

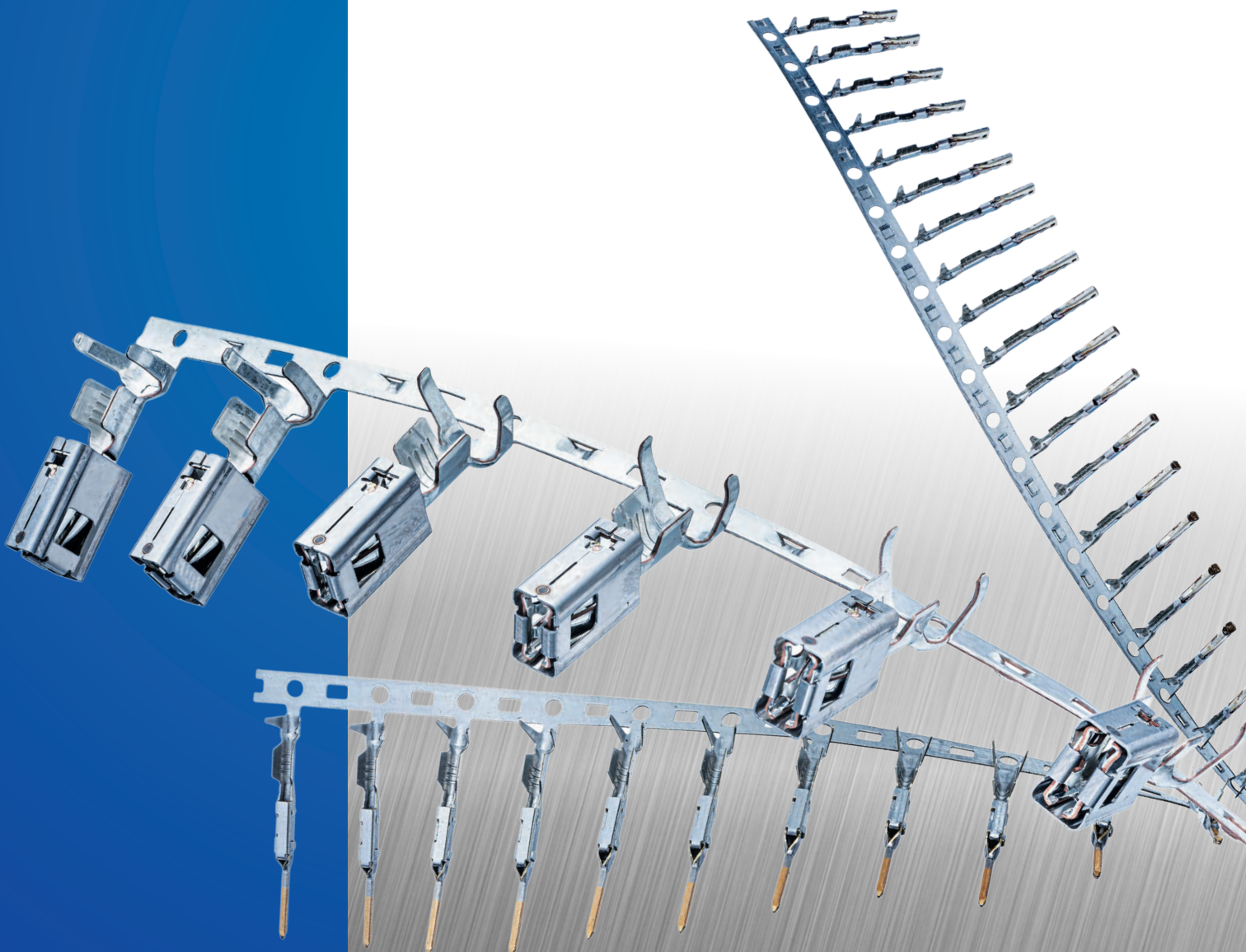
STAMPACK

FORMING SIMULATION

Case Study

SCHROEDER + BAUER GmbH & Co. KG

- Results comparable to reality -





Stampack calculates the exact unfolded length, detects potential edge cracks at an early stage, and visualizes and compensates for springback behavior. This significantly reduces the need for costly prototype tools.

(All pictures: © SCHROEDER + BAUER Werkzeugbau Stanztechnik GmbH + Co. KG / Stampack GmbH)

Stampack simulation software has proven its worth at toolmaking and stamping technology expert SCHROEDER + BAUER, whether for the early detection of product-specific problem areas in tool design or for supporting customers in product development.

Anyone who relies on high precision and calculates tolerances in thousandths needs state-of-the-art machinery and technologies. The development and design department at SCHROEDER + BAUER has access to these. This enables the family-run company in Neulingen, Baden-Württemberg, Germany to manufacture tools with extremely high precision. After all, the better the tool, the better the parts! One of the forward-looking technologies that SCHROEDER + BAUER has been using for some time is Stampack forming simulation software which enables them to respond to market requirements and prevent

crack formation at the transition areas of crimp contacts, which are important within the product range.

SCHROEDER + BAUER primarily produces various types of stamped parts by punching, using tools developed in-house. Contacts are manufactured in a single step using dies consisting of up to 3,000 individual parts. The patented servo technology ensures optimum tool movement sequences and high UT accuracy. Incidentally, tools measuring up to 6ft in length are used for crimp contacts, for which between 1,600 and 3,000 design hours

have been invested. The pressing force ranges from 20 to 80 tons and the annual output is up to 300 million pieces. Stampack has been used in Neulingen since 2024. Thanks to forming simulation, time-consuming processes such as producing prototypes for complex products, analyzing problem areas and adapting/testing tool-specific parts are now a thing of the past.

Without altering the simulation definition, Stampack employs the fast shell solver to generate an initial estimate and subsequently provide an exact description of the forming process in terms of volume. Springback and compensation calculations are included, as is a tolerance check. This can be used to check compliance with manufacturing tolerances and graphically display deviations within the software. The fast volume solver accurately simulates processes involving the forming of thick sheets and material compaction, making it ideal for simulating progressive processes.

During the procurement process, Stampack impressed the SCHROEDER + BAUER specialists above all with its favorable price/performance ratio, the straightforward transfer of CAD data into the software (via the interface with existing CAD systems) and the successful completion of the test phase. In practice, the simulation software enables the early detection of problem areas in tool design and the initiation of countermeasures, as well as supporting customers in product development by testing different solutions. SCHROEDER + BAUER is also very satisfied with the service, as Stampack's employees are easily accessible and provide prompt support. Furthermore, the software training was quick, competent and smooth. The highlight at SCHROEDER + BAUER is that the forming simulations deliver results comparable to reality.



The use of 3D printers at the subsidiary PPM makes it possible to “print” parts extremely quickly and on a greatly enlarged scale, which can then be used both for customer viewing and internally for prototyping.



With more 200 employees at the Neulingen site and 330 across the entire group, we guarantee maximum precision with the manufacturing of punch tools with tolerances of +/- 0.002 mm.

SCHROEDER + BAUER GmbH & Co. KG H

SCHROEDER + BAUER Werkzeugbau Stanztechnik GmbH & Co. KG was founded in 1964 and is based in Neulingen, Germany. This family-run company's product range includes crimp contacts, assembly contacts, rivet contacts, weld contacts, round contacts, welding tools, flat contacts for plastic components, insulation displacement contacts (IDC) and motor contacts. With over 60 years of experience, SCHROEDER + BAUER strives for the highest quality standards in toolmaking for every project.