



Technological leap ahead for the indexable insert grinding department, thanks to investment in precision



To continue to fulfil the quality requirements for increasingly small and precise indexable inserts used in small parts manufacturing, in particular in medical engineering and in the watchmaking industry, Boehlerit has invested in 5 state-of-the-art Agathon peripheral grinding machines.

Leo Peri and Dom Plus are the pride and joy of Andreas Königshofer and his grinding team. The units are used in Kapfenberg as well as in the production facility in Turkey, thereby ensuring failsafe performance (redundancy) between the two sites.

"These state-of-the-art, 4-axis peripheral grinding machines are fully automated, integrated into our network and programmed from a central programming station."

The fully automated grinding processes in the μm range are measured continuously and corrected automatically. Andreas Königshofer is particularly proud of the fully automated, process-reliable handling: Thanks to precise spot recognition (the

indexable insert always faces the same direction in the machine) and a robot with a special gripper arm, waste during handling is eliminated even in the smallest range of indexable inserts (IC03), and even with extremely sharp indexable inserts for aluminium machining, breakouts are a thing of the past.

To top it all, the grinding time itself is reduced by up to 30%, despite these ultra-precise results. Hard to believe – the process is wastage-free, faster, and more precise. In a nutshell – it is an improvement! Digitalisation was a prerequisite for this investment. The data is processed further via the OPC-UA interface to our ERP system.

The future is almost here, and with it Industry 4.0. Smart Connectivity – the connection to an employee's mobile phone in order to monitor the live status and runtime analyses of machines – is no longer a pipe dream, but tangible reality.

To grind complex shapes or our highly successfully indexable inserts

for mould-making in the μm precision range, we invested in a 5-axis Haas tool grinding machine with a wheel changer with room for 9 grinding discs.

"The machine comes with a special dressing technique – XING Dressing – to help us grind even the most complex shapes. With this technique, re-profiling of tapered wheel is performed automatically."

Naturally, high-level precision output must also be measured precisely. To ensure this, we invested in 6 measuring units: digital profile projectors that are linked to the Boehlerit network and measure the profiles (IC, side length, corner radius and diameter of the bore) down to the smallest μm .

An automated contour adjustment via DXF file is also possible.

Andreas Königshofer is convinced: *These investments have made the indexable insert grinding department fit for the future!*

Gerhard Melcher