

SIMPLE SOLUTIONS
FOR COMPLEX SYSTEMS

MiniTec
THE ART OF SIMPLICITY



Since 2015 MiniTec has successfully continued to grow under the new management: Andreas Böhnlein, Ulrich Wigand and Tobias Doll (from left to right).



MiniTec GmbH & Co. KG (Germany)

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- 10 locations worldwide
- representation in 60 countries
- 360 employees worldwide

Demanding solutions require a quality working environment. We develop state of the art automation solutions at our headquarters in Schönenberg-Kübelberg (Palatinate) with 12,000 m² production area and 3,000 m² office space.

Since its founding in 1986 MiniTec has been continuously growing from a specialist in miniature ball bearings to becoming a leading technology company. Today our 360 experts at 10 locations in Germany, France, USA, United Kingdom, Spain, Slovakia, Slovenia and China develop tailored solutions for our clients. Over 60 partners worldwide ensure reliable service and competent consulting.

An integral element of MiniTec's philosophy is to keep essential components in-house and control the quality. This applies to our modular construction system as well as for our linear technology. We achieve efficiency with highest reliability owing to the modular principle, by avoiding a superfluous variety of products, and

by constantly developing our CAD software. Accordingly, the expectation of our profile system is: **The Art of Simplicity.**

Based on our construction system we implement sophisticated solutions for a variety of tasks in all industrial sectors. Among our clients are important industrial companies worldwide. We are working on trend-setting developments in Ergonomics and Industry 4.0 cooperation with leading research institutes, such as the DFKI or the Fraunhofer Institute. The motto for our complete solutions matches closely the high technical demand: **The Engineers Choice.** ■

TRADITION AND INNOVATION:

WITH VISION AND STRENGTH TO SUCCESS.



From its 1986 beginnings with miniature linear guidance systems, it developed itself into a worldwide recognised full-service provider with about 360 employees located at nine plants and over 60 partners and service stations worldwide. The MiniTec modular system with its proven and flexible components for automation technology

and plant construction is appreciated and used by leading companies worldwide. Based on these systems, MiniTec offers the entire spectrum of a full-service manufacturer: From consulting and planning with its own software development to assembly at the customer, including training and after-sales service. ■

1986

Founding in Bensheim (Berg street)
by Gernot Conrad and Bernhard Bauer

1991

Patent for non-machined profile connectors
Relocation to the new building Waldmohr / Palatinate

8 employees in Germany

1996

Certified according to DIN EN ISO 9001
Attended first trade fair HMI and Motek
Expanded production area by another 1000 m²
Developed assembly line for photo-voltaic modulese

30 employees in Germany

2001

Formation of MiniTec S.N.C. (France)
Formation of MiniTec Framing System LLC (USA)
Formation of MiniTec UK Ltd. (UK)
Formation of service and assembly office Zirndorf

70 employees in Germany

2006

Certified according to DIN EN ISO 14001
Certified according to DIN EN ISO 18001
Awarded 'innovative medium sized business'
New construction of linear center Waldmohr / Palatinate

136 employees in Germany

2011

Formation of MiniTec España S.L.U. (Spain)
Relocation to the new centre Schönenberg-Kübelberg / Palatinate
World market leader in laser welding equipment for solar thermal energy

180 employees in Germany

2016

10 locations worldwide, representation in 60 countries
Awarded 'attractive employer Rhineland-Palatinate'
Formation of MiniTec System Technology Co., Ltd. (PR China)

240 employees in Germany

360 employees worldwide



MANUFACTURING AND DESIGN:

FROM PLANNING TO IMPLEMENTATION.

Based on our proven profile system our engineers create ready-to-use solutions for any task. Our customers benefit from our extensive experience in virtually all industrial sectors.

Profile system and linear technology

Linear technology and profile systems are complementary goods. Linear guides are necessary in numerous designs. Our linear plant in Waldmohr can draw from 30 years of experience. High-precision rotary guides and rail systems are processed at our state-of-the-art production facilities. Our extensive warehouse and the special change-over-technique, combined with CAD/CAM programming, guarantee the shortest possible delivery time. Cost-effectiveness is ensured from individual manufacturing to mass production.

Construction

More than 30 experienced engineers constantly develop and test new components at our parent company for the MiniTec profile system. Based on this system, tailor-made solutions for the most diverse applications are developed after intensive consultation with our customers. For example, from the Ergonomics Team originate comprehensive manufacturing solutions with workstations, Kanban production control, Pick-to-light commissioning, and electronic operator guidance. In changing teams for the respective order to be compiled, are further tasks such as workpiece transport, quality assurance, automation and safety assessment in accordance with the relevant provisions. All the necessary competencies, ranging from mechanical design to electrical engineering, cabinet layout, programming, data processing, set up and on site assembly including remote maintenance are available in-house. Our customers benefit from our comprehensive

expertise and experience through numerous developments for the widest range of industries and problems.

Assembly and Service

Our services do not end at the factory gate. Complex production facilities, such as complete assembly lines for the solar industry or automatic laser welding systems – do reliable work worldwide round the clock, – including among others USA, Malaysia, Ghana, China, India, Australia, or Korea. Our service teams ensure smooth operation by fast remote maintenance and regular software updates. Whenever there is a need for repair, training, or extension, our experts will get to your site as quick as possible.

Customer service

In Germany alone there are 14 consulting offices supporting our customers by analysing problems and developing first approaches to the solutions. Worldwide, our partners can call on more than 60 support bases. In close cooperation with mixed teams from sales and construction, proposals for tailor-made solution are developed in the shortest possible time. ■

The design of new components requires the highest degree of precision. MiniTec ensures this by constant optimisation of production and manufacturing processes.

- customer-specific solutions
- professional production processes
- smooth operations



Miniftec

ERGOTAB RESEARCH PROJECT
with the Fraunhofer Institute in Rostock





RESEARCH AND DEVELOPMENT:

FOCUS ON THE ESSENTIALS.

In cooperation with renowned research institutes such as Fraunhofer Institute and the Institute for Artificial Intelligence (DFKI) we address the developments that will change the future working world. With the support of the federal government, completely new kinematics for the manual assembly are currently explored.

Cooperation with technical colleges

Our company benefits from the close proximity to numerous technical colleges and research institutes. Many graduates of the Technical University of Kaiserslautern, University of Applied Sciences, Kaiserslautern specialised in the areas of industrial engineering, logistics and environmental protection work in our company. Close cooperation exists with the University for Technology and Economy (HTW) Saarbrücken, which has specialized particularly on the formation of software developers. We award scholarships for students and offer internships, and Bachelor or Master degrees.

The quality

Since 1996 our company has maintained a process and customer-oriented certified quality management system. Customer satisfaction and the delivery of error-free products are our top goals.

Good technical advice as well as a comprehensive service are important to us, as well as comprehensive service in all areas ranging from storage and production to construction and sales. Key factors for us are motivated and well trained staff, as well as partnership cooperation with our suppliers.

Protection of the environment

Careful handling of resources and active protection of the environment are fundamental principles of our corporate philosophy.

Among other things we choose our service locations as close as possible to the customer, in order to avoid long transport routes. Our environmental management system is certified according to: DIN EN ISO 14001.

Occupational Health and Safety

In 2006 MiniTec was awarded the excellence certificate OHSAS 18001 in occupational health and safety.

Organisation and IT security

Maximum efficiency, responsiveness and customer orientation in the modern economy are only possible with the latest IT technology. We are in the position to create catalogues that address the individual needs of our customers due to our ERP software especially programmed to connect with the Product Information System (PIM). The flood of redundant data and information is thus effectively reduced. Data security is assured through close cooperation with specialized companies. ■



“Since 2011 we have been working very closely together with the Schöenberger firm. As one of the first small and medium-sized enterprises, the company has been involved with the Industry 4.0 theme as a member of the technology initiative, and this emphasises the innovative power of the company: MiniTec is an example that even small and medium-sized companies develop a high innovation potential and is able to actively contribute to such an important subject as Industry 4.0. We are looking forward to many more years of joint activities and innovations.”

PROF. DR.-ENG. DR. H.C. DETLEF ZÜHLKE

Chairman of the board of the technology initiative SmartFactory KL e. V.



Photo: SmartFactory^{KL}

EMPLOYEES AND THE ENVIRONMENT:

COMMITTED TO SUSTAINABLE ACTION.



MiniTec pursues a sustainable personnel policy, enabling generations of cross-functional teams to work together to find solutions. Knowledge and experience can be optimally used this way.

- continuing education
- individual promotion
- responsible environmental commitment

As an international company we consider it vital, to treat our employees fairly and responsibly in order to guarantee long-term success.

MiniTec is aware of its responsibility toward its workforce. In this spirit, we create demanding jobs at each location, offer forward-looking education to the youth, and offer all employees opportunities for professional and personal further education. Employees of more than 20 nationalities work in mixed teams perfectly together. We use meetings with participants from all areas of the company for continuous further development and improvement of processes and products.

Everyone in the company deals responsibly with its environment. Everyone is committed to keep their workplace clean, to avoid material waste, air, water and soil pollution, as well as noise, and to collect recyclable goods to be re-used. ■





BJÖRN MOHR
Process Automation

“Whether hardware or software, the company always makes available the best and most up-to-date. We already use the standards of tomorrow, today. For internal research and development projects resources are available at any time. This strengthens innovation and takes us forward! Our presence as a full service supplier and system integrator in special machine engineering ensures an incredible diversity and a very interesting job – worldwide! I am proud of helping to shape pioneering technologies by working on a research project such as ERGOTAB.”



JOCHEN HELLBRÜCK
Engineering Automation Technology

“Already during my Masters degree, I have been supported by MiniTec not only through the provision of material and control engineering, but also by the good advice of competent colleagues, my impression of MiniTec has strengthened as a future-oriented and innovative company. It is therefore even more pleasing that it enabled my entry into professional life here after graduation, where I can apply my skills in varied and interesting projects.”



JOHANN FLEIG
Head Assembly and Storage

“I migrated in 1990 from Russia, and was at first accommodated in a reception centre with my family. At the beginning of 1991 Mr Bauer hired me as the company’s first employee. At first I was employed as a mechanic; in time the company grew and I took over the management of an entire department. From the beginning I was accepted into MiniTec like a family member and I’m very happy in my work. In particular, I like the good working atmosphere, and that the leaders always have an open door.”



MINITEC LINEAR TECHNOLOGY

The modular system: from pre-assembled shaft up to modules with drive and control





▲
MIŁOS HADAR
 Managing Director, MiniTec Slovakia s.r.o.

◀
MINITEC SLOVAKIA S.R.O.
 Slovakia



▲
PETER ŽAGAR
 Managing Director, MiniTec d.o.o.

◀
MINITEC D.O.O.
 Slovenia



▲
MINITEC UK LTD.
United Kingdom

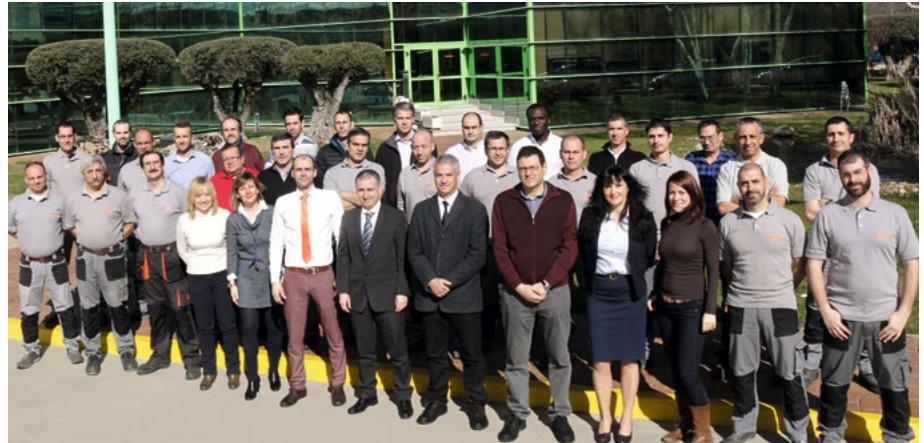
▶
GARY LIVINGSTONE
Managing Director, MiniTec UK Ltd.



◀
**MINITEC SYSTEM
TECHNOLOGY CO., LTD.**
China



◀ **MINITEC S.N.C.**
France



▶ **MINITEC ESPAÑA S.L.U.**
Spain



◀ **MINITEC FRAMING SYSTEMS LLC**
USA



EDUARDO VIGO
Pre-assembly Employee

"I come from Peru and am pleased that I can work in this company. I have great colleagues, a beautiful and clean work place, and our Chef greets all employees by name."



PATRICK JAECK
Managing Director, MiniTec S.N.C.

"In my professional life I have worked in large, medium-sized and smaller companies. Everywhere there are problems. I have been with MiniTec for more than 10 years. I am still searching for something wrong with MiniTec, but so far I have not found anything."



DAVID MARTOS
Managing Director, MiniTec España S.L.U.

"Before MiniTec took over our company, it belonged to a very large group. For me and my colleagues the positive working climate and the flat hierarchy was a completely new experience. This makes the work easy and fun, it is like in a big family."



TRAINING AND CAREER:

WITH VISION AND EXPERIENCE TO SUCCESS.

Fully-trained employees are the prerequisite for perfect solutions for our customers. With a consistently high training quota in the most diverse areas we are constantly well prepared for growth in demanding applications.

Our demanding, tailor-made solutions for our customers can only be realised with fully trained staff. Often there are service assignments at customers or commissioning all over the world. For these tasks we form our specialists in-house. With a training quota of over 10 % our company is well above the average. In addition to vocational school, our trainees are prepared for future tasks during in-house hands-on training . The above-

- more than 30 apprentices
- constantly high apprenticeship ratio
- above-average test results

In our own training workshop, future employees become fully acquainted with individual production techniques. Only in this way can we ensure consistently high quality.

average test results of our trainees and the feedback from our customers regularly confirm the success of our training. In addition, the successful completion of an internship at our company is for many young people a solid basis for further education as a technician or engineer. ■





“The MiniTec GmbH & Co. KG from Schönenberg-Kübelberg is seen as an attractive employer in the West Palatinate. The manufacturer of profile, linear, and workplace systems and solution provider for factory automation devotes great effort as an employer. In recognition, Economy Minister Eveline Lemke presented MiniTec with the award ‘Attractive Employer Rhineland-Palatinate’ at a ceremony on 18 November 2015. The company received the award for transparent career opportunities, a respectful personnel policy, and its commitment to the children and youth work activities within the community.”

ICC PALATINATE

Skilled labor and qualification counseling





JESSICA CASTIGLIONE

Working Student

“During my studies, through my internship at MiniTec and a subsequent two years of work study, I had the opportunity for practical work on projects. This way I could gain important insights about my future career. Even greater was the joy to continue my career in a distinguished and internationally active company like MiniTec. Here is the working environment and conditions that matches with my ideas.”



RONJA SCHILLIG

Student

“In the context of my dual study courses with the University of Kaiserslautern and the MiniTec firm, during semester breaks, I have the opportunity to apply theoretical knowledge to practice. The familiar working environment and the friendly competent colleagues allow me an excellent opportunity to practice my acquired knowledge.”



DENISE BRUCKER

Marketing Intern

“During my studies in the field of International Marketing the practical application was always relevant. Therefore I also was looking for a company that offered this to me during my Bachelor thesis. The MiniTec GmbH & Co. KG was the right partner. The company enabled me, thanks to a research project of their own, to collect insight into the individual processes, and thus it was possible for me to gather much additional knowledge in light of my future career.”



CUSTOMER TESTIMONIALS AND REFERENCES:

OUT OF CONCEPTS COME PRODUCTS.



CORNING



Mercedes-Benz



Lufthansa



SEW
EURODRIVE



SIEMENS



thyssenkrupp



FEUERWEHR KIRKEL
Löschbezirke Limbach, Altstadt, Kirkel-Neuhäusel





FURNITURE MANUFACTURER

Mr Groel, Dept. of Material Handling

“Ergonomics, economic efficiency and 5S principles are a high priority for our new production. The new workstations from MiniTec with optimised holding areas, workpiece deployment with KanBan changing carriage and motor-friendly lifting device are a great assist for our employee. In this way, the assistance system with pick-to-light method and electronic display of correct assembly position and installation variant makes for reliable quality despite the wide variety of our products.”



FURNITURE MANUFACTURER

Staff of the Dept. of Industrial Engineering

“We had the task of producing a product with a large number of variants in the shortest possible time in order to relocate to our new facilities. The special challenge was to produce numerous variants with semi-skilled operators in several shifts and economically in an assured quality.

MiniTec provided us valuable assistance with professional advice, an intelligent assembly line with electronic machine operator guidance, Scan2light pick system, and integrated quality control. We are convinced of the competence in automation and ergonomics of MiniTec.”



SEW GRABEN-NEUDORF
Mr Albrecht, Business Unit Service

“Our self-developed extremely efficient production methods require very special workstations, manufacturing stations or transport facilities. In order to protect our precious know-how these assets are created in-house. For the construction, the iCADassembler 4.0 free software is a very useful tool with automatic parts list creation and integrated plausibility check, suitable for the system. The operation of the CAD system is very easy. The latest features and tricks from experienced designers are passed down in regular workshops.”



SEW BRUCHSAL
Mr Wittmer, Head of Production Equipment

“Industry 4.0 is an already practice reality for SEW. The rapid development of new processes and production methods requires among other things also the immediate adjustment or the creation of entirely new operating resources. The high requirements for flexibility and quality in respect to the economy can be observed only through in-house production. The MiniTec profile system is ideally suited for this task. The system is strictly built according to the modular principle, so that all the components fit together perfectly. In particular the patented connection technology is of advantage, complex processing is not necessary and subsequent adjustment is no problem. This system allow the most demanding solutions to be realised in a very short period of time, even without a detailed design.”



PROMINENT

Mr Berneck, Production Equipment Design

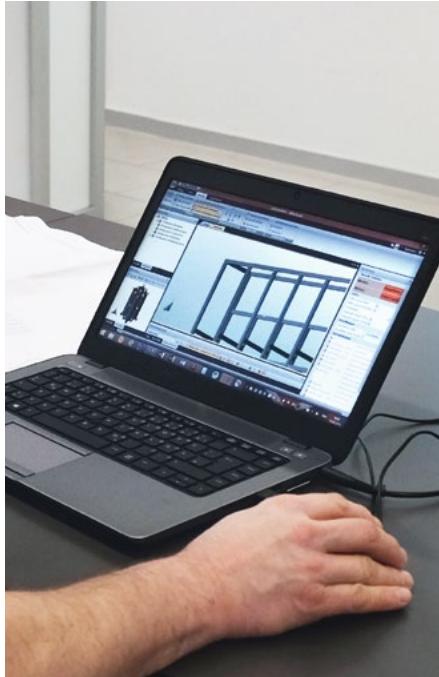
"For more than 50 years our pumps have been used under the most difficult conditions. Highest reliability and quality are indispensable prerequisites. Only with our own research and development as well as with great production depth can we maintain the high quality standard. This also applies to our production facilities, that we develop and manufacture in house for all prominent locations worldwide. We use the proven MiniTec profile system with the rational connection technology and the mature system components. Most designs are created with the MiniTec iCADassembler 4.0. With this tool we really save a lot of time in construction."



PFW AEROSPACE

Mr Steringer, Head of Manufacturing Equipment

"Our sophisticated products for the aircraft industry require the highest level of precision, that can be processed only with reliable production resources. MiniTec has delivered a drilling system for processing very high quality tubing, that meets our requirements for great precision in every respect. The system is extremely flexible and economical for workpieces from 80–3500 mm in length with a maximum deviation of 0.05 mm in each plane. This precision we would not have thought possible from an aluminum profile."



DÄTWYLER PHARMA PACKAGING

Mr Müller, Servicing

Mr Schneider, Servicing

“Just-in-time production of pharmaceutical packaging makes maximum demands on machine availability, flexibility and hygiene. This is a major challenge for servicing. In particular, changes in the process must be implemented without loss of time. For this reason the necessary devices are created in-house, based on the MiniTec profile system. For us, the iCADassembler 4.0 design software with integrated plausibility checking and automatic BOM is a huge help.”



ERNST KLIMMER

Mr Klimmer, Managing Director

“As an automotive supplier, we are particularly concerned that our systems function reliably and economically in 3-shift operation as well. In cooperation with MiniTec we have developed an interlinked plant, where very precise vehicle parts are processed with minimum use of personnel and the quality of the machined parts is monitored. A spiral conveyor buffers parts for several hours of production. Two rotating machines are fully automatically fed from the buffer, the removal of the parts produced is carried out by a portal robot from MiniTec, which supplies the following process modules. Competence, service and the very good working relationship with MiniTec convinced us.”



KIRKEL FIRE DEPARTMENT

Mr Klaus, Fire Brigade District Leader

“As early as 1998 we started with a radical design for the interior structure of a fire fighting vehicle. In 2005, through personal contributions, our truck was developed and placed in service in an expanded role as an advance and lead vehicle.

Particularly helpful was the ease of installation of the MiniTec modular profile system. Colleagues in our fire district, with no technical knowledge, were able to install and mount the rack very quickly. Interim changes in the loading of the vehicle can be easily carried out simply without the problem of loosening the profile connector and shifting the profile.”



SIEMENS

Mr Franosch, Plant Manufacturing

“For development of new standard tables, we increasingly apply the MiniTec iCAD 4.0 assembler software. This enables fabricators to construct ideas already in the workshop, and at the end, even provides a complete parts list. We can see here in our table fabrication workshop that with a complete list of cut lengths per profile, no further processing is required. Thus the profiles can be tailored and a new workbench immediately constructed. This type of modular fabrication system with the MiniTec ProfileSystem also allows us to make quick desired attachments to already completed worktables by other manufacturing employees.”

VALUES AND COMMITMENT:

RESPONSIBILITY TO SOCIETY.



We take our social responsibility very seriously. This responsibility applies not only to our employees but also to our environment and the development of our society.

For many years MinTec has supported the Arnold Janssen school for orphans in the Soweto slum. MiniTec ensures a supply of clean drinking water to 30,000 people through use of a deep well on the school grounds. A further focus of support is the Reinha Rosary Health Center in Githunguri/Nairobi. This clinic is the only health facility for

roughly 120,000 people. MiniTec is an outstanding example for a successful development aid.

Local schools, kindergartens and sports clubs receive generous benefits from MiniTec. Our sponsoring activities concentrated especially on supporting early-music education in day care centres, promoting German and foreign languages teaching and sport for youths. ■



RELIABILITY AND SERVICE:

PARTNERS AND LOCATIONS NEAR YOU.

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Celje (SI)
Rabca (SK)
Helsingborg (SE)
Hampshire (UK)

NORTH AMERICA

Victor (US)

SOUTH AFRICA

Port Elizabeth (ZA)

ASIA

Taicang (CN)

WORLDWIDE NEAR YOU

