Press release

Carbides and Precision tools

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Milling competence all along the line

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The new Boehlerit milling programme comprises 18 innovative tool systems and 19 cutting grades and offers maximum process reliability and productivity. Adapted to the machining operations for face, edge, 3-D and solid carbide milling, all current materials can be machined safely and economically.

The tool specialists at Boehlerit have been setting international quality standards in the field of milling for decades. Thanks to their know-how and experience in material and cutting tool development, the experts at the Kapfenberg-based company have subjected all milling tools to dynamic FEM design (Finite Element Method) and developed stable milling cutters with excellent fatigue strength properties, optimum cutting behaviour and precise geometric characteristics. Special materials and heat treatments form the basis for a long service life even under very challenging operating conditions.
The basis for the new high-end milling programme are 18 innovative tool systems. These include multifunctional tool systems that enable two machining operations (corner and HFC milling) with one basic body, thus saving not only the corresponding carrier bodies but also storage costs. Furthermore, the range extends from highly economical high-feed tools to face milling cutters with 16 cutting edges. A total of 19 new cutting grades ideally cover the many milling tasks in face, edge, 3-D or solid carbide milling in all current materials and combine machining reliability with economic efficiency.

Different carbide substrates are used to produce the new milling grades and milling inserts, which are matched to each other in such a way that a wide range of applications from roughing to finishing on cast iron, steel, stainless materials, aluminium or hard materials as well as superalloys is possible without any gaps. The cutting material grades guarantee the user low flank wear and greater stability against cutting edge chipping. In addition, comb cracks are avoided and scour resistance is offered.

Holistic system solutions at high-end level

The special feature of the four Boehlerit face milling systems (ETAtec 45P, PItec 45N, THETAtec 45N and ISO 45P) is the extremely stable design of the tools, which makes them easy to cut even under extreme conditions and offers a high cutting volume with extremely smooth running. In addition, the variety of cutting materials ensures optimum cutting results on a wide range of materials.

The corner milling programme with its seven tool systems (BETAtec 90P Feed, DELTAtec 90P Feed, DELTAtec 90N, DELTAtec 90N Tang, ISO 90P, THETAtec 88N and ZETAtec 90N) is defined by maximum productivity, a diverse range of geometries and grades, the reduction of machining costs and optimum cutting force distribution with uncompromising coordination down to the last detail. In addition, the two milling systems BETAtec 90P Feed and DELTAtec 90P Feed can be used multifunctionally and also offer the possibility of achieving high tooth feeds and high stock removal rates with maximum process reliability in the high feed sector.

Universally applicable 3D milling programme

The universally applicable 3-D milling programme from Boehlerit is an ideal extension for machining hard, resistant materials. The BALLtec and TORROtec copying tools have been specially developed for finishing - resulting in two new geometries, one for pre-finishing (N geometry with neutral rake angle) and the other for fine finishing (F geometry with positive rake angle). The hardness-toughness behaviour of the newly developed ultra-fine grain grade BCH13M offers special properties in machining. This also brings a new geometry with convex helical cutting edges and joins the BALLtec range with the designation FHF2. The RHOMBICtec milling system is also suitable for finishing, but in a larger diameter range (16 to 42 mm), and primarily for 90-degree, face and contour finishing in die and mould making. The ISO 00P programme for roughing is very broad and offers a wide range of round inserts. A wide variety of steels, cast materials, hardened steels or stainless materials can be machined with them.
Boehlerit also focuses on the highest quality and performance in the area of solid carbide milling: this is achieved through the high-quality substrates and coatings. With over 1000 products, this is Boehlerit's most extensive solid carbide milling programme to date. What they have in common is high performance, resistance and tool life - the properties that are expected from a carbide and tool specialist.

A strong signal in the field of special machining

The three tool systems VARIOtec 00P, ISO Chamfer and ISO Plunge 90P are absolutely new in Boehlerit's milling range. The former is particularly suitable for turbine blade milling and also offers carrier bodies and cutting materials adapted for copy machining. The special design of the VARIOtec 00P tools prevents the inserts from twisting in use, facilitates handling when fitting a new cutting edge and delivers exceptional performance results. Optimised chip chambers ensure excellent chip evacuation, enabling high cutting data and high metal removal rates. With the ISO Chamfer, Boehlerit has developed a universal milling tool for chamfering and deburring which is available with different angles of attack. The ISO Plunge 90P tool system, on the other hand, is particularly suitable for plunge milling of non-ferrous metals and high plunge angles can be realised thanks to a specially developed base body design.

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

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