## BIN PICKING

Bin Picking (having a grip in the parts bin) is a technology whereby a robot uses a camera system to select certain components from a bin containing randomly posed and often irregularly shaped parts and then delivers these in the correct body alignment to a machine for further processing.

VIDEO OF  
THE PROJECT



*A special 3-way robot was developed for Intorq that can pick up several components at once, thereby eliminating empty runs.*

# TAKING A FIRM GRIP

## Bin Picking on the electromagnetic brake line

**100% precision for 100% safety. Manufacturing electromagnetic brakes calls for the utmost care and attention. Brake specialists Intorq first deployed bin picking on their production line in November 2018. Since then CNC machining operations at the market-leading company have been faster and more efficient now that they have taken a ›firm grip in the parts bin‹.**

»Brakes are safety-relevant components. Either they are perfect or they do not leave the factory«, says Jürgen Kampmeier, production planner for resource management at Intorq. The company produces brakes and clutches for electric drives that ensure safety and reliability in cranes, forklifts, elevators, wind turbines and many other applications all over the world. It was therefore hardly surprising that reliability was a crucial factor when procuring new production technology. The same criterion applied to the search for an automation solution for feeding parts to a CNC machining centre.

### **AUTOMATIC IDENTIFICATION, GRIPPING AND FEEDING**

The remit was to develop an automatic system for supplying a CNC machine with rotors in six sizes plus sub-variants. The die cast parts had been placed in the supply bin in completely random poses. With the previous system the components would be pre-sorted by hand and repacked before the robot could feed them to the CNC turning machine. The identification, picking, feed and return of the raw parts was now to be undertaken using automated bin picking technology that would make the entire process both faster and more efficient.





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» We got a comprehensive  
tailor-made solution.  
The whole project worked perfectly.«

**Jürgen Kampmeier**, Production Planner for Resource Management, Intorq GmbH & Co. KG

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### A COMPLETE ONE-STOP SOLUTION

»We chose Blumenbecker as a business partner because they could supply us with a complete solution as part of a one-stop package«, explains Kampmeier, adding »the most important thing was that we did not want a prototype. Blumenbecker impressed us by having a tried and tested and fully developed process.« The Prague-based automation specialists have invested more than ten years in developing their own technology. This has resulted in a vendor-neutral solution that is compatible with any type of robot and exploits the performance capabilities of the specifically designed sensor system to the full. The robot gripper system was also developed and manufactured by Blumenbecker in-house.

### 3-WAY ROBOT GRIPPER ELIMINATES EMPTY RUNS

For Intorq, the production team designed a special 3-way gripper that can pick up three parts at once and thereby eliminate empty runs. The robot uses a 3D camera to locate the correct component in the bin. The part is then picked up and delivered to the CNC machine. Specifically, this means that the robot has to insert a fully geared rotor on to a full-mesh mandrel and in the same operation remove any ready-machines parts and transfer them safely back to the bench. »This is always done by the quickest, collision-free path«, explains Marten Arnold, project manager at Blumenbecker. He goes on »Before the robot moves, we test all the collision risks in real time and calculate the best route that it can use to safely avoid the parts bin and other obstacles.«



## A BESPOKE SOLUTION READY TO RUN IN JUST SIX WEEKS

The whole one-stop solution was up and running at Intorq after only six weeks. »This was possible because we really have some high-level technology expertise and work with offline programming. We first construct the robot as a 3D simulation and then program the handling instructions. Only when everything works as it should do we transfer the software over to the production line. This makes for a quick operation and enables us to respond effectively to the customer's wishes«, explains Arnold. And this was borne out by Intorq: »Right from the start we had the feeling

that Blumenbecker knew exactly what they were doing. They immediately understood our requirements and these were implemented very quickly«, declares Kampmeier.

**OUTCOME:** Lots of positive experience on both sides and this has further strengthened the business links between the two companies. Indeed Intorq have already approached Blumenbecker for their next bin picking solution.

*Blumenbecker impressed with their fully developed technology that is compatible with every type of robot.*

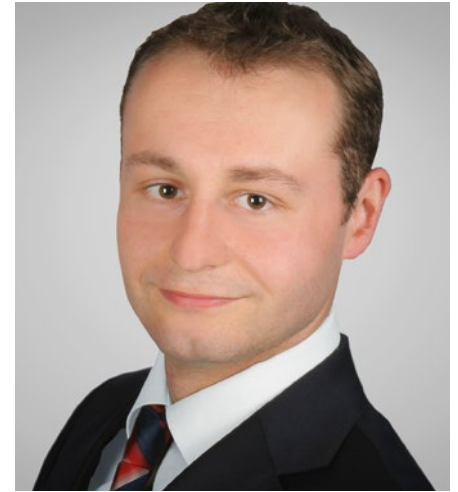




## OFFLINE PROGRAMMING

With offline programming, the whole machine is first constructed as a 3D model. In this way the desired behaviour of the robot can be simulated and programmed offline. This means that any developing problems can be identified and resolved at an early stage. In the second step the finished programs are then be transferred to the actual robots on-site. This keeps the robot commissioning time to a minimum.

## CONTACT PERSON



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6

ROTOR SIZES

1

GRIPPER



*The machining process uses die cast parts that have been randomly placed in bins.*

*The robot picks up the correct part, delivers it to the machining centre and then sets aside the finished component in an orderly manner.*

# THE LOVELY LADY OF THE VLTAVA



»Prague never let's you go ... this dear little mother has sharp claws,« is what Franz Kafka had to say about the city of his birth and his mixed feelings of love towards it. In his words, he captures the special atmosphere that casts its spell on all visitors to Prague.

The capital of the Czech Republic, Prague positively overpowers its visitors with the wealth of its cultural riches, the diversity of its architecture, the wonderful sights to see and the many breath-taking vistas.





The unique panorama of the city is dominated by the Hradčany, the historic quarter on the castle mount, with Prague Castle, one of the most extensive castle complexes anywhere in the world. Czech rulers and presidents have resided here since the 9th century. At its core is the

gothic St. Vitus' Cathedral, the Czech Republic's largest church, which took almost 600 years to build and was only finally completed in 1929. Part of the fortress is Golden Lane, a collection of tiny houses, where alchemists are reported to have devoted themselves to finding the





*Astronomical Clock*

fabled philosopher's stone, which would allow base metals to be turned into gold. Franz Kafka also lived here for a time, in House No. 22.

The way to the Old Town leads across the River Vltava. With countless visitors, musicians and traders, the famous Charles Bridge, in particular, is usually full of bustle. Early risers, though, will still have the magnificent structure, named after Charles IV, with all its wonderful photo motifs, (largely) to themselves. Entry to the Old Town is through the highly ornamented Old Town Gate Tower, which also offers a magnificent view of the bridge, the castle and the river.

After just a few minutes' walk, you find yourself on the Old Town Ring with its splendid renaissance and baroque buildings. A major attraction for visitors is the only recently renovated Astronomical Clock on the Old Town Hall. At each full hour, this mechanical miracle from the 15th century presents a brief but fascinating spectacle depicting the transitoriness of life.

Prague is a city that offers the good things in life. Whether your choice is for traditional Bohemian or modern international cuisine, a beer before, with or after your meal should never be lacking in one of Europe's best beer cities. Speaking of which, the widest choice of top local beers is said to be available at Zlý Čas (Bad Times), a pub in the city's Nulše district, which has meanwhile acquired cult status, with at least 48 beers on tap.

Visitors wanting to leave the beaten track can find out more about otherwise unknown aspects of the Czech metropolis by taking special themed tours guided by insiders (can be booked through Prague City Tourism, among other channels). An especially delightful way to see Prague is from the water. A tour on a traditional canal boat provides the opportunity to explore hidden spots and discover new aspects of the Lovely Lady of the Vltava.



# INSIDER TIPS

## Prague Tower

From here, you have the whole of Prague at your feet. At 216 metres, the Tower Park is the city's highest building. Enjoy the breathtaking view, perhaps over a relaxed meal or a delicious cocktail. A sight not to be missed are the huge Baby sculptures of artists David Černý climbing up the sides of the former television tower.



ANDREJ SCHVARC  
Managing Director  
Blumenbecker Prag

## Cyberdog

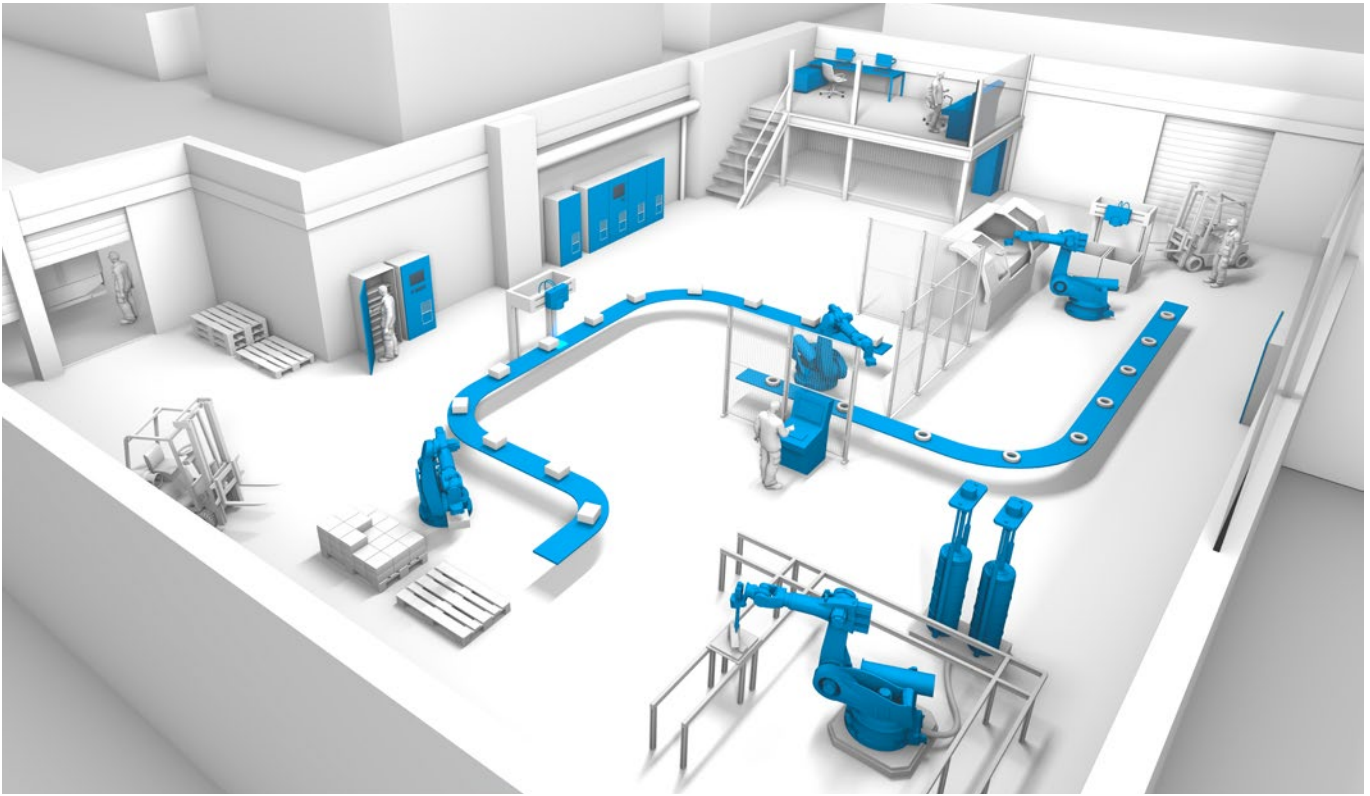
You are probably familiar with excellent waiters, but have you ever experienced a waiter made of shiny metal and a fully automated heart? In this advanced restaurant, a KUKA robot pours your wine. You can also order snacks, soups, salads and much more simply via a mobile phone app.



JITKA KOVAŘÍKOVÁ  
HR/Marketing Manager  
Blumenbecker Prag

*Old Town Square in Prague*





Blumenbecker Prag

# INDUSTRIAL AUTOMATION AT THE HIGHEST LEVEL

Whether it's installing efficient robotic workstations, the automation of entire robot welding lines or placement by bin picking for production machines, Blumenbecker Prag is always in demand when it comes to complex industrial automation assignments. The company has acquired extensive expertise in the robotics industry since it was first established in 1995.

## ROBOTIC SOLUTIONS FOR A WIDE RANGE OF SECTORS

A total of over 130 staff at some five production sites in the Czech Republic plan and execute international projects for a whole spectrum of industries. These range from metal-working companies and the paper industry right through to the energy sector. Close collaboration with car manufacturers Skoda and various automotive suppliers has made Blumenbecker Prag the acknowledged automotive specialist of the Blumenbecker Group.



## EXPERTS IN MACHINE VISION TECHNOLOGY

Special priority has been given to the implementation of machine vision systems. This involves giving robots eyes so that they can carry out measurements and identify, sort and pick up particular items. Sensors and camera systems are creating quasi intelligent machines that can undertake fairly complex tasks. Blumenbecker Prag has developed its own software that can provide optimised support for recognising shape, colour, position and even temperature, the resulting data streams then being processed in realtime into handling instructions for the robots.

## COMPLETE SOLUTIONS FOR BIN PICKING ROUTINES

As well as producing its own software the company also develops and manufactures the sensors and robot grippers in-house. This ensures perfect interaction between the camera and the robots. Blumenbecker Prag's expertise in this area means that it can now offer its customers complete solutions on a one-stop basis.



**136** staff



**20.5** million € turnover



**5** locations



**1995** founded

## SUCCESSFUL PROJECTS...

In order to supply the German market, the Czech company has teamed up with German-based Blumenbecker Industrie-Robotik, the latter being responsible for marketing and project management. Together these two companies have implemented complex bin picking solutions for clients such as Benteler Automobiltechnik and brake specialist Intorq ([for project report see page 22](#)).

*Blumenbecker locations  
in the Czech  
Republic*



New measurement track for the ICE engineering workshops in Munich

# PIT STOP WITH **JUMPING JACKS**







# 71

## JUMPING JACKS

**The new 200 metre-long measurement track at the ICE (or InterCityExpress) workshops in Munich, which came into service in November 2018, is fitted with a series of special props developed by Blumenbecker Technik GmbH. Dubbed ›jumping jacks‹, they not only ensure highly accurate track calibration to a tenth of a millimetre but also provide ventilation for the track inspection pit.**

Five times from Munich to Hamburg via Berlin and back again. Then it's time for an inspection. Each ICE train has a scheduled pit stop every 8,000 kilometres and other check-ups are also carried out on a regular basis. The purpose of this strict inspection routine is to ensure absolute safety for travelling passengers over the train's operating lifetime of some one million kilometres. Germany has eight engineering workshops whose job is to keep Deutsche Bahn's 230 or so high-speed trains rolling, and the ICE workshops in Munich is one of them. Behind the imposing glass frontage,

work goes on around the clock seven days a week and this fast turnaround means that trains are quickly back out on the rails.

### **A 200 METRE-LONG TEST TRACK FOR ICES**

When it is time for an inspection, the entire ICE train is driven into the 450 metre-long workshop where it is serviced on three levels simultaneously: beneath the train, at boarding height and in the roof zone. Adjustment work on the railcar bodies is now carried out on the new 200 metre-long measurement track that was installed in November 2018 and which is also suitable for the new ICE4 models. This meant rebuilding the old test track. The aim was to create an absolutely flat railtrack with a height tolerance of less than 0.5 millimetres. Andreas Sander is project manager at DB Fernverkehr AG: »The precise adjustment work needed between the railcar body and the bogie can only be undertaken when you have an absolutely level track.« The company assigned this important task to Blumenbecker Technik.







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» Our successful partnership with Blumenbecker now goes back some ten years. «

**Andreas Sander**, Project Manager, Fernverkehr AG

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### SPECIAL SOLUTION CALLED FOR

A survey of the existing tracks showed that twice as many supports would be needed as before in order to reduce track deflection to the minimum level laid down in railway vehicle specification DIN 27202-10. However, the resulting reduction in the prop spacing interfered with the existing ventilation technology for the 200 metre-long working pit beneath the track. »A special solution was called for«, says Hendrik Henicke, project manager at Blumenbecker Technik, »and here we

were able to use something that we first developed for another project undertaken for Deutsche Bahn: props that could effectively absorb the resonance generated by the trains while at the same time directing used air out of the pit.« The supports, which are similar in appearance to a child's plaything, were soon dubbed »jumping jacks«.







**200 m**  
measurement  
track



**102**  
props



**7.500**  
screws

#### UPGRADE AND CALIBRATION IN JUST FOUR WEEKS

Work at the Munich site started in October: 102 new props, including 71 ›jumping jacks‹, were installed and the old tracks were relaid and configured. »This was a tough job that meant undoing 7,500 or so M24x120 bolts and torquing them back up to 1,000 Nm« recalls Henicke. But the effort was worth it. The project was completed without any corrections at all. The structure was calibrated in conjunction with the Deutsche Bahn calibration centre. After a rebuild time of just four weeks the first high-speed train could be run onto the new test track for an inspection. »We are delighted with how quickly and smoothly the upgrade went, as each unused track costs us a lot of money. With the cooperation of Hendrik Henicke we were in fact able to put the test track into service one day earlier than planned.«

#### CONTACT PERSON



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INDIVIDUALLY  
**TAILORED**





## 110 workwear lockers for Seelig+Co.

When it comes to individuality, Seelig+Co. Feinblechbau know a thing or two. The Baden-Württemberg company has been in business for nearly nine decades, its 100-strong workforce producing individual items and assemblies from sheet metal

and related materials. It has a Europe-wide customer network that ranges from small businesses to global companies. Each order is individually designed and tailored to the customer's requirements.

### » ANYTHING BUT A ROUTINE JOB «

That means anything goes and nothing comes straight off-the-peg. And that was exactly what was needed when the sheet-metal specialist approached Blumenbecker with an order for some 110 storage lockers for the common room facility at a production shop. The commission featured irregularly shaped rooms and challenging requirements, including an electronic locking system that could be used for time tracking as well as for opening and closing the locker units. This was a challenge that Ulrich Maier, deputy head of Blumenbecker Industriebedarf in Munich, described in the following words: »This was anything but a routine job.«

Whether it's a single screw or ten tonnes of grit, 500 litres of lubricant, a belt grinder or 110 individually designed clothing lockers – Blumenbecker Industriebedarf in Munich is the place to go for a wide range of products and services. The Munich branch opened in 2016 and since then has been providing small workshops and industrial clients alike with everything they need to keep their businesses running successfully. This means stocking more than 500,000 items in the units and numbers required, and with no minimum order limit. Blumenbecker Industriebedarf Munich is one of eight such branches in Germany and its customers include the likes of Zeiss, Voith, Ruag, MTU and 3M.

### EVERY REQUEST WAS MET IN FULL

The concept that Blumenbecker developed with its partner C+P Möbelsysteme was well thought out and had a distinctive and uncluttered appearance: 110 individual lockers, all custom-made, designed for orderly storage and where every specification has been met, from the colour scheme through to the technical features. The units feature a 'blue/white' demarcation that provides a clear line of division between home-wear and work-wear. The closing and time-tracking system has been effectively incorporated into the building's technical services and last but not least some ingenious engineering is used to create zonal ventilation.

**End result:** Mission accomplished! The lockers have been in use for over a year now: they have been very well received by the staff and are highly appreciated by the client Seelig+Co.





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»Everything went perfectly,  
from the excellent advice to the  
price-quality ratio.«

**Sabine Bieber**, CEO, Seelig+Co. Feinblechbau GmbH

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#### CONTACT PERSON

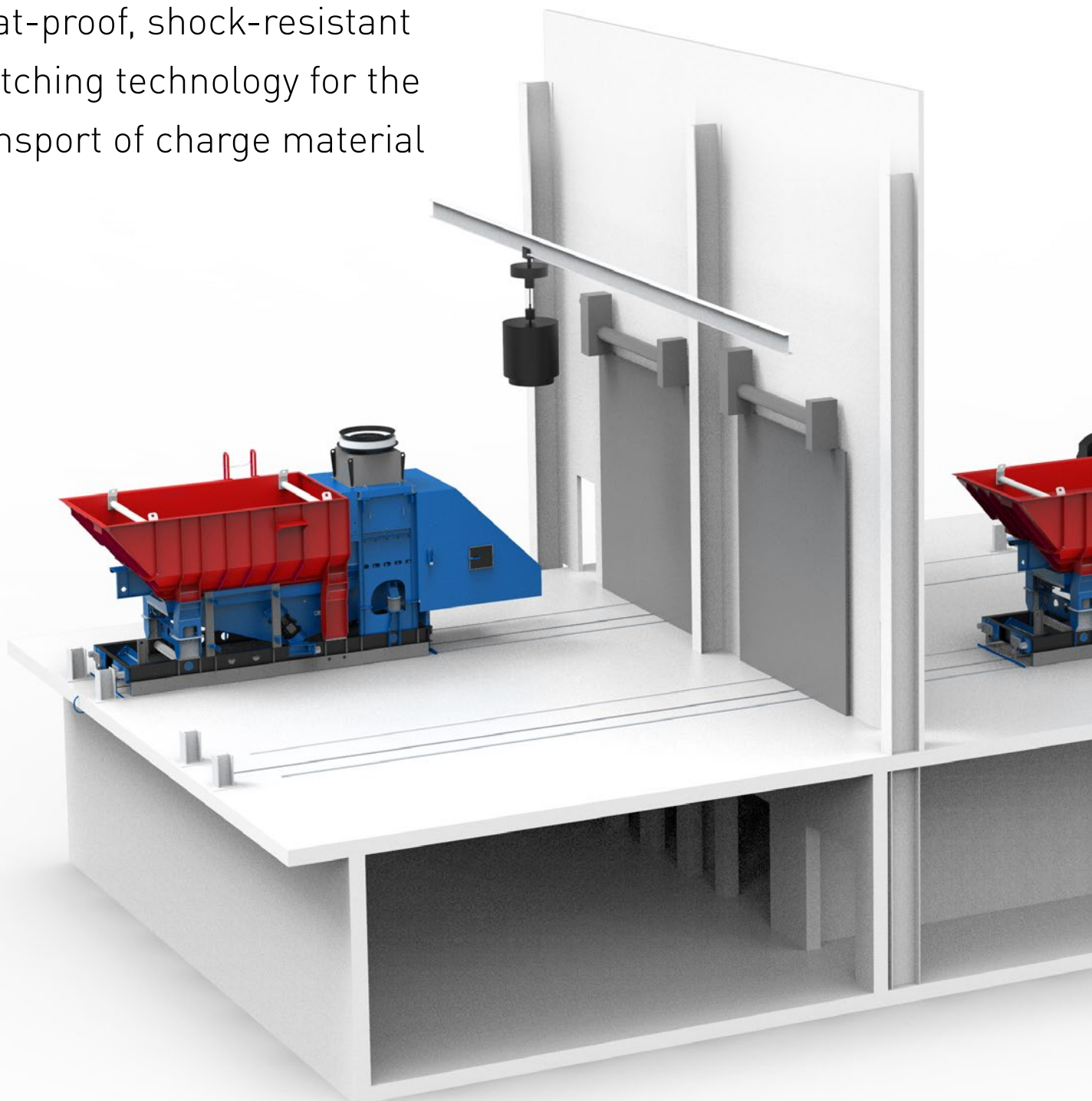


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Jöst GmbH & Co. KG

# TRANSPORTING MATERIAL SAFELY TO THE FURNACE

Heat-proof, shock-resistant  
switching technology for the  
transport of charge material







AUTONOMOUSLY  
WLAN-  
CONTROL

San Luis Potosí, Mexico. The American metal casting company Metal Technologies Inc. is planning to build a new iron foundry here some 440 kilometres north of Mexico City. The main bays are currently being fitted out and the technical systems will follow. This will include Jöst-made vibration equipment. With its corporate headquarters in Dülmen-Buldern, Germany, the globally active Jöst group is an international leader in ›vibration technology for bulk materials handling‹. Jöst has been awarded the contract to supply customised vibro-handling equipment for the foundry in San Luis Potosí, this to include two OUL furnace charging cars.

#### TEMPERATURES OF UP TO 50 °C EN ROUTE TO THE FURNACE

These rail-mounted transport machines will soon be required to carry metal scrap and alloying agents from the holding boxes to the furnace plant and then to deliver them into the furnace. As they travel along this 30 metre-long path, the chargers are subjected to ambient temperatures of as much as 50 degrees Celsius. These are extreme conditions, especially for the sensitive control systems that are directly fitted on-board the cars. »It was the client's express request that the chargers should be autonomously controlled by WLAN«, says Jöst project manager Reinhard Pannenbäcker in setting out the nature of the task. He continues: »For this reason, a heat-resistant control solution had to be found that could also cope with the extreme oscillations generated by the vehicles' vibro-feeders.«



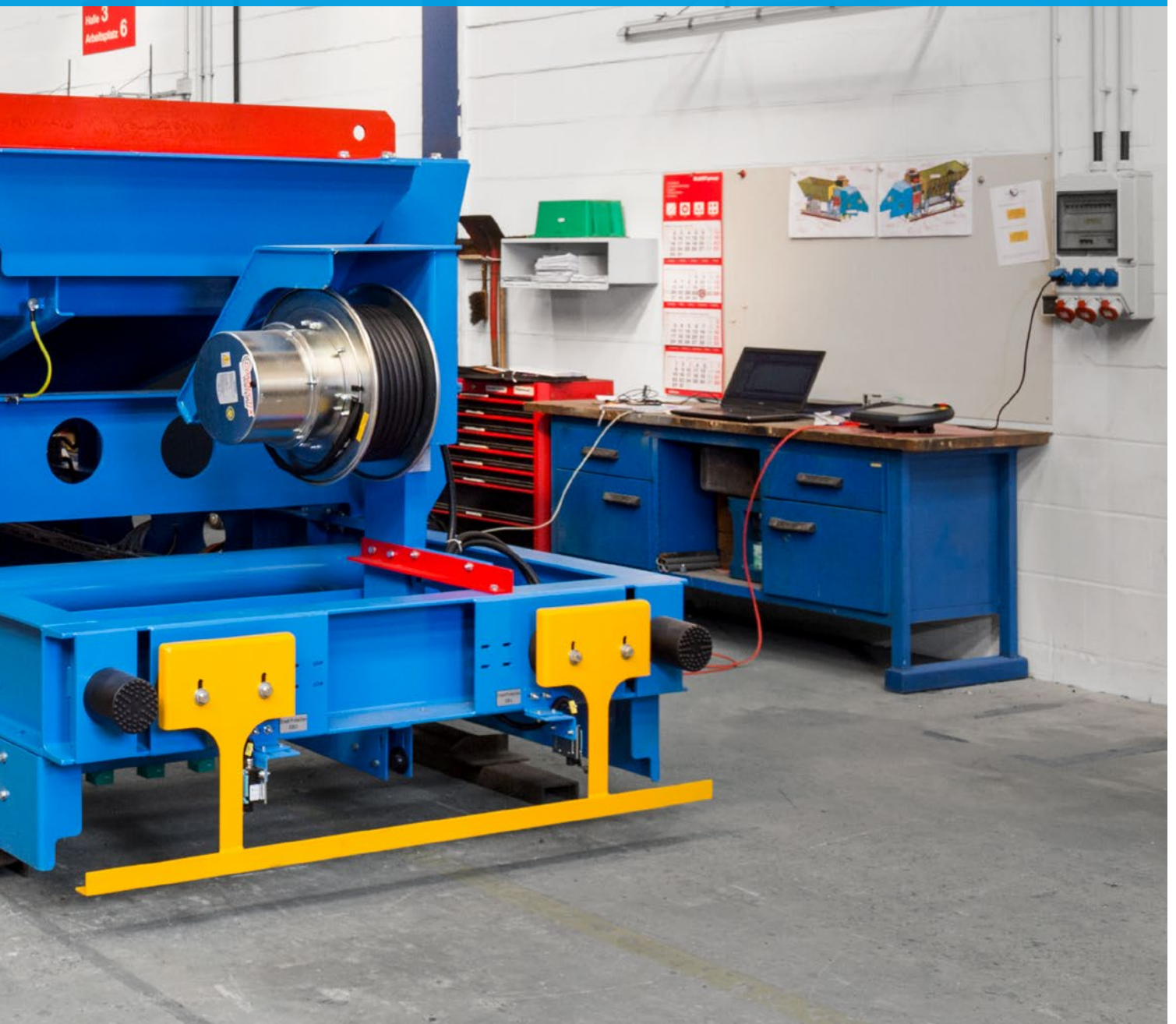


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»Straightforward and flexible.  
With Blumenbecker we have a partner who can  
quickly find an appropriate solution even for  
complex tasks.«

Reinhard Pannenbäcker, Project Manager, Jöst GmbH & Co. KG

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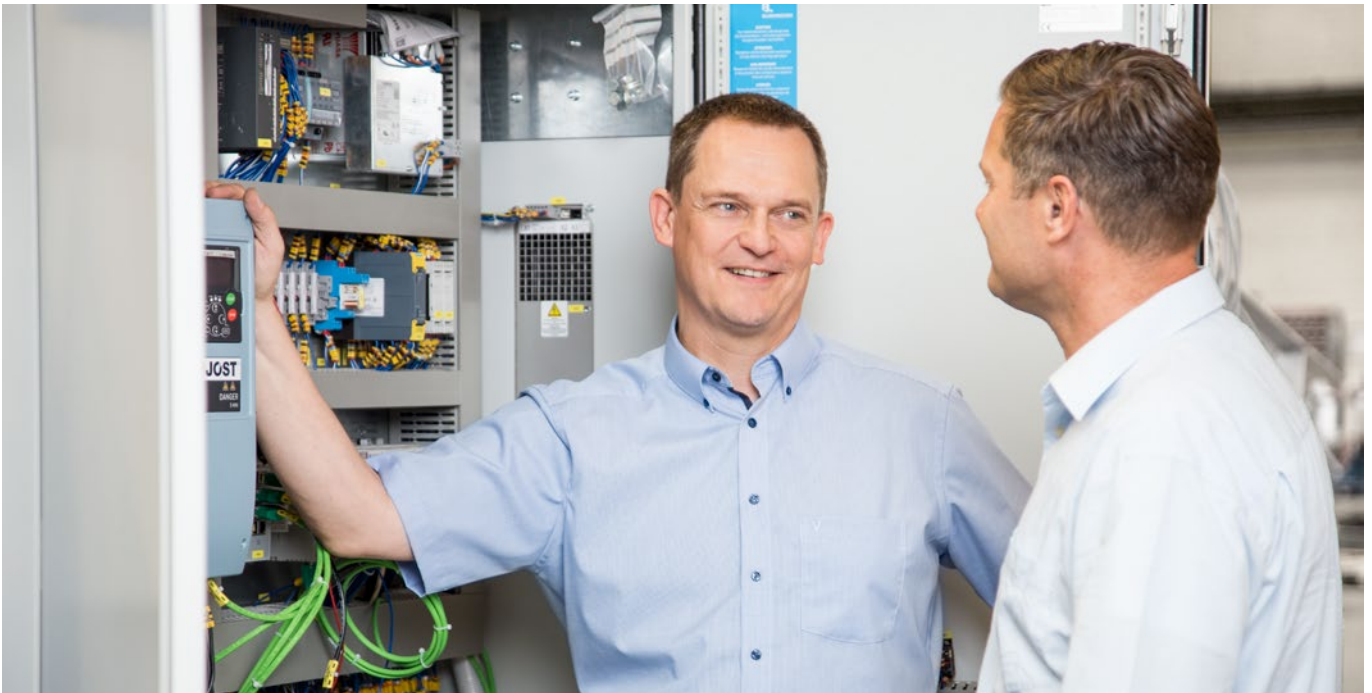


HEAT  
STRESS  
UP TO  
**50°**



*Prabhav Mhapne  
during pre-commissioning*





*Uwe Podlich and Reinhard Pannenbäcker at the last adjustments*

### BLUMENBECKER SUPPLIES AN END-TO-END SOLUTION

In entrusting Blumenbecker Automatisierungstechnik with this work, Jöst has opted to enlist the services of a company that has been supplying the vibro-machine specialist with switchgear since 2005. As well as building the control panels, Blumenbecker will now also be responsible for engineering, electrical cabling, software development and equipment commissioning. »The timetable for the project was set at an ambitious twelve weeks. Most of the work therefore had to be done in parallel and this required the close coordination of everyone involved«, explained Uwe Podlich, project manager at Blumenbecker Automatisierungstechnik. The time frame was made even more challenging when at the start of the project the end customer decided to change the entire proposal that had been part of the bidding phase. »This meant we had to develop a fundamentally new technology concept«, recalls René Findling, who is the key account manager for the project. With the Allen Bradley control system not widely used in Europe, the programming work was handed over to Blumenbecker KAT Automation Private Limited in India. The Indian subsidiary is also responsible for commissioning the charging cars in Germany and Mexico. All tests conducted to date have been handled to the complete satisfaction of the customer. It therefore comes as no surprise that Jöst already has a number of follow-up contracts in the pipeline for which Blumenbecker has been named the turnkey supplier.

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*Project manager Jonas Großhode  
is pleased about the new website*

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