



Part production at Mercedes-Benz Molsheim is dominated by small batch series and individual parts. Bystronic laser cutting systems and a fully automated Antil storage system provide the required flexibility and speed.

HIGH-TECH FOR ALL TRUCKS

IN THE PROCESS CHAIN FOR THE CUSTOMIZED CONVERSION OF TRUCKS, THE MERCEDES-BENZ FACTORY IN MOLSHEIM RELIES CONSISTENTLY ON BYSTRONIC LASER CUTTING SYSTEMS.

Text: Ralph Schiffler, Photos: Stephan Dürer

WITH ITS RELIABLE and powerful trucks, Mercedes-Benz is respected across all industrial sectors as a competent partner. In addition to a whole range of serial-produced models, the company also offers companies customized conversions. The worldwide activities in this segment are coordinated by the business organization Mercedes-Benz Custom Tailored Trucks (CTT), which is based in the city of Molsheim in the Alsace region of France. At the same time, Mercedes-Benz Molsheim is CTT's largest conversion partner: whether the customer wants changes to the chassis and wheelbase, additional axles, or customized superstructures – most of the parts required for the tailor-made solutions are manufactured in Molsheim. Four laser cutting

systems from Bystronic have been integrated into the process chain since 2000 and ensure the productivity of the factory.

From small chassis changes right through to complete truck conversions – an increasing number of users are availing themselves of CTT's services. Philippe Bender, Production Manager for parts production in the Molsheim factory, knows why: "The customers get a top-quality product, as they have come to expect from Mercedes-Benz, and can have this changed to meet their requirements." This added value is a decisive argument in a highly competitive market.

In the conversion business, the workers in Molsheim are faced with challenges unlike anything found in



Customized truck conversion is a growing business sector for Mercedes-Benz that generates a significant need for laser parts. In total, the Molsheim factory operates four laser cutting systems, including these two Bystar stand-alone machines.

the serial production of trucks. "Our production consists mostly of small batch series and individual parts. This means we have to be flexible and at the same time be able to react quickly," according to the Production Manager. With the increased demand, this challenge has steadily grown. As the number of orders has been on the rise, the production volume has also increased considerably, so that the production had to be completely restructured. Already in 2000, a Bystronic laser cutting system of the type Bystar 3015 was installed. "Compared with the old sheet metal shears, this of course gave us an enormous boost in terms of speed and productivity," Philippe Bender explains, describing the technology leap that Mercedes-Benz Molsheim made with the 3,000-watt laser system.

A CHANGE IN EVERYDAY WORK

Convinced by the performance and the benefits of the Bystar 3015, the company decided in the following year to make further investments. "With each new purchase, we decided on a more powerful model, a decision that was always based on productivity reasons," the Production Manager remembers. With 4,400 or 5,200 watts, Mercedes-Benz Molsheim was now suddenly in a position to cut even thicker sheets or to cut several thin ones simul-

"Our customers get a top-quality product."

Philippe Bender, Production Manager,
Parts Production

taneously. The expansion of the machinery reached its present peak in 2009: the 6,000-watt Bystar 3015 cuts steel sheets with a thickness of up to 25 millimeters.

The Bystronic systems changed the everyday work decisively. The nesting of the parts is done on the PC and optimized for the sheets of 3,000 x 1,500 millimeters. The powerful laser cutting machine does the rest. Within just a few minutes, even complex parts are cut in high quality. As far as Philippe Bender is concerned, this is more than just an advantage of speed: "The scope for errors is reduced, and the personnel can concentrate fully on the operation or the maintenance of the system."

With the expansion of the capacity, it was essential to keep an eye on the safety aspects, as Philippe Bender explains: "We had quickly reached a pro-



Production Manager Philippe Bender (below right) is satisfied with his Bystronic systems. They are powerful and deliver perfect cutting results.



duction volume where the manual loading of the machine became too dangerous." While previously, the heavy sheets had been transported through the factory using forklift trucks, an automated system would henceforth ensure safe transport. "In this way, we were able to reduce the risk of accidents to a minimum," the Production Manager recalls. For at Mercedes-Benz Molsheim, work safety is a top priority.

SHORT COMMUNICATIONS CHANNELS

Due to the limited height in the production halls the installation of the automatic warehouse system from Bystronic seemed not to be the ideal solution. However, the manufacturer was still able to help Philippe Bender and his team. In such cases, Bystronic works in close cooperation with Antil. Their warehouse concept can also be adapted to make use of horizontal space. The completed warehouse system is imposing: seventy cassette places, each of which can carry a load of up to three tons, offer adequate space for the raw materials and the finished cut parts. Two Bystar systems are connected directly to the warehouse, the other two indirectly. The Production Manager describes the procedure: "There, too, the workers take the same cassettes from the warehouse, so that the distance to the machine in question is extremely short and risk of accidents is minimized."

Mercedes-Benz Molsheim benefits in many ways from the cooperation between Bystronic and Antil. In addition to the optimal adaptation and the gains in safety and productivity, Philippe Bender sees a further benefit: "The whole project was controlled by Bystronic, so that we only had a single contact partner, and we will continue this arrangement in the future." During the twelve months of planning and installation, this prevented overextended communications channels.

In the parts production department, only two shifts are now worked, since the fully automated warehouse solution allows the third shift to be unstaffed. "In the event of fluctuations in the production, we also have some leeway upwards," is how the Production Manager assesses the current capacity. Hence, no extension of the warehouse is planned. Since the complete system consists of standard modules, such a step would, however, also be possible – provided that the production hall is extended accordingly.

The target set for the future can be discerned simply from the development of recent years. Philippe Bender summarizes: "We started with a sheet metal shear, then we optimized the hall layout, and today we use four laser cutting systems as well as seven bending machines." The emphasis will be on further growth and expansion as well as constant safety on the factory floor.

"We have to be flexible and react quickly."

Philippe Bender



Durable: the 3,000-watt Bystar 3015, built in 2000, is fully integrated into production of parts.