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ASM 100 CNC-TC

CNC-Controlled TwinCut-Generator for Aspheres, Cylinder-Optics and Freeform Surfaces

The OptoTech 4-axis generator ASM 100 CNC-TC is the ideal universal grinding machine for any operational area. Spheres, aspheres, torical, A-torical up to free form surfaces can be produced in highest precision and accuracy. High quality grinding due to 2 interpolating axes.

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Technical Data

	ASM 100 CNC-TC
Working Range Diameter (Using 1 Grinding Spindle with 2 Tools)	10 mm - 250 mm
Working Range Diameter (Using 2 Grinding Spindles with 4 Tools)	10 mm - 150 mm
Working Range Radius cc	Depending on Tool Diameter
Working Range Radius cx	10 mm - ∞ (Best Fit Radius)
Travel C	0 ° - 360 °
Travel X	0 mm - 360 mm
Travel Y	0 mm - 100 mm
Travel Z	0 mm - 100 mm
Repeatability - Axes	X: ± 0.001 mm; Y: ± 0.001 mm; Z: ± 0.001 mm; C: ± 10”
Tool Spindle 1	Speed: 0 - 19700 rpm; Interface: Flange Ø 25 mm
Tool Spindle 2	Speed: 0 - 19700 rpm; Interface: Flange Ø 25 mm
Workpiece Spindle	Speed: 0 - 550 rpm; Interface: Hydro Expansion Ø 25
Air Pressure Requirement	6 bar
Dimensions	Width: 1750 mm, Height: 2000 mm, Depth: 1850 mm
Weight (approx.)	2400 kg

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Highlights

- 4-Axis CNC generating operations (X, Y, Z, C) and 4-Axis interpolation
- Rigid, low torsion cast iron machine construction
- 1 vertical workpiece spindle, movable in Z-direction
- 2 horizontal tool spindles, movable in X- and Y-direction
- Workpiece spindle combined with C-Axis in highest precision
- Synchronized Linear Drives in X-Y-Z-Axes
- Better surfaces and repeatability due to grinding of aspheres with peripheral wheels
- Up to 4 grinding wheels in 2 tool spindles possible
- Rough grinding, medium grinding, fine grinding and finest grinding
- High speed single surface processing of any lens shape (depending on tool diameter)
- Short set-up times due to Microsoft Windows operating system with OptoTech user interface
- Quick and precise tool change due to Hydro-Expansion Chuck technology (Option)
- Siemens Sinumerik 840 D Solution Line CNC Controller
- Interfaces: USB and Ethernet ready and to modern profile measuring systems (e.g. Taylor Hobson Talysurf PGI Series)

System Advantages

- Processing is done with wheel tools using the circumferential grinding method. This greatly improves the machine kinematics and gives highly reproducible results
- Aspheres can be generated using a spiral tool path with only 2 CNC axes. As a result, the grinding results are much more accurate than those achievable with other methods
- Short set-up times and quick as well as precise tool change

Options

- Hydro Expansion Chucking Technology
- Remote Diagnosis

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