



## AUTOMATION RESOLVES BOTTLENECKS



Rik Denoo and his daughter Ann-Sofie Denoo began working with automation at the end of 2018.

Belgian mould maker Denoo Matrijzen is a progressive company. While it invested early on in CNC-controlled 5-axis machining, company owner Rik Denoo and his daughter Ann-Sofie have just now made the entry into automation.

Denoo Matrijzen from Zedelgem, Belgium has been designing and manufacturing high-quality cutting, folding and plunger moulds since 1966 – from prototype to small series. Much has changed since then. The small family business was one of the first in the Flanders region to working entirely CNC-controlled. The company also got started with the five-axis milling process early – more than 14 years ago. At the time a 5-axis machining centre from Maschinenfabrik Berthold Hermle AG replaced two older machines. In 2016 the mould maker began working with 5-axis simultaneous machining.

"We machine mainly individual pieces and occasionally small series. So we saw no need to automate our process. But this has changed now due to the positive trend of the past years", explains Ann-Sofie Denoo. "Another milling machine would not have freed us up, the more so as it is becoming harder and harder to find qualified personnel in our region." The logical conclusion was to go into automation.

With the idea of automating one of their 5-axis machining centres, Denoo Matrijzen started looking for concrete solutions. "One approach was for us to equip one of our machines with a robot and integrate the corresponding software into the production process", explains Ann-Sofie Denoo. "We compared this scenario with the Hermle complete package, which was more expensive." Our decision was to invest in Hermle.

The Hermle C 400 with HS flex was delivered to Denoo Matrijzen in December 2018, followed by a running in phase. Training from Hermle helped the employees become familiar with the machine, the automation system and the software.

### NEW WORKFLOW

"The biggest change is in the workflow. Earlier we were mainly concerned with the question of whether to machine a part on a 3- or 5-axis machine. Now we concentrate on offline programming of the new 5-axis machine", explains Ann-Sophie Denoo. After programming, the order is sent to the machine. The remaining preparation is done in production itself: The employee clamps the workpieces on the pallets and temporarily stores them in the storage module.

### "NOW WE CONCENTRATE ON OFFLINE PROGRAMMING OF THE NEW 5-AXIS MACHINE"

The HS flex solution is controlled by the Hermle Automation Control system, which supports the operator in production planning and tool usage calculations. The employee always has his or her upcoming orders in view via a touch screen.

Denoo Matrijzen mainly wanted to reduce downtime, create capacity and maximise productivity. The family business also derives another benefit from the Hermle automation solution: "Since we can now machine preprogrammed orders on the weekend on our Hermle C 400, we have won a significant competitive advantage", summarises Ann-Sofie Denoo.



C 400 HS flex