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MCP 1501 CNC

CNC-Controlled 6-Axis Optical Machine Center for Polishing and Fine-Correction of Aspheres (Axis and Off-Axis Aspheres) and Freeform Surfaces

The multi-functional 6-Axis-Polishing Center MCP 1501 CNC is an optimal machine for 3D production of any optical components. Whatever you want to produce, whether spheres or aspheres, the MCP 1501 CNC is the perfect machine for these tasks. Multiple CNC axes and an innovative tool concept grant the requested flexibility.

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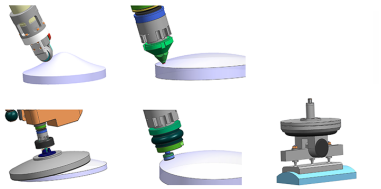
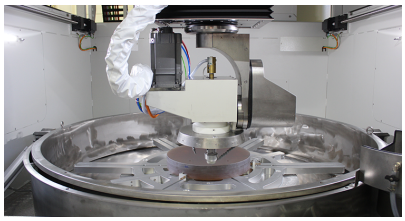
Technical data

	MCP 1501 CNC
Application	6-Axis Optical Machine Center for Polishing and Fine Correction of Spheres, Aspheres (Axis and Off-Axis Aspheres) and Freeform Surfaces
Working Range Diameter	50 mm - 1500 mm
Travel A	-90 ° - 60 °
Travel B	-90 ° - 90 °
Travel C	- 360 °
Travel X	0 mm - 1700 mm
Travel Y	0 mm - 1700 mm
Travel Z	0 mm - 350 mm
Amount of Axes	6 (X, Y, Z, A, B, C)
Control	Siemens Sinumerik 840D Solution Line
Tool Spindle	Speed: 0 - 1200 rpm
Workpiece Spindle	Speed: 0 - 100 rpm
Vacuum	-0.7 bar
Air Pressure Requirement	5 bar
Power Requirement (others on request)	35 kVA
Dimensions	Width: 3000 mm, Height: 2900 mm, Depth: 3860 mm
Weight (approx.)	9500 kg
Disclaimer	All data are subject to change without notice. Please verify details with OptoTech.





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Highlights

- 5+1-Axis polishing and correction polishing machine for pre-polishing and highly accurate correction polishing of pre-polished workpieces made of glass, ceramics etc.
- The large range of usable tools like Advanced Wheel Polishing Technology A-WPT), Active Fluid Jet Polishing (A-FJP), tools for different pitch tools make the MCP-Series a universal machine for optical processing
- Full online connection between the entire working cell (MCG Series with MCP Series and Metrology). Even freeform surfaces can be fine corrected by correction dataset
- Direct interface to tactile and optical surface measuring systems like Taylor-Hobson Form Talysurf, Mahr MarSurf, Mitutoyo or OptoTech Interferometers
- Use of conventional consumables (e.g. Cerium oxide as the polishing medium, polyurethane as the polishing medium carrier)
- Machine front and top can be opened for easier loading/ unloading of large workpieces via crane or forklift

System advantages

- Ultra-Precision correction polishing with different tool constellations
- Maximum flexibility combined with the largest possible working chamber
- Different expansion options offer maximum variability

Performance characteristics

Process Technologies:

- Wheel Polishing Technology (WPT or A-WPT) Spiral & Raster Mode
- Active Fluid Jet Polishing (A-FJP) Spiral & Raster Mode
- Polishing with pitch tool and kinematics of a traditional machine (High End Polishing)
- Polishing with Subaperture Pitch Polishing Pin
- Cylinder Polishing
- Fine-correction of sherical surfaces with POLyCAM-2D (available as an option)
- Fine-correction of aspherical surfaces with POLyCAM-3D (available as an option)

Options

- Exhaust filter system for mist collection
- Polishing Slurry Tank

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