SABRINA SCHILLING

Made in Germany: three million postboxes and lockers from a Smart Factory

Max Knobloch, Germany's oldest manufacturer of postboxes of all kinds, has relocated some of its production back to Germany using a TRUMPF Smart Factory and is boosting its key success factor – flexibility.

In Döbeln, 50 kilometres west of Dresden, sheet metal has recently been moving entirely on its own in Max Knobloch's production hall. This is because a new Smart Factory has been in operation at the company's headquarters since spring 2026. It manufactures precision sheet metal parts for postbox systems, parcel boxes and bespoke products entirely automatically. This process results in around 120,000 product units per year being produced from approximately 600 tonnes of metal. In over 26 countries, letters and parcels are delivered to boxes made by Max Knobloch – and this is an upward trend.

"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 sectors and different product types." That's why we are increasingly producing bespoke solutions, such as lockers. "This variety and flexibility are our unique selling point", says Managing Director Thomas Kolbe.

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In the past, there were standardised manual processes with limited flexibility

The existing manufacturing 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 cutting machine, cut it, and sorted the parts by hand. We also found ourselves tied to products with very specific technical specifications. Press stamps, for example, are considerably more expensive and are only suitable for a single product. This leaves no scope for greater flexibility." The solution? To set up a Smart Factory with more flexible manufacturing processes and greater efficiency. This called for new machines, networked work processes, greater digitalization and extensive automation.

Cost-effectiveness put to the test

"We chose TRUMPF because we wanted a one-stop solution for our Smart Factory: from planning, software, storage, machines, automation and implementation right through to commissioning and a rapid parts service," says Quellmalz, explaining the decision-making process. TRUMPF's Smart Factory Consulting Team carried out feasibility studies and analysed 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 level of automation was too limited," recalls Sven Ongert, who oversaw the project on behalf of TRUMPF. The turning point came after taking a closer look at sheet metal part design. "The specialists from TRUMPF's component design team modified the part so that it could be manufactured using automated laser cutting, punching and bending," explains Ongert.

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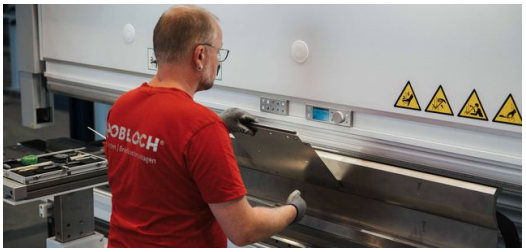
Andreas Quellmalz, Technical Director at Max Knobloch

Small details with a big impact

There was considerable scope for optimisation in joining technology, for example. Quellmalz explains: "We used to receive spot-welded assemblies from our supplier – they were stable, but not very repeatable. By optimising the components, we are now incorporating additional punching operations and joining the parts with rivets or clips. We don't need any special equipment for this, and we achieve greater repeatability because the parts are always precisely aligned."

Software, a central store, and three fully automated machines

At the heart of the new Smart Factory is the TRUMPF Oseon software. It handles order planning, store management and production control. Third-party machines are also integrated into the process. A TruMatic 7000 punch laser machine with SheetMaster and a TruBend Center 7030swivel bending machine are responsible for the product ranges with the highest production volumes. Two high-end, fully automated, physically linked and digitally networked precision systems for high throughput. "The TruMatic 7000 even allows us to carry out small forming operations, such as cup forming or clip connections. The sheet metal blank becomes a 3D part," says Quellmalz.



On the TruBend 5130 manual bending machine, an employee is processing sheet metal parts for postbox systems and bespoke products.

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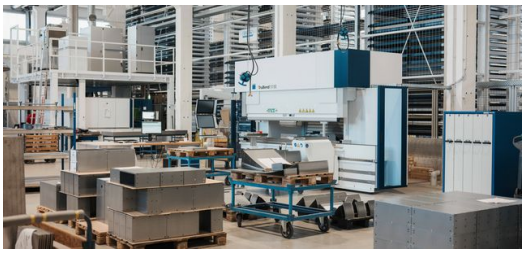

Thanks to the high efficiency of the Smart Factory, Max Knobloch was able to relocate some production back to Germany.

Behind the two machines is the STOPA Compact II storage system. With 480 pallet spaces, it provides sufficient capacity for steel, stainless steel and aluminium plates with thicknesses of one to three millimetres, as well as a buffer storage area for pre-cut sheets from the TruMatic 7000. A TruLaser 3030 laser cutting machine is connected to the rear of the store via a Liftmaster StoreLinear. A TruBend 5130 manual bending machine completes the Smart Factory.

For Quellmalz, the benefits lie not only in the concept of the fully automated Smart Factory, but also at the machine level: "With these machines, we can flexibly manufacture outsourced parts and components for our own product range. In the past, making adjustments would have required substantial investment due to the pressing tools. We have moved away from that approach entirely. As a result, we are now much more flexible overall."

Greater vertical integration for Germany

It's not just flexibility that has increased. The forecasts from the profitability analysis have also proved accurate. Thanks to the high efficiency of the Smart Factory, Max Knobloch was able to relocate some production back to Germany. Assemblies that were previously sourced from southern Europe are now being processed using the modern infrastructure in Döbeln. "In the past, for orders involving non-standard dimensions, we had to allow one to two weeks' lead time for outsourced manufacturing. That's no longer necessary, and we can respond more quickly to enquiries," explains Quellmalz. With the Smart Factory, Max Knobloch has paired its strategic goals with the ideal technology. Germany's oldest postbox manufacturing facility is ready for the future.

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TRUMPF GROUP COMMUNICATIONS

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