



Blocking



CCU modulo ONE

BLOCKING PERFORMANCE AT A NEW LEVEL



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. Individual freeform lenses are now the top product in the market, and SCHNEIDER has grown to be the premier equipment manufacturer 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 step is a highly integrated system solution: SCHNEIDER's Modulo Line.

Following a new self-organizing philosophy, the cognitive machines manage the production flow all by themselves – fully self-sufficient. The result is an unprecedented level of equipment utilization and unmatched throughput. Designed for utmost flexibility, the unique arrangement and plug-and-play connection allows adding new modules in any order, with minimal disruption.

The Modulo Control Center interacts with the intelligent machines and provides centralized production control. At a glance, the smart dashboard presents all the key information and functions to run the lab at highest efficiency. Significant cost and time savings as well as maximum equipment utilization are guaranteed.



Highest flexibility

Multiple block sizes are available and exchanged fully automatically offering a vast majority of options.



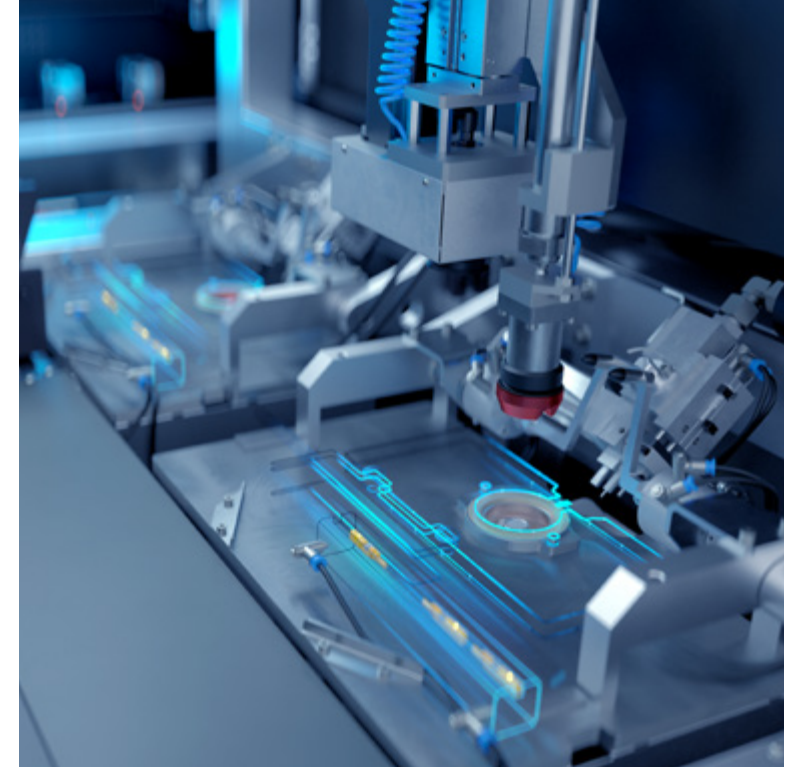
Little to no downtime

No time-consuming manual block ring exchanges. Alloy and block pieces are refilled easily during operation.



Highest throughput

To make best use of time, all processes are run in parallel guaranteeing highest productivity.



CCU modulo ONE

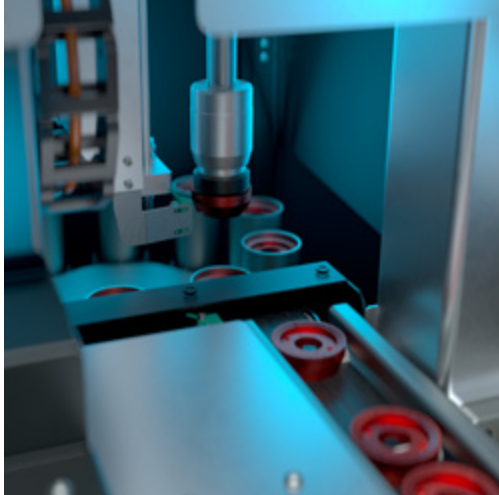
One auto blocker covering virtually all of a lab's blocking requirements at highest speed. With CCU Modulo ONE, SCHNEIDER introduces the only auto blocker today with automated block size exchange and achieves unprecedented efficiency in blocking.

Time-consuming manual changes are a thing of the past. Thanks to the innovative technology, CCU Modulo ONE has multiple block sizes – a minimum of three and up to six – readily available at all times. And the best part: The exchanges are carried out automatically and without increasing cycle time.

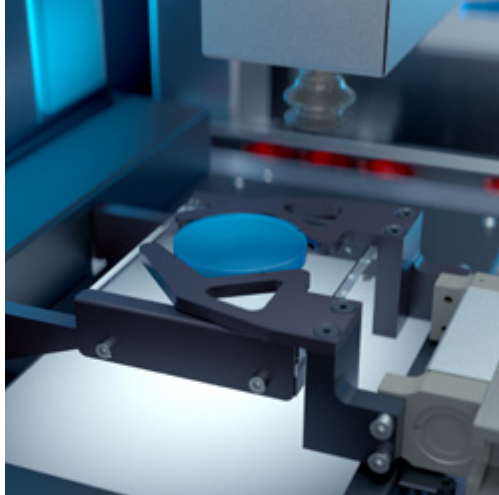
With the added flexibility, CCU Modulo ONE solves a well-known problem: Inefficient block size distribution and poor machine utilization. For any lab size, a wider range of blocking requirements can be met with a smaller number of machines.

The proprietary lens measuring unit guarantees perfectly oriented lenses. An intelligent fill control provides highly consistent and precise fillings – no under or over fillings. Thanks to the smart design, the alloy and block pieces can be refilled during operation.

Non-stop uninterrupted blocking for highest throughput, at lowest cost per lens.



The intelligent block piece recognition adjusts the orientation fully automatically.



The high-resolution optical measuring system reliably evaluates the lens and guarantees perfect orientation.



The highly accurate and intelligent fill control guarantees most precise and consistent fillings.

Full flexibility. Added efficiency

Traditionally, to cover all blocking requirements labs would have two options: They would employ multiple auto blockers fitted with different block rings. This requires complex automation, often resulting in poor machine utilization.

Alternatively, labs would sort the jobs and change block rings in between batches – a time-consuming manual process that demanded stopping not only the blocker but often the complete line. Significant downtime is the outcome.

Now, SCHNEIDER introduces the first auto blocker with automated block size exchange. With a minimum of three and up to six block sizes at immediate disposal, CCU Modulo ONE covers virtually all blocking requirements of a lab in a single machine. The exchanges are carried out without increasing cycle times.

Labs can freely define their block sizes depending on the statistical distribution – which sizes are most commonly used.

This maximized production flexibility facilitates best machine utilization and use of time for high-efficiency.

Fast and reliable evaluation

The proprietary high-resolution optical measuring and alignment system is extra robust and measures the lens much faster than competing systems. It recognizes a wider range of products and reliably and accurately evaluates the lens. Perfect orientation and alignment is guaranteed.

High precision fillings. Minimized losses

The highly accurate and intelligent fill control stops the alloy flow at exactly the right time, guaranteeing the most precise and consistent fillings and high-quality fillings in the market with – no over or under fillings – no matter which blank is used. The controlled flow also prevents blowholes.

Thanks to the active cooling of the blocking stations, the alloy cures quickly, speeding up the process and throughput is increased.

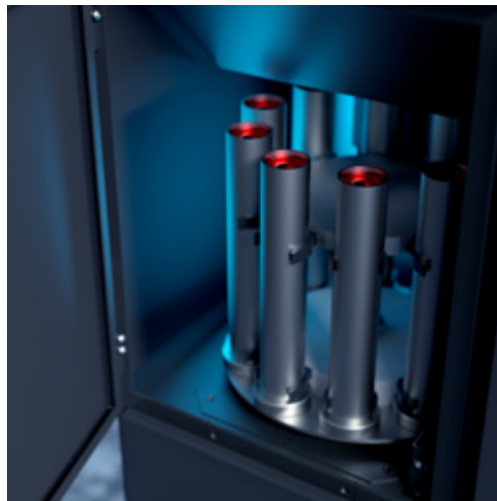
Intelligent block piece automation

The block pieces are stored in a space-saving cartridge magazine. This way, fast access to a large number of block pieces is provided and longterm uninterrupted processing is facilitated.

The intelligent block piece feeding system recognizes and adjusts the orientation fully automatically. Unsuitable block pieces are rejected. To assure shortest cycle times, the block pieces are transferred in auxiliary times.

Non-stop productivity

Without any interruptions, the alloy and the block pieces can be easily refilled during operation thanks to CCU Modulo ONE's smart design. Both the alloy tank and cartridge loader for the block pieces are easily accessible from the outside. This way long term uninterrupted blocking is guaranteed.



Easy upkeep and maintenance

CCU Modulo ONE has been optimized for easy upkeep and maintenance. All essential components have been arranged for best accessibility to guarantee that interventions can be carried out in as little downtime as possible, e.g. the blocking stations and C-axis. The latter can be easily taken out and cleaned for minimal disruption.

The Modulo advantage

CCU Modulo ONE 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 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 assured.

Benefits

Unmatched throughput and uptime

Highest machine utilization

Fully-automated block size exchange

Maximum flexibility – three to six block sizes

Drastic reduction of non-productive times

Consistent high-quality precision blocking

Very little material consumption

Highest efficiency and yield

The block piece magazine enables uninterrupted processing for more than an hour.



technical data

lens diameter	up to ø 85 mm
clamping system	block ø 43 mm
lens material	all organic and mineral lens materials
blocking material	alloy
blocking diameter	all typic sizes
blocking height	7 – 10 mm
prism angle	up to 5°
curve range	concave 0 – 18 diopters
power consumption	1 kVA avg.
air requirement	min. 6 bar (87 psi)
weight machine	approx. 1200 kg (2646 lb.)
dimensions without control panel (width x depth x height)	approx. 1720 x 1750 x 1715 mm (68 x 69 x 68 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, China and Thailand we support our customers at any time – worldwide, with fascination for innovation.

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