



For half a century, precision tools have been developed and produced in Riederich. The consistent orientation on the diverse customer requirements, comprehensive service and continuous product innovations are the secret to the success of the family-run company which now employs 800 employees worldwide.

Dedicated to Innovation

50 years of botek – a proud history and a firm eye on the future

'You can do even better!'

This basic principle led to the founding of botek GmbH in 1974 and has been firmly rooted in the company's DNA ever since. Gotthold Schur, Karlheinz Wenzelburger and Lothar Herrmann had already dedicated themselves to the development, manufacture and sale of deep hole drilling and precision tools many years before the company was founded and were therefore also aware of the efficiency of single flute drills. They were convinced that many machining processes could be made more productive and reliable by using these tools, but they were unable to further develop the technology in the form and consistency they would have liked.

This led to the courageous step into self-employment and the brazed single flute drill with carbide head became the first botek product. A small hall served as the production facility in the early years, and the existing grinding machines for drill head production were converted and optimised in-house. Where previously a two-stage process consisting of pre-drilling and reaming with HSS tools was required, the new and innovative botek single flute deep hole drilling tools now made it possible to drill precise holes in the solid as a 'one shot' process. Thanks to shorter machining times, lower tool costs and greater process reliability, success was quickly realised, the customer base and workforce grew and the company soon moved into new premises.

The company founders, from left L. Herrmann, K. Wenzelburger, G. Schur

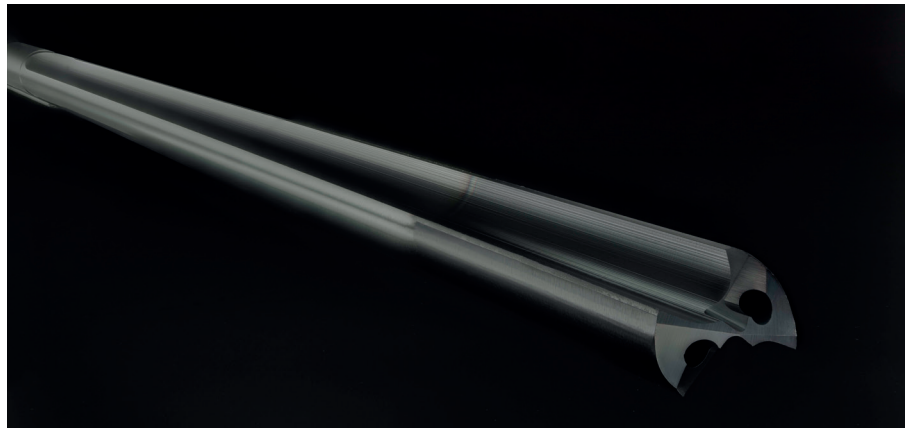


From the very beginning, close contact with customers was important to the botek founders, as their requirements and wishes were the driving force behind numerous further and new developments. As early as 1976, the first BTA tools were developed which, in contrast to the tools commonly available on the market at the time, were equipped with replaceable cutting edges from a diameter of 20 mm. In 1983, the first solid carbide single flute drills were developed, which also helped botek to achieve

an international breakthrough, as these tools enabled significantly higher productivity compared to the brazed single flute drills that had been standard on the market until then. The solid carbide tools are now available from diameters as small as 0.4 mm - which is unique in the world. Thanks to optimised grinding, sophisticated cutting edge preparation and full coating, the botek single flute solid carbide tools achieve feed rates that are comparable to double-edged twist drills - with higher machining quality and process reliability. Today, botek offers tools and accessories for all deep drilling processes as well as solid carbide tools for piloting, solid drilling and counterboring, form drilling, counter-sinking, reaming, deburring and milling.

As botek always keeps an eye on the entire process, components have been and continue to be developed outside of the actual tool. For example, the axial pulsator, which is a mechanical element between the spindle and tool that generates a pulsation of the feed movement and thus guarantees reliable chip breaking without having to intervene in the machine control. To this day, this robust solution for long-chipping materials provides customers with great added value thanks to significantly higher feed rates and longer tool life. Even though the company remains true to its roots and the headquarters in Riederich at the foot of the Swabian Alb is still the largest site, botek now operates worldwide. The family-run company, which is now managed by the second generation, has established a production facility in India, opened its own representative office in Thailand for the South East Asia region and is present on the North American markets with its newest subsidiary, botek America Inc.

Current development projects are dedicated to new and optimised tool concepts as well as the opportunities presented by advancing digitalisation. The optimised single flute drill with interchangeable parts 'Type 01', whose inserts have two cutting edges and therefore two uses from a diameter of 12 mm, is about to be launched on the market. The stable design with serration between the cutting insert and drill head body is retained, while the lubricoolant supply is improved. Internal tests with different materials were successful, the first prototype applications are already being used by customers and the sales launch is plan-



ned for January 2025. The solid carbide 2-fluted drill Type '123-04' for drilling in stainless steels under emulsion has recently been added to the programme. The tool life achieved is many times longer than with single-fluted deep hole drilling tools and the hole quality is significantly better than when using twist drills.

Solid carbide
2-fluted drill
Type 123-04
(Pictures: botek
GmbH)

The practical understanding of customer processes is of the utmost importance at botek, and in future the focus will increasingly be on new and innovative possibilities of measurement technology and digitalisation. The data-supported use of botek tools is intended to supplement the application engineers' extensive wealth of experience in the near future and make processes even more efficient and reliable for customers. The foundations for this have already been laid in collaborative research projects for several years. For example, botek is working with research institutes in Stuttgart and Kaiserslautern in the BMBF project 'TransKI' to analyse and develop ways of predicting tool life using artificial intelligence. Other projects are dedicated to sensor technology on tools and analysing tool wear. The family company's future innovations can therefore be looked forward to with excitement and anticipation. One thing is certain: customer benefit will continue to be the basis and motivation for botek - as it has been for 50 years.

The botek single-flute drill with interchangeable parts Type 01 is available in diameters 9.90 - 43.99 mm. From January, the cutting insert will have 2 cutting edges from \varnothing 12 mm. The solid carbide 2-fluted drill Type 123-04 is optimised for use in stainless steel under emulsion, available in diameters 6 - 16 mm. The botek application engineers will be happy to assist you with the design of tools and processes: www.botek.de