

## MicroDrill Chucks:



- For tool shanks from 0.2 mm to 3 mm (0.0078 to .040 inch.)
- Balanced to less than 0,5 gmm/kg
- Runout less than 0.01mm (0.0004 inch.)

MicroDrill Chucks are designed to machine small workpieces at high spindle speeds. In micro-production or the medical industry, these toolholders make it possible to hold tool diameters from 0.2 to 1.5 mm or 1.5 to 3 mm with minimal runout. Due to the slim contour, the chucks are very low-weight.

Every company machining small parts is familiar with the problem of how to hold small drills and milling cutters. Collets or ShrinkFit chucks are not typically suitable for cutter shafts under 1 mm diameter. Special toolholders are required for these small diameters. Now Micro-Drill Chucks from Diebold can hold even the smallest diameters safely and accurately.



There are very few reliable systems on the market for mounting very small diameter cutting tools. When using collets from 1 mm up it's necessary to use high-precision collets at a much higher cost than standards. When mounting these shafts in collets, the runout will change each time the collet nut is tightened. Collet chucks are typically bulky, and it is difficult to supply coolant directly to the cutter-tip when machining cavities. Collet nuts add weight and mass, which leads to unbalance. Further, the level of unbalance will change each time the collet nut is tightened. Shank diameters of less than 1 mm require extremely low levels of runout to function correctly.

ShrinkFit chucks solve unbalance problems, but shrinking shank diameters of under 3mm is problematic, at best.

The new MicroDrill Chucks offer an elegant solution, holding small cutting tools safely, with minimal runout, and extremely low unbalance level. MicroDrill Chucks are compact and versatile, allowing milling of small slots, pockets or cavities with good coolant supply.

Diebold offers two sizes of the MicroDrill Chucks:

Size One is for 0.2 to 1.5 mm diameters, and Size Two is for 1.5 to 3 mm diameters. The runout of the cutting tool is less than 0.01 mm, quite low for a 3-jaw drill chuck.

Special manufacturing methods guarantee this low runout level. The MicroDrill Chucks are balanced to < 0,5 gmm/kg and are suitable for high speed machining and micro production.

A hex key is used for adjusting the jaws through the HSK taper.

The jaws are clamped using a hex key through the drill-chuck body. It takes only seconds to install a cutting tool, and presetting is easy.

Advantages of Diebold MicroDrill chucks:

- Highly accurate drill chuck
- Runout <0.01 mm
- Range from 0.2 up to 3mm
- High clamping force
- Ease of use
- Balanced for high speed operations to < 0,5 gmm/kg
- Drill chuck heads are made out of stainless steel

These MicroDrill chucks are available as HSK-E25, HSK-E32 and HSK-E40 tapers, or with a cylindrical shank.