

Customer Interview: Mill-turning – Turn-milling – Turning



ZELTWANGER Maschinenbau is one of the leading outsourcing partners in Germany with outstanding know-how in the areas of highly complex machining, partial assembly and complete assembly. Cost reduction, capacity bottlenecks, shortening of supply chains – there are many good reasons to outsource manufacturing of products and components. ZELTWANGER Maschinenbau supports you with the production of high-precision and complex parts and series.
www.zeltwanger.de

Interviewee:

Wolfgang Pfeiffer,
Head of CAM Programming



ZELTWANGER: Over 400 employees. Eight independent companies. Three countries.

You produce high-precision components using a wide range of manufacturing processes, including for the semiconductor and medical technology industries. These are among the most challenging industries. What specific requirements did you have for the CAD/CAM system at the beginning, particularly with regard to the mill-turning and turn-milling of high-precision components?

In production, you would prefer to have everything from a single source. The CAD/CAM system should cover as many requirements as possible, from 2.5D, 3D and 5-axis milling to turn-milling and mill-turning, and be as easy to operate as possible. Given the variety of technologies, competent and fast support plays an important role when deciding on a CAD/CAM solution too.



ZELTWANGER Maschinenbau uses hyperMILL® for milling, mill-turning and turn-milling

How was your learning curve with mill-turning and turn-milling with hyperMILL® TURNING Solutions, and what is your daily work with it like?

The learning curve with TURNING Solutions was without any problems, as we have been using hyperMILL® in the milling area since 2008. The handling of the turning functions was self-explanatory for us. The big advantage is that all the milling tools were already available in the tool database and you can find every tool in one place.

To what extent have the added capabilities that hyperMILL® TURNING Solutions offers in programming influenced your production processes, and what advantages have you noticed?

Clearly, the parts no longer have any idle times between turning and milling. Everything is produced on one machine and programmed for just one machine instead of two. In addition, responsibility for quality is limited to just a few workstations. This significantly reduces throughput times and increases quality at the same time.

Are there specific functions or features of hyperMILL® that you particularly appreciate in your day-to-day work? What are your personal favorites?

The usability is really good, especially across both technologies. Everything is in one system. Of course, 5-axis milling with hyperMILL® has also become an integral

part of our production. And we have just recently started using *hyperMILL*® VIRTUAL Machining for NC code simulation and NC code optimization.



Complete machining on a DMG MORI CTX turn-mill machine

Automation is currently on everyone's lips. A lot is also possible in the CAD/CAM area. Are you already using automation in *hyperMILL*®?

Yes, partly. Feature recognition is a great thing and saves time during programming. We haven't yet looked at further automation options, but we see potential here too. Let's see what the future brings.

The semiconductor and medical technology industries attach great importance to high quality and efficient production costs. How do *hyperMILL*® TURNING Solutions help to meet these requirements?

On one hand, the toolpaths are of very good quality, which is reflected in the final product. On the other hand the virtual machine can precisely simulate and collision-

check even the most complex components in advance. For us, this means reliable programs and shorter run-in times. You can simply rely on it.

How do you see the future development of mill-turning, turn-milling and turning, and what role can our *hyperMILL*® TURNING Solutions play in this?

Machining on turn-mill and mill-turn centers will certainly play an even bigger role in future. It's simply more efficient and saves a lot of time. As I said, we are already using *hyperMILL*® for this type of machine and are very satisfied with it. *hyperMILL*® TURNING has laid an important foundation for turret support. We are convinced that *hyperMILL*® can also be used to program multi-channel machines in the future. That is why we have decided to participate in the turret assembly as beta testers, and we are of course happy to provide feedback in order to drive development forward.



Turning with turret on a CTX alpha 500 from DMG MORI with Siemens controller

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