



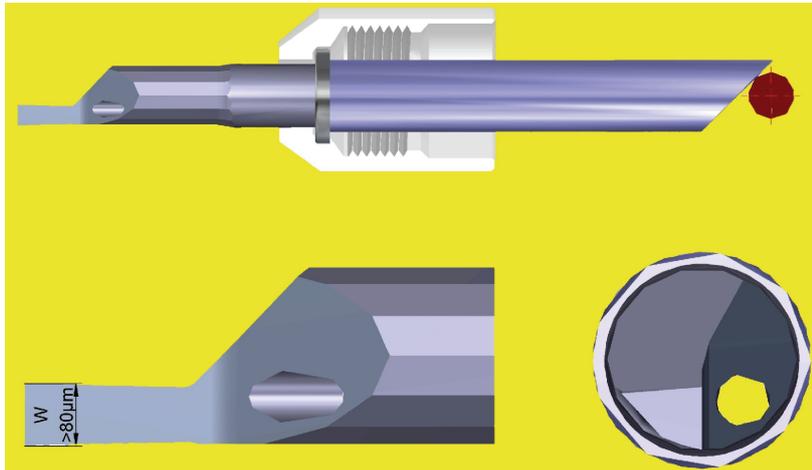
NEWS

borin® Micro Axial Trepanning Tools

The demand for mini axial trepanning and mini axial copying tools with turning diameters of sometimes less than 1 mm and groove widths of up to a maximum of 120 μm is increasing steadily.

In reaction to the growing interest, Hobe GmbH in Baienfurt/Germany, developer and manufacturer of the borin® miniature boring system, has enlarged its already extensive complete range with two new standard products.

Flat trepanning and flat copying chisels for tooling diameters from 0,92 mm have already been included as standard types in this range.



In the range of the **axial trepanning tools** we have already produced groove widths of 0,08 mm for turning diameters from 0,5 mm. Their maximum groove depth lies at 3x W (groove width).

For the manufacturing of these tools, Hobe GmbH uses a specially selected type of hard metal with a very high bending-rupture resistance to make possible the application of the products in almost every material.

The very small tools are purposely delivered without hard material layer because a roundness of the cutting edge would cause an overloading of the cutting piece.

For this reason, the Super-Finish quality of all borin® tools gains special importance: frequently, only the extreme sharpness of all the edges makes the application of these tools possible and increases the redress life of the tools considerably.

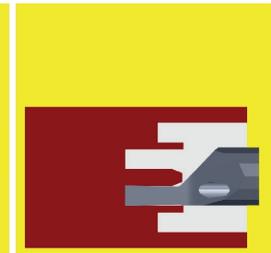
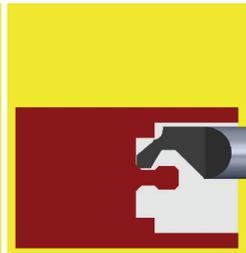
In the case of bigger turning diameters, the coatings

available are adapted to the material to be tooled.

Furthermore, the geometry developed specifically for this type of tools takes into account the maximum possible cross section of the tool. With the help of FEM (Finite Element Method) the transitions to the tool shank are optimized.

Hobe's GmbH self-developed grinding software additionally guarantees the compliance with all the relevant parameters. In the case of special dimensions or special forms, these can be taken into the dimensioning of the tools without any problems.

This signifies that even the special tools will present the properties defined during the development, such as the optimized geometry, the Super-Finishing, etc.



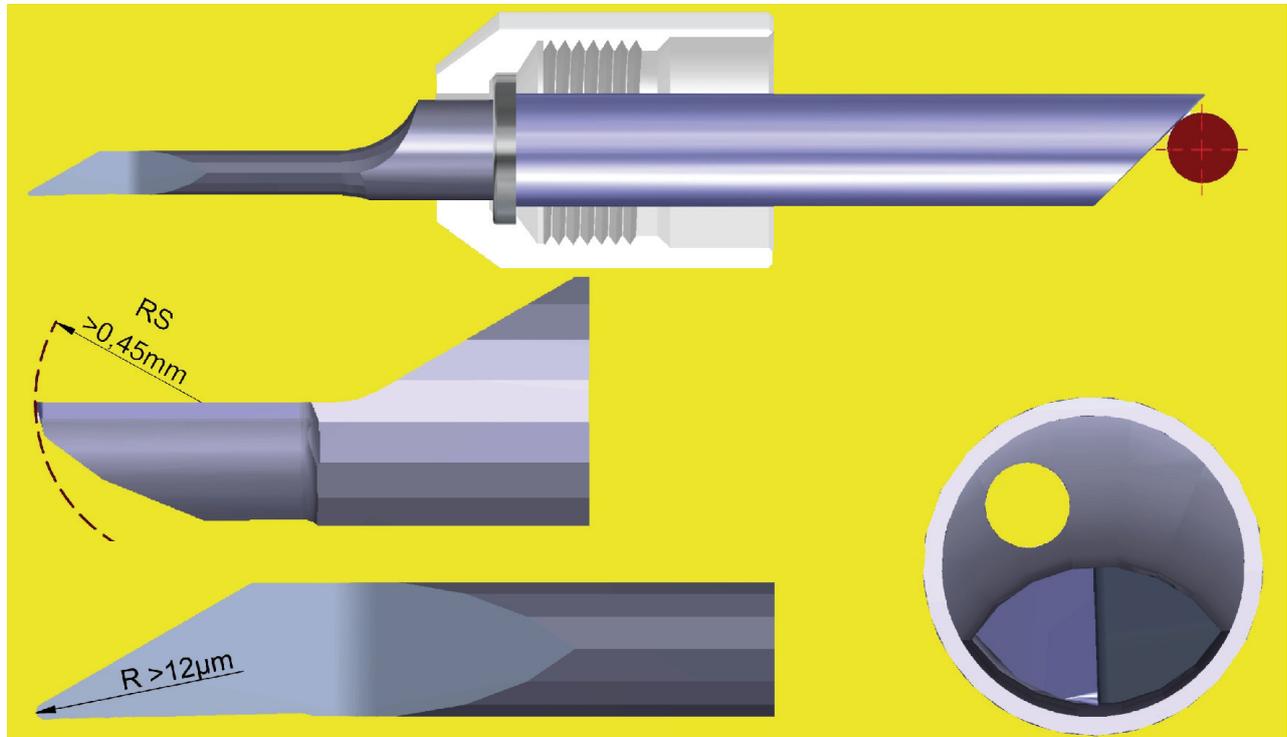
Application examples in connector manufacturing, clock industry and valve manufacturing

■ **NEWS**

The newly developed **flat copying chisels** have got front radius of 80µm, 120µm and 160µm.

grinding centers of the highest precision that are used for the manufacturing, and the tool geometry likewise specifically

from 15 µm – 25 µm . From a spherical radius of 0,75 mm, it is possible to manufacture special tools for the "backing-off" of



With them, it is possible to manufacture spherical interior grooves with spherical radius from 0,45 mm.

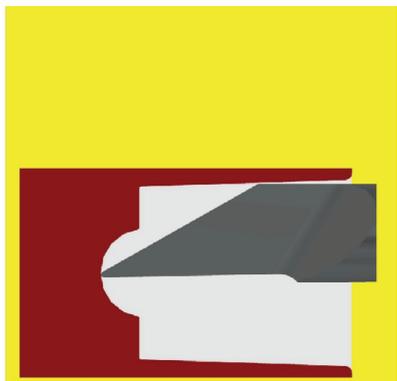
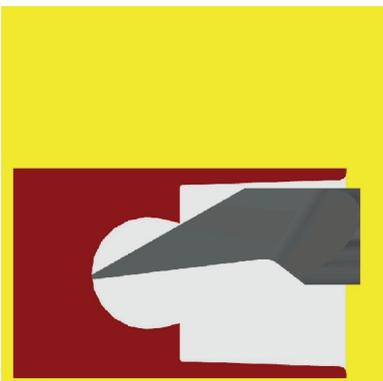
developed for this application allow the turning up to the center of the workpiece.

frontal grooves.

The ±3 µm precision required for the tool changing is securely guaranteed on the basis of our system in all the borin® tool holders and borin® cutting inserts.

The grinding program developed specifically for the

In the range of special versions, miniature radius with Super-Finish surface are available



Application examples in medical technology and sensor manufacturing

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