

OBM™ pulls out all the stops.



SPEED

- Saves up to 12 process and 40 manual handling steps.*
- Eliminates transfer time among traditional Rx, coating, and finishing departments.
- Eliminates finish blocking and coating batching.

YIELD

- Block protects front surface throughout all processing steps.
- No handling – eliminates surface scratches.
- No finish blocking necessary.

COST

- Total automation drastically drives down labor cost.
- Integrating three departments into one compact OBM line reduces floor space and infrastructure.
- High yields = low cost for breakage and redos.



**Compared to conventional lens production – including digital.*

The breakthrough that makes it all possible.



Blank On-Block



Surfaced On-Block



Coated On-Block



Edged On-Block

Every OBM machine and process is proven Satisloh technology. What's game-changing? The ability to integrate all processes using a single block – enabling totally automated in-line production. For this, two breakthroughs were needed:

- 1. Nucleo™ Blocking** - The patented Nucleo blocking process utilizes a machineable plastic block that can be used in every machine – including AR coating and edging. The process: dosing adhesive onto clear plastic block, lowering lens blank into the adhesive using patented spatial prism technology, followed by UV curing. The result: full support prismatic blocking that eliminates block rings, alloy, and its 40 minute cooling period. The Nucleo block is an open platform designed to work in any brand surfacing machine.
- 2. Back Side Digital Surfacing** – Prior to the development of digital surfacing and back-side PAL designs, the number of SKU's (stock-keeping units) for front-side cast progressive blanks was vast. Each PAL design, add power, base curve, and lens material required a different semi-finished lens blank, and to carry all of the variations required a high investment. It was never financially practical to double or triple inventory investment by also carrying each blank with front-side treatments such as AR coatings. Instead, labs typically added lens treatments like AR coatings to both sides of lenses in house after surfacing. This step has now been eliminated. Digital back-side surfacing allows a lab to dramatically reduce its lens SKU's from thousands to dozens. For the first time, it is financially attractive for labs to carry each lens blank in both hard-coated and front-side pre AR-coated SKU's. Front-side treatments can always be added more efficiently at the off-shore factory where blanks are cast or molded. Now local labs can focus solely on processing the back sides of lenses. The results? A dramatic reduction of process steps and production time.

Productivity (60-90 lenses/hr)



1 Nucleo Blocking process time: 1 min. Fully automated blocking system uses UV-curable compound and disposable/recyclable plastic blocks. Features imaging and blank orientation; probing and front-curve measurement allows job calculation (spherical blanks) optimization.



2 VFT-orbit. Complete generating process time: < 1 min. Full support Nucleo block piece prevents lens flexing and unwanted deblocking. Superior surface accuracy and quality – high speed milling and turning.

3 CO₂ laser system engraves semi-visible and visible markings.



4 Duo-FLEX polishing features automatic tool selection from tool magazine. < 3 min process time. Loads 2 tools and lenses simultaneously. No knife edges to damage polishing tools. Lenses and polishing tools exchanged in one step with loading system. Washing station removes polish residue.

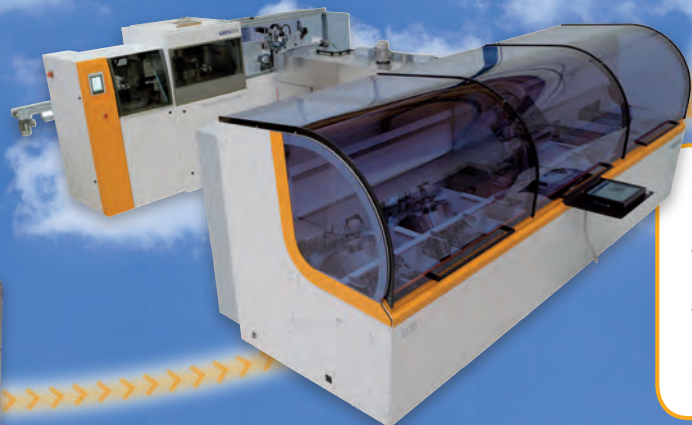
Also available in manual mini lab version.

Quality



7 Nucleo Deblocking process time: 0.5 min. Full automated lens deblocking system. High pressure water jet separates lens and block. Air knives dry both sides of lens.

6 Edge On-Block process time: 2 min. No re-blocking after coating. No support clamp needed – no minimum B, no crazing. Complete shape adhesion – zero slippage and axis errors. No loss of reference axis orientation – from start to finish. Full milling, drilling and polishing using flexible tool changer concept.



5 Coat On-Block: Process time < 90 min. Includes 1) Nucleo MagnaSpin for backside steam cleaning and spin hard-coating. 2) COB CVD/Sputtering for high quality AR Coatings. Eliminates batching by running up to 3 modules simultaneously with 4 lenses per module.

Profitability



The first true “No Touch” Rx lab!

A fully automated OBM lab combines three different departments into one small footprint – reducing required space and work flow distances by more than 50%. By integrating and eliminating many process steps and focusing on back side processing, a lab can produce AR coated and edged jobs in less than two hours, allowing a lab to promote same-day

service. These new “Digital Speed Labs” allow our partners to better compete locally by reducing costs and production speed:

- 50-75% less square footage
- >80% reduction in process steps
- 100% reduction in human lens handling
- >75% reduction in process time
- Dramatic yield and quality improvements



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