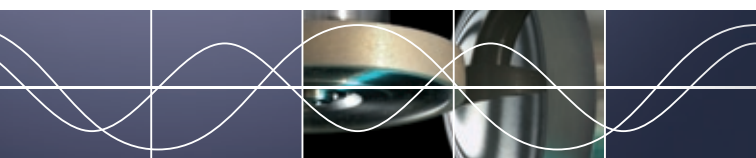


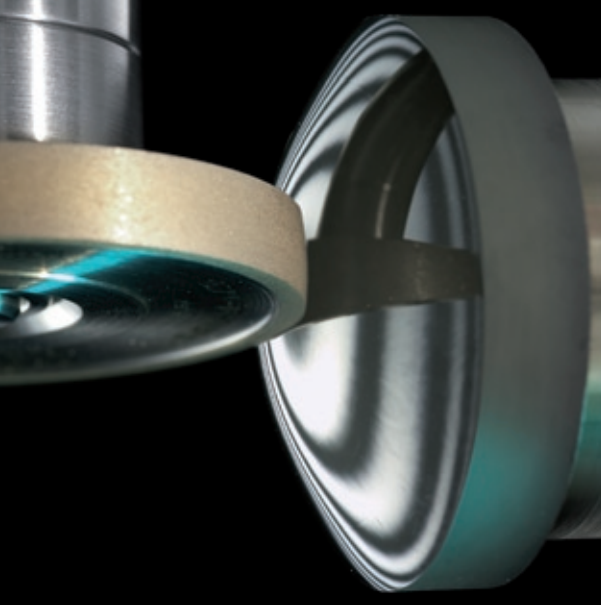


# Spheroline<sup>®</sup> SLP 120 E

The affordable polisher



Fascination for Innovation



## Introducing the Spheroline® SLP 120 E

Excellent performance-investment ratio, uncompromised form accuracy and perfect reproducibility – this has been the target we developed a new polisher for.

Our solution: The SLP 120 E – a high-quality polisher with integrated correction and automated setup routines. With the integration of a correction spindle mounted in parallel to the workpiece spindle, precise and convenient tool correction is guaranteed.

The setup can be done easily and in virtually no time using the Auto Teaching feature. Additionally, the machine's high efficiency is supported by a compact design, with good access to the work space and easy operation.



### Design basics

The basis for the high form accuracy, surface quality and process stability is set by the machine's kinematics resting on a machine bed specifically designed for high stiffness and stability. The kinematics combines three axes as well as the work-piece, polishing and correction spindles.

The modern microprocessor CNC control system SINUMERIK 840 Digital drives the AC servo drives, ensuring consistently high accuracy during the polishing and correction. The controller checks and adjusts all parameters as process times, working pressures, oscillation speed of the polishing process etc. Multi-step processing can be performed and parameters can individually be adjusted.

The work space is designed very compact and sealed what prevents the damage of sensitive machine components by excessive polishing slurry.

### Easy setup and correction

The patented Auto Teaching module enables a fully automated setup process of the polishing tool and the workpiece.

With the CNC controller intelligence, the contact situation of the tool and the work piece is determined. This includes the measuring of the polishing-tool length and the positioning of the lens. The procedure reduces not only the setup time but also minimizes the risk of a crash due to improper setup.

The automated detection and alignment of the polishing-tool length guarantees the precise oscillation of the tool around the radius center – the most critical parameter for high form accuracy and process stability. The reliable and precise detection of the lens and tool position enables the reproducible polishing of lenses with very thin edges and other geometric specialities.

An accurate correction of the polishing tool is accomplished, using the integrated correction spindle – with no tool change necessary! The non-productive time is reduced to a minimum.

In production, the correction spindle allows a cyclic correction of the polishing pad.

Additionally, a graphical-based form correction routine enables the operator to optimize the oscillation behavior to further minimize any form deviations.

### Data communication

The system interfaces to an Ethernet network connection and to the SCHNEIDER Technology Software enable smooth and effective data exchange for setup and operation. Service is greatly accelerated by use of the remote-diagnostic tool. At the machine base, a graphical user interface assists the operator for an easy and fast completion of communication tasks with the SLP 120 E.

The polisher SLP 120 E works perfectly in conjunction with the Spheroline® 120 series of SCHNEIDER grinding machines.



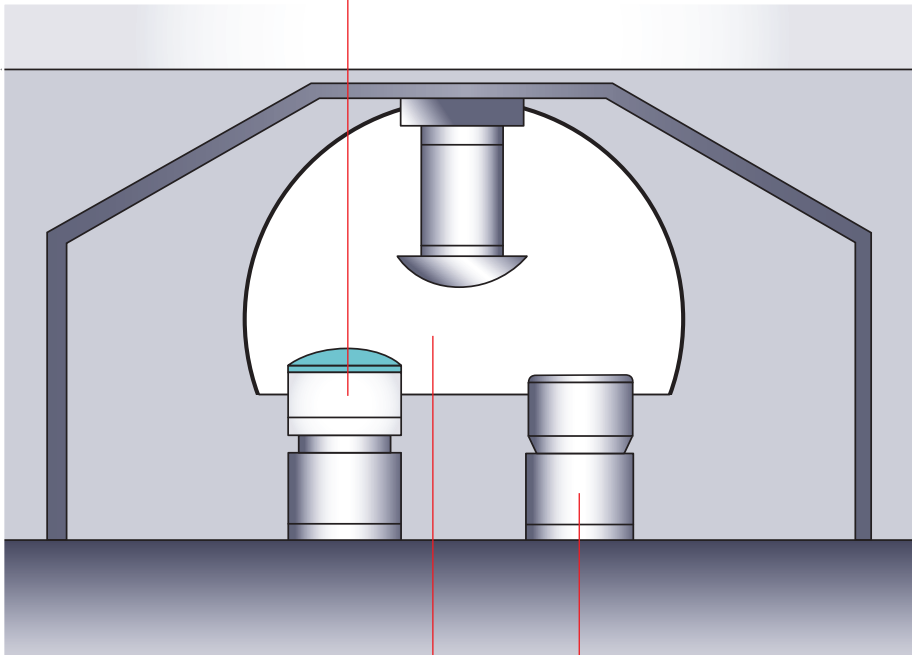
*For best use of the SLP 120 E, we offer a wide range of high-quality tools and consumables.*



## Work space features of the SLP 120

### **Auto Teaching**

- Automated determination of the tool length and lens position.
- Minimization of the crash risk.
- Reduction of the setup time.



### **Best kinematics**

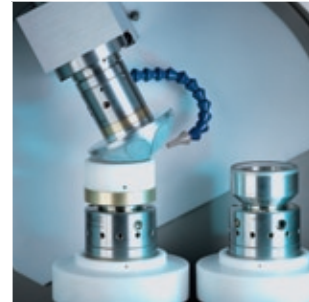
- The integration of the tool, workpiece and correction spindle guarantee precise and consistent results.

### **Tool Correction**

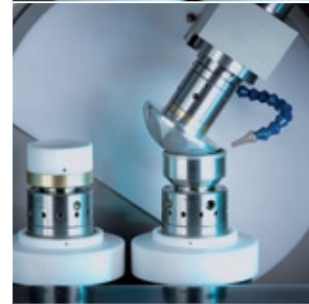
- CNC-controlled correction of the polishing tool with integrated correction spindle
- No change of the correction tool
- Highest correction accuracy

### Benefits

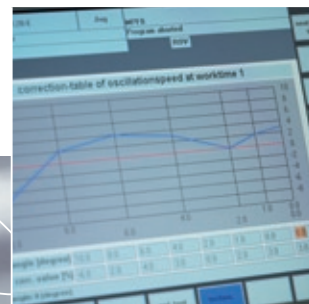
- Polishing of spheres with high quality and form accuracy
- Fast, precise and reliable setup by Auto Teaching
- Excellent performance-investment ratio
- High process stability
- Flexible processing of small and mid-sized batches
- Multi-step processing with individual parameters
- Tool correction without tool change
- Computer-assisted setup
- Graphical user interface
- Intelligent remote diagnostics



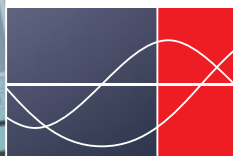
*The SLP 120 E is capable of multi-step polishing with individually controlled CNC parameters.*



*An integrated tool correction spindle system ensures fast and flawless adjustment of the polishing tool.*



*Optimum oscillation behavior is achieved by the use of graphic-supported form correction technique.*





technical data		
working range (max. diameter)	spherical aspherical	tool $\varnothing$ 220 mm 140 mm with restrictions
working range	radius	10 mm – flat
number of axes		3 (X, Z, B)
feed rate X-, Z-axis		0.01 – 15000 mm/min
positioning and repeat accuracy X-, Z-axis		+/- 0.001 mm
feed rate B-axis		0.01 – 4300 °/min
positioning and repeat accuracy B-axis		+/- 4"
tool spindle connection		25 x 42 HD
tool spindle speed range		50 – 2500 min <sup>-1</sup>
workpiece spindle connection flange	$\varnothing$	80 mm
workpiece spindle speed range		25 – 1500 min <sup>-1</sup>
power requirement		14 kW
air requirement	min.	5 bar (75 psi)
vacuum requirement		0.6 bar (9 psi)
weight machine		1150 kg (2530 lb.)
dimensions (w x h x d)		1400 x 1925 x 1285 mm (55 x 76 x 51 inches)

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