



SPM/SPS-50

PRECISE GRINDING AND POLISHING SOLUTION FOR
SMALL TO MIDSIZED OPTICS

SPM/SPS-50

Satisloh's grinding and polishing CNC machines for the production of small to mid-sized spheres and aspheres from \varnothing 5 mm up to 50 mm.

The SPM/SPS-50 reliably master the major challenge in manufacturing optics within the range of \varnothing 5-50 mm: they provide highest possible machining sensitivity for the handling of small lenses, and, at the same time, the force required for the processing of larger diameters.

Despite the fact that their configuration adjusts to your needs and application, the grinding and polishing solutions are already equipped with an improved spindle design for the small to mid-sized range, enabling higher grinding torque of 0,7 Nm and 3 Nm for the polishing tool spindle.

A compact body and space-saving footprint shortens work lines and contributes to a higher work efficiency.

Adding the optional HS-30 or HS-200 loading systems automates the production process, further improving efficiency and reliability.





FEATURES + BENEFITS

Flexibility

- Modular, upgradeable machine design meeting your specific needs
- Combines the sensitivity needed for small lenses with powerful axis drives and direct-driven spindles for mid-sized lenses up to \varnothing 50 mm
- Spherical & aspherical grinding, edging, versatile chamfering and form-grinding options, steps and grooves – all possible on one machine.

Efficiency

- Two tool spindles mean faster processing and shorter cycle times
- Optional automatic loading systems HS-30 for single lenses or HS-200 for larger lenses and production volumes
- Integrated quality control system



Reliability

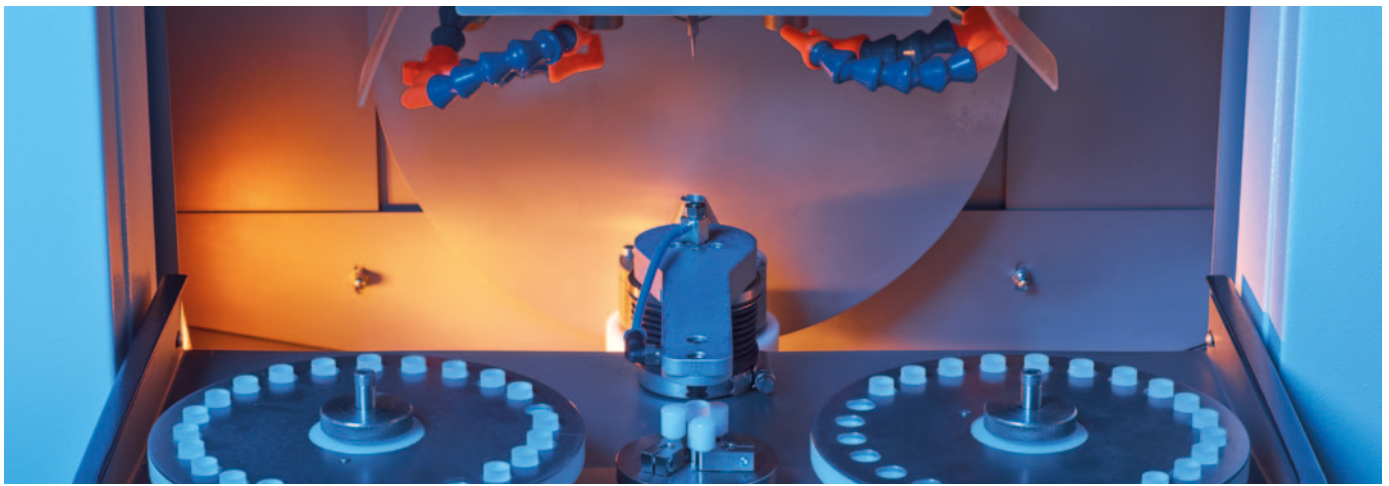
- Repeatable process performance through integrated chiller that maintains an optimal temperature during grinding
- Direct driven linear and servo motors including feedrate control on X- and Z-axis
- Integrated Y-axis allows precise fine adjustments improving form accuracy

Ease of use

- Coated working chamber for fast and easy cleaning
- Maintenance-friendly
- Easy operation with Satisloh guided software interface BaSyS
- Compact footprint

OPTIONS + ACCESSORIES

- Automatic loading system HS-30 (integrated) or HS-200 (movable)
- Integrated C-axis for formshaping of workpieces
- Aspheric software package
- Different workpiece receptions (collet or vacuum chuck, cemented block, membrane or seal-lip chuck)
- 3-jaw precision clamping chuck
- Tools & consumables
- Integrated RFID reader for tool management



TECHNICAL INFORMATION

	SPM-50	SPS-50
Working ranges		
Working diameter	5-50 mm	5-50 mm
Tool diameter	up to 50 mm	dressing Tool: max 60mm aspherical polishing 12-50 mm (depending on aspherical curve)
Workpiece reception	collet or vacuum chuck, cemented block	membrane chuck or seal-lip chuck
Tool connection	Ø 6 mm	Ø 12 mm
Tool clamping	automatic	manual
Spindle type		
Workpiece C-axis	1x direct driven, ball bearing, water cooled	1x direct driven, ball bearing, water cooled
Tool spindle	2x direct driven, water cooled, ball bearing	1x direct driven, ball bearing
Dressing spindle	-	1x direct driven, ball bearing
Speed		
Workpiece C-axis	up to 2,500 rpm	up to 2,500 rpm
Tool spindle	up to 40,000 rpm	up to 2,500 rpm
Dressing spindle	-	up to 10,000 rpm
Axes	X, Z, B, Y*, C	X, Z, B, Y*, C
Processing possibilities	spherical lens generating aspherical processing (optional) edging multifunctional chamfering non-rotational symmetric edge processing	spherical lens polishing tool dressing aspherical polishing (optional)
Energy requirements		
Electric current	3 kVA	3 kVA
Compressed air	90 PSI / 6 bar	90 PSI / 6 bar
Dimensions (w x d x h)	700 x 1350 x 1950 mm 28 x 53 x 77 in	700 x 1350 x 1950 mm 28 x 53 x 77 in
Net weight	795 kg / 1752.67 lb With HS-30 895 kg / 1973.14 lb	795 kg / 1752.67 lb 895 kg / 1973.14 lb

*adjusting axis

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