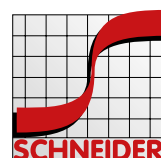
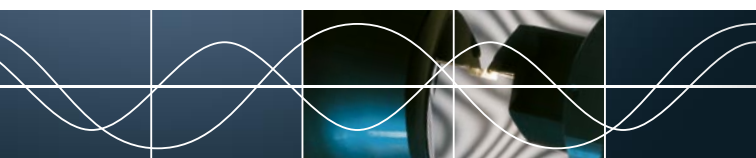


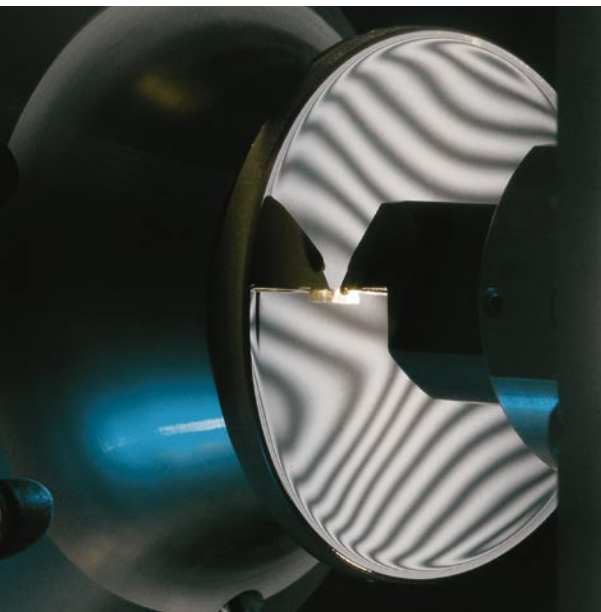


CCP 102

Soft laps, firm results



Fascination for Innovation



Computer controlled polishing by SCHNEIDER

The computer-controlled polisher (CCP) has been an integral part of SCHNEIDER's vision to process individual surfaces with intelligent automated production lines. Since hard laps are not usable for free-form polishing, we developed the computer-controlled polishing system. With SCHNEIDER's new zonal polishing technology and the adaptive tools, virtually all lenses can now be polished with few tools to a very high form accuracy.

SCHNEIDER has led the way in soft lap polishing production for labs since the introduction of the CCP 100 polisher in 1999. For this process, we developed the adaptive tools, the permanent pads, the special polishing spindles, and an unique polishing philosophy. Combining these techniques with the automatic tool/lens handling system and the post-cleaning of lenses, the CCP 101 became the first fully automated polisher on the market.

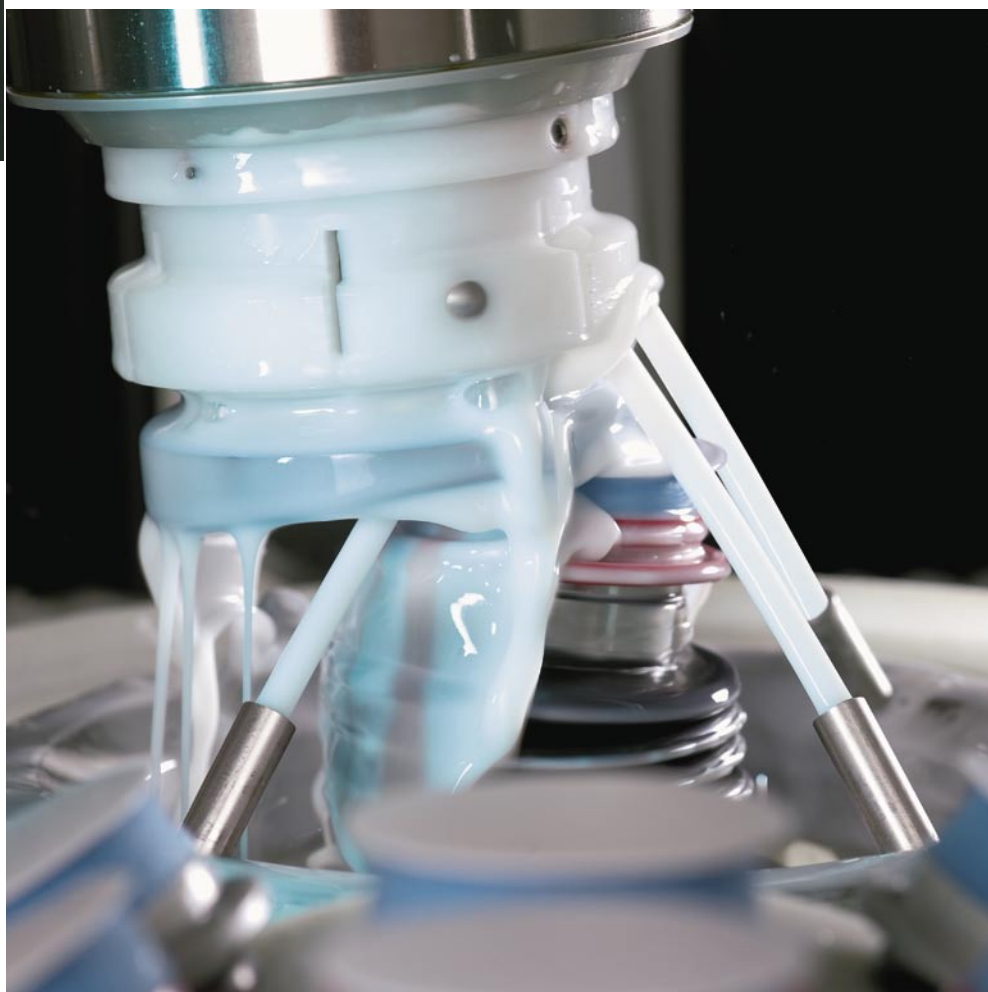
Today, more and more Rx labs are taking advantage of the many benefits of computer-controlled polishing. Starting with freeform polishing, the CCP technology has become the world-wide leading technology for fully automated polishing for all lens types.

Introducing the CCP 102

High productivity times two.

Today's surfacing department is a fast paced environment. With the computer-controlled polisher CCP 102, we have developed a polisher that beats time. The processing of two lenses simultaneously, in one machine, boosts the performance of our polisher to an unmatched productivity and quality level. Two lenses are picked from the job tray at a time while two intelligent tool handling systems are loading the needed polishing tools on the holder – and in parallel the two polishing cycles start.

A special 3-channel controller and multi-axis kinematics enable individual processing of lenses. The key element for the high quality of the polishing process are the unique super-dynamic polishing spindles and the SCHNEIDER polishing technology which allow efficient processing even for sophisticated



*The CCP 102 is
another module of
the SCHNEIDER iRx
concept.*

surface geometries and strong curvatures without form deviations. Multi-step polishing cycles and modern macro technology guarantee the successful processing of different plastic materials and of all geometries. Additionally, the SCHNEIDER freeform package allows for the design-specific polishing of sophisticated back-side progressives.

The intelligent, fully automated lens and tool handling system with our exclusive polishing process, results in a self-sustaining polishing solution running up to 24 hours per day and 7 days a week.

Few tools, full range.

Specially developed and proven, the adaptive tools, with SCHNEIDER's permanent pad and our click-easy lock system, keep the tool costs at a minimum. Tools are stored on two independently controlled tool drums making the automation simple.

The computer-controlled tool management system selects the individual tools based on radius of curve and usage cycles. Labs, used to handling thousands of hard laps, will not believe that a minimal number of tools will be sufficient for an all-day, all-curve production. The drums are externally prepared with adaptive tools and changed between shifts in virtually no time. With the adaptive tools, all lenses can now be polished to exact prescription curves while use of hard laps only allows polishing to the nearest lap curve available. The CCP 102 meets your needs – exactly!

The clean solution.

In contrast to messy hard lap polishing, our CCP 102 offers a clean polishing solution. Both polishing stations are covered by flexible rubber bellows ensuring a perfect seal and easy cleaning. To take the cleanliness a step further, the integrated washing station post-cleans the lenses prior to replacing them in the trays. Not only is the working area clean, but the job trays are kept clean as well for a high-quality, fully automated production.

In conjunction with the HSC generator, the CCP 102 polisher builds the core of a fully automated surfacing solution that guarantees the highest productivity and quality in a small footprint with multiple shifts.

Intelligent tool management

The computer-controlled tool management selects tools based on curve radius, usage cycle etc.



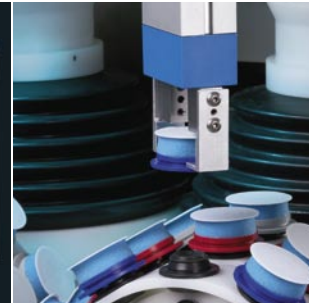
Benefits

- Simultaneous and individual polishing of two lenses
- Highest throughput of any auto polisher in the industry
- Superb surface quality (power, cosmetics and cleanness)
- Best polishing technology for RX and freeform lenses
- Fully automated operation – all shift long
- No logistics and handling of hard laps
- Click-easy disposable tools
- 24 hour operation without tool changes
- Low consumable costs
- Post-cleaned lenses after polishing
- Seamless integration into the SCHNEIDER i-RX system



Working space

Double the throughput by simultaneously processing in two work stations. Two protection bellows guarantee excellent sealing and simple cleaning.



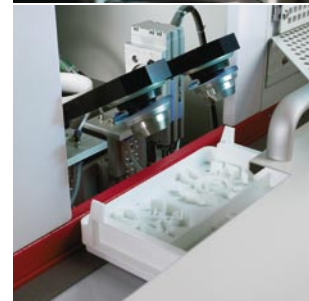
Tool changer

Two independent tool changers supply the workstations individually with the appropriate tools for three shifts of continuous work.



Polishing spindles

The highly dynamic polishing spindles guarantee excellent polishing results for sophisticated surface geometries.



Automation

The flip-over loading system enables the simultaneous loading of two lenses.

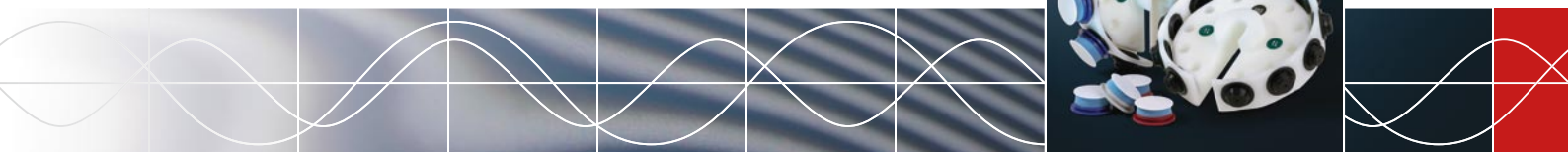


Washing station

The integrated washing station cleans lenses while new tools are placed at the polishing spindle.



The tool magazines carry click-easy adaptive tools equipped with SCHNEIDER permanent pads.





technical data	
lens diameter	up to \varnothing 92 mm
clamping system	block \varnothing 43 mm
material	CR39, Hi-index, Polycarbonate, Trivex®
curve range	concave 0 – 14 diopters
controller	32-bit 3-channel CNC controller
power requirement	8 kW max.
air requirement	5 bar (75 psi) min.
weight machine	1500 kg (3605 lb.)
dimensions (w x d x h) machine	1555 x 1992 x 1868 mm (3,430 x 4,390 x 4,120 inches)

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