SABRINA SCHILLING

Made in Germany: Three million mailboxes and lockers from a Smart Factory

Max Knobloch, Germany's oldest manufacturer of all kinds of mailboxes, has moved some of its production back to Germany with a TRUMPF Smart Factory and is enhancing its most important success factor – flexibility.

In Döbeln, 50 kilometers west of Dresden in Germany, sheet metal has recently started moving all on its own in Max Knobloch's production hall. That is because a new Smart Factory has been in operation at the headquarters since spring 2026. It manufactures precise sheet metal parts for mailbox systems, package lockers, and custom-made products fully automatically. In this way, approximately 120,000 product units are produced each year from about 600 tons of metal. Mail and package deliveries in more than 26 countries are delivered to boxes made by Max Knobloch – and the trend is on the rise.

"We have a modular system that allows customers to configure over three million product variants. Our aim is to offset fluctuations in our core business by diversifying into other industries and different product types. We are thus increasingly manufacturing custom solutions, such as lockers. This diversity and flexibility are our unique selling point," explains Managing Director Thomas Kolbe.

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The Past: Standard Manual Processes – Little Flexibility

Existing production processes were too rigid to implement this strategy cost-effectively. Andreas Quellmalz, Technical Director at Max Knobloch, reflects: "Until recently, we manually retrieved raw sheet metal from the rack, transported it to the laser processing machine, cut it, and sorted the parts by hand. We were also technically limited to specific products. Embossing dies, for example, are very expensive and only suitable for a single product. That leaves no room to increase flexibility." The solution: The development of a Smart Factory with more flexible manufacturing methods and greater efficiency. This required new machines, networked workflows, more digitization, and extensive automation.

Cost-Effectiveness Put to the Test

"We chose TRUMPF because we wanted a Smart Factory from one provider: From planning to software, storage, machines, automation , and implementation, all the way through to commissioning and a fast parts service," explains Quellmalz regarding the decision-making process. The TRUMPF Smart Factory consulting team conducted feasibility studies, analyzed processes, time requirements , and material flows. The results were initially sobering. "A Smart Factory solution as requested by the customer would not have been economically viable because the degree of automation was too limited," recalls Sven Ongert, who oversaw the project on behalf of TRUMPF. The turning point: A closer look at the sheet metal part design. "The specialists from the TRUMPF part design department modified the parts in such a way that production could be implemented using automated laser cutting, punching, and bending ," explains Ongert.

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Small Things with a Big Impact

There was significant potential for optimization when it came to the joining technology, for exmaple. Quellmalz elaborates: "In the past, we received spot-welded assemblies from our supplier – which were stable, but did not ensure processes could be repeated accurately. Thanks to component optimization, we are now adding additional punched holes and are joining parts using rivets or clips . We do not need any special equipment for this and achieve greater repeatability because the parts are always precisely aligned."

Software, Central Warehouse, And Three Fully Automated Machines

The heart of the new Smart Factory is TRUMPF software Oseon. It handles order planning, store management, and production control. Third-party machines are also integrated. A TruMatic 7000 punch laser machine with SheetMaster and a TruBend Center 7030swivel bending machine are included for product series with the highest production volumes. Two high-end, fully automated, physically linked, and digitally networked precision machines for high throughput. "With the TruMatic 7000 we can even perform small forming operations, such as cup embossing or clip connections. "The blank becomes a 3D part," explains Quellmalz.

An employee is processing sheet metal parts for mailbox systems and custom-made products on the TruBend 5130 manual bending machine.

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Behind the two machines is the STOPA Compact II storage system. With 480 pallet spaces, it offers enough capacitance for 1 mm to 3 mm thick steel, stainless steel, and aluminum sheets, as well as a buffer storage area for prefabricated sheets from the TruMatic 7000. On the rear side of the warehouse a TruLaser 3030 laser cutting machine is connected via a Liftmaster StoreLinear . A manual bending machine TruBend 5130 completes the Smart Factory.

The advantages for Quellmalz not only include the design of the fully automated Smart Factory, but are also at the machine level: "With these machines, we can flexibly manufacture outsourced parts and components for our own product line. In the past, adjustments would have required significant investments due to the bending tools. We have completely moved away from that way of working. As a result, we are significantly more flexible overall."

Greater Vertical Range of Manufacture for Germany

It is not just flexibility that has increased. The projections from the profitability study have also been met. Thanks to the high efficiency of the Smart Factory, Max Knobloch has been able to bring part of the production back to Germany. Assemblies that were previously sourced from Southern Europe are now produced by the modern infrastructure in Döbeln. "In the past, we had to allow one to two weeks for orders with custom dimensions from external producers." That is no longer an issue, and we can respond more quickly to inquiries ," explains Quellmalz. With the Smart Factory, Max Knobloch has paired its strategic goals with optimum technology. Germany's oldest manufacturing facility for mailboxes is ready for the future.

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https://www.trumpf.com/en_SG/newsroom/stories/made-in-germany-three-million-mailboxes-and-lockers-from-a-smart-factory/