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24/7: TRUMPF machines take over VDL Technics production

VDL Technics works in three shifts. However, employees are only there during the day. At night and on public holidays, the machines take over - including three TruLaser Center 7030 systems from TRUMPF. The innovative all-rounders take care of the entire machining process, from loading the raw material to the completely sorted component - virtually independently.

Up to 2021, a TruLaser 3030 with the power of four kilowatts, a TruLaser 5030 with six and a TruLaser 5030 fiber with eight kilowatts were connected to the STOPA storage system at VDL Technics. "After these highly productive machines had worked all weekend, lasering around 150 hours, my staff had the task of tidying away and storing the finished parts in the STOPA storage system every Monday," says Hans Sanders, Managing Director at VDL Technics. That took another 125 to 150 hours, which meant we lost the time advantage gained by quick cutting. In addition, it was really monotonous work, skilled workers are much too good for that." He told his contact at TRUMPF a few years ago how much he would appreciate a machine that not only cuts, but also independently removes the parts, stacks them on pallets and brings them into the store. However, when they presented him with the TruLaser Center 7030 which can do exactly that, Sanders still waited. He wanted to see how the machine proved itself in practice. But the time had come in 2021: The first full-service laser machine was put into operation at VDL Technics. When Sanders placed the order, it was under the condition that TRUMPF install a 12 kW laser instead of the standard 6 kW laser. That was not a problem and after around ten weeks, the machine was running with its first unmanned 24-hour shifts. Today, five TruLaser Center 7030 systems render their services within the entire VDL Group. Not only Sanders, who now has three full-service laser machines in his production, but his colleagues from the sister companies VDL Industrial Modules and VDL NSA Metaal now rely on the process-reliable full-service machines.

Automation and digitalisation as keys to success

VDL Technics, based in Boxtel, Netherlands, is a subsidiary of the VDL Group and has specialised in the production and serial assembly of complex metal components. Their customer base includes companies from the agricultural, transport and mechanical engineering sectors. VDL manufactures the components, some of them highly complex, in lot sizes of 20 and up

to 1,500. Design consulting as well as laser cutting and welding, punching and bending are all part of the company's portfolio. "Our customers expect quality and short delivery times. This can only be achieved with automation and digitalisation," explains Sanders. VDL Technics has pursued both intensively in recent years. Sanders believes they are the key to the company's success.

The lack of skilled workers is a problem in the Netherlands as well. Thanks to highly automated machines like the TruLaser Center 7030, Hans Sanders reduces his staff workload and increases productivity.

Automation and digitalisation are the keys to success for VDL. The three currently installed TruLaser 7030 full-service laser machines from TRUMPF fit into the concept perfectly. They take care of any process concerning laser cutting fully automatically.

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Program and then ready, set, go

The three TruLaser Center 7030 full-service laser machines as well as another laser system and a bending machine from TRUMPF are connected to a STOPA high bay storage rack. This will soon be followed by a 24 kW laser system. "The only thing that is still done manually is storing raw sheets in the STOPA store," explains Sanders proudly. However, none of the other machines work as fully autonomously as his three TruLaser Center 7030 machines. "We program the systems offline using the TruTops Boost programming software and then that's it. From that point on, the machines take care of everything automatically," says Sanders. Programming is easier than with conventional automated laser cutting systems thanks to the high degree of automation of the TruLaser Center 7030. "My programmers can handle the systems and we have a fully finished part at the end of the process," maintains Sanders.

Process reliability trumps speed

Hans Sanders believes that logistics are the most important thing in production. "What is the point if the laser cutting process is fast but the downstream processes come to a halt due to delays caused by manual removal," he says. The process reliability of his machines is much more important to him: "We have a problem if a part is tilted somewhere along the line during unmanned cutting." The TruLaser Center 7030 is equipped with numerous functions to prevent this from happening. For example, SmartGate integrated in the brush tables prevents parts from overturning. It consists of two carriages that move synchronously to the cutting head and support the sheet during the cutting process. An ejector cylinder fitted on the cutting head ejects the metal parts downwards automatically. "That makes microjoints superfluous. We receive top quality parts straightaway - without any post-processing. Punching slugs and scrap fall into a container without appreciably interrupting

the cutting process," says Sanders and adds. "I just think that is fascinating."

Efficiently reducing the staff workload

But the TruLaser Center 7030 does not just take care of unloading reliably and automatically. "Depending on the material thickness and the type of component, a full-service laser machine processes up to 850 kilograms of material every hour. With three machines working over the weekend, this is a lot of material. But we don't have to worry about that anymore," Sanders is pleased. At VDL, the SortMaster Speed stacks parts on up to three pallets and places them in the deposit position. "And then they are automatically taken directly to the TruBend Cell 5170 for bending which is the next process step," says Sanders and summarises: "Thanks to the three TruLaser Center 7030 systems, we can increase our order volume by 20 to 25 per cent. The work that a system like that takes on for our staff not only reduces their workload, but accelerates our processes massively."

Foresight has the clear advantage

Hans Sanders is completely impressed by the machine: "The TruLaser Center 7030 is a unique system. There is nothing comparable on the market. It is perfect for any supplier who wants to process a lot of parts quickly, safely and to the best quality standard." And Sanders is sure that machines like the TruLaser Center 7030 have great potential due to increasing customer requirements and the ongoing lack of skilled workers.

"I told my TRUMPF sales representative many years ago that if they had a machine that could independently clear and tidy up, I would buy it" says Hans Sanders. Now, when he leaves the production hall on a Friday night, he knows that the three TruLaser Center 7030 machines will not only work reliably, precisely and productively during their night shift, but will also tidy away all finished parts as well.

An ejector cylinder fitted on the cutting head of the TruLaser Center 7030 ejects the metal parts downwards automatically. "That makes microjoints superfluous and the system delivers top quality parts straightaway," Hans Sanders, Managing Director at VDL Technics is pleased.

Process reliability is the be all and end all for Hans Sanders. This is why he is particularly excited by the safety concept of the TruLaser Center 7030. SmartGate integrated in the brush tables, for example, prevents parts from overturning during the cutting process.

The system is programmed offline using the TruTops Boost programming software. “My programmers can handle the systems and we have a fully finished part at the end of the process,” explains Hans Sanders, Managing Director of VDL Technics.

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