CENTER POINTS

MAXIMUM PRECISION: THANKS TO DIAMOND

High-precision machining of complex, rotationally symmetrical components is often carried out by clamping between tips. Revolving conical tips are not suitable for maximum precision of less than 1µm due to the bearing dynamics. In high-precision machining applications, therefore, only fixed tips are used. Here, the process forces are transferred directly to the tips – generally made of carbide – via the work piece. In many applications, the contact chamfers are only a few tenths of a millimeter, meaning that large surface pressures lead to high friction and a fast wear rate.
Maximum accuracies, especially in continuous operation, can only be achieved economically with PCD tips: the low friction compared to steel benefits the process behavior and improves the shape, position and roundness of the work pieces.

COMPACT OR SEGMENTED

Small hollow points up to 36 mm in diameter are manufactured from solid PCD. Beyond that, hollow points are manufactured segmented.

CENTRING TIPS

For work pieces with large diameters – flexible and precise:
The center hole in the component enables accurate re-chucking and machining beyond the end areas. The low friction value between diamond and steel means that very high levels of accuracy can be achieved on the component.

HOLLOW TIPS

Indispensible for long components, such as jet needles:
The high-precision hollow conical tip with roundnesses of < 0.5µm on the PCD internal tapered surface. Components with bevelled ends can therefore be machined around the perimeter with high precision.

SPECIAL TIPS

Long, slim, multi-recessed components or the machining of end contours (e.g. jet needle):
Special solutions for the highest demands are DR. KAISER's specialty, in a PCD or carbide version.