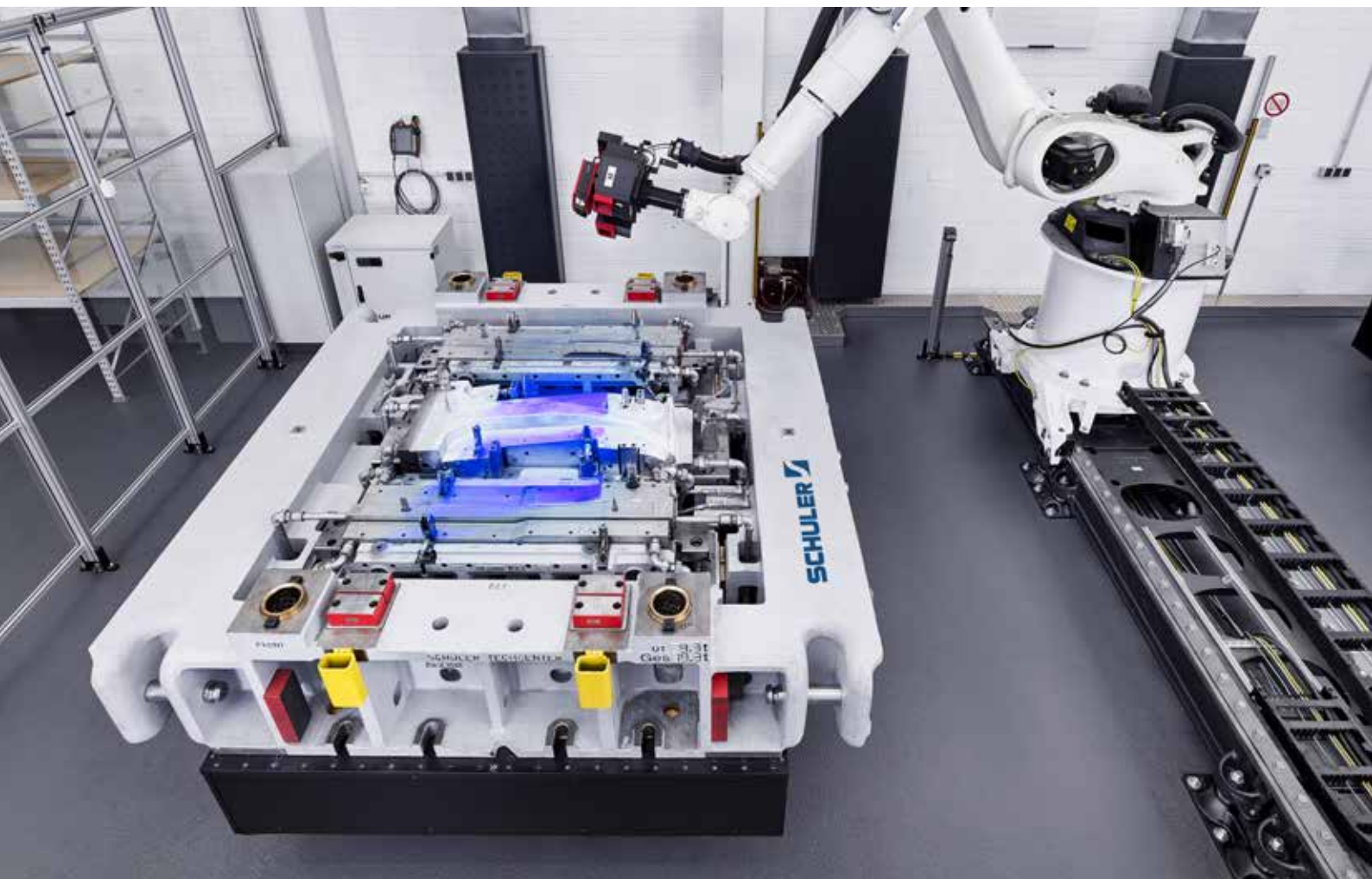


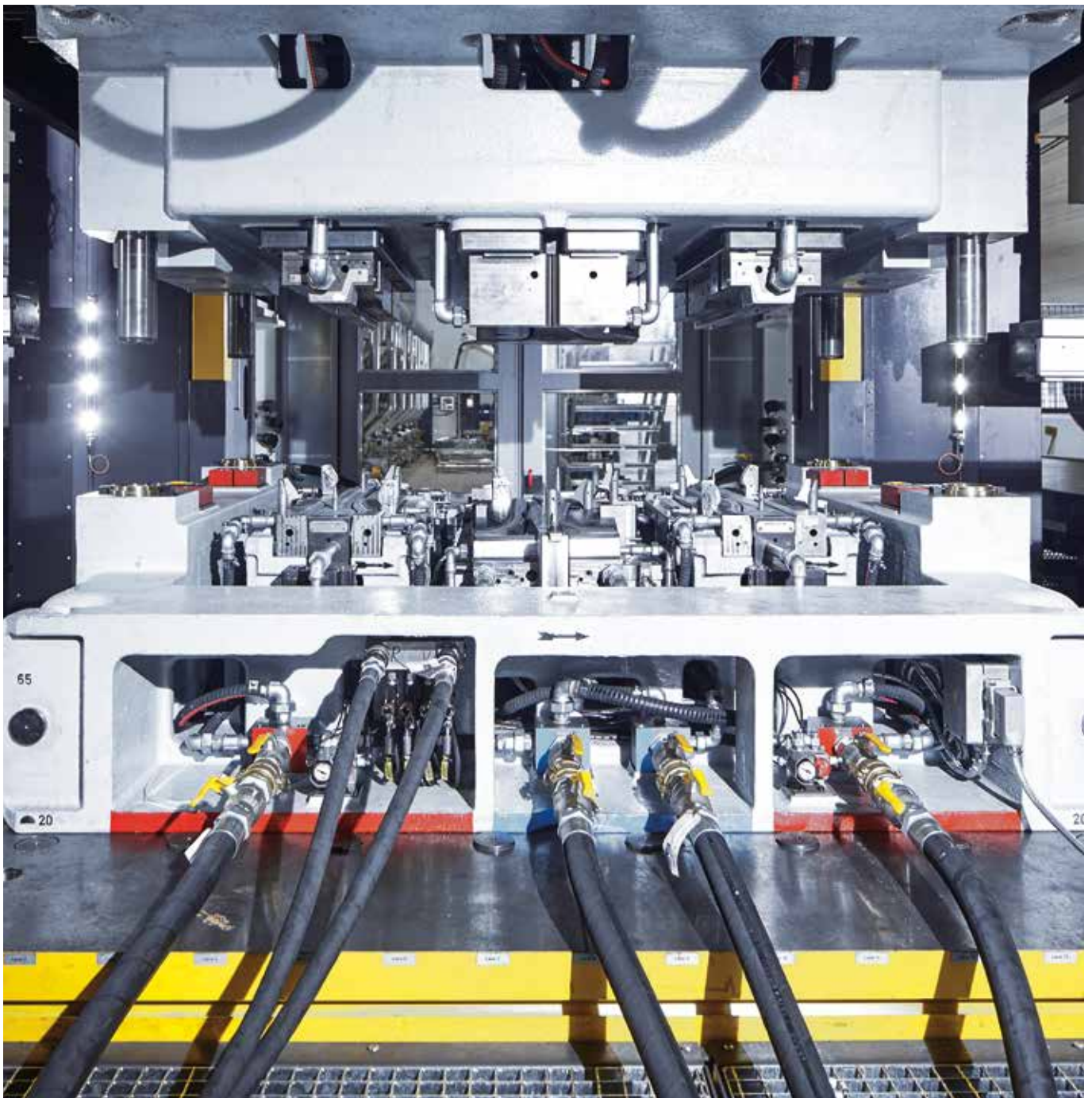
FORMING THE FUTURE



DIE EXPERTISE FOR BODY PANEL &
HOT STAMPING PARTS

FORMING THE FUTURE

SCHULER'S DIE EXPERTISE. CROSS-PROCESS KNOW-HOW.



Hot stamping die at the Schuler Hot Stamping TechCenter Göppingen.

From simulation to series production. Our die engineering department takes over complex development tasks in die and process technology. Its range of services covers the entire product development process—from simulation to the finished part.

We are familiar with your processes. Thanks to our many years of experience and our comprehensive know-how, we at Schuler are familiar with the entire process chain: in die engineering, press construction and at our own stamping plants, which allow us to provide you with support during production.

The product development process is our key expertise. Whether you require a complete solution or a partial solution—our knowledge of the entire process cycle means we can offer you invaluable advantages for your production.



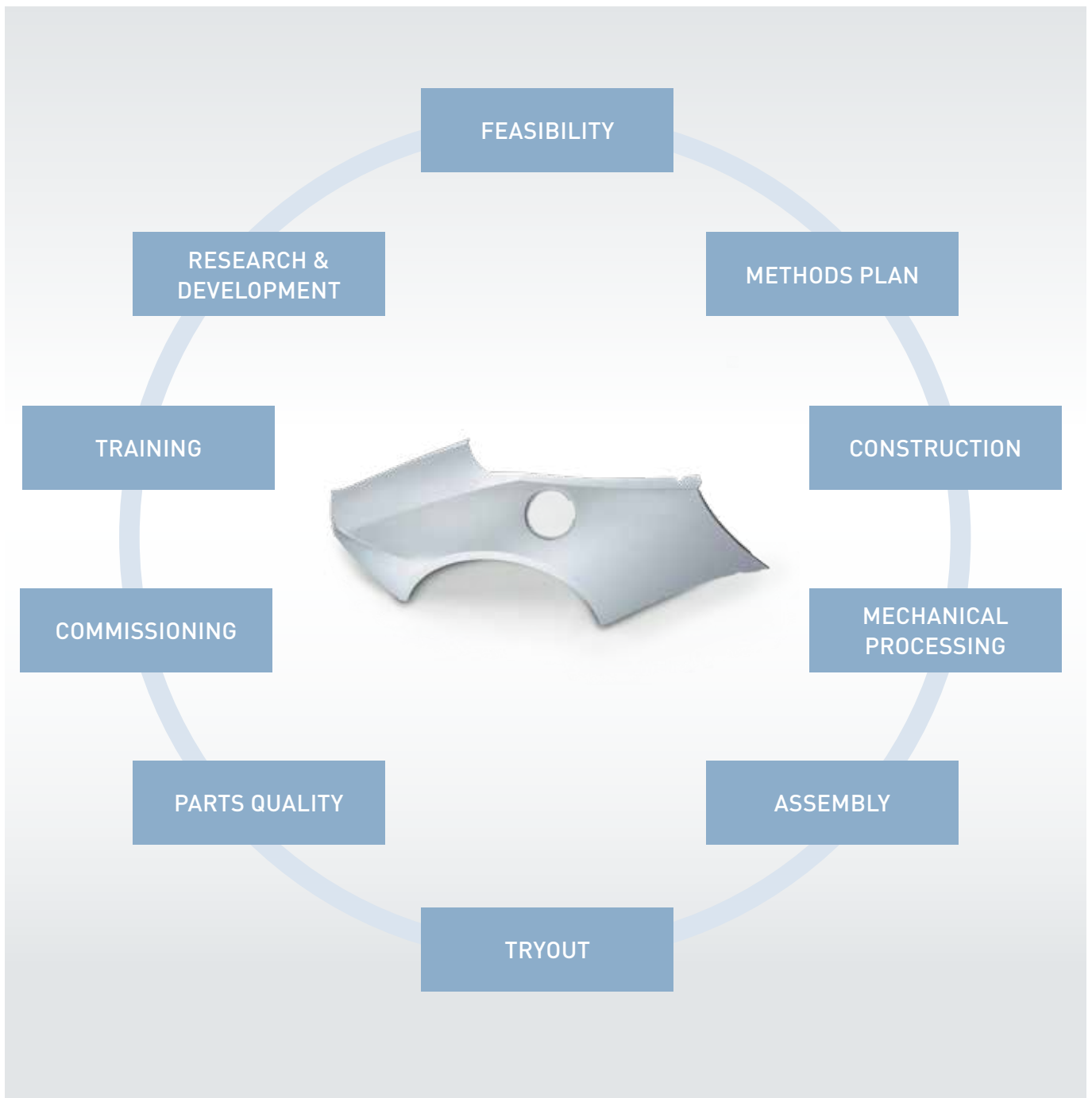
Aluminum outer skin part with complex component geometry.

EVEN MORE EFFICIENCY: SCHULER AND AWEBA JOIN FORCES

Schuler has managed to round off its die engineering range with the takeover of the AWEBA Group. As a customer, you will benefit from the synergies of both companies in the future. For example, orders that were previously outsourced can now be subcontracted internally. This means we are able to offer you our entire die expertise from one source.



SCHULER'S DIE EXPERTISE. EVERYTHING FROM A SINGLE SOURCE.



Engineering and Innovation.

- Feasibility studies
- Simultaneous engineering
- Simulation & method planning
- Construction
- Technological development

Hot forming.

- Mechanical processing
- Assembly
- Tryout
- Finishing
- Quality optimization
- Start-up support
- Training and maintenance
- Project management

Cold forming.

- Mechanical processing
- Assembly
- Tryout
- Finishing
- Quality optimization
- Start-up support
- Training and maintenance
- Project management

Parts production.

- Erfurt press plant
- Göppingen press plant
- Hot Stamping TechCenter Göppingen



Together we work out the optimal solution for the most diverse components.

ENGINEERING AND INNOVATION. TECHNOLOGICAL KNOW-HOW FOR INNOVATIVE SOLUTIONS.

Our experts have the necessary know-how to enable you to manufacture high-precision components in top quality with the dies developed by us.

Feasibility studies and simulation. We prepare a feasibility study for you based on the simulation of the forming process. Within the scope of the simulation, we optimize the feasibility and process capability in close coordination with you.

Method planning. We determine the optimal production concept for you—derived from the simulation results. This helps you to be sure that the die will not only meet all technical requirements in subsequent series production, but will also work reliably.

Construction. Our engineers have years of experience in die design—both in cold and hot forming.

Technology and innovation. Schuler is continuously developing existing forming processes in order to meet the current and future challenges in die engineering. Innovative solution approaches for increasing quality and process reliability are also being developed.



Manufacturing top-quality components—Your success is our goal.

BODY PANEL DIES FOR OUTER SKIN AND STRUCTURAL PARTS. THE DECISIVE STEP AHEAD.



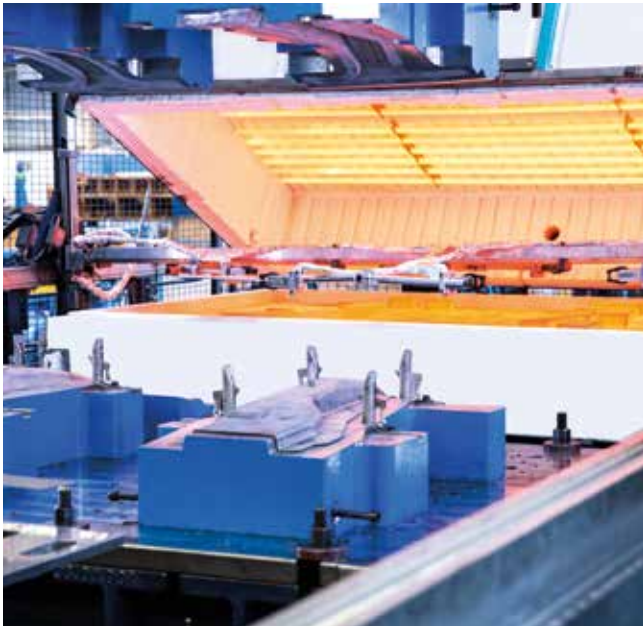
We manufacture dies for cold and hot forming at the Göppingen site.

Whether prototyping or series production dies – you can use Schuler's dies to produce all components in excellent quality.

Cold forming. During the production of outer skin and structural parts made of aluminum or steel, precision is required in order to produce consistently high-quality components. We distinguish ourselves in this area thanks to our experience and well-coordinated processes. This expertise is particularly needed to be able to implement demanding design specifications for outer skin parts.

Together for even better performance. The takeover of AWEBA Werkzeugbau GmbH in Aue means that we can now also supply orders for outer skin and structural parts in a package. The additional capacities in Aue make it possible to manufacture package allocations entirely within the Schuler Group.

SCHULER'S HOT STAMPING DIES. FROM PROTOTYPES TO SERIES PRODUCTION DIES.



Tryout cell for testing prototype tools at the Göppingen site.

Hot stamping. The use of press-hardened parts makes cars safer and lighter. However, the production of these very parts is a sensitive process that Schuler has mastered comprehensively. Thanks to the close cooperation with press construction and automation, Schuler has a wide range of know-how in this field. This enables us to guarantee you process reliability even in a demanding process such as hot stamping.

Prototype tools—the first step to series production. We test the optimal conditions for manufacturing your component using a prototype tool. It is also possible to produce small batches reproducibly. At our Hot Stamping TechCenter, the component quality can be assured with the help of various sensors and thermal camera. In addition, there is a laboratory for mechanical and technical component investigations.

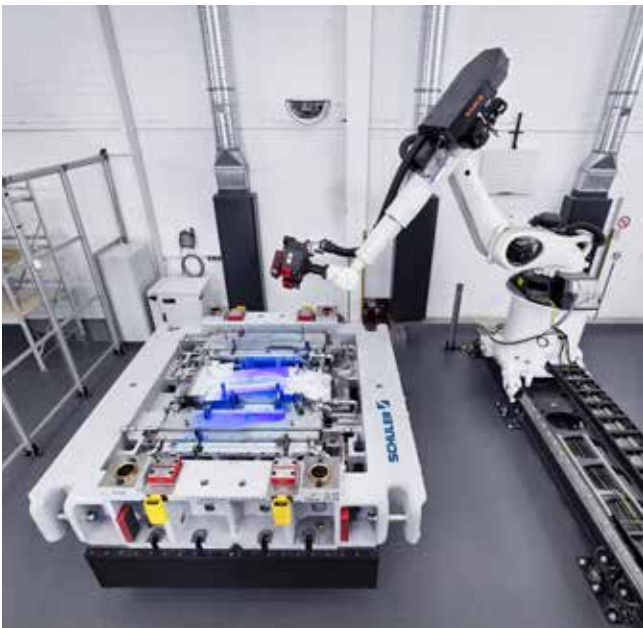


Hot stamping die for the production of high-strength body panel parts.

Quality in series. We use innovative solutions in the production of series tools. In engineering, we simulate microstructure, strength and temperature distribution for optimal results. The improved cooling system offers safety and process stability.

Short distances for greater efficiency. Dies can be incorporated close to series production thanks to the proximity to the press shop and the Hot Stamping TechCenter at the Göppingen site. In addition, there is the option of commissioning directly at the site.

OPTICAL DIE AND COMPONENT MEASUREMENT. PRECISE. FAST. FLEXIBLE.



Speed, flexibility and precision—all these characteristics are combined in the robot measuring cell at the Göppingen site.

Exact digitization, measurement and inspection of body panel sheet metal, dies and components.

Until now, conventional tactile measurement technology has been used primarily for the measurement of body panel sheet metal parts. Instead of evaluating individual points as is the case with tactile measurement technology, the automated robot measuring line also checks large components completely and in a short time for shape and dimensional accuracy. Full-surface adjustment to the target geometry is also possible.



Mobile and flexible: the measurement can take place at the Göppingen site or at your premises.

The innovative measuring technology is particularly suitable for complicated structural parts such as longitudinal members and B-pillars or for outer skin parts such as doors, front and rear flaps, roofs and complete side walls. It allows for the complete recording of component geometry, which speeds up both the die manufacturing phase and ensures quality in series production. Throughout the entire process chain, changes can be quickly represented and easily interpreted, for example by means of a target/actual comparison as false color representation on an image.

PARTS MANUFACTURING AND PROCESS CONSULTING. THE PRESS PLANTS IN GÖPPINGEN AND ERFURT.



Press line 1 at the Göppingen press plant.

Parts production at the press plant. At our Göppingen site, we have a press shop that you can use for back-up production or to relocate your dies in the event of capacity bottlenecks.

We offer you the following services here:

- Start-up support
- Process and quality optimization
- Temporary part impressions
- Small-scale production
- Series production

Your contact at the press plant:

Phone +49 7161 66-313
presswerk-goepingen@schulergroup.com



The press plant in Erfurt with three transfer presses.

Your strong partner for all your press plant needs. In Erfurt you will find more than just a fully functional press plant designed to meet the requirements of the automotive industry. Rather, we are at your side at all times with our know-how and experience in the production of automotive and non-automotive parts.

We offer you the following services here:

- Parts production (batch size from 10,000 parts)
- Commissioning in case of tool relocation
- Bridging of production
- Support in case of loss of production
- Qualified finishing of your pressed parts
- Parts cleaning and preservation

Your contact at the Erfurt press plant:

Phone +49 751 401-2866
presswerk-erfurt@schulergroup.com

SCHULER SERVICE.

STATE-OF-THE-ART SERVICE FOR MORE PERFORMANCE.

Schuler Service offers a tailored portfolio of services covering the entire life cycle of your equipment.

Over 900 service employees worldwide provide expert support 24/7 in close cooperation with you – our partners. Our main priority is always to ensure the maximum productivity and safety of your production equipment in order to secure your company's continued success.

With over 175 years of experience and expertise, we can guarantee the best possible support for the operation of your machines – and not only those supplied by Schuler, but by all other manufacturers. Whatever the situation, Schuler Service has the right solution for your specific needs.



[www.schulergroup.com/
service_en](http://www.schulergroup.com/service_en)

ABOUT THE SCHULER GROUP – WWW.SCHULERGROUP.COM

Schuler is the technological and global market leader in the field of forming technology. The company provides presses, automation solutions, dies, process expertise and service for the entire metalworking industry and for lightweight automobile construction. Its customers include automotive manufacturers and suppliers, as well as companies in the forging, household appliance, packaging, energy and electronics industries. Schuler is a leading supplier of minting presses and implements system solutions for a wide range of different high-tech sectors. The company has a presence in approximately 40 countries with roughly 6 600 employees. Schuler is majority-owned by the Austrian ANDRITZ Group.

Schuler Pressen GmbH

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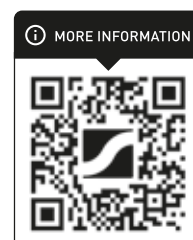
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