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**BCM35M and BCM40M - Unsurpassed cutting power on stainless steels.**

Kapfenberg / Styria, 15/01/2024

Milling stainless steels is one of the most challenging tasks in machining technology. The extreme, sometimes downright contradictory properties of this material class ensure a high level of abrasive wear, suboptimal chip break and chemical reactions with the tool material that may lead to built-up edges and, in extreme cases, to tool breakage.

Such high requirements demand a perfectly developed tool concept. With the new grade generation BCM35M and BCM40M, Boehlerit is facing up to the challenge of milling stainless steels. As a result of intense research and development, these grades reflect all technical aspects in an optimised form.

Essentially, both milling grains consist of superfine-grain carbides with a different binder content, which is the reason why they have the best hardness/toughness ratio in the Boehlerit portfolio. In practice, this means a high level of abrasion resistance, paired with fracture toughness. The chip former and edge finish were determined after extensive simulations and trial runs, ensuring cutting power and perfect chip removal. The newly developed PVD coating is based on a multi-layer system of AlTiN and AlCrN individual layers (5-10 layer changes, depending on the thickness). The coating combines excellent abrasion resistance even at high temperatures with very good fracture toughness and temperature change resistance (delayed crack formation). An innovative after-treatment method ensures smooth layers and reduced layer tensions, significantly reducing the adhesion of workpiece material and resulting in an excellent result when milling stainless steels.

## Press release

### **The company**

As a carbide pioneer, the Boehlerit Group is one of the world's leading manufacturers of wear protection solutions and cutting tools for machining metal and composite materials. With cutting materials, semi-finished products, precision tools and tool systems for milling, turning, grooving and forming, the family-owned company has been ensuring process reliability and efficiency worldwide since 1932. Around 800 employees offer customers comprehensive know-how in all aspects of metallurgy in order to be able to realise process-optimised manufacturing technologies, the highest quality and an edge in tool productivity. With three production sites in Europe and Asia, international subsidiaries and a network of sales partners, the carbide and tool specialist has a global presence. Together with its two legally independent sister companies Leitz and Bilz, the Boehlerit Group forms the globally active Brucklacher Group, in which over 4,000 employees generate an annual turnover of around 450 million euros.

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Pictures

**Fig. 1:** The new grades BCM35M and BCM40M lead to excellent machining results when milling stainless steels.

