

# SPM/SPS-30

Highly Flexible and Extremely Accurate  
Processing of Micro-optics



The new generation of the Satisloh Micro-Line is suitable for high dynamic production of lenses from 1 to 30 mm diameter.

**satisloh**<sup>®</sup>

**SPM/SPS-30**  
for the production of precision lenses,  
extreme accuracy is indispensable for the  
positioning of workpiece and tool.



## SPM/SPS-30 new generation of Micro-Line

The new Satisloh Micro-Line consists of a double high speed tool spindle equipped grinding machine SPM-30 and a state of the art fast polishing machine SPS-30. The new generation of Satisloh Micro machines will help to achieve optimum surface quality. Improved accuracy with new dynamics and design.

### **SPM-30** **Grinding** **Optimum in accuracy and surface roughness**

To achieve the efficiency in micro lens production, the generating machine must constantly give an optimal output on generated lenses with highest level on accuracy in surface form, center thickness and surface roughness. The newly designed machine SPM-30 linked the advantages of a compact and small solid footprint design with state-of-the-art Bosch Rexroth MTX controlled drives for the highest position accuracy and latest developing on air bearing high frequency tool spindles for an optimal result on surface finish.

The latest generation of micro grinding machines combine the sensitivity, which is necessary for micro lenses for even smaller than

Ø 1 mm, with optimized power of axis drives and direct driven tool /work piece spindle which can even handle lenses up to Ø 30 mm. The integrated chilling system supports an optimal temperature management during the process and repeatable processing performance.

The machine can be handled by the operator easily using Satisloh's user guided software interface and provides a high functionality for different processes like surface grinding, multi-chamfering operations, edging and optional aspherical grinding in on-axis cup tool mode.

### **Process Automation**

The optional loading system HS-Micro automates the micro-grinding machine SPM-30. It also increases process reliability and efficiency by constant loading of lenses.

### Benefits

- State-of-the-art generating of small lenses  $\leq \text{Ø } 1\text{mm}$  and dynamic performance for efficiency processing of lenses up to  $\text{Ø } 30\text{ mm}$
- Precision processing in the submicrometer range
- Direct drive, avoiding belt-induced vibration
- Smooth running to air bearing spindles
- High cutting speeds - important particularly for small tools
- Minimum subsurface damage due to high revolutions up to 80,000 rpm for air bearing tool spindles

The in-situ measuring probe in conjunction with the integrated quality control system - IQS software for evaluation of centre thickness and optional sagittal height.

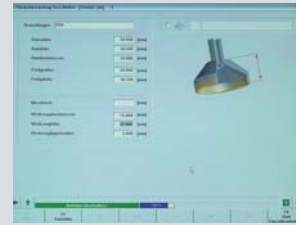
### SPS-30

#### Pro Polishing

The polishing machine SPS-30 polishes lenses and may be used to dress polishing tools up to a diameter of 65 mm. Infinitely variable speed settings up to 2,700 rpm during polishing and up to 6,000 rpm during dressing ensure optimum results. Besides polishing of spherical lenses, utilizing different tool technologies, an optional aspherical software package can be adapted.

### Benefits

- Optimized for micro-optics
- Compact construction with minimal footprint requirements
- Easy Windows™-user guided programming with touch screen monitor
- Maintenance-friendly
- Network capabilities
- Working chamber easy to clean through special anti haft coatings



Easy operation with Satisloh guided software interface



Tools for generating, dressing and polishing for Spheronorm System



Measuring the lens diameter and the centre thickness with the integrated measuring system



High quality surfaces for lenses from 1 to 25 mm diameter



SPM/SPS-30

## Technical Information:

	SPM-30	SPS-30
<b>Working Ranges</b> Working diameter Tool diameter	≤ 1 to 30 mm up to 30 mm	≤ 1 to 30 mm up to 65 mm (up to 40mm for dressing tool)
<b>Work piece reception</b>	collet chuck, vacuum chuck cemented block	membrane chuck or seal-lip chuck
<b>Tool connection</b>	Ø6h6 x 20 DIN 58676 - 6x20	Ø12h6 x 20, DIN 58767 - 12x20
<b>Tool clamping</b>	automatic	manual
<b>Spindle type</b>	water cooled direct driven air bearing generating spindles, direct driven work piece spindle, roller bearings upon request	direct driven tool- and work piece spindle with roller bearings
<b>Number of spindles</b>	1 or 2 tool spindle; 1 work piece spindle	1 tool spindle, 1 dressing spindle, 1 work piece spindle
<b>Processing possibilities</b>	radius generating edging multi functional chamfering tool dressing aspherical processing (optional)	radius polishing tool dressing aspherical polishing (optional)
<b>Speed</b> Work piece spindle Tool Spindle Dressing spindle	up to 2,700 rpm up to 80,000 rpm -	up to 2,700 rpm up to 2,700 rpm up to 6,000 rpm
<b>Energy requirements</b> Electric current Compressed air	3 kVA 90 PSI / 6 bar	3 kVA 90 PSI / 6 bar
<b>Dimensions (wx dxh)</b>	700 x 1200 x 1600 mm / 27.5 x 47.2 x 63 inches	700 x 1200 x 1600 mm/ 27.5 x 47.2 x 63 inches
<b>Net weight</b>	625 kg / 1377.90 lb	625 kg / 1377.90 lb

## Options & Accessories:

- Satisloh Software options:  
Asphere-, Cone-, Synline and  
DataCorrect-Software
  - HS-Micro loading system
  - Measuring device for sagittal height
- Tools:**
- Sintered and galvanic diamond tools
  - Polishing receptions and tools
  - Spherometer rings
  - Exhausting system

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Subject to technical changes

