

A detailed photograph of industrial machinery, likely a conveyor system. A prominent feature is a heavy-duty metal chain drive with multiple links, each featuring a circular pin and a rectangular plate. The chain is positioned over a large, polished metal pulley. In the background, a black gear with teeth is visible, connected to the chain. The machinery is constructed from various metal components, including plates, bolts, and shafts, all showing signs of industrial use. The lighting is bright, highlighting the metallic surfaces and the intricate details of the mechanical parts.

AMA 1



KÜBLER ESSIG

We are your technology partner for newly designed and optimized production processes and systems. We are skilled in and gear to finding solutions for unique and challenging issues regarding factory automation as well as mechanical and plant engineering. We develop and produce automation solutions, technology systems, process steps, single assemblies including complete machine lines and plants all with your requirements in mind.

At KÜBLER ESSIG all operational processes are completely tailor made and aligned to our customers' specific solutions. The right project team is put together and assigned to a project. The project team adheres to customer requirements, their time-lines and are an integral part of the collaboration with suppliers. All systems and machinery are tested and pre-assembled at our newly expanded state of the art facilities at our headquarters located in north Black Forest. As a result, installations and getting the systems up and running on site can be done in the shortest possible time.

Our customers are global leaders in their markets. No job is like the other. New ideas are always required. We look forward to and are focused on challenges. We seek challenges that feed our quest for developing and making ideas reality.

AMA 1

OUR FORMULA FOR YOUR SOLUTION

Three letters and a number shape our working formula at KÜBLER ESSIG. This expression decrypted defines our spectrum of services: **A** for Automation, **M** for Machine Engineering, **A** for Automated Plant Design – **1** for One Batch Solutions.

On the following pages we decipher the code AMA1, by presenting our divisions. It becomes abundantly clear that most of our commissioned projects cannot be assigned to just one specialty field.

Electronics and mechanics need to be cleverly connected in order to attain intelligent solutions. To this end, KÜBLER ESSIG brings together its more than two decades of experience and expertise in mechanical and plant engineering with its automation technology experience. We work in an interdisciplinary fashion. We continuously evolve our standards together with software developers, designers, engineers and technicians.

Therefore AMA1 represents the entire scope we have at our fingertips. At times individually, at times a combination of disciplines and always with drive and in pursuit of perfection.



AUTOMATION

INTELLIGENT CONTROL TECHNOLOGY IS THE IMPETUS FOR MOTION AND COMMUNICATION

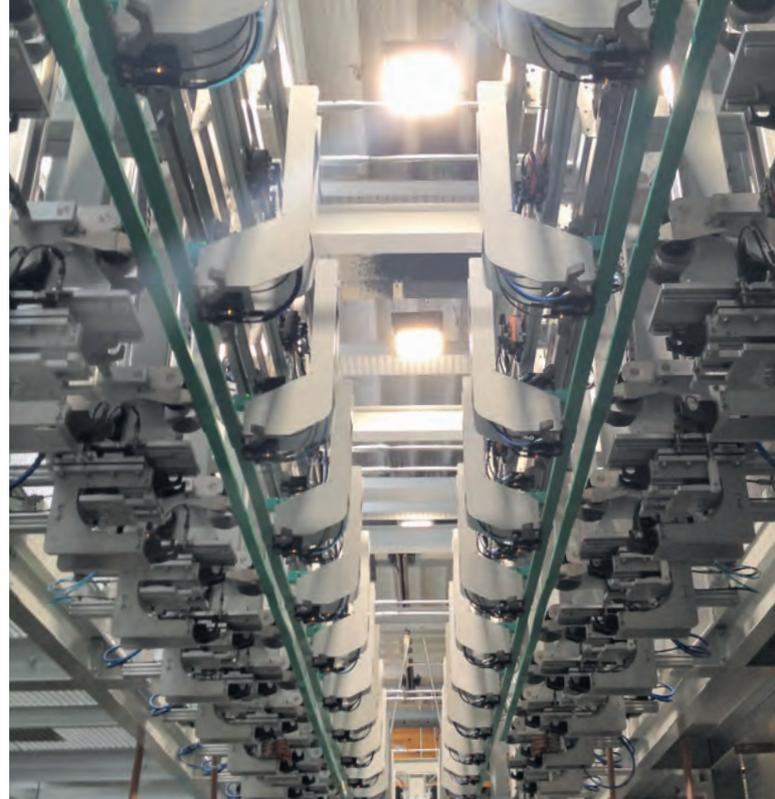
Employees achieve a lot more together when they regularly and accurately communicate with each other. This principle also applies to plant automation. We open up channels of communication between man and technology, between part and machine and last but not least between individual plant components, leading to more efficient processes.

For more than 20 years we have been working with interfaces for plant automation with companies in a variety of industries. This is how we have grown and continue to grow. Using hardware planning EPLAN P9, EPLAN fluid, visualization, control/switch cabinets, modules pre-assembly, retrofitting, adjusting robots, work part identification, RFID technology for transmitting and storage of work part data, to name a just few in order to achieve a fully automated control of an entire plant complex etc. The list at KÜBLER ESSIG for developed automation solutions could go on and on.

Our customers increasingly require system networks on the shop floor level. Individual components synchronise with each other and then continuously adapt to changing conditions. They flexibly and efficiently respond to these ever changing process conditions.

Therefore data technology plays a crucial role. The work part receives its production data in real-time, like its own fingerprint and is available during the entire workflow. We develop these solutions with refinement and sophistication and at the same time being constantly aware of how important smooth plant communication is for our customers' competitiveness.





AUTOMATION AT KÜBLER ESSIG IS BECOMING FASHIONABLE WITH INDUSTRY 4.0

Industry 4.0 is in simple terms world class automation – no more, no less. Together with our customers we strive for optimised plant productivity around the globe. We can achieve this by implementing perfectly tuned processes at all company sites. We also incorporate our customers' as well as their partners' processes into industrial production's global network.

KÜBLER ESSIG possesses the essential key qualifications by having the knowledge of plant level data. This all starts with collecting data, evaluating and processing gathered data right up to the automated utilisation in different company divisions and locations.

The use of mobile devices for production and remote maintenance offers interesting prospects especially when virtual and real worlds start to merge together.



Whether machines are operating 10, 1000 or even 10,000 kilometres away it is no longer so easy for service technicians to do their job. However by using sophisticated hardware and software solutions we can conveniently operate and service machines and systems world-wide from one location.



Intelligent-L
LASER SENSOR
YENCE
EXPOSURE
RADIATION IS EMITTED
APERTURE

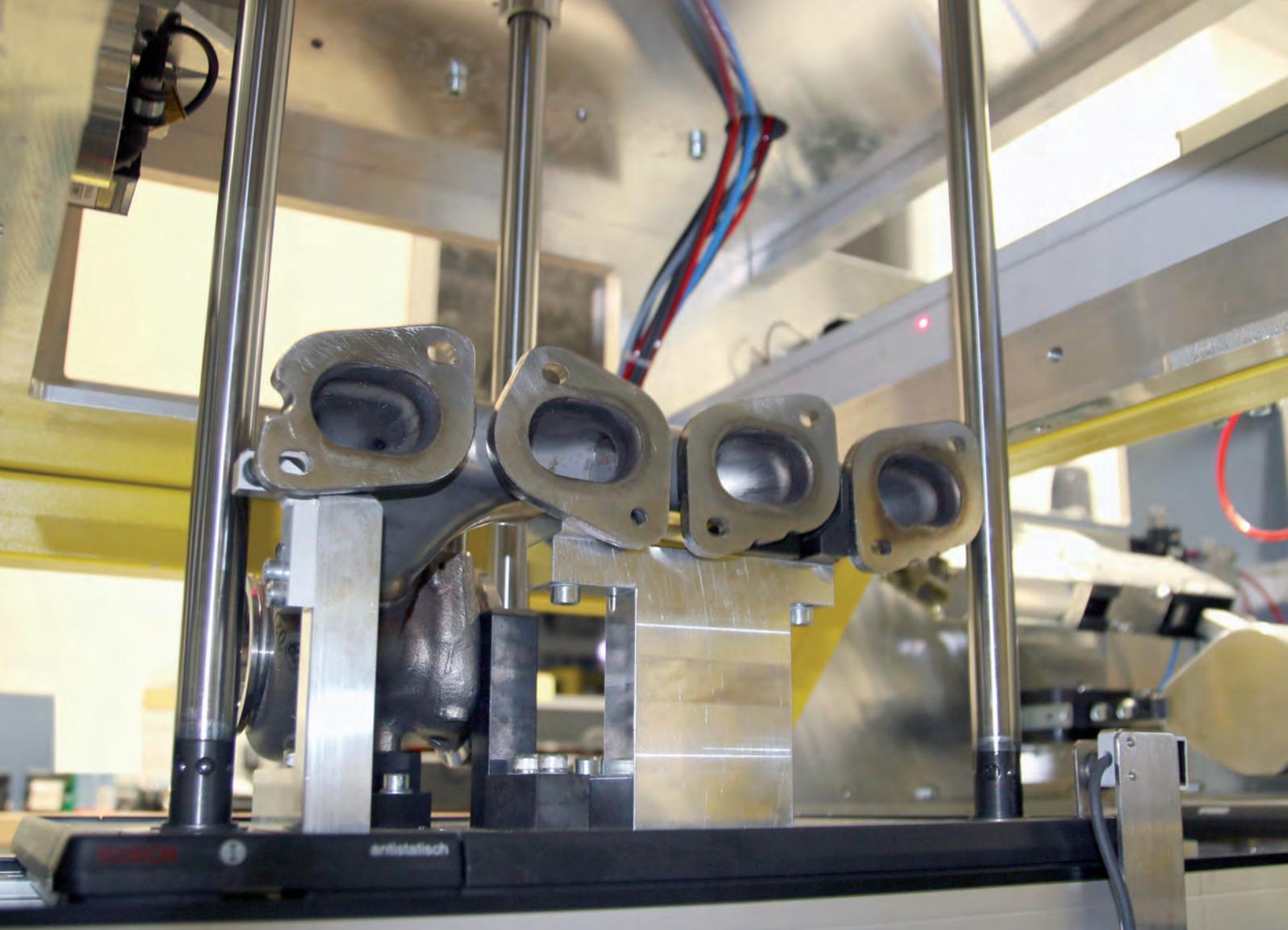
M

MACHINE
ENGINEERING

MEASURING, INSPECTING AND HANDLING TECHNOLOGY BELONG TO OUR CORE COMPETENCE IN MECHANICAL ENGINEERING

Products and production processes are becoming increasingly more complex along with the accompanying quality controls. Our clients are facing the challenge to use ever more versatile and sophisticated measuring and testing technology including appropriate handling systems. We are a reliable partner to provide such services to international companies in many different industries.

We develop and build machines where product quality is directly monitored and documented during the manufacturing process. Detecting and evaluating production-related shape and surface defects, safely and quickly. It is crucial step to smoothly integrate these machines into production processes. Thus the acquired production parameters are recorded and documented for the end user.

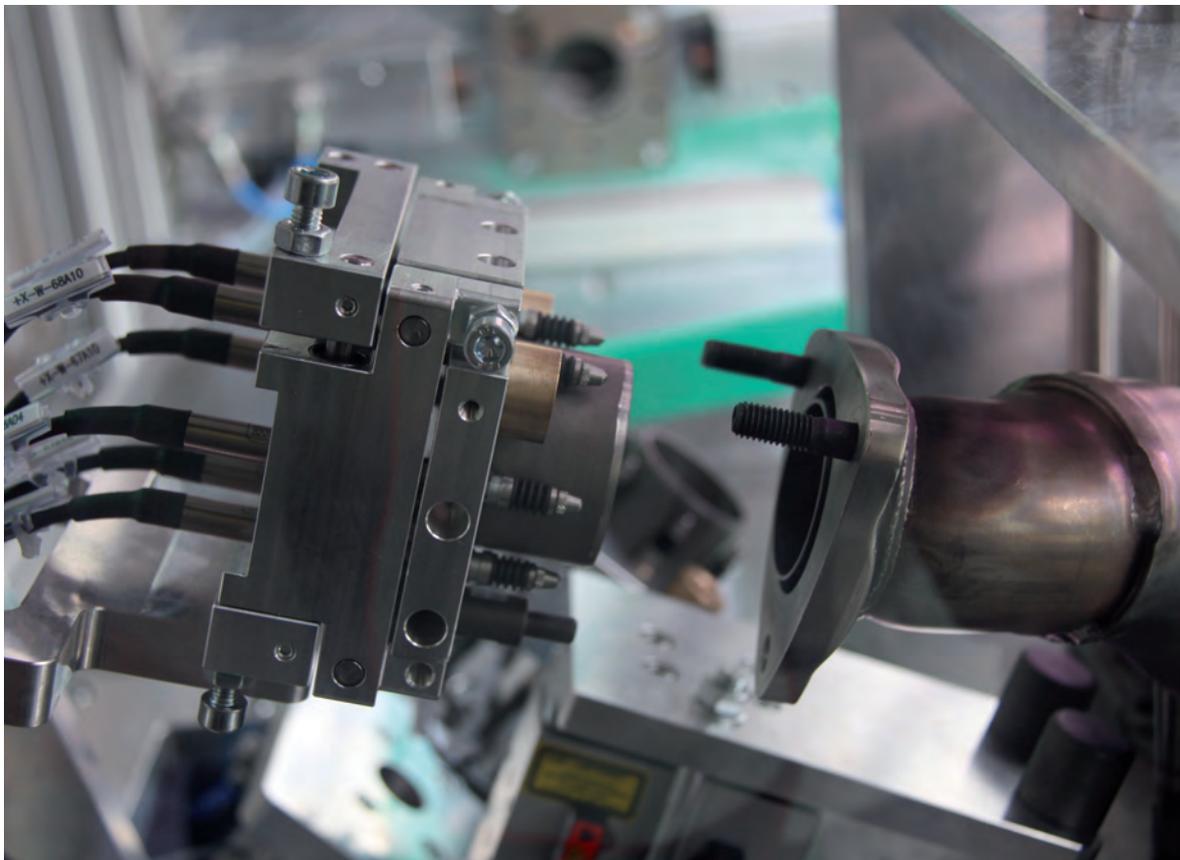


Contactless Measuring

In addition to tactile measuring methods, the trend is moving towards non-contact measuring, since components have become not only more complex but also more sensitive. KÜBLER ESSIG has carried out the following projects within these diverse innovative areas: Light section sensors with 3D measuring, optical measuring systems using a transmitted light method and part covering for highly reflective elements and surfaces, camera systems which can also keep pace with the high speeds in production and laser measuring systems for calculating circumference, positioning and locating different object geometries.



We completely pre-assemble each test system at our location where it undergoes extensive pre-testing. Thereby ensuring its reliability and it is then documented in corresponding measuring protocols for our customers.

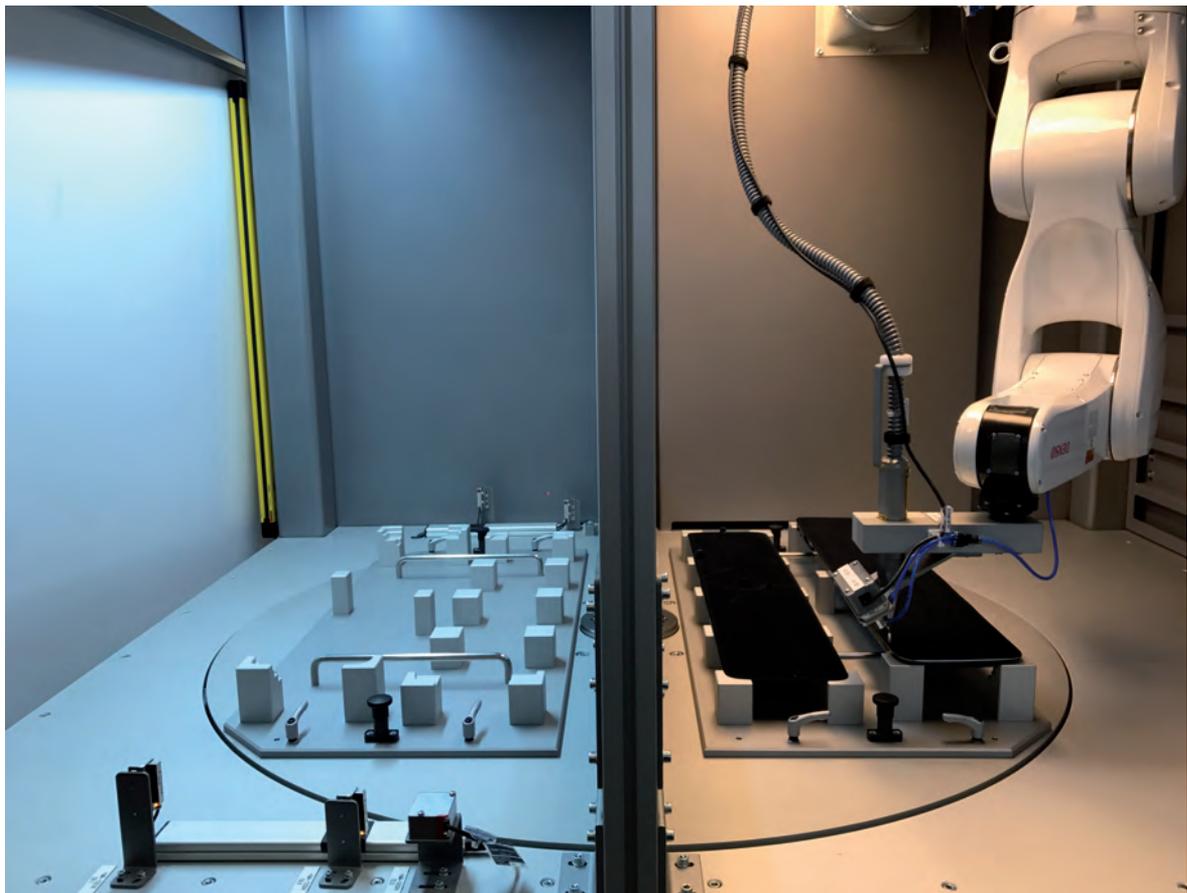




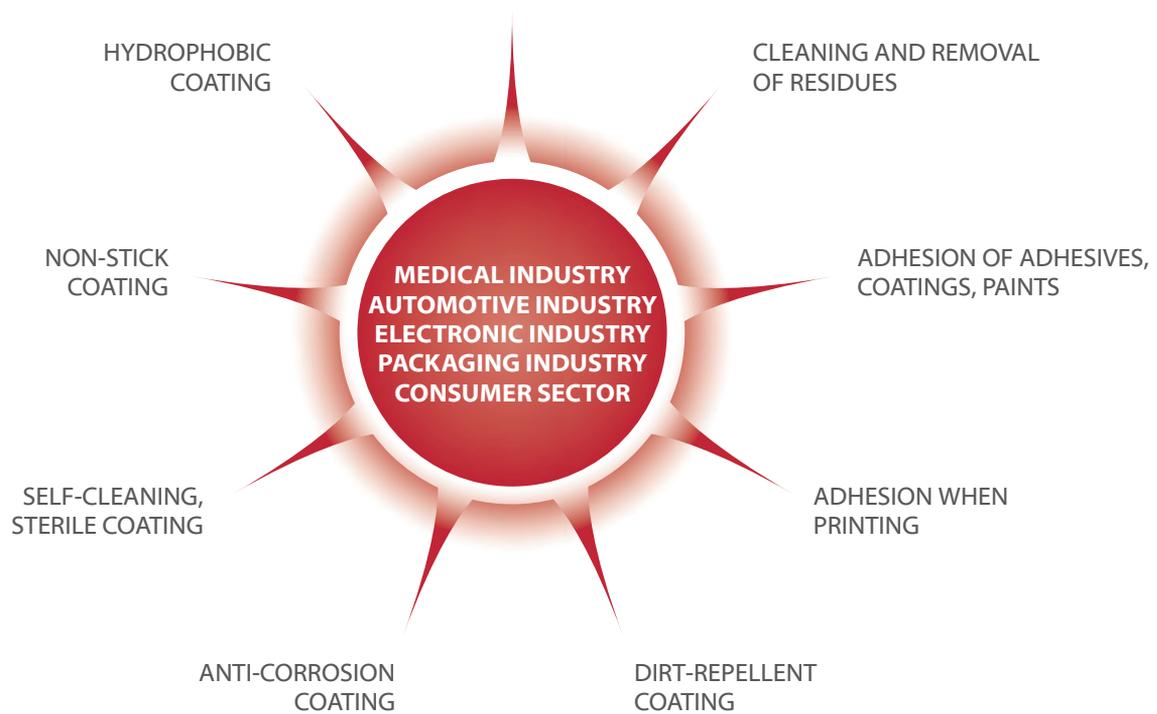
AUTOMATED PLASMA TREATMENT ENVIRONMENTALLY FRIENDLY. VERSATILE. ADVANCED TECHNOLOGY.

Are you tasked with the challenges of bonding, coating, cleaning or painting components? Is your objective to only change the material's surface without destroying the material's basic properties? Then this specific surface treatment of basic materials with plasma is essential and of great interest to you.

Based on this, KÜBLER ESSIG realizes an automated plasma treatment by using a suitable atmospheric pressure plasma unit and fitting robot cell for your application. In this case, the components to be treated are first detected by using a barcode scanner, before they are automatically processed in a type-specific manner.



AUTOMATED PLASMA TREATMENT
CAN BE EASILY INTEGRATED
INLINE INTO EXISTING PROCESSES



By using plasma, surface modifications for almost all materials are environment-friendly. This means the process can be applied to plastic, metal, glass, recycled and composite materials.

The treatment is atomically exact, from less than one micrometer and is also suitable for complex component geometries. This versatility makes plasma treatment an indispensable advanced technology.

KÜBLER ESSIG Plasma treatment booths, perfect solutions in standardized construction

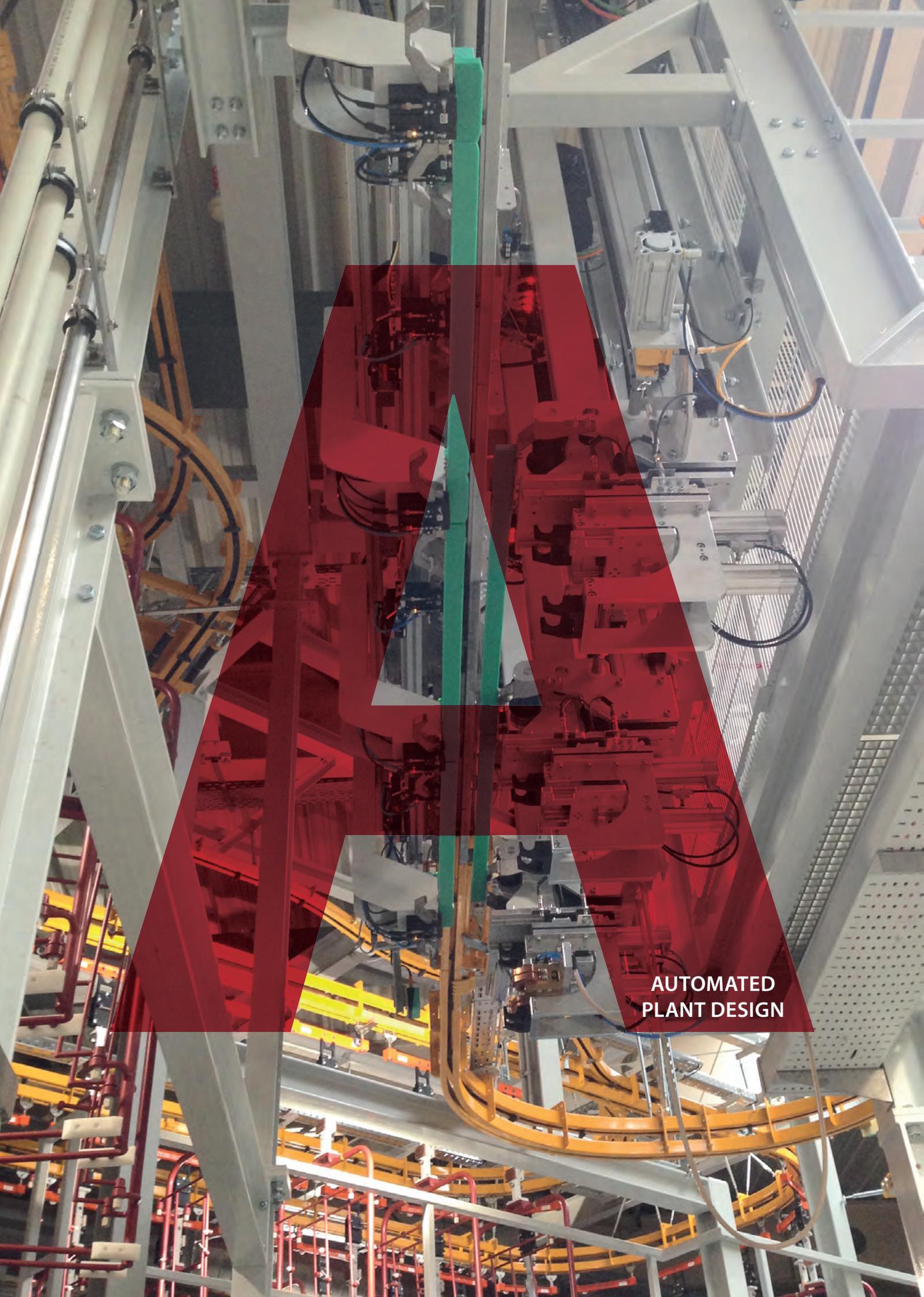
Machine configuration in dimensions:

- Width from 1000 mm to 3000 mm
- Depth from 1000 mm to 3000 mm
- Height up to 2500 mm

Technical configuration:

- Rotary transfer system or continuous inline System
- Robots and handling systems
- Integrated machine control
- Further machining processes, such as lamination, laser marking, surface cleaning, adhesive bead application, joining, measuring and testing processes





**AUTOMATED
PLANT DESIGN**

WE FOCUS ON ENAMEL COATING TECHNOLOGY SYSTEMS

The system engineering division at KÜBLER ESSIG specialises in the field of enamel surface coating. We develop and build complete systems for electrostatic dip coating, electrostatic wet coating as well as cabins for powder coating. These plant system concepts also include pre-treatment and cleaning, conveyor technology, material handling systems, dryer as well as system components for excellent energy efficiency and material recovery systems.

During our many years of designing enamel systems, we have acquired a huge amount of expertise for the complete spectrum of enamel coating. This is reflected in the increasingly large and sophisticated plant concepts we have installed. Moreover this has enabled us to gain the trust and expand into the home appliance sector, working with some of the leading brands in the field. For their global production facilities, our customers can attain the highest level of quality and efficiency through installing and using coating equipment by KÜBLER ESSIG.

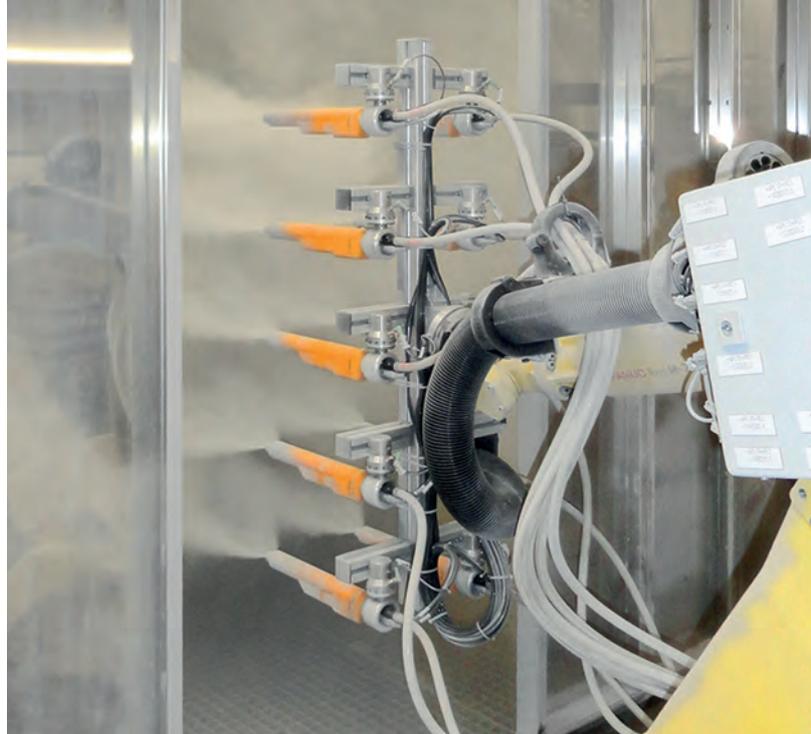
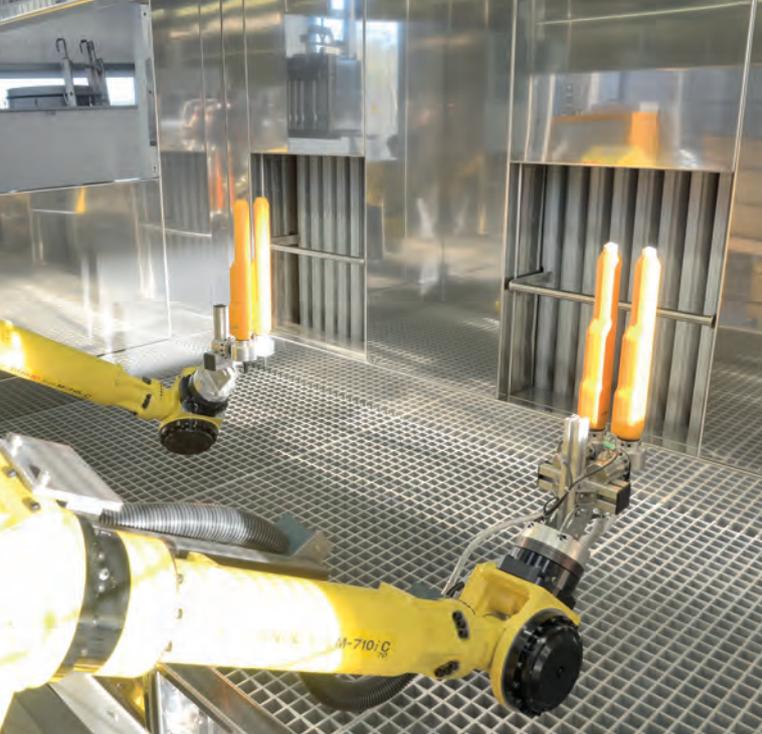


WHAT MAKES KÜBLER ESSIG PLANT SYSTEMS UNIQUE?

Modular Construction

Each KÜBLER ESSIG enamel coating plant system is developed and built in modules in logical units. Thereby reducing complexity and creating efficient plant systems.

Each module stands on its own. All the more crucial are the perfectly connected interfaces. Hard- and software must match up and has to clearly communicate. Only then can our customers benefit from the advantages of a modular method of construction during the entire life cycle of the plant: the extension or adaptation for new productions or even relocating the system to other production sites.



Flexible right till start of production

The enamel plant systems are manufactured, installed, assembled and put into operation in advance directly on-site at our newly built production and assembly facility in Rotfelden, Germany. From the first project sketch to start of production, we are in close communication with our customers, making changes and adjustments easy. We can carry out the disassembly and dismantling in individual modules and then the subsequent assembly and building the system on the actual production site is done in a very short time.





ONE PROJECT – ONE TEAM: PEOPLE AT KÜBLER ESSIG

Innovative technologies in batch production 1 are only the result of our team work. A fitting team of specialists is at the centre of each individual project development.

Because we know: intelligent solutions require the interaction of various experts. Software developers, designers, engineers and technicians together develop new and unique ideas for mechanical and electrical designs and systems, for automation as well as the integration of measuring – and test equipment or handling systems.

Each person works in his or her special area of responsibility and is able to actively manage interfaces. We spend a lot of time collaborating with our customers and this is an integral part of the KÜBLER ESSIG process methodology. It is based on mutual trust and it is our common goal to create the best possible solution. During the course of each project, as the system provider we become a partner for our customer.





CONCENTRATION AND COMMUNICATION: SPACES FOR MANY PROSPECTS

Our new state of the art facility located in the north Black Forest provides our employees the perfect environment for their work.

It offers spaces to come up with creative ideas in modern, bright working areas not just in the offices but in the factory itself, providing transparency and smart organization. At the same time offering quiet areas to retreat to for more concentrated work. The new production and assembly plant also opens up the possibility to directly implement our ideas for modular plant concepts as well as carrying out the optimization and test phases for pre-start ups. It is directly connected to the office building.

Hallways are more than the just corridors to us. They liven up our company; connect project management to software programming, construction, administration, installation and in-house system start-ups and most importantly inviting communication as well. Both we and our customers benefit from this again and again.



Our entrance way is a testament to our commitment to the material enamel. Large red enamel panels arouse emotions, creating durable and vibrant accents that demand innovation. Values our team identified with.





AMA1

 **KÜBLER ESSIG**

Unterer Brand 4
72224 Ebhausen
T. +49 (0) 7054 9320-0
info@kuebler-essig.de
www.kuebler-essig.de