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## Boehlerit – The Partner in bar peeling

**Bar peeling, also known as skiving, is one of the most demanding chip-forming machining processes, in which process engineering expertise is applied directly at the point of action to a particularly high degree. As a partner for successful bar peeling, Boehlerit offers complete tooling systems—namely bar peeling heads, holders and cassettes—as well as tools for bar-end machining and wire shaving rings.**

From a process engineering perspective, bar peeling is a kinematically reversed form of longitudinal turning, in which the workpiece is concentrically guided through a rotating tool, the peeling head. In practice, bar peeling is a heavy-duty cutting process that is economically employed in diameter ranges from 20 up to 500 – 600 millimetres. With standard materials, feed rates of up to 18 millimetres per revolution are common today, which represents many times what is possible in conventional turning. Using appropriate cassette systems, depths of cut of up to 15 millimetres can be achieved.

### Always at the forefront

Bar peelers benefit from comprehensive know-how gained from a wide range of applications and processes when it comes to achieving performance increases through new coating developments. In addition, Boehlerit has all coating technologies in-house. Due to the process conditions—particularly the extremely high feed rates—the greatest challenges arise from the required coating adhesion. Much more than in conventional turning, application-specific design of cutting edge geometries moves to the forefront in bar peeling. In Boehlerit's portfolio, users will find the broadest geometry program available in standard versions, tailored to a wide range of material classes.

Currently, simulation software is used in the development of new insert geometries to analyze chip flow as well as the temperatures and forces generated, in order to achieve the best possible results. A large number of parameters are fed into the software to obtain results that are as close to reality as possible. The interaction between cutting material, coating, geometry, and cutting-edge preparation is usually dependent on the machine and the material to be machined.

Applications are constantly changing, as new materials to be machined are continually being developed and driven by cost savings, machining allowance—especially for smaller diameters—is reduced to a minimum before the peeling process. This aspect presents particular challenges in terms of roundness and surface

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quality. For larger diameters, this is only possible to a limited extent due to the manufacturing process, which is why tandem or trio peeling systems with large round inserts for high material removal rates are still used. Current examples of innovative solutions for machining new materials or for achieving significant performance increases in bar peeling include the development of new indexable insert grades for machining carbon steels, the nanotechnology of the universal peeling turning grade BCP25P, and the new grades BCP05P, BCP10P, BCP15P, and BCP35P. In addition, we offer grade solutions for non-ferrous metals such as aluminum and copper. Further information can be found in our new bar peeling catalogue.

## Presseinformation

### **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 700 employees offer customers comprehensive expertise in all aspects of metallurgy in order to realise process-optimised production technologies, the highest quality and a head start 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.

### **Our commitment to a sustainable future**

At Boehlerit, sustainability is not just a promise, but a lived reality and deeply rooted in our corporate culture. We set standards in environmental protection and occupational safety and are committed to a future that conserves resources. We focus on the development and construction of durable and recyclable quality products, environmentally friendly manufacturing processes and minimising the environmental impact of our products.

### **Press/media contact**

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**Fig. 1:** As a partner for successful bar peeling, Boehlerit offers complete tool systems, i.e. bar peeling head, holder and cassettes.

