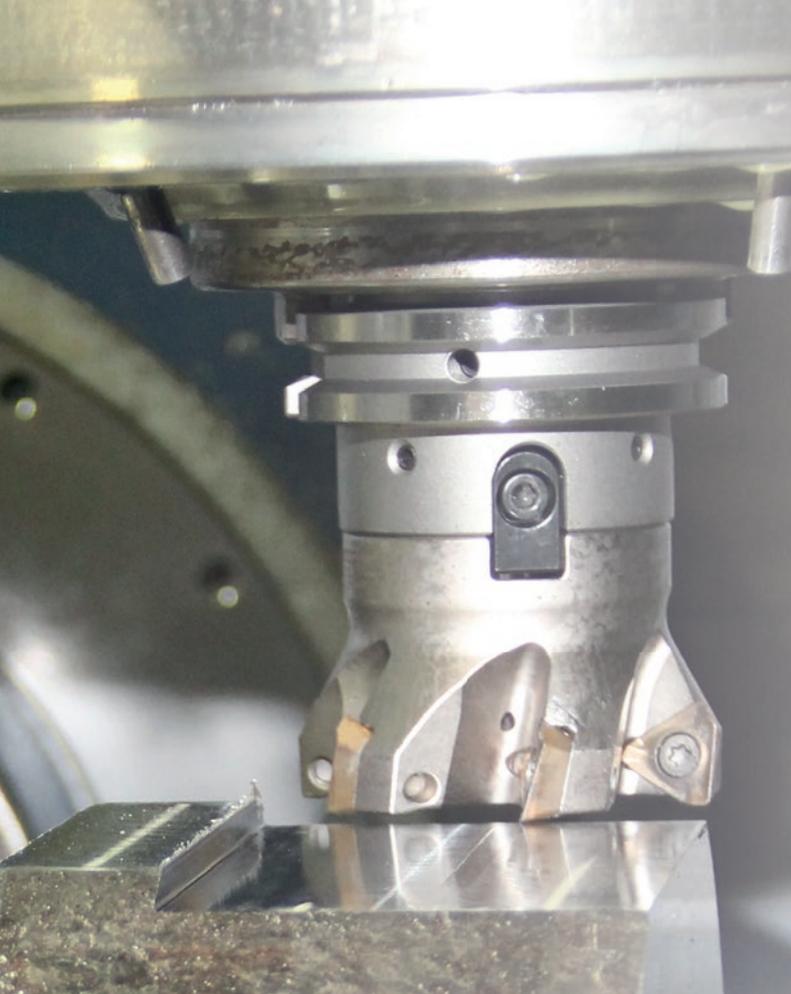


**A variety
of advantages**



In this manner, the prepared blanks can be used for virtually all special and standard housings.



From left to right: Daniel Schaub, Milling Manager, Dirk Wunsch, Work Preparation Manager (both from Heimatec Präzisionswerkzeuge), and Thomas Helfer, Hainbuch Representative.

We all know that money is only earned in a machine shop when the machines are running. This means that set-up procedures are not only bothersome, but they also cost some serious money.

When Heimatec Präzisionswerkzeuge GmbH was witnessing issues in this area, it relied upon the assistance of the Marbach based work-holding specialists Hainbuch.

The Manok plus manual stationary chuck can be used in horizontal, as well as vertical machining position.

M When Martin Krieger, the Managing Partner of Heimatec Präzisionswerkzeuge GmbH started his own business, producing multi-head spindles and power tools in 1989, he couldn't have envisaged the current success. The business has developed brilliantly and today it has almost 90 employees and is one of the five largest employers in the Renchen region with a sales presence on all continents.

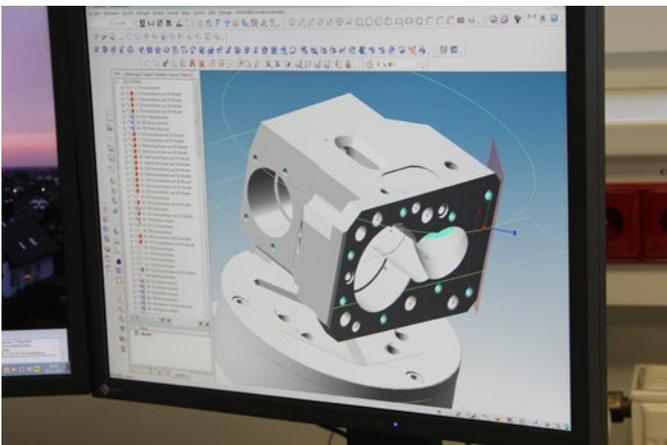
Whilst the focus is on customer-specific solutions, this entails various problems for the company's manufacturing facility. Dirk Wunsch, Work Preparation Manager at Heimatec says: "We strive to keep the unit quantities as low as possible, whether it is a standard or a special solution. This is because our production has to be as flexible as possible in order to reduce inventory. We have to do all this without passing extended delivery times onto the customer."

A good solution for the set-up problem

In the past, complex housings were delivered as round material and then machined on an appropriate lathe. Then parts were changed to a machining center for finishing. For this, the company needed specific fixtures that required up to 3 hours to set-up. For Daniel Schaub, this was an unavoidable nuisance, especially as precision was a critical factor. When Daniel, the company's Milling Manager encountered the Hainbuch manual stationary chuck at the open house of a machine tool manufacturer, he engaged in intensive consultation.



The Manok manual stationary chuck, part-specific fixtures can be dispensed with when manufacturing the housing.



Without specific set-up fixtures, the housings can be machined on 5 sides in one clamping set-up.

Daniel Schaub, explains: "For the most part, we have converted our core production to pallet machines, so that we can quickly and easily let orders flow through manufacturing. In this regard the objective is quite clear, to keep machine utilization extremely high via a low-manpower shift. We are successful in this challenge, as we have found a very good solution for the eliminating the set-up problem through Hainbuch."

As Dirk Wunsch adds: "Thanks to the Hainbuch solution, we can simultaneously manufacture parts on two machines. Parts previously machined on a Nakamura lathe can now also be machined on one of our Matsuura machining centers much more quickly. Moreover, we can manufacture parts that are finished and ready for assembly."

The first trials of the Hainbuch solution had its doubters. Once Hainbuch Representative Thomas Helfer saw the parts spectrum at Heimatec, one thing was clear. The parts were ideal for the Manok plus system: "The parts that were shown to me were almost perfect for 5-side machining in one clamping set-up via our Manok plus stationary chuck".

Daniel Schaub explains why: "The saw cuts are pre-machined on any lathe. This means a smaller diameter is turned. This is a machining step that can be activated at any time on any machine. In other words it does not restrict us in any way. We can use the blanks prepared in this manner for virtually almost all special and standard housings. The turned pin is used for locating in the stationary chuck". However, Thomas Helfer adds: "The actual clamping head can be changed in a few seconds when needed, so that a different clamping diameter or a different profile can be clamped. The same applies if the part should be clamped via a mandrel."

On lathes, as well as on machining centers

Dirk Wunsch also stresses: "We are surprised again and again by the flexibility of the Manok plus system. Currently, our company has dispensed with the entire fixture construction in favor of the Hainbuch systems. It no longer takes two or three hours to set a workpiece, but just a few minutes."

The Manok plus manual stationary chuck can also be used in a horizontal and vertical position. It can be adapted on lathes as well as on machining centers. In conclusion, Thomas Helfer explains the structure of the Manok system like this: "The manually activated stationary chuck consists of an interchangeable expanding clamping part, the clamping head and a conical location in the body. The clamping heads are produced from hardened steel segments that cause a parallel workpiece to be clamped to a remarkably high accuracy with minimal deformation of the workpiece. The axial draw force that occurs when tightening the actuating screw draws the clamping head directly into the stationary chuck and generates vertical clamping forces on the workpieces of up to 120 kN."

"In this regard, the clamping head either pulls the workpiece onto an internal end-stop that is integrated in the Manok plus, or it pulls the workpiece onto a front end-stop, which is then fastened. Therefore extremely rigid clamping is achieved, even for a short clamped workpiece. Additionally, repeatability rates of less than one hundredth of a millimeter can be achieved".

At Heimatec, Dirk Wunsch and Daniel Schaub are currently investigating further possibilities for the Manok plus, with the arrival of a Matsuura machining center with 25 pallets and a hard turning lathe from Spinner imminent.