



*The Toplus chuck with the jaw module and the Mori Seiki machine are the perfect team.*

## **HAINBUCH clamping devices take charge in the machine shop**

With a converted Mori Seiki NZ 2000 machine, HeBa Fertigungstechnik GmbH & Co. KG was reliant on an all-round, no-hassle clamping device. 3-jaw chucks were too big, and they could not be called set-up friendly. So a different system was required that would be smaller, more flexible, and easier to set-up. The company ended up with the modular system and the many adaptation possibilities offered by Hainbuch. Although initially Hainbuch was not the first choice, now Hainbuch is the number one. Jürgen Balting, HeBa CEO, is extremely pleased and meanwhile has converted the complete shop to Hainbuch clamping devices.

### **HeBa was the opportunity in the crisis**

The young firm sprung from Paul Henkel GmbH & Co. KG following bankruptcy in the economic crisis of 2009. Jürgen Balting, who had been Plant Manager at Paul Henkel, took over the company.

He describes it concisely: »If you have a leased car and then you are asked if you want to buy, i.e. own, the car, then you know whether it had problems in the last three years and whether it would be worthwhile to take it over.« This was the starting signal for the new beginning. However, the company did need to be

turned completely inside out and adapted to the requirements of the market. Jürgen Balting progressively invested in new machines, new clamping devices, and new employees. Today the firm has approximately 20 employees and a manageable, ultra-modern machine shop, consisting of eight turning centers

and three machining centers. To enable HeBa to supply its customers, predominantly from the automobile industry, with bushes for engines and various turned and milled parts, the firm works in three-shift operation. The batch sizes vary between 100 and one million parts. This only works because the machine shop is highly automated. For a small manufacturer this is level of automation is extremely important, to counter high employment costs and to remain flexible. This level of automation requires the right tools and clamping devices.

### **In 2011 Hainbuch joins the party**

Jürgen Balting ordered his first new machine in 2010, a Mori Seiki NZ 2000 DL T2, and had it specified to be totally flexible. A fully automated machine that can do everything, bar work, or robot loaded, in short a »jack of all trades«. The two spindles on the machine can work autonomously; this means that spindle one can make parts that are completely different than the parts made by spindle two; however, the two spindles can also work together. The machine is programmed so that it can be quickly switched over depending on capacity and the part required. In April 2011, the machine was delivered, and due to the 80 large capacity on the main spindle, the company specified a 3-jaw chuck. However, when the firm went into production, it turned out that the chucks were not ideal. »The chuck was too big for a lot of the tooling. Also set-up was difficult and time consuming«, according to Balting. Something better was required. »The most important thing was that it was accurate and provided various adaptation possibilities. I did not

want to always take off the entire chuck to change workholding. Also there was not enough room in the machine to get a crane in. So we ended up at Hainbuch with its modular system and the different adaptations. The advantages were clear: Clamping from outside, inside or in front of the chuck with the modular system elements, fast set-up, and easy handling. No other clamping device manufacturer had this amount of possibilities«, explains Balting.

### **Everything perfectly matched**

By summer 2011, the machine was equipped with the size 100 hexagon Toplus collet style chuck on the main spindle and sub spindle. So that manufacturing could immediately take full advantage of the Toplus chuck, the Mando Adapt [mandrel] adaptations, as well as the clamping heads were purchased

at the same time. For Mr. Balting, set-up with the clamping heads is a lot easier than it was with the jaws. His opinion in this regard: »Even if the jaws are cleanly serrated, you always have to re-machine when you remount the top jaws. And then we also no longer had any problems with the interference contour, because the Toplus chuck has a far smaller profile than the large 3-jaw chuck. The only short coming with the clamping heads was that we could only clamp to diameter 100mm, and we also had larger parts.« We were also able to solve this problem with the jaw adapter, so there was no longer anything stopping us from unmanned machining. All machining steps, from milling the contour, inserting transverse bores, diagonal bores, to inner and outer turning and turning outer contours, the full program, was now possible without major workholding changes.

*With its modular system and the many adaptations, Hainbuch has succeeded in getting into the machine rooms of HeBa.*







*Benjamin Schuh, Field Service employee at Hainbuch, supports Jürgen Balting, CEO of HeBa, in word and deed – this is what a good and fair partnership looks like.*

### Problems eliminated

All difficulties were eradicated with the Hainbuch clamping devices. The set-up time was significantly reduced, the interference contour was improved, and large throughput was achieved. Also, short-notice program changes are no longer a problem, thanks to the modular system, as changing from O.D. clamping to I.D. clamping is quick and simple. In addition, there is less scrap and the quality of the parts has improved. This was another challenge for the clamping device, because of different swarf from different material, from short chips, to stringy birdsnest swarf. But the clamping devices from Hainbuch also mastered this challenge. Balting adds: »You can have the best machine and the best tools, however if you have a bad clamping device, you can't run. And with the Mori machine we had a top machine and the tools on it were not bad either, the 3-jaw chuck was the only issue. Now everything runs smoothly.«

### Next generation – jaw module

The jaw adapter combined with the Toplus chuck has performed well for a long time, and was actually good enough. But when the new jaw module came out in 2013, it was clear, the jaw adapter would be superseded. Why? The jaw module had crucial advantages a larger stroke, a larger clamping

range, clean radial clamping, hard jaws, and standard serrations. With the old jaw adapter there were no standard jaws. The new jaw module can

also be more easily set-up. »We were happy that the next generation »jaw module« came on the market, thus we could firmly run against it«, reports Balting. From now on, the Toplus chuck with the jaw adapter is on the main spindle, and the Toplus chuck with Mando Adapt is all that is required.

### Other clamping devices are out of the running

Because Jürgen Balting was absolutely happy with the Hainbuch clamping devices, and the service and support were handled in an outstanding manner, in 2012, all machines with bar work were successively equipped with size 65 Toplus chucks. Now he saves 25 minutes set-up time, when swap-

ping out a clamping head, and running-in the machine again goes real fast, five minutes maximum. The newly ordered Mori Seki NLX machine that will be delivered in April of this year will also be fitted with a Toplus chuck size 100 on the main spindle and sub spindle. There is even a Toplus Carbon on one machine. However, this was purely coincidental; Hainbuch was having a promotion offering the carbon chuck at the same price as the steel chuck. And since all adaptations also fit here, the company thought, why not. All the Hainbuch chucks are pull-back chucks; there is not a single deadlength chuck. The reason is that Mr. Balting wants to use the complete modular system on each spindle and this only functions with the pull-back effect. With deadlength, this is only possible under certain conditions. And in response to the final question as to his overall satisfaction with Hainbuch, Balting said: »If everything was not functioning so well, I would not be sitting here with you.« Hainbuch has gained another real fan.

*The workpieces are running like clockwork, thanks to the clamping devices from Hainbuch.*

