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MCP 251 CNC

CNC-Controlled 6-Axis Optical Machine Center for Polishing and Fine Correction of Aspheres (Axis and Off-Axis Aspheres) and Freeform Surfaces up to Ø 400 mm

The multi-functional 6-Axis-Polishing Center MCP 251 CNC is an optimal machine for 3D production of any optical components. Whatever you want to produce, whether spheres or aspheres, the MCP 251 CNC is the perfect machine for these tasks. Multiple CNC axes and an innovative tool concept grant the requested flexibility.

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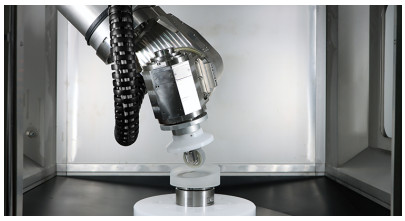
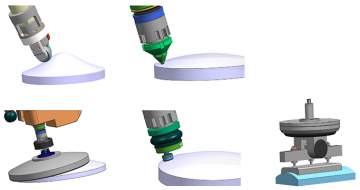
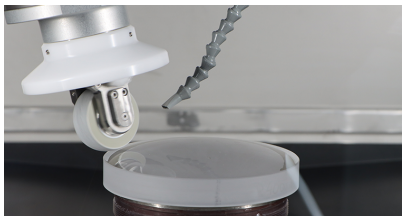
Technical data

	MCP 251 CNC
Application	6-Axis Optical Machine Center for Polishing and Fine Correction of Aspheres (Axis and Off-Axis Aspheres) and Freeform Surfaces
Working Range Diameter	20 mm - 300 mm
Working Range Diameter (aspheres)	20 mm - 400 mm
Travel A	-90 ° - 90 °
Travel B	-90 ° - 90 °
Travel C	- 360 °
Travel X	0 mm - 600 mm
Travel Y	0 mm - 600 mm
Travel Z	0 mm - 350 mm
Amount of Axes	6 (X, Y, Z, B, A, C)
Control	Siemens Sinumerik 840D Solution Line
Tool Spindle	Speed: 0 - 3000 rpm; Interface: Hydro Expansion Chuck HD25
Workpiece Spindle	Speed: 0 - 1000 rpm; Interface: Flange (optional HD25 or HD40 available)
Vacuum	-0.7 bar
Air Pressure Requirement	6 bar
Power Requirement (others on request)	13 kVA
Dimensions	Width: 2050 mm, Height: 2650 mm, Depth: 2640 mm
Weight (approx.)	5000 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
- The large range of usable tools like Polishing Wheel (Wheel Polishing Technology), Active Fluid Jet Polishing (A-FJP), tools for spherical polishing and 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

- Maximum flexibility combined with the largest possible working chamber
- Ultra-precise fine correction polishing using various tool constellations, with a direct interface
- Different expansion options offer maximum variability

Performance characteristics

Process Technologies:

- Spherical and Aspherical Polishing
- 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

Options

- Hydro Expansion Chuck (HD 25 or HD 40)

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