

SPM/SPS-60

Efficient and flexible production
of spheres, aspheres and more



Modular system design, tailored for efficient production
of spheres, aspheres and more.

satisloh

Maximum process
and substrate geometry
flexibility, fast & consistent
processing accuracy



SPM/SPS-60

Efficient production of spheres, aspheres and more

Maximum process and substrate geometry flexibility, superior speed & consistent processing accuracy. Combination of disc and cup-wheel mode grinding. Enables cost-effective production and fast time-to-market.

SPM-60 and SPS-60 stand for an innovative, modular system platform, enabling application specific grinder and polisher variants. With its high precision and fast processing speed this system has already set a new standard in optical manufacturing since its introduction in 2006.

The revolutionary 360° multifunctional swivel head with 2-tool spindle technology, the ultra-compact polymer concrete base, and the large working range of the inductive linear axis motor are key factors for this new level of performance in working speed, accuracy and process stability.

The SPM-60 platform can be equipped with one or two 2-tool spindles, making up to 4 tools available for multiple processes without the need for a tool changer. Besides spherical processing, the production of highly sophisticated aspheres is possible by combining the

disc and cup-wheel grinding modes in the same machine. The Y-axis and C-axis options elevate the SPM-60 into a compact processing center with almost no process limits.

The SPM/S-60 employs direct-driven water-cooled generating spindles, eliminating belt-induced vibrations. Optional air bearing spindles allow very high cutting speeds and highest surface quality. The integrated quality control system IQS compensates inaccuracies caused by wear effects onto the tool. Measurements and subsequent auto-calibrations result in consistent high quality.

Ultimately the SPM-60 can be setup for complete processing of lenses on both sides, utilizing an automated loading system with flip-over. The SPS-60 polishes spheres by pre- and fine-polishing procedure in Synchro-speed or Vario-speed Polishing Technology.

Process

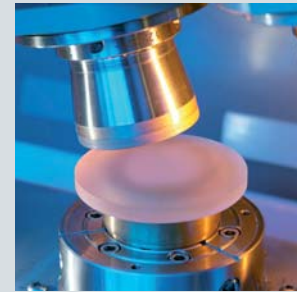
- Pre- and fine-generating of spherical surfaces
- Aspheric grinding in cup wheel and disk mode
- Edging and chamfering
- Processing of non-symmetrical parts
- Contouring, bevelling, grooving and drilling
- 3D-Process simulation
- Direct CNC programming according DIN 66025
- Full LOH*CAM compatibility
- Processes can be programmed off-line and simulated with the Satisloh Windows™-emulation software.

Benefits

- Maximum process flexibility
- Modular, upgradeable system design
- Excellent repeatability and accuracy
- Fast production machine
- Ergonomic machine design for operating and servicing
- Process simulation, direct CNC programming, LOH*CAM compatibility

Features

- Versatile 360° tool swivel head with multiple functions
- Unique 2-tool spindle technology
- Complete 2-side processing (optional)
- Y-axis and C-axis (optional)
- Direct driven and water cooled spindles lead to high precision in process
- Inductive linear motor for very fast movements
- Integrated measuring probe for quality assurance system (IQS)
- Automated handling, flip-over (optional)
- Air bearing workpiece spindle available, for best surface finish (optional)



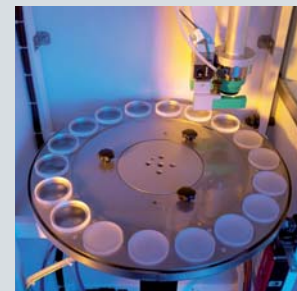
Up to 4 tools
(cup-wheel mode shown)



Disc mode in the same machine



Adaptive Aspheric Polishing Tool
(ASP-Tool)



Loading system carousel for
automated production

SPM/SPS-60

Technical Information:

Substrate Specification

Materials:

Glass, ceramics, crystals and similar materials

Geometries:

Spheres, aspheres, plano optics & other optical surfaces

Working range:

SPM-60: diameter 5 to 80 mm (up to 100 mm depending on process)
SPS-60: diameter 5 to 60 mm

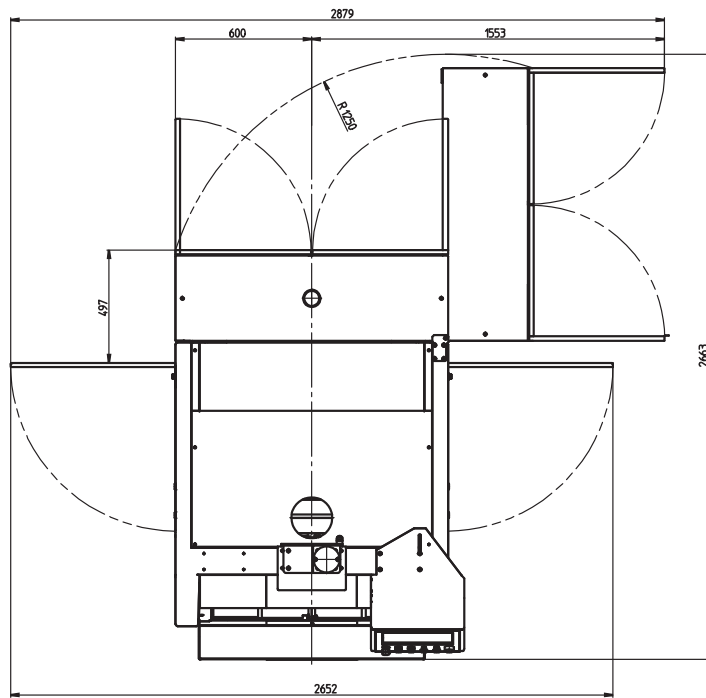
Utilities & Space:

Dimensions:
1200 x 1802 x 2114 mm/
47 x 71 x 83 inches
(without handling system)

Electrical Power: 6 kVA

Compressed air: 6 bar
Consumption: up to 350 l/min

Weight: approx. 2300 kg / 5070 lb
(without handling system)



Available Options:

- Satisloh asphere software module
- LOH*CAM
- Satisloh Synline tool calculation software
- Satisloh DataCorrect
- HS-60 loading system controlled, with round magazine
- Flip-over option
- Coolant systems
- Polishing slurry system
- Chiller unit
- Measuring system for sagittal height

Tools:

- Sintered diamond tools for generating
- Galvanically coated diamond tools for dressing
- Polishing receptions and tools with polyurethane foil for spherical polishing
- Special membrane based polishing tools
- Cementing holder for aspherical grinding and polishing
- Adaptive Aspherical Polishing with ASP-Tool
- Spherometer rings

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Subject to technical changes

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