OptoTech

MCG 250 CNC Compact

5-Axis Optical Machine Center

The OptoTech optical processing center MCG 250 CNC Compact provides you with grinding technology for all optical materials in highest precision and flexibility. Whatever you want to produce, whether aspheres, spheres, edging, prisms, cylinders, 3D-optics or drilling holes, the MCG 250 CNC Compact is the perfect machine for these tasks. Five CNC axes and an innovative tool concept grant the requested flexibility.

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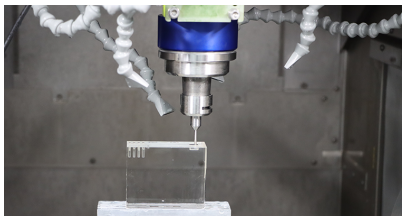
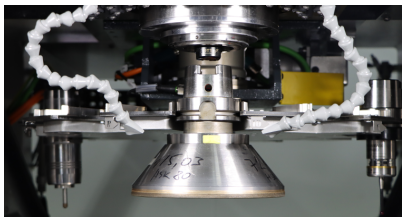
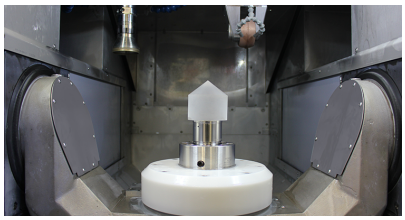
Technical Data

	MCG 250 CNC Compact
Working Range Diameter	10 mm - 400 mm
Working Range Diameter (aspheres)	10 mm - 450 mm
Travel A	-90 ° - 90 °
Travel X	-250 mm - 250 mm
Travel Y	0 mm - 600 mm
Travel Z1	0 mm - 270 mm
Max. Ø Grinding Wheel S1	max. 125 mm
Tool Spindle	Speed: S1 (upper right): 0 - 8000 rpm; S3 (upper left): 0 - 20000 rpm; other spindle constellations available; Interface: HSK 63 A
Workpiece Spindle	Speed: 0 - 550 rpm or in C-Axis mode; Interface: Flange
Vacuum	-0.7 bar
Air Pressure Requirement	8 bar
Power Requirement (others on request)	42 kVA
Dimensions	Width: 2000 mm, Height: 2750 mm, Depth: 3100 mm
Weight (approx.)	5600 kg







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Highlights

- 5-Axis machine center for generating plano-surfaces, spherical surfaces (lenses), aspheres, optical freeform surfaces, centering functions and special components
- Highly dynamic AC servo drives for X-, Y- and Z-Axis
- Positioning via high resolution linear scales
- Full online connection of the whole working system (MCG series with MCP series and metrology). Even freeform surfaces can be fine corrected by correction dataset
- Microsoft Windows operating system with OptoTech user interface
- Interfaces to Taylor Hobson Form Talysurf, Mahr MarSurf, Mitutoyo Measuring System, OptoTech Workshop Interferometers of the OWI XT Series (Others available on request)
- Siemens Sinumerik One controller with OptoTech user interface

System Advantages

- Grinding technology for all optical materials in highest precision and flexibility
- Modular assembly and a variety of expansion levels guarantee maximum variability
- High flexibility due to up to 5 CNC axes

Performance Characteristics

Standard Cycles:

- Spherical grinding with cup wheels
- Edging of cylindrical shapes with peripheral wheels
- Chamfering on cylindrical shapes with peripheral wheels with chamfer form
- OptoEdge (optional): Edging of non-rotationally symmetric workpieces
- Grinding of aspheres (optional)
- Possible by manual CNC-DIN-programming or ShopMill (optional): Prism processing; sawing; drilling cycles

Options

Machine Options:

- Second Z-axis
- Ultrasonic technology
- Tool changer for up to 15 different tools
- Exhaust filter system for mist collection

Software Options:

- F^3 software for asphere and freeform processing
- ShopMill software for drilling holes and milling of pockets etc.

OptoTech Optikmaschinen GmbH
Sandusweg 2-4 | 35435 Wettenberg / Germany | T +49 641/49939-0 | info.de@optotech.net | **optotech.net**