



OptoTech

# MCG 500 CNC Compact

5-Axis Optical Machine Center



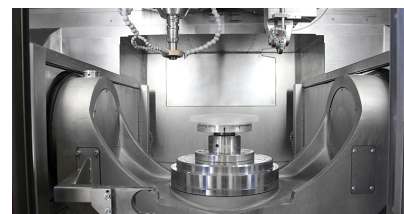
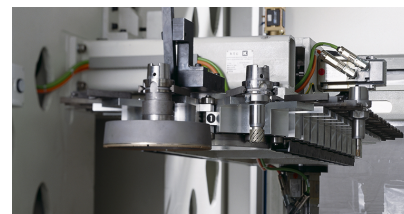
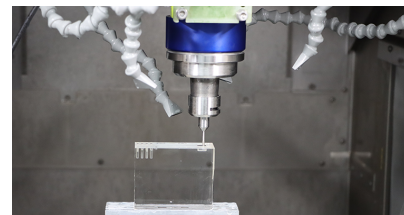
The OptoTech optical processing center MCG 500 CNC Compact provides you with grinding technology for all optical materials with highest precision and flexibility. Whatever you want to produce, whether aspheres, spheres, edging, prisms, cylinders. 3D-optics or drilling holes, the MCG 500 CNC Compact is the perfect machine for these tasks. Up to 5 CNC axes and an innovative tool concept deliver the requested flexibility.



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## Technical Data

	MCG 500 CNC Compact
Application	Optical Processing Center for Universal Purposes
Working Range Diameter	0 mm - 750 mm
Working Range Diameter (aspheres)	0 mm - 800 mm
Travel A	-90 ° - 90 °
Travel C	- 360 °
Travel X	0 mm - 600 mm
Travel Y	0 mm - 800 mm
Travel Z1	0 mm - 400 mm
Amount of Axes	5 (X, Z1, Y, A, C)
Control	Siemens Sinumerik 840D Solution Line
Max. Ø Grinding Wheel S1	max. 140 mm
Tool Spindle	Speed: S1 (upper right): 0 - 8000 rpm; S3 (upper left): 0 - 15500 rpm; other spindle constellations available; Interface: HSK 63 A
Workpiece Spindle	Speed: 0 - 360 rpm or in C-Axis mode; Interface: Flange
Vacuum	-0.7 bar
Air Pressure Requirement	8 bar
Power Requirement (others on request)	90 kW
Dimensions	Width: 2800 mm, Height: 3400 mm, Depth: 4175 mm
Weight (approx.)	15000 kg
Disclaimer	All data are subject to change without notice. Please verify details with OptoTech.





## Highlights

- 5-Axis machine center for generating plano surfaces, spherical surfaces (lenses), aspheres, optical freeform surfaces and centering functions
- Highly dynamic AC servo drives for X-, Y- and Z-Axis
- A-Axis driven by high precision rack and pinions via AC servo drives
- Easy tool change function for heavy tools (mounted on A-Axis)
- 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)

## System Advantages

- Grinding technology for all optical materials with 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)
- Additional functions such as prism processing; sawing; drilling cycles are possible by manual CNC-DIN-Programming or ShopMill (optional)

## Options

### Machine Options:

- Second Z-Axis
- Ultrasonic Hybrid Technology
- Tool changer for up to 33 different tools
- Exhaust Filter System for Mist Collection

### Software Options:

- F<sup>3</sup> Software for asphere and freeform processing
- ShopMill Software for drilling holes and milling of pockets etc.