

Hainbuch Cuts Set-Up Times from 30 to 3 Minutes

When Linhardt GmbH & Co. KG was witnessing excessive set-up time in its turning department, it recruited the services of Hainbuch to equip its multitude of turning centres with a quick change system. The results were astounding with the change-over time for clamping devices reduced from 30 minutes to just three minutes.

Commenting upon this remarkable success, Stefan Pfeffer, Acting Department Manager at Linhardt GmbH & Co. KG in Viechtach says: “In our company we don’t talk about problems with clamping devices anymore. That’s because of the centroteX quick change-over system from Hainbuch. We have always been looking for suitable clamping devices for our lathes to reduce our high set-up times and three years ago when I attended the Hainbuch Technology Forum in Marbach, I learned about the quick change-over system, the centroteX. It is the

perfect interface between machine spindle and clamping device.”

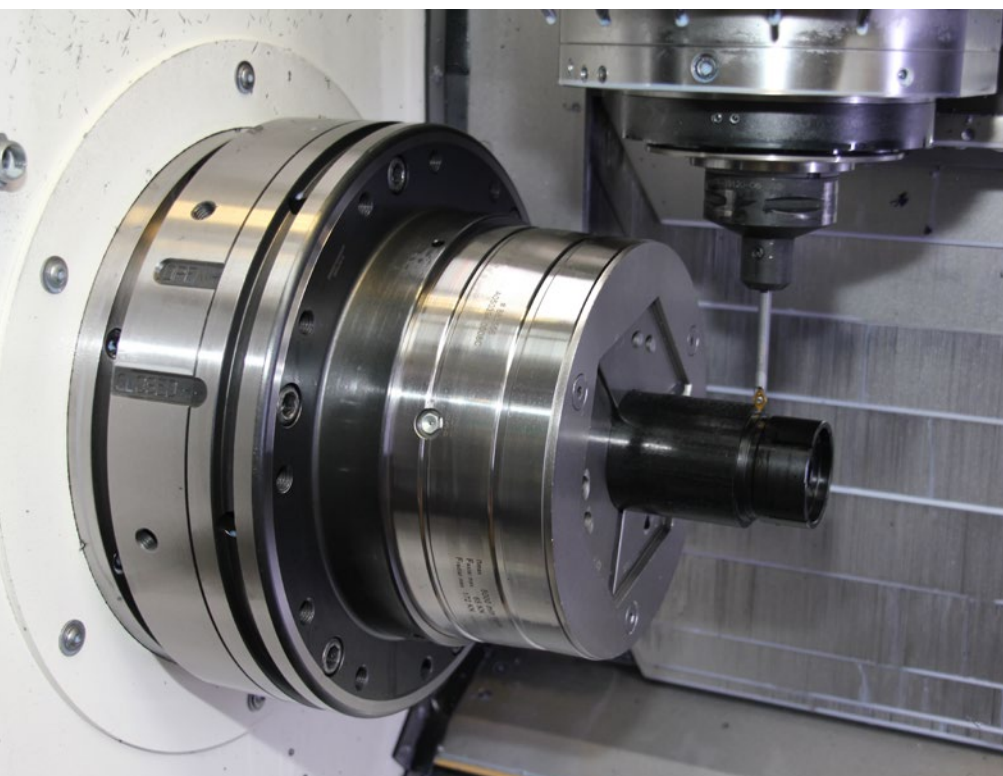
With a machining department that consists of over 35 CNC machines, the Linhardt Tool Construction organization is an independent branch of the group with 60 employees. As Mr. Pfeffer continues: “We are a single source for everything, from the drawing to the end product; so our competence is primarily in the area of single-piece manufacturing. The company manufactures small production runs from 1 to 500 off. To avoid production

downtimes we must implement extremely short throughput times. We offer these short throughput times to our external customers as well, and they are pleased to accept them.”

Frequent change-over at reasonable time expenditure

A high set-up effort conflicts with this objective, so a solution was required to enable fast changeovers with justifiable time expenditure. “We set up each lathe at least once per shift. Previously the time for changing a clamping device was just under 30 minutes, with our 3-shift operation that adds up to 1.5 hours every day. With the centroteX system from Hainbuch, the changeover now takes only two to three minutes,” points out Pfeffer.

A welcomed side effect of the time reduction is increased flexibility, now the clamping device can also be changed several times per shift, if necessary. “In addition, set-up has become much easier for the workers,” states the acting department manager. Even if set-up time reductions were the top priority at Linhardt, there were still other requirements that the clamping technology specialists had to satisfy. Stefan Pfeffer continues: “It was imperative that the run out of 1/100mm does not get lost due to the quick change-over system.



With the quick change-over system the right clamping device is on the machine within a few minutes.



Thomas Hummel (left), Technical Consultant at Hainbuch, and Stefan Pfeffer, Acting Department Manager in the Tool Construction organization of Linhardt GmbH & Co. KG: “For us centroteX is a universal solution.”



Pictured are: The different clamping devices with adapter plate that can be quickly mounted on the lathes.

Moreover, the adapter plate also had to allow clamping devices from other manufacturers, as well as from Hainbuch.”

Previously the Tool Construction organization had two to three associated clamping devices for each machine spindle. “To reduce this number, we also wanted the ability to use all clamping devices on all spindles.”

Twelve now fits into six

To accommodate the different types of lathe and clamping devices, Hainbuch had to enable the change-over of twelve clamping devices on six spindles. Thomas Hummel the responsible Technical Consultant at Hainbuch, describes the challenge: “To do this, we designed the adapter plates for the chucks. An additional requirement was to

Linhardt

The Linhardt Group is one of the leading manufacturers of packaging materials in Europe. Every day, 1200 employees at 5 locations produce more than 3 million packaging items: These include tubes of aluminum and plastic, multi-flex tubes, aluminum cans and small tubes, aerosol cans, markers, and or custom packaging solutions. The company, which was founded in 1943, has 650 employees at the headquarters location in the Bavarian Forest. Linhardt’s production equipment is among the most modern in the world. On average the family-owned business invests 10 to 15% of its turnover, year for year. Last year’s turnover was €119 million, with total investments of € 18.4 million. Linhardt has a global network of representatives. The company exports more than one third of its production to countries all over the world.

minimize the interference contours in the work space. Consequently, the outside diameter of the interface was defined at 320 mm and the diameter range selected per clamping device was as small as possible.”

Overall, the clamping devices cover diameters from 5 to 250 mm with two DMG lathes marking the beginning for the centroteX project. Today, the system is installed on four machines, with a total of six spindles. All are equipped with the basic flange. Twelve chucks with adapters complete the modular system.

“For us centroteX is a universal solution. A new precision hard turning lathe from Monforts’ is coming in September and as the Hainbuch clamping devices ensure high repeatability when clamping, the new machine will also be equipped with a centroteX quick change-over system”, reveals Stefan Pfeffer.