

As if destined for each other

Neugart supplies gearboxes for machine tools to Gebr. Heller Maschinenfabrik

Where turning, milling and drilling take place, no two applications are alike. That is why there are the planetary gearboxes from Neugart. We have developed a precisely fitting model for the chain magazine used by Gebr. Heller Maschinenfabrik, located in Nürtingen in Swabia.

„The Neugart planetary gearbox is made for the chain magazine used in the Heller machining centers. Technically and economically, we have found the best drive solution,“ says Achim Wohlfarth, Group Manager Research and Development, Workpiece & Tool Management at Heller, who is impressed by the cooperation.



Why is Neugart the ideal partner?

Our understanding of machine tools and Heller’s needs is no accident. The most ingenious technology would be nothing without our greatest asset: listening! Heller’s experienced development and sales engineers understand which solution fits each application. An intelligent design and the many variants are a matter of course for us. From reliable and durable gearboxes through intelligent software around the product and experience in drive technology and

The application in the machining center is a good example of the successful and positive beginning in the cooperation between the two Baden-Württemberg companies.

The benefits for you at a glance once again:

- The unique design we developed ensures a lifetime-lubricated gearbox that performs its job reliably.
- It’s actually not so easy to find the right gearbox for an application. Software tools from Neugart help in this regard and are easy to use.
- Our planetary gearboxes are up to any challenge, no matter how special, demanding or complex it may seem.
- Whether it’s the quality of the workpieces or the surface, you create more value with the right gearing.

And how does that fit with Heller?

Founded over 120 years ago, Heller has evolved over the decades to become a global leader in key machining markets. The company offers complete solutions consisting of state-of-the-art machine tools and manufacturing systems, intelligent applications and comprehensive service. Heller is one of the top addresses for highly productive manufacturing solutions in the automotive industry as well as at its suppliers, in fluid technology, energy technology, and other sectors involving machinery in general.

What exactly does this machine manufacturer need?

The company continuously optimizes machine concepts and solutions for its customers - with the aim of keeping their production tasks competitive. Tool management in particular is a central component of machining centers. If this is improved, tool change times and chip-to-chip times are also reduced. This allows workpieces to be machined much faster. A decisive advantage, because: The machines have to run smoothly around the clock – and this under harsh ambient conditions.

Technology and economy combined

In addition, the new chain magazine for the machining centers needed to have a modular design so that it could be adapted to different machine series. Heller also wanted to use the same concept in a wide variety of chain magazine sizes. Besides the technical aspects, economic considerations were also decisive in the design.

Fast and productive: Neugart has the right solution

The requirements for the planetary gearbox were calculated using the freely available Neugart Calculation Program (NCP) design and calculation software. "The underlying cycle data has been optimized with our team's years of experience," explains Achim Wohlfarth. The various loading situations and variants could also be replicated with NCP and included in the analysis for selection of the planetary gearbox. "This enabled us to determine the gearbox in the best possible way also in terms of energy efficiency and efficiency in the fatigue strength range," Wohlfarth says.

A perfect fit convinces

For exact positioning of the tool to the transfer position for the tool changer, the gearbox must accelerate very quickly, be very torsionally stiff and have low torsional backlash - even in the most varied loading situations of the chain magazine. The Neugart planetary gearbox meets all these requirements. This shortens the chip-to-chip time, which gives the customer decisive cost advantages.

That is why Neugart is better

Compared to a competitor's previous concept, the Neugart planetary gearbox offers economic advantages for both Heller and their machine users thanks to its high energy efficiency.

Once the right gearbox had been selected, Heller tested it extensively for rigidity and torsional backlash. "Our test results confirmed the high expectations for the planetary gearbox and even exceeded them in places," Wohlfarth reports.



Perfectly matched

Further validation was carried out in a real test application, which took place at the assembly site of the chain magazine at Heller in England. Two machining centers were then tested with the new gearbox at customers and positive feedback from the customers then led to the technical release of the new gearboxes.

How fast tool management works for productive machining centers

The very important after-sale service was also taken into account. Since the planetary gearbox is also used in series production at Heller, the machine user has additional assurance of fast availability in the event that service is needed. The spare part is ready for shipment quickly if needed. This means that Heller can also dispense with double warehousing. The tool magazine is very flexible due to the chain structure and offers space for 50 to 160 tools in several variants.

„Starting with the very good consultation, through the quick sampling to the release for series production, it was always an open and very good cooperation with Neugart. The overall concept combined with a fair and attractive price convinced us.“



Dipl.-Ing. (FH) Achim Wohlfarth | Group Leader Research and Development | Workpiece- & Tool Management | Gebr. Heller Maschinenfabrik GmbH

A look into the future

Potential for more?

“For the future updating and redesign of other machine tool components, the added value of the Neugart planetary gearbox will of course also be examined and tested,” Wohlfarth continues. The gearbox solutions developed by Neugart will thus also contribute to the further development of Heller machines in the future.

Let us convince you too!



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