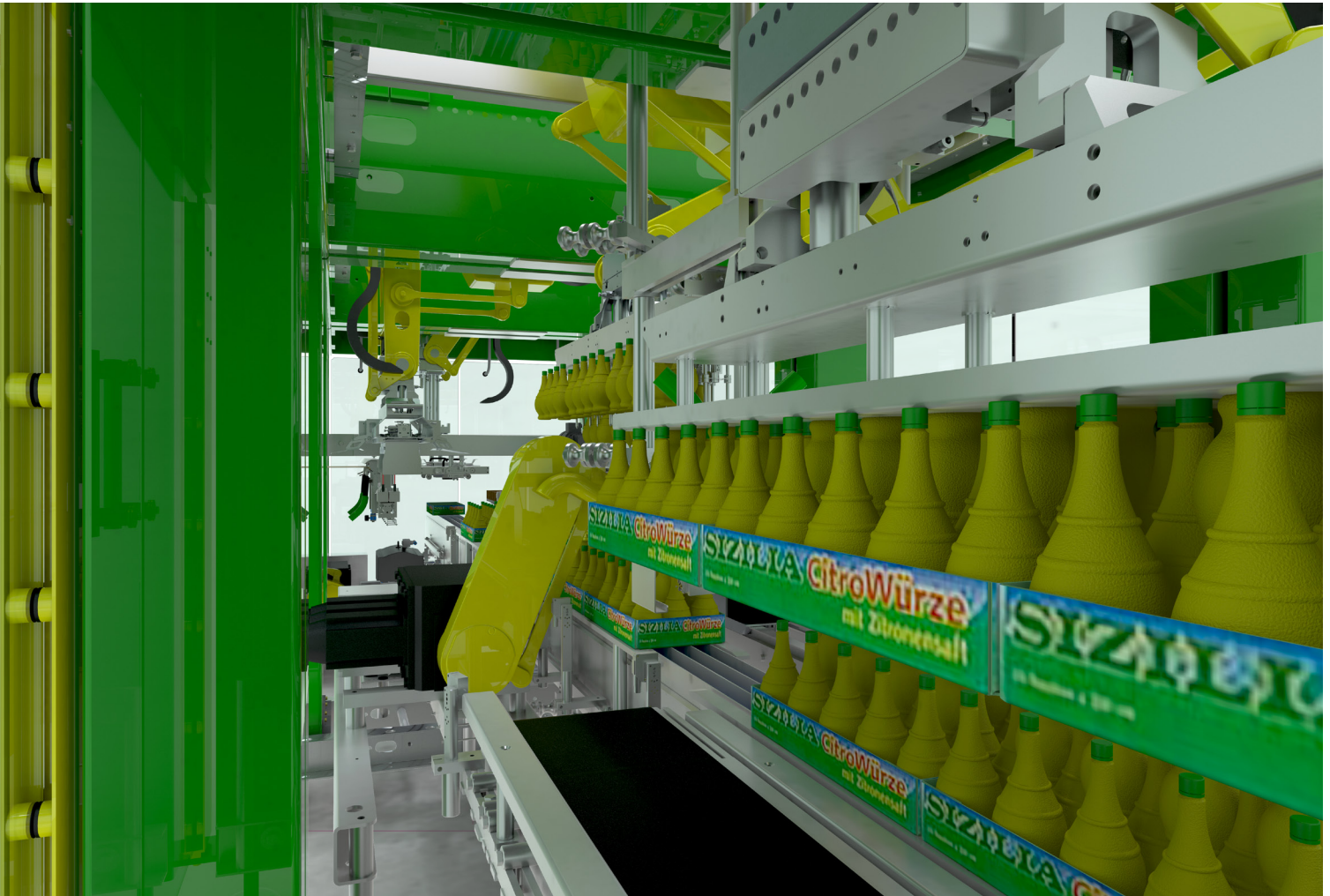


GERHARD SCHUBERT GMBH

ACCELERATING CUSTOM PACKAGING MACHINE DEVELOPMENT
WITH SOLIDWORKS SOLUTIONS



Using SOLIDWORKS design and simulation solutions, Gerhard Schubert can develop and produce sophisticated packaging machines twice as fast as its competition.

Challenge:

Streamline and accelerate development of the world's most advanced automated packaging machines while maintaining a high degree of flexibility and customization.

Solution:

Implement SOLIDWORKS Professional and SOLIDWORKS Premium design software in conjunction with SOLIDWORKS Simulation analysis and DraftSight 2D layout solutions.

Results:

- Produced packaging machines twice as fast as competitors
- Saved five hours on each assembly design
- Improved design visualization
- Enhanced customer communications

Since introducing the world's first packaging robots in 1984, Gerhard Schubert GmbH has become the recognized market leader in the development of packaging machines. Founded in the 1960s by Gerhard Schubert, the company is responsible for many of the technological innovations that have advanced packaging machinery performance. These technical milestones include the development of its packaging machine control unit, the first F44 picker line for picking and placing products in trays, the first top-loading packaging machine installed on an assembly line, and the first transport robot.

Companies worldwide rely on Schubert automated machines to package everything from underwear to beer to chocolate bunnies. Each Schubert machine is custom-designed to meet the individual customer's unique packaging needs. The packaging machinery manufacturer's success stems from its ability to quickly deliver customized, top-performing machines by maintaining high levels of design flexibility and efficiency.

According to Design Engineer Wolfgang Sedlak, the company outpaces competitors partly because of the genius of Gerhard Schubert's vision—which combines the use of seven standard assemblies with intelligent electronic components and configurable assemblies—and partly through the use of advanced 3D design automation technologies.

"For years, Schubert developed machines using PROCAD 2D tools," Sedlak recalls. "However, the introduction of parametric 3D CAD systems fit perfectly with Schubert's vision for accelerating machine development through the use of standardized components that can be configured in a variety of ways. In 1997, Gerhard Schubert made the decision to move the company's development platform from 2D to 3D, and he chose SOLIDWORKS® solutions."

Schubert chose SOLIDWORKS as the company's design environment—implementing SOLIDWORKS Professional and SOLIDWORKS Premium design software in conjunction with SOLIDWORKS Simulation analysis and DraftSight® 2D layout solutions. The company selected SOLIDWORKS because the software is easy to use; allows for design automation through the SOLIDWORKS Application Programming Interface (API); and includes robust design configuration, sheet metal design, and design communication and visualization capabilities.

"The way that SOLIDWORKS handles design configurations is similar to the way we construct our machines," Sedlak explains. "SOLIDWORKS helps us work more quickly and collaborate more efficiently. Using SOLIDWORKS and our development approach, we can design custom machines in half the time it takes our competitors."

AUTOMATED CONFIGURATIONS OF STANDARD COMPONENTS

Since implementing SOLIDWORKS solutions, Schubert has consistently designed, manufactured, and delivered customized packaging machines in just six months. While the company's development philosophy and other 3D tools, such as SOLIDWORKS Motion analysis and interference detection capabilities, have contributed to the company's industry-leading performance, the use of SOLIDWORKS design configurations combined with API automation routines has played a significant role.

"SOLIDWORKS helps us work more quickly and collaborate more efficiently."

— Wolfgang Sedlak, Design Engineer

"Our machines are the most advanced and complex packaging machines in the world," Sedlak stresses. "When developing machines that can total more than 10,000 individual parts, design configuration and automation tools can save a lot of time. For example, we use design configurations to quickly adapt our seven standardized assemblies to a particular packaging task. We leverage SOLIDWORKS API functionality to automate the design of assemblies, which saves us roughly five hours on each assembly."

BETTER SHEET METAL DESIGN EFFICIENCY

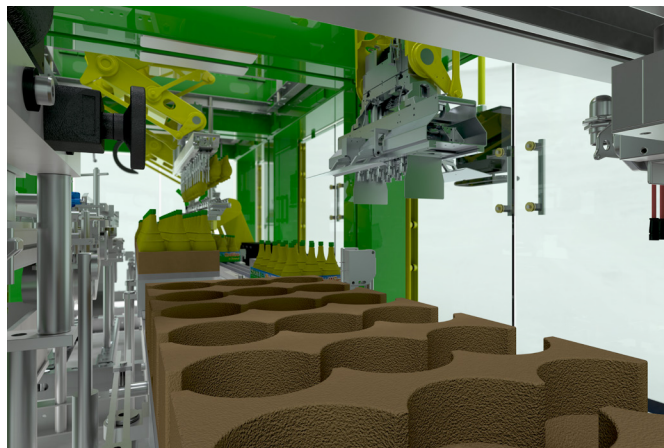
A recent trend in Schubert's development of the latest generation of automated packaging machines is a continual increase in the number of sheet metal parts required. The company relies on SOLIDWORKS sheet metal design tools to optimize laser-cutting and bending operations.

"SOLIDWORKS sheet metal design tools are very efficient and easy to use," Sedlak notes. "As the number of sheet metal parts in our machines grows year by year, we will increasingly depend on SOLIDWORKS sheet metal design functionality to streamline the production of sheet metal parts."

VISUALIZING, REVIEWING, AND COMMUNICATING

An important aspect of Schubert's development efforts involves interacting and communicating with customers about their packaging needs and Schubert's proposed solutions. Schubert uses dynamic SOLIDWORKS models and animated walk-throughs to facilitate design reviews, SOLIDWORKS eDrawings® files to communicate technical details with customers and vendors, and photorealistic renderings created with PhotoView 360 to support marketing efforts. The company has also begun using DraftSight 2D tools to prepare basic layouts of customer packaging footprints.

"SOLIDWORKS provides a variety of tools for visualizing and communicating our designs," Sedlak says. "The ability to show the construction of our machines and how they operate is vital to having our customers understand what we intend to do. This is critically important not only to securing customer approval on a machine configuration but also for making sure our customers remain satisfied with a machine that will last over 40 years."



Gerhard Schubert relies on SOLIDWORKS design configuration, interference detection, and sheet metal design tools to develop the most advanced and complex packaging machines in the world.

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