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**New machines – new opportunities:  
Boehlerit continues investment programme to boost in-house production**

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With the purchase of the turning/milling machine DMG CTX beta 1250 TC, the carbide experts from Kapfenberg performed a technological leap that will open up new customer groups. *“The machining of so-called ‘green parts’ confronts toolmakers with a range of challenges: Clamping these soft, chalk-like, and therefore highly sensitive workpieces is especially difficult! The goal is to complete as many machining steps as possible on a single unit.”* The new turning/milling machine does exactly that: An extensive tool magazine provides a range of machining options with optimised set-up times. All preforms must be machined on both sides, and the repositioning this requires is completed automatically in the machine. The air pressure-controlled Röhm clamping technology works with the aid of sensors and is highly sensitive, which means that it may be adapted to the different requirements of each workpiece. Flexibility is key, as “batch size 1” is the norm. The pressure on the clamping jaws must also be checked and monitored regularly to compensate for wear, dirt, and deterioration of the clamps. *“The centrifugal forces of the clamping jaws in case of high speed frequencies is also taken into account and compensated for”*, adds Martin Willinger. Thanks to this sophisticated system, process safety is maximised. After all, *“extreme challenges such as these only occur in carbide manufacturing”*, says Karl Dotter, Head of Process Planning for carbide machining at Boehlerit.

**Simulation before production**

At the same time as purchasing the turning/milling machine, Boehlerit has upgraded its programming system, which had already been in use for in-house turning. The software experts of Pimpel GmbH have now also implemented the Esprit CAM system for milling applications. The Esprit SolidTurn Multi-Spindle has opened up a new dimension for Boehlerit. *“The biggest advantage lies in the fact that the main and counter spindle are synchronised with the B axis”*, explains Karl Dotter. This feature allows for the simultaneous turning and milling with up to five axes and ensures the exact maintenance of positions during the transition from main to counter spindle, making the exact machining of the front and rear of workpieces possible. *“Until now, this required quite a lot of additional effort”*, says Dotter. A special software feature now allows for the simulation of the entire machining process. This means that errors may be avoided effectively and results may be assessed on the monitor - an essential technological step ahead when it comes to the complex manufacturing of individual parts.

## Press release

### **Time-saving expertise**

With this investment, Boehlerit is yet again putting its expertise to the test, now also in the manufacturing of precision tool blanks. This has reduced machining times by at least a third and made it possible to deliver specific, customised tools within just ten working days from the order date. Boehlerit is also considering extending its production technology facilities in the Kapfenberg headquarters, with the Boehlerit sites in Germany and Turkey following suit, all with the goal of optimising production and delivery cycles even further.

## Press release

### The company

Boehlerit, headquartered in the Austrian town of Kapfenberg, sets global standards with carbides and tools for the processing of metal, wood, plastics and composites. With cutting materials, semi-finished products, precision tools and tool systems for milling, turning, drilling and forming, Boehlerit ensures process safety and efficiency on a global scale. The company's extensive product portfolio includes highly specialised tools for the machining of crankshafts as well as for the mining industry, for bar peeling, tube and sheet metal processing and heavy-duty machining. The Boehlerit product range also features carbides for construction components and wear protection. When it comes to coating technology, Boehlerit holds a global monopoly, ranging from the first-ever nano-CVD bonding layer to the hardest diamond layer worldwide. With its many years' experience in metallurgy, coating technology and state-of-the-art press technology, Boehlerit is a highly competent development partner for toolmakers.

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Pictures

**Abb. 1:** Flexibility for batch size 1: Thanks to special clamping technology, the turning-milling center from DMG offers new possibilities for machining complex, chalk-like preforms.



## Pictures

**Abb. 2:** Turning and milling is possible with up to five axes simultaneously. Exact adherence to the positions during the transfer from main to counter spindle is thus guaranteed.

