

SPM/SPS-10

PRECISE GRINDING AND POLISHING SOLUTION
FOR MICRO OPTICS

SPM/SPS-10

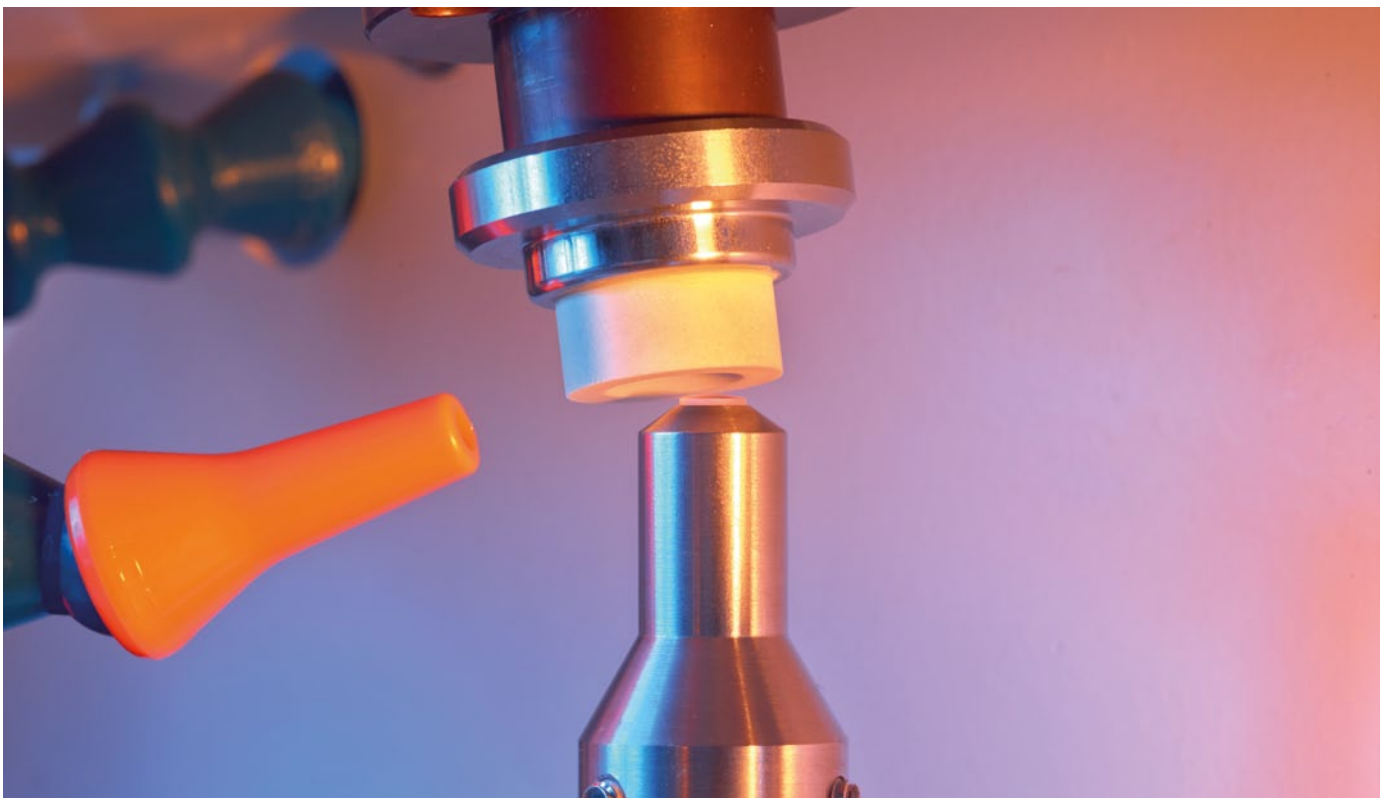
Satisloh's next generation of grinding and polishing CNC machines for the production of micro optics spheres and aspheres from the submillimeter range up to 10 mm.

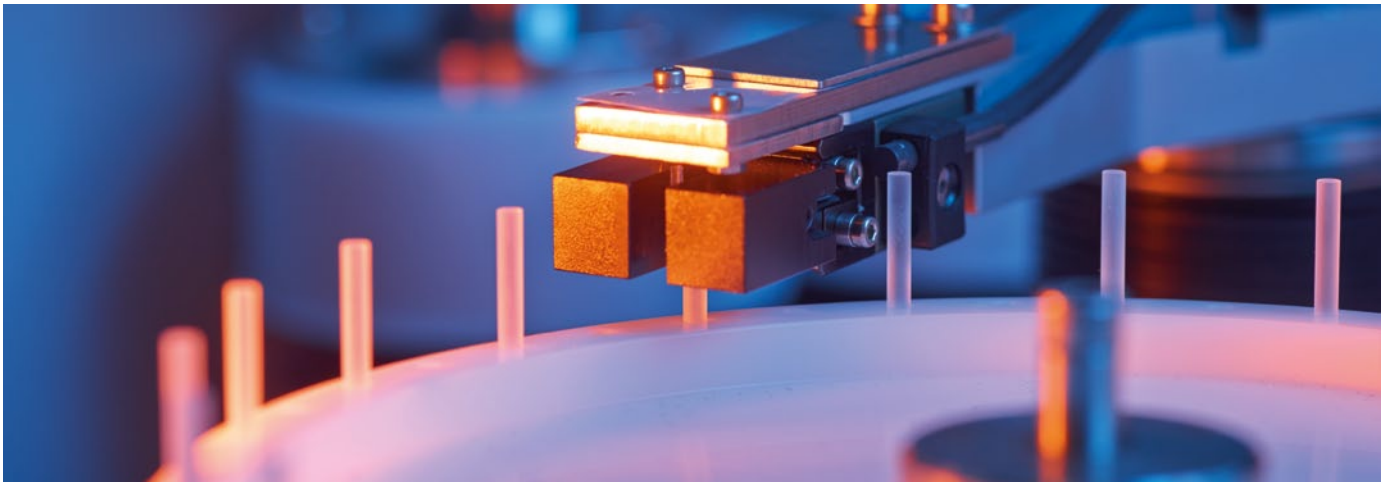
The SPM-10/SPS-10 extends grinding and polishing production capabilities to include complex, small lenses, non-linear shapes, and micro optics aspheres with maximum precision and perfect surface finishing.

Depending on your needs and application, the SPM-10/SPS-10 are equipped with your choice of either air bearing or ceramic hybrid spindle technology both enabling up to 100,000 rpm.

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

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





FEATURES + BENEFITS

Flexibility

- Processes spheres and aspheres
- Grinding tool spindle with up to 100,000 rpm for production of smaller workpieces than ever before
- 3 reception systems available for different workpieces: Rotor chuck; vacuum chuck or collet chuck
- Air bearing or ball bearing spindle depending on application

Efficiency

- Ready for automated production
- Integrated HS-30 handling system for cemented or rod lenses optimizes micro lens handling (option)
- Tool wear compensation with IQS-system



Reliability

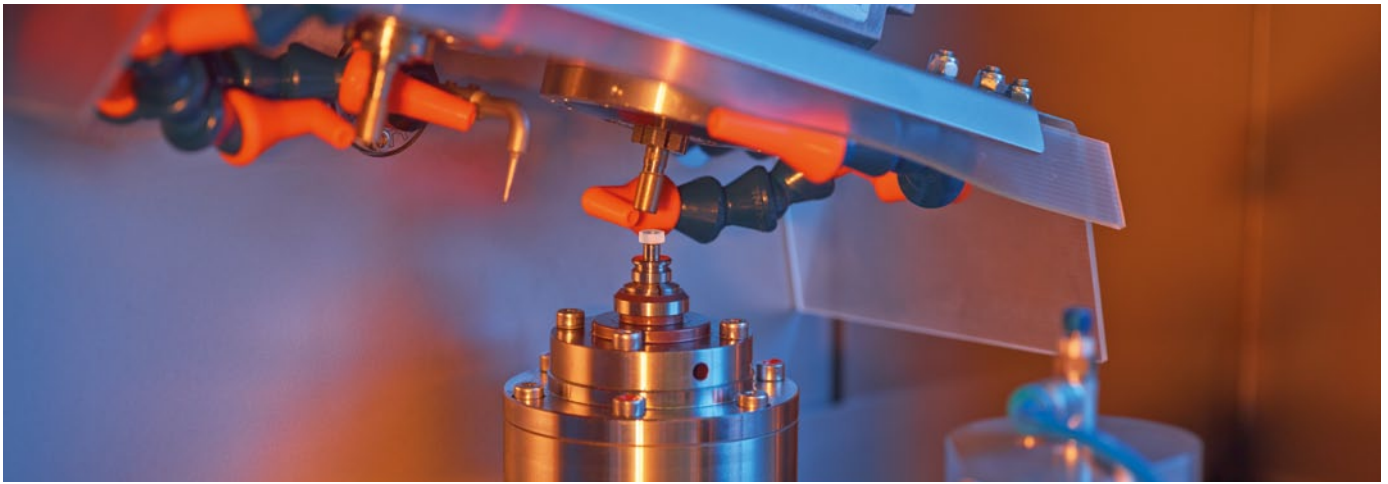
- Highest micro optics precision through water-cooled linear drive
- Direct driven and water-cooled Baxis guarantees better repeatability and higher precision
- Higher position accuracy through Caxis mode of work piece spindle
- HS-30 automation system with force driven linear Z-axis for highly sensitive lens handling

Ease of use

- low power consumption and flexible machine location independent from power source
- Dressing spindle allows quick and easy dressing of tools
- Easy operation with optimized HMI (Human Machine Interface)
- ReST-interface allows smooth integration into your MES system
- Full connectivity to ADAPT software for pre- and corrective polishing of aspheres

OPTIONS + ACCESSORIES

- Automatic integrated loading system HS-30
- Coolant systems
- Chiller systems
- Polishing slurry tank
- Suction device
- Axis adjustment tool
- Receptions for grinding and polishing
- ReST-interface
- Measuring equipment
- Tools & consumables
- SYNLINe tool design software
- ADAPT software for polishing of aspheres



TECHNICAL INFORMATION

	SPM-10	SPS-10
Working Ranges		
Working diameter	≤ 1 to 10 mm	≤ 1 to 10 mm
Tool diameter	up to 30 mm	up to 25 mm (up to 20 mm for dressing tool)
Work piece reception	collet or vacuum chuck, cemented block	membrane chuck or seal-lip chuck
Tool connection	∅3 ± 0,01 mm	∅6h6 x 20, DIN 58676- 6x20
Tool clamping	automatic, half automatic	manual
Spindle type		
Work piece C-axis	1x direct driven, ball bearing water cooled	1x direct driven, ball bearing water cooled
Tool spindle	2x water cooled direct driven, air or ball bearing	1x direct driven, ball bearing
Dressing spindle	-	1x direct driven, ball bearing
Speed		
Work piece C-axes	up to 2,700 rpm	up to 2,700 rpm
Tool spindle	up to 100,000 rpm	up to 2,700 rpm
Dressing spindle	-	up to 10,000 rpm
Axes	X, Z, B, Y, C	X, Z, B, Y, C
Processing possibilities	radius generating edging multi functional chamfering tool dressing aspherical processing (optional)	radius polishing tool dressing aspherical polishing (optional) stemp polishing (optional)
Energy requirements		
Electric current	3 kVA	3 kVA
Compressed air	90 PSI / 6 bar	90 PSI / 6 bar
Dimensions (wxdxh)	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 (without HS-30) with HS-30 895 kg/ 1973.14 lb	795 kg / 1752.67 lb (without HS-30) 895 kg/ 1973.14 lb

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