Smart Engineering is our Passion



Welcome to the world of blue automation

Who we are

blue automation is THE competent partner for innovative automation technology.

With us, the customer gets the complete electrical engineering for automated plants and machines, customised from a single source: precise, reliable and cost-saving.

As passionate engineers, we offer all the necessary services in the fields of software development, robot programming and virtual commissioning, plant control, hardware design, building automation, visual measuring and camera systems.

Each of our customers is supported by a personal contact person until the system is up and running - and, if future expansions are planned, of course beyond.

We fulfil your wish for an automated system down to the last detail, precisely and costeffectively: from the first innovative idea to trouble-free production.

Smart Engineering is our Passion.

Use our expertise to your advantage:

- Through our many years of experience with a wide range of customers, we speak the language of every customer
- We recognise your actual needs and find exactly the solution you need
- Experts from all the necessary disciplines are part of our team
- Our solutions are always open to future expansion, if you so wish
- Through a virtual commissioning carried out in advance, we offer you maximum reliability with the lowest possible start-up costs
- You will be looked after by your personal contact person - until your system is up and running.



Facts & Figures

2013

Year of foundation

Thomas Grahl founds blue automation as a one-man engineering office, which quickly grows with the requirements and develops into an engineering office for automation technology of complex control, assembly and production systems.

54

Employees

Our team of experienced specialists in automation and control technology is characterised by openness and flat hierarchies. In our work, we like to think outside the box - without losing sight of the big picture.

11

Industries

Our knowledge spectrum is as broad as the industries in which our customers operate: from automotive incl. their suppliers, to pharmaceutical and medical technology, concrete block and construction machinery, to filling and packaging plants in the various food industries.

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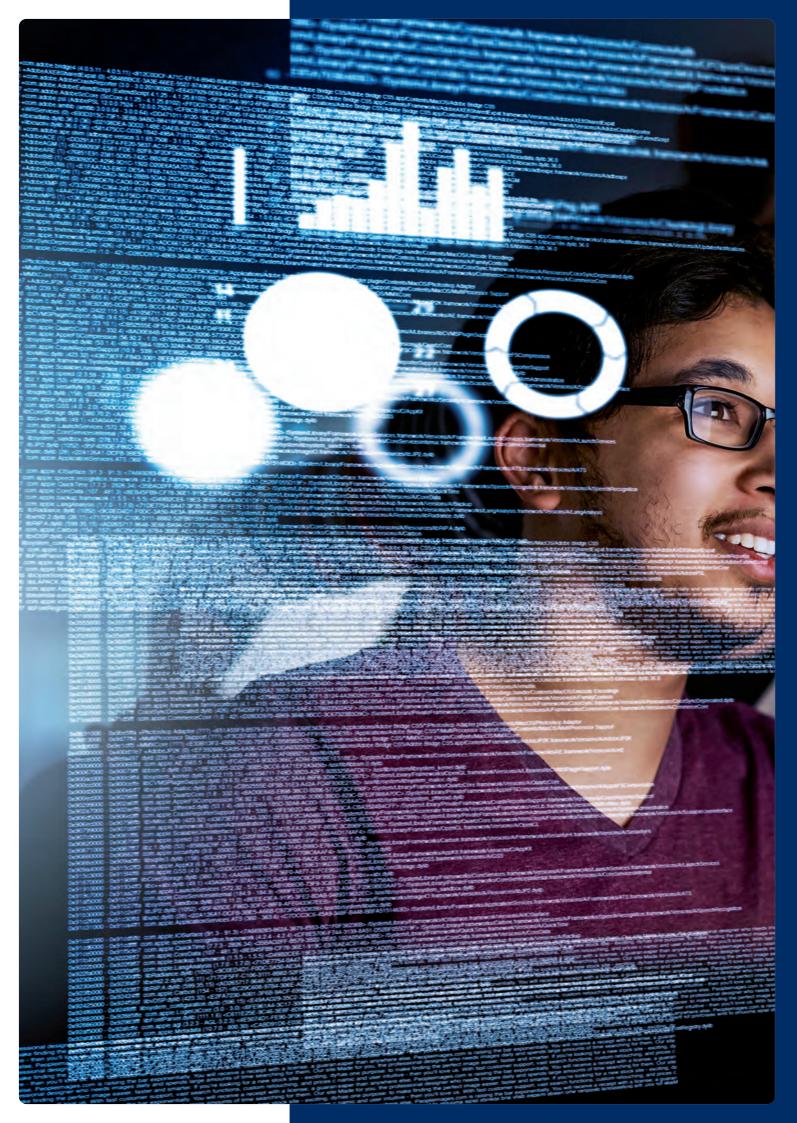
Business areas

Our areas of expertise include hardware design, PLC software development, robot engineering, visual measurement and camera systems, virtual simulation on the digital twin, standardisation & automated code generation, control system retrofit and building automation.

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Global locations

In addition to our headquarters in Germany, we have offices in Poland, China, India and the USA. Our specialists place their expert knowledge at the service of our customers worldwide and at all times. Our back office is available globally.



SPS Software Engineering & Solutions

You want maximally reliable PLC solutions?

We automate your plants and machines to the highest standards.

For your control and visualisation requirements - whether fully or partially automated - we create individually operable interfaces and powerful software specially tailored to programmable logic controllers from all well-known manufacturers.

The use of modular PLC modules as well as automatic code generation and the application of agile innovative techniques enable us to create a transparent programme in a time-saving manner. We develop hardware & software on a component basis.

Flexibility and dynamism allow us to accept orders even at short notice. We support you in the areas where you really need support.

Our goal is to put your system into operation error-free and on time.

OUR APPLICATIONS

- Siemens (Tia-Portal, S7 Graph, S7-Classic, S5, Safety Integrated, Simotion, etc.)
- Rockwell / Allen-Bradley (RSLogix 500, 5000, RSStudio5000, RSMotion, GuardLogix, etc.)
- → ABB (AC500)
- --- Beckhoff (TwinCat)

YOUR ADVANTAGES

- $\hspace{1cm} \longleftarrow \hspace{1cm} \text{Innovative programming and transparent software development}$
- --- Hardware and software (almost) simultaneously
- --- Implementation of future-proof programme elements
- --- Easily understandable and logical software structures

Hardware Design

You want the top specialists for planning and implementing your circuit diagrams?

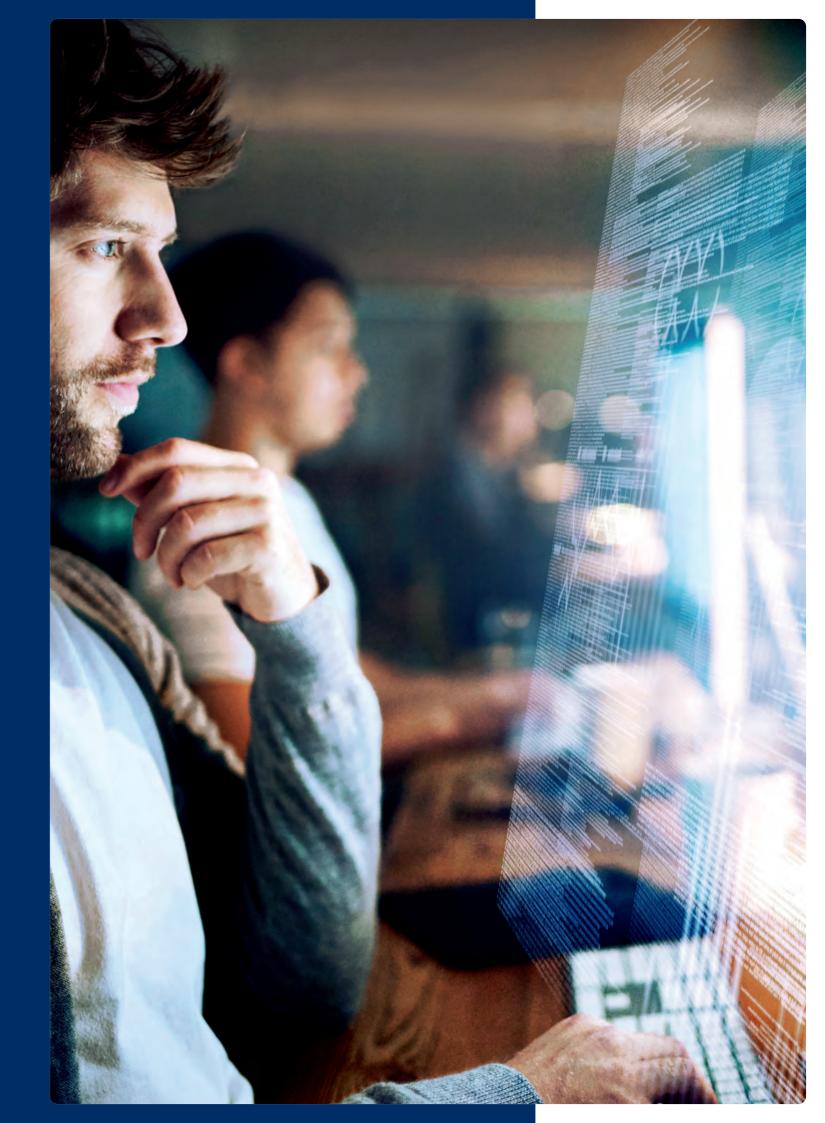
We are an ePLAN Certified Engineer.

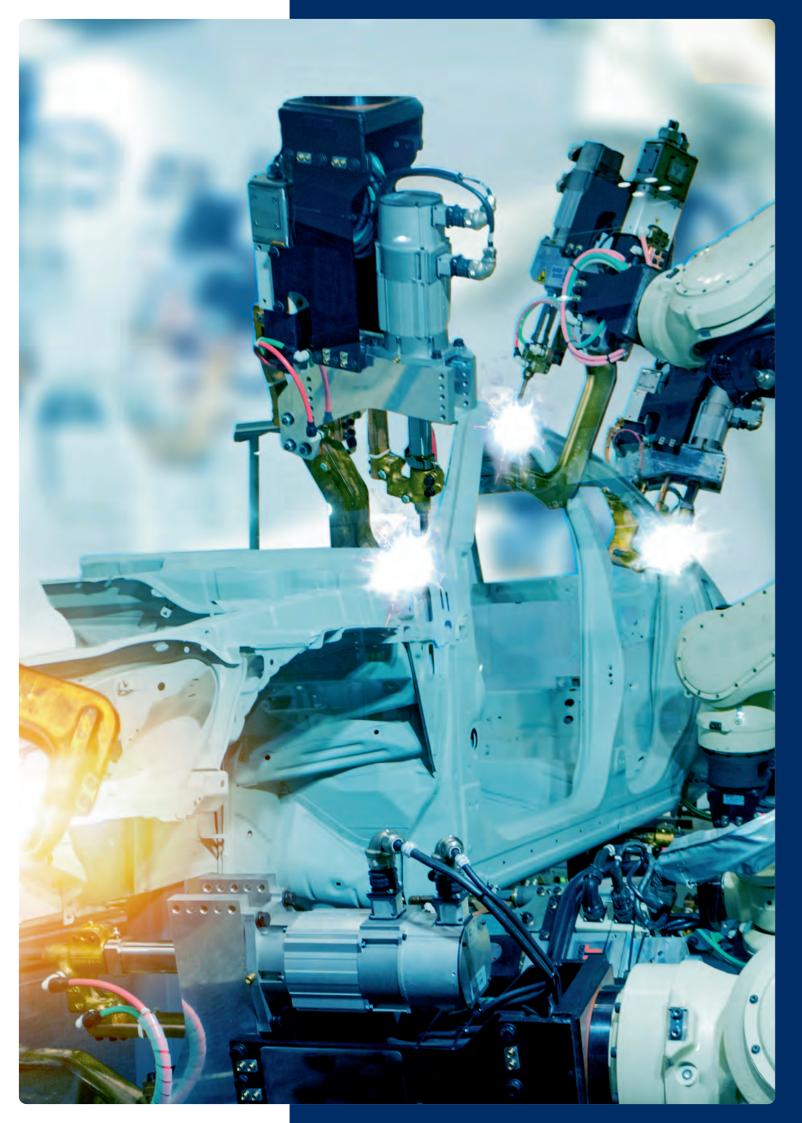
Analysis, planning, conception, design and implementation of complex circuit diagrams for automation technology in industry are all available from us from a single source. We conscientiously examine the initial situation and your needs. Together with you, we create a precise project plan and advise you beyond commissioning.

For hardware planning, we work with ePLAN, the standard tool in German industry. With the CAE and CAD solutions of this tool, circuit diagrams for different areas of application can be drawn exactly in accordance with technical and standard requirements. The powerful software comprehensively records automation projects - from the from conception to application and documentation.

OUR COMPETENCES

- --- CAE system EPLAN P8 (also 5.70 still possible)
- ← Electrical design according to DIN EN 61082 and UL
- Sistema calculation and verification
- ── EPLAN certified engineer since 2021





Robot Engineering

You want precise and efficient processes?

We create measurable added value by optimising your processes.

We optimise your automation processes with precise and highly dynamic motion sequences with consistently high quality and continuity.

Our cycle time analysis precisely records the cycle of the production process and optimises it to the maximum. The shorter the cycle, the more efficient the process and the more products can be produced in less time. We are happy to accompany you throughout the entire process - from the concept phase to commissioning.

By simulating the robots in advance, in conjunction with the programmable logic controller, we test all subsequent motion sequences in order to put all robots into operation more quicklyan d without damage.

OUR APPLICATIONS

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— ABB

── Fanuc

· Yaskawa / Motoman

── EPSON

— U

Human-robot collaborations are also part of the work and production processes. We support and accompany companies in which humans and collaborative robots work closely together.

Virtual Commissioning & Digital Twin

You want to commission your automated system quickly and reliably?

We make it possible with our test simulation.

Even before the actual commissioning of a machine, we can simulate all modes of operation and thus identify faulty designs at an early stage. Through virtual prototyping, we recognise in the design phase whether processes will function as planned. We virtually simulate exactly those processes that will later be take place in reality.

OUR APPROACH

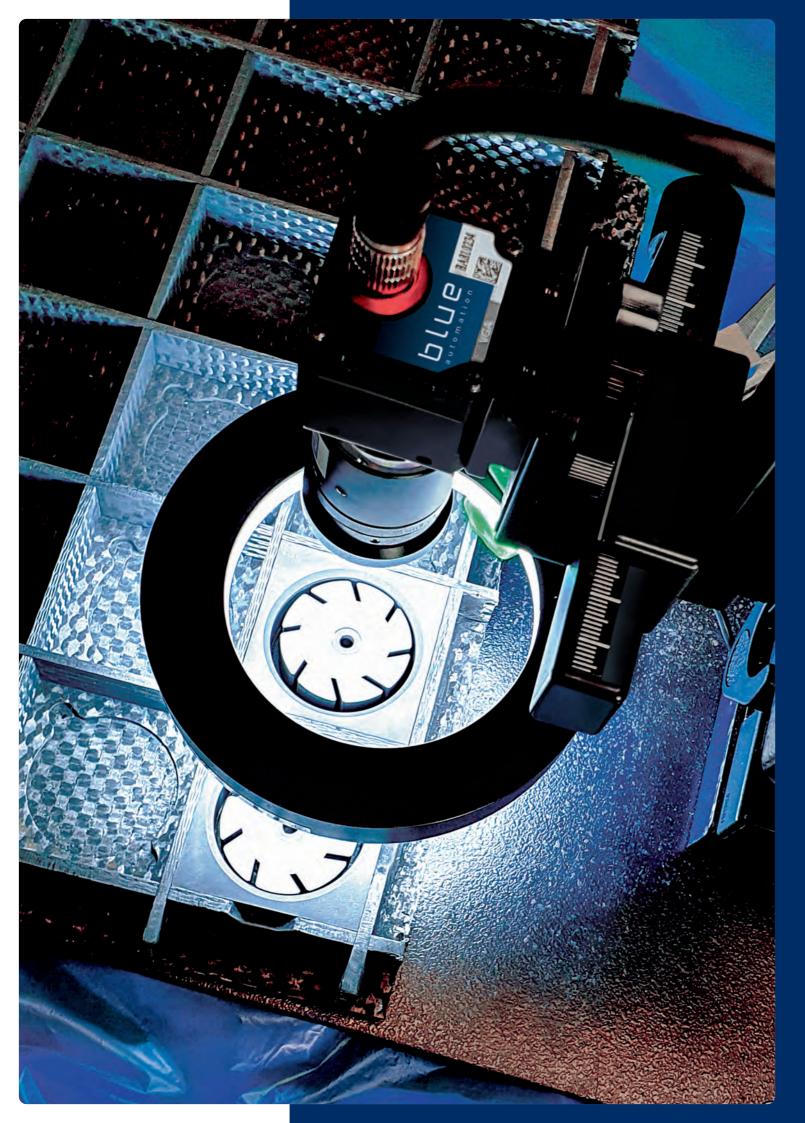
- --- 3D data from mechanical design
- Implementing physical properties
- Simulation of the mechanical process
- $oxed{}$ Testing the robots and PLC programmes on the digital twin

YOUR ADVANTAGES

- Risk minimisation through safeguarding of the mechanical construction
- Faster commissioning of automated plants
- → Higher quality of software programmes
- Early training of operating personnel on the digital twin
- \longrightarrow Savings in time, costs and resources







Vision Inspection Systems

You want consistently high product quality and fast processes?

We ensure successful visual inspections.

We work with high-quality camera systems for quality control and assurance as well as to increase efficiency in the manufacturing process. The systems and image processing programmes we use systematically detect the quality and position of components, packaging or products and transfer them to the production process in a controlled manner.

During the production and packaging process, you can use our systems to re-measure, view, compare and check various parameters and thus optimise the process as a whole to the maximum.

OUR APPLICATIONS

- \longrightarrow Keyence camera systems in 2D and 3D
- --- Cognex camera systems with AI

DIVERSE AREAS OF APPLICATION

- --- Automotive and supplier industry
- --- Pharmaceuticals and medical technology
- Packaging systems for the food industry

Building Technologies

You want intelligent and efficient building management?

We automate your modern building services.

As the demands on buildings and infrastructures grow, so do the demands on building technology. We are the specialists who realise your ideas of a safe, energy-efficient, economical and comfortable building with the corresponding infrastructures.

From fire protection to intelligent building automation to central building management with the appropriate services, we supply everything from a single source - also for data centres and the life sciences industry.

YOUR ADVANTAGES

- Increasing building performance
- --- Improving your protection and security concepts
- --- Preventive remote maintenance
- Monitoring of your facilities and systems
- --- Data acquisition for efficient energy management





Team of Experts



Thomas Grahl Founder

After his apprenticeship as an electrician and subsequent A-levels, Thomas Grahl studied electrical engineering. He was responsible for software development in a medium-sized company with worldwide operations. After working for the same company for four years as a project manager, as the technical manager for control cabinet construction and as a member of the management team for another four years, Thomas Grahl started his own business in 2013 and founded blue automation GmbH.

Find out more about us!



Join our





blue automation experts

The blue automation team forms the basis of our success and customer satisfaction. Our passion is engineering: we combine outstanding expertise with passionate commitment. The international team of experts is fully dedicated to the needs of our customers. At blue automation, we combine career prospects with opportunities for advancement and a wide range of further training measures. This is how we keep our culture of innovation alive. On our worldwide assignments, we gain new valuable experience every day.

Worlwide connected



OUR WORLDWIDE LOCATIONS

Germany

blue automation headquarter + Hauptstrasse 67 + 56477 Rennerod

USA

723 Kanawha Blvd Charleston, WV 25301

Polen

ul.Witosa 9A 76-100 Slawno

Indien GE 125,

GE 125, Rajdanga Main Road Kolkata 700107

China

7th, Yangtai Road, Haicang District Xiamen, City 361026

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