



- 1 DMS 20 linear.
- 2 Electrobonded dosing coil.
- 3 Zerodur module.
- 4 Free form surfaces in quartz glass.

MACHINING TECHNOLOGY FOR BRITTLE MATERIALS

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The objective is machining small structures in glass, ceramic, silicon, composite materials and refractory metals with CNC-Technology.

Characteristics

- Spindle rotational speed 0–42 000 rpm
- Maximum workpiece dimension 350 mm x 240 mm x 340 mm
- Minimum tool diameter 0,4 mm
- Working tolerance < 10 µm
- Control system Siemens 840D

Technology

- Ultrasonic assisted grinding with special coat tools
- 5-axial simultaneous machining center

Application

- Fabrication of holes, special milling contours and free form surfaces in
 - Quartzglass, BK7, Borofloatglass
 - Ceran, Zerodur
 - Aluminium oxide, AlSi-composition
 - Sintered ceramics, Zircon oxide
 - Silicon
- Cooling structures in Silicon wafer
- Dosing coils in glass material
- Support components of glass materials
- Mechanical bedstops for optical components
- Aperture holes in optical components
- Holes in composite ceramic
- Free form surface in brittle material