

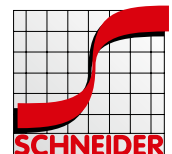


Modulo Line

Edging

HSE modulo

Automated edging, intelligently combined



Fascination for Innovation



Modulo Line

SCHNEIDER had the vision to manufacture individual lenses based on freely definable mathematical descriptions. The HSC generators and CCP polishers have become the tools used to develop the freeform idea in the ophthalmic industry. Individual freeform lenses are now the top product in the market, and SCHNEIDER has grown to be the premier manufacturer of freeform equipment worldwide. The innovative machines have also made their way into standard Rx production, leading to higher productivity and quality of virtually all lenses surfaced today.

The next logical step is a highly integrated system solution: SCHNEIDER's Modulo Line with its unique combination of high level intelligence and plug-and-play simplicity. Following a new self-organizing philosophy, the cognitive machines manage the production flow all by themselves – fully self-sufficient and with the highest level of equipment utilization. With this, the Modulo Line guarantees easy lab planning and expansion as well as significant cost and time savings.

Introducing the HSE modulo

The first high speed double spindle edger for fully independent edging of the left and the right lens – on-the-block or blockless. The two separate multi-axis systems enable truly independent simultaneous processing of the lenses – no matter how diverse the job requirements.

The edger's high rigidity and precise tool clamping allow for highest rpm processes. Working with exceptional speed, HSE Modulo sets new standards in performance and throughput.

The intuitive and easy to use shape editor opens up a broad range of finishing options to process even the latest complex styles, specialties included. The result: virtually unrestricted lens finishing. And with the SCHNEIDER blockless edging option costs can be reduced significantly.



Highest speed for massive throughput

The HSE Modulo fulfills all the criteria for accurate high-speed edging: Built on an extra solid machine base the double spindle edger features the high rigidity to produce the smoothest surfaces. Perfectly centered tools and highest rpm processes provide ideal conditions for very precise and fast edging. Extremely efficient, the edger processes two lenses simultaneously and incorporates time saving parallel handling processes. While the fast handling system unloads the finished job, the next job is transferred to the working chamber, minimizing non-productive time. The result: a new standard in throughput.

Unrestricted lens finishing for flawless first fit

The Modulo edger with its 2x4-axis design achieves highest feature accuracy and delivers a flawless and unmatched first fit rate even with extreme curves. Whether angled rimless drilling, V-beveling, T-grooving or polishing – HSE Modulo does it all with its set of 24 tools. The high-frequency milling spindles enable fast cut out of the rough shape. Afterwards the fine work is done with precision – including front and back safety bevels. For delicate lenses such as super-hydrophobics, the chucking pressure and rotation speed are automatically adjusted to prevent slippage.

Fashion's best friend

The HSE Modulo is prepared to keep up with the constantly changing requirements of fashion – today and tomorrow. The advanced Shape Editor offers simple programming of virtually any shape in fashion, even the most complex. The elaborate software performs all optimizations fully automated to grant the best results without specific operator expertise. The HSE Modulo is designed to work with existing tracers on the market linked via the VCA/OMA protocol.

Excellent aesthetics

The right bevel positioning is the result of a sophisticated and skilled combination of several – sometimes divergent – factors and conditions. The sophisticated set of beveling rules and options automatically produce better aesthetics with all common and complex jobs using a new algorithm based auto beveling function. Together with the automated size adjustment, best fit with superb aesthetics is guaranteed.

SCHNEIDER blockless option

The HSE Modulo is able to work with blocked lenses or it can be fitted with the SCHNEIDER blockless option. The fast non-tactile measurement technology measures the spherical and cylindrical power, axes and prism to determine the right lens position. Alternatively the system recognizes visible and semi-visible marks and printings. Working blockless, the HSE Modulo reduces costs and eliminates handling errors. No need for time consuming manual blocking. No costs for consumables.

Integrated quality control

Optionally, HSE Modulo comes with an integrated optical measurement unit – LMU. For the first time ever, quality can be measured based on the full lens map inside an edger. The result is a fully automated quality control before further manufacturing steps occur. Mismatch is avoided, labor is reduced, and process efficiency gains are unmatched.

The Modulo advantage

HSE Modulo comes with an on-board global interface philosophy that allows connection to the Modulo system.

Once connected to the Modulo system, the machine works as an integral part of this one-of-a-kind system solution and is subject to the centralized monitoring Control Center. The lab manager is fully informed about the current status of the machine. Therefore critical situations and downtime can be avoided before they arise. Higher uptimes and increased yields are guaranteed.

Benefits

- Best first fit rate and highest throughput
- Robust machine design
- Intuitive, simple to use shape editor
- Broad range of finishing options
- Premium polished edges
- Automated front and backside safety beveling
- On-the-block or blockless
- Supports the new cognitive Modulo machine philosophy



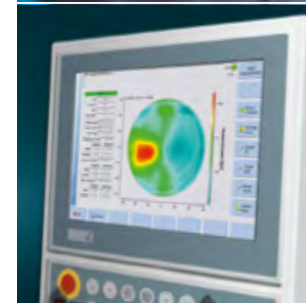
Tool changer

The industrial tool changer handles multi-purpose and special tools covering the broadest range of processing options.



SCHNEIDER blockless option

The blockless option reduces costs and eliminates handling errors.



Optional integrated quality control

Full map optical measurement unit LMU allows for quality control inside HSE Modulo.



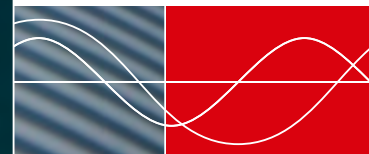
TMU Modulo

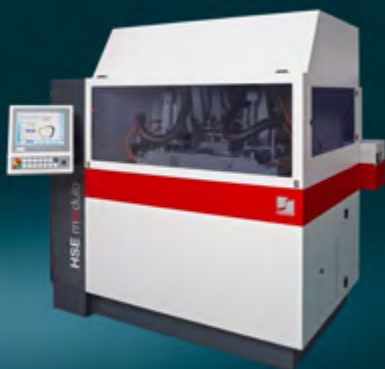
Upon request, HSE Modulo comes with a high precision calibration unit, TMU Modulo.



Advanced shape editor

The integrated shape editor comes with virtually unlimited options.





technical data	
lens diameter	up to \varnothing 85 mm
lens thickness	up to \varnothing 30 mm
lens material	CR39, Hi-index, polycarbonate, Trivex [®] , Tribid [™]
minimum B-size (depending on the used block piece)	with WECO standard block piece 22 mm
blocking chucks blockless option	all common types no blocks needed
power consumption	3.3 kVA avg.
air requirement	6 bar (87 psi)
weight machine	approx. 1650 kg (3638 lb.)
dimensions without control panel (width x depth x height)	approx. 2055 x 1610 x 2110 mm (81 x 63 x 83 inches)

All data subject to change without notice. Please verify details with SCHNEIDER.



SCHNEIDER

We are one of the world's leading suppliers of processing solutions to the ophthalmic and (ultra-)precision optical industry. Founded in 1986 our company is known as the pioneer of freeform and setting the pace. We are distinctive for our development of new technologies and swift translation of technological concepts into customer-oriented innovations. Our success stems from the creativity, commitment and enthusiasm of our highly qualified team. With our locations in Germany, the US, Brazil, Hong Kong, China and Thailand we support our customers at any time – worldwide, with fascination for innovation.

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