

# Schütte

## CNC-Tool and Cutter Grinder

## WU 305 *micro*



Fine adjustment of the support prism in which the tool is clamped – assures shortest set-up times – whereby overhead guide, tool and base holder are contained with closed-loop force and the assembly is adjusted as a whole.

### Complete machining in a single set-up A new type of toolholding system makes it possible

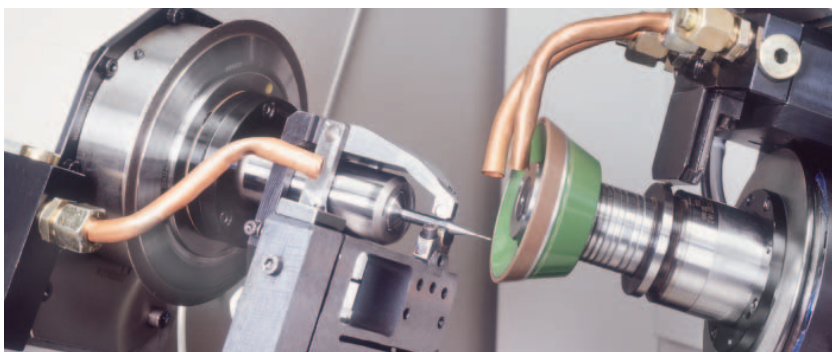
The products are becoming even smaller. More and more of them are of the multi-functional variety and often of cage-work construction. As a consequence, there is a marked increase in the demand for smaller tools.

A high quality surface finish on the cutting edges and absolute concentricity between cutting edges and shank are central to the successful manufacture of micro tools.

The patented toolholding system WFS from Schütte ensures accurate, play-free and stable tool clamping. It is the heart of the WU 305 *micro* 5-axis CNC Tool and Cutter Grinder and guarantees a vibration-resistant machining process. This allows for higher feedrates which lead to short, economical machining times.



The WU 305 *micro* combines all the advantages of the basic WU 305 concept with those provided by the direct drives in all linear and rotary axes.



To ensure that the cylindrical grinding of the blank and the finish grinding of the cutting edges can be carried out in a single set-up, Schütte offers a universal rotary axis. This can be used as an accurate interpolation axis or as a cylindrical grinding axis with speeds of up to 4,000 min<sup>-1</sup>. Not only does it shorten the work process, it eliminates the need for a cylindrical grinder.

| Machine                                                                        | WU 305 <i>micro</i>   |                          |
|--------------------------------------------------------------------------------|-----------------------|--------------------------|
| <b>Linear axes:</b>                                                            |                       |                          |
| anti-backlash, temperature-controlled AC direct drive with closed-loop control |                       |                          |
| <b>Stroke:</b>                                                                 |                       |                          |
| X-axis (longitudinal travel).....mm                                            | inch                  | 400      15.75           |
| Y-axis (cross travel).....mm                                                   | inch                  | 250      10              |
| Z-axis (vertical travel).....mm                                                | inch                  | 250      10              |
| <b>Resolution:</b>                                                             |                       |                          |
| X-, Y- and Z-axis.....mm                                                       | inch                  | < 0,0001      < 0,000004 |
| <b>Feedrate:</b>                                                               |                       |                          |
| X-, Y-, Z-axis.....mm/min                                                      | inch/min              | max. 24000      max. 940 |
| <b>Rotary axis and universal rotary axis* (A-axis):</b>                        |                       |                          |
| anti-backlash, temperature-controlled AC direct drive with closed-loop control |                       |                          |
| Resolution in dividing mode .....                                              | Grad      degree      | < 0,0002                 |
| Speed range rotary axis .....                                                  | min <sup>-1</sup> rpm | 0 to ± 200               |
| Speed range universal rotary axis* .....                                       | min <sup>-1</sup> rpm | 0 to ± 4000*             |
| Receptor.....                                                                  |                       | HSK 50 E                 |
| Torque .....                                                                   | Nm                    | 20                       |
| Workpiece clamping.....                                                        |                       | pneumatic/manual*        |
| <b>Swivel axis for wheelhead (C-axis):</b>                                     |                       |                          |
| anti-backlash, temperature-controlled AC direct drive with closed-loop control |                       |                          |
| Swivel range.....                                                              | Grad      degree      | 225                      |
| Resolution .....                                                               | Grad      degree      | < 0,0002                 |
| Swivel speed.....                                                              | Grad/s      degree/s  | 360                      |
| <b>Grinding spindle:</b>                                                       |                       |                          |
| Speed.....                                                                     | min <sup>-1</sup> rpm | 0 to ± 12000             |
| Motor spindle power rating.....                                                | kW      HP            | 8      11                |
| Spindle receptor.....                                                          |                       | HSK 50 E                 |
| Clamping system for grinding wheel arbor and coolant distributors.....         |                       | automatic                |
| <b>Machine weight:</b>                                                         |                       |                          |
| without auxiliary equipment.....                                               | kg                    | 2800                     |
| * Option                                                                       |                       |                          |

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