



Eco-HPC-Line

High performance for more sustainability

Sustainability, careful use of resources and environmental protection are current topics and are rightly the focus of corporate strategies. Tool solutions from botek take this into account and provide users with additional high economic benefits and technological added value. And this is by no means limited to deep hole drilling, which the family-

Solid carbide
tools of the
HPC-Line
from botek

High productivity and sustainability do not have to be contradictory in metal-cutting production. On the contrary, short process times often help to save resources and energy. This is particularly true if the tool concept, tool manufacture and process strategy for customer use are dedicated to this goal.

owned company has been known worldwide for over 40 years, but also in many other areas of machining.

At the AMB trade fair, for example, botek is presenting the comprehensive high-performance product family "HPC-Line" for milling, reaming and drilling. These newly developed tools meet the special requirements of high metal removal rates and maximum process dynamics, while at the same time ensuring high process reliability and good machining quality. This is achieved by geometrically optimized and highly polished flutes for rapid chip evacuation, by resistant wear protection coatings that withstand high temperatures and abrasive materials, and by adapted cutting edge micro-geometries that ensure a high stability of tool life. For HPC milling tools and HPC reamers, an unequal pitch of the cutting edges inhibits oscillations, so that a high surface quality is achieved in stable processes. For HPC twist drills, this is ensured by the special grinding of the three-fluted cutter and the design of the guide chamfers.

In order to fully exploit the advantages of these tools, the machining task requires a process design that is adapted to the general machine conditions.



The experienced application engineers at botek will be happy to assist you in selecting the tool design, process strategy and parameters in such a way that short machining times and long tool life are achieved. The result: short machine operating times with simultaneous optimized utilization of the available production resources, machine capacities and lower tool consumption, ultimately higher economic efficiency and also savings in resources and energy.

These savings potentials are particularly remarkable when several machining steps are carried out in one process using combination tools. For example, drilling and countersinking processes or even drilling and reaming can be combined by using a single tool, so that tool change times, additional main times and the production of complete tools are eliminated. Here, too, botek's application engineers will be happy to provide support in order to identify and technically implement the corresponding potential.

Sustainability has always been a central issue at botek, not only in the use of tools, but also in their manufacture. For example, raw materials are only sourced from certified manufacturers in Europe and only "green electricity" is used, with a large part of the energy requirement being covered by the company's own photovoltaic systems. In addition, environmentally harmful production and auxiliary materials are continuously reduced and substituted, which is monitored in regular environmental audits.

The topic of sustainability has been taken to its logical conclusion in a botek innovation that will be presented for the first time at the AMB. As a further development of the HPC-Line in the field of milling tools, tools of the "Eco-HPC-Line" are presented, which have the same technical advantages as the sister tools of the conventional HPC-Line, but are also made of carbide, which is very environmentally friendly with only 2.9 kg CO₂ per kg carbide. An extension of the Eco-HPC-Line is planned in order to continuously expand the topic of sustainability at botek.

The further development of the botek single flute drills with interchangeable parts, which have been established for many years, also serves sustainability, because in their production carbide is only used for the tool components that are directly involved



Type 01:
Deep hole drilling tool with
exchangeable cutting
inserts from Ø 9.90 mm
(Pictures:
botek
Präzisionsbohrtechnik GmbH,
Riederich)

in the machining process. The resulting savings potential is therefore realized not only in the production of new tools, but also for retipping existing tools. Until now, these tools were only available from Ø 12 mm.

Thanks to continuous further development, botek is now in a position to offer single flute drills with interchangeable parts from Ø 9.9 mm, so that significantly more customers can use this cost-efficient and environmentally friendly tool concept. The single flute drill type 01 with interchangeable inserts in Ø 9.9 mm will be presented for the first time at the AMB, tools from Ø 11 mm are already available from stock.

The first choice for smaller diameters are the solid carbide single flute drills type 113 and type 113-HP. With these tools, too, botek consistently implements the sustainability concept – without compromising process performance. This tool type can be resharpened up to 20 times, depending on the cutting edge length and coating variant. Then, on tools Ø > 5 mm and minimum length 300 mm, a new drill head can be fitted to the existing solid carbide shank. This saves a large part of the carbide that would be required for the production of a new tool. This is unique in the field of solid carbide drilling tools.

At botek, a great deal is done to conserve resources and to act sustainably, not only with regard to the company itself, but also always with the aim of allowing its customers to benefit from this through efficient processes and highly productive tools. A visit to the botek booth in Hall 1 at the AMB is therefore certainly worthwhile.

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