

BLOCKING

CORNERSTONE OF OPTICAL MANUFACTURING

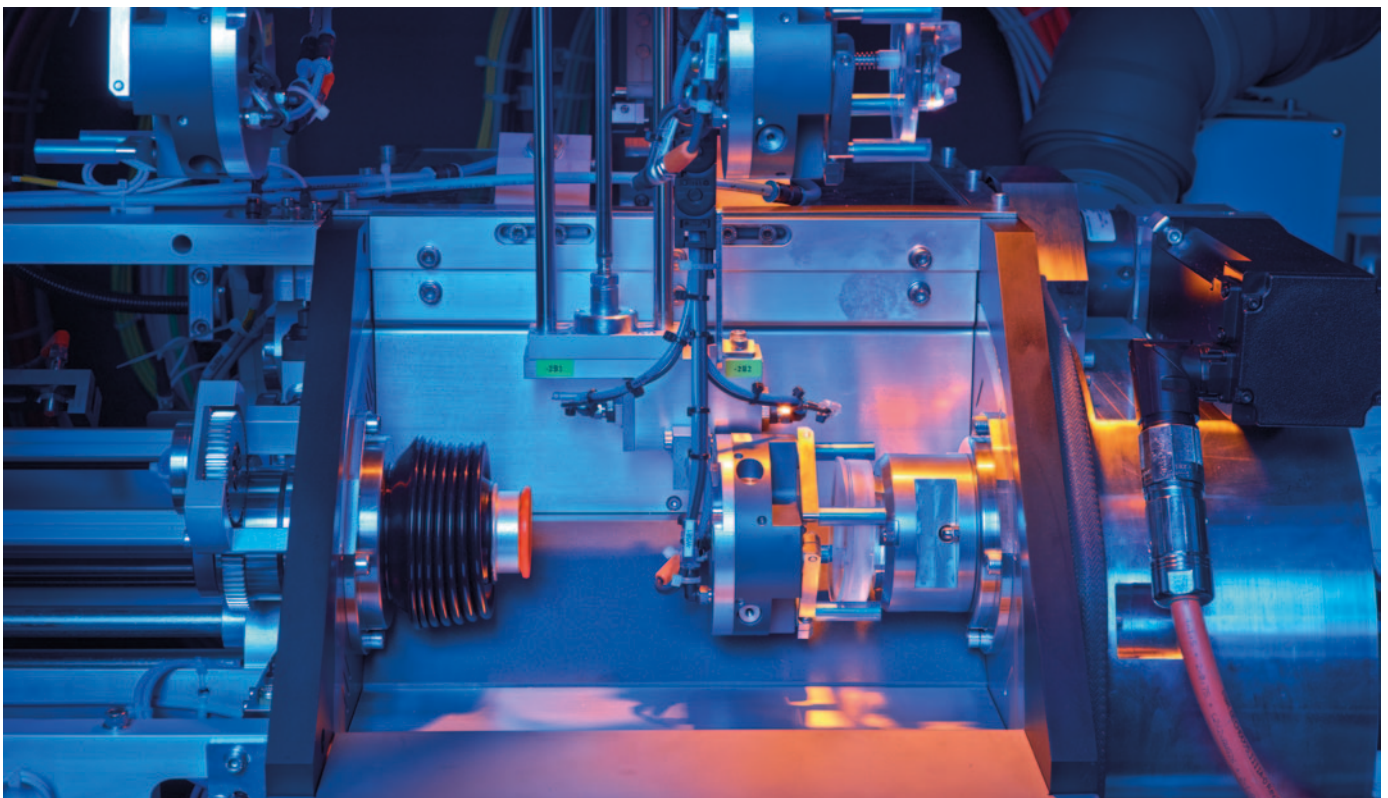
BLOCKING

High-precision blocking is not only the start, but also the cornerstone of the entire lens production process. Choosing the right blocking technology is key to further decisions for designing the entire production line.

Satisloh is focused on environmentally-friendly production and offers matching solutions for every lab to replace hazardous substances from their production.

Automated as well as manual alloy-free blocking equipment is available. Satisloh offers an “Open Platform Surfacing” (OPS) blocking system, compatible with any surfacing machine type. This blocking technology can also be used with Satisloh’s Express-AR system (EX_{AR}).

As a complete solution provider, Satisloh also offers alloy blocking equipment.





Bundespriis
ecodesign
Produkt 2014

ALLOY REPLACEMENT TECHNOLOGY

With ART (Alloy Replacement Technology) Satisloh offers an environmentally-friendly alternative to traditional alloy blocking. ART utilizes a universal, reusable plastic block-piece and a UV-curable adhesive. Tape for front-side protection is no longer needed.

Using this synthetic material combination eliminates hazardous substances like heavy metals and their discharge into the water cycle, helping protect both, environment and staff. ART was presented with the German Federal Ecodesign Award in 2014.

FEATURES + BENEFITS

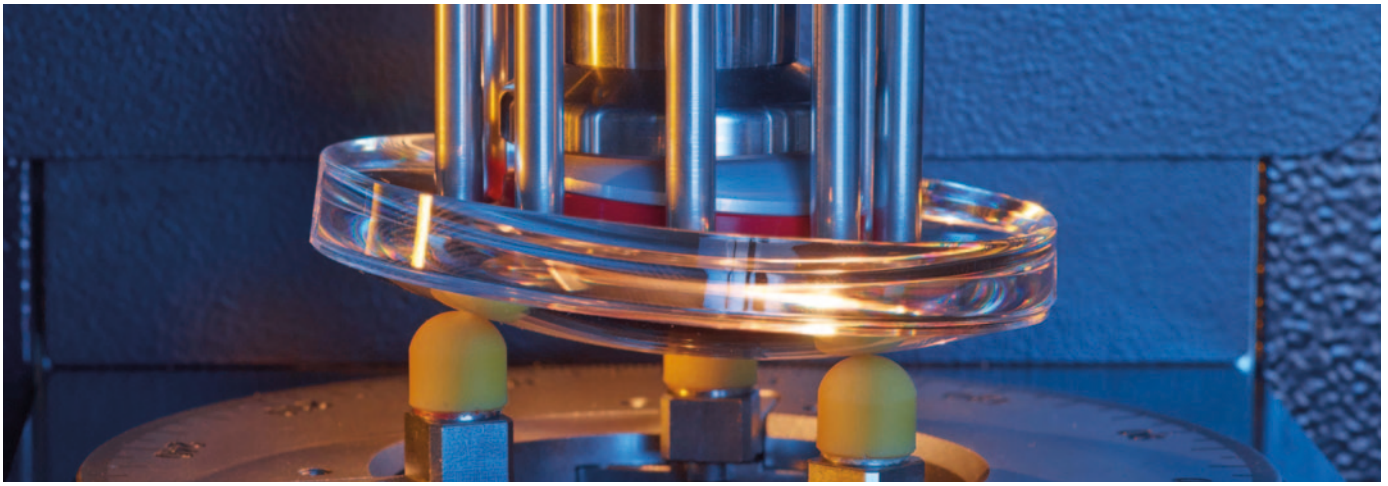
- Alloy-free blocking eliminates hazardous substances protecting both environment and staff
- Machinable block-piece offers the best stability and lens support for round, oval, knife edge, high plus or other complex shapes
- Satisloh Spatial Blocking System eliminates prism rings
- Fast UV-curing process eliminates cooling time after blocking
- Video recognition system ensures highest blocking accuracy
- Probing of the lens frontside reduces breakage
- QR-code identifies each individual block-piece for selection, sorting, and re-use
- Express-AR (EX_{AR}) only possible with ART

CONFIGURATION

OPS

(Open Platform Surfacing)

Uses the premium OPS block-piece that fits all common generators and polishers. To totally eliminate alloy from production, only an ART-Blocker and ART-Deblocker are needed.



ART-BLOCKER-M

Satisloh's ART-Blocker-M, is an easy to operate and easy to maintain manual blocker.

Features + Benefits:

- A scanner interface enters job data automatically, simplifying operation and saving time
- The work sequence is displayed on the screen, reducing operator errors
- Prism rings help set the lens in the right position
- A screen message alerts the operator when the process is complete, avoiding breakage from stopping too early

ART-DEBLOCKER-M

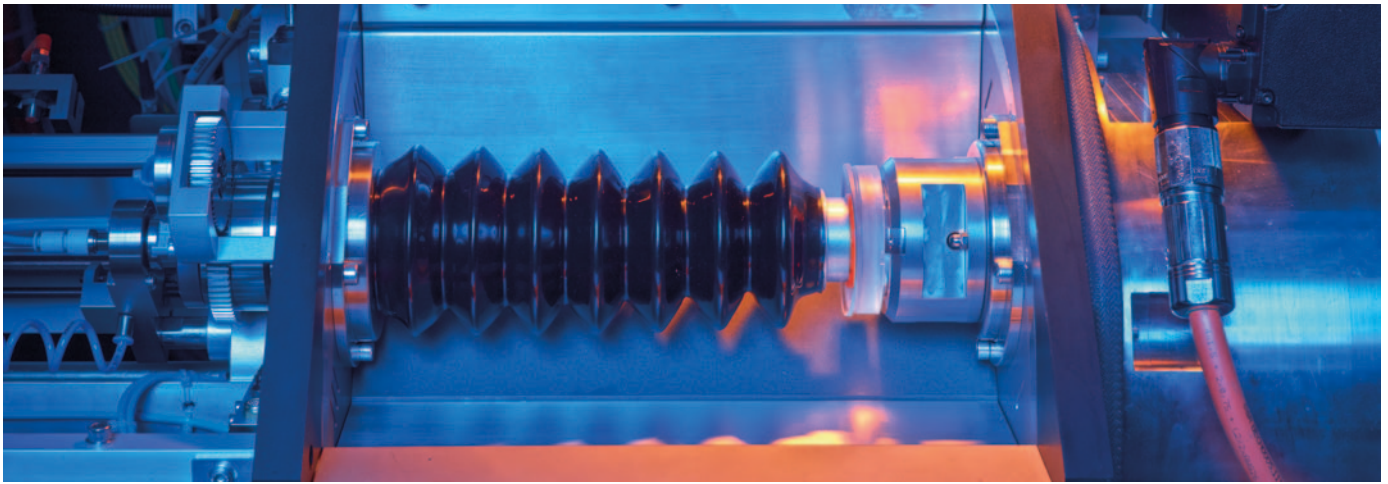
Manual deblocking is performed with the ART-Deblocker-M.

Features + Benefits:

- Quickly separates lens and block-piece with the same water jet technology used in the automated ART-Deblocker-A
- Simple mechanical adjustment for different block curvatures
- Easy operation and maintenance
- Closed water cycle reduces water usage



Productivity	up to 50 lenses/hour	up to 100 lenses/hour
Working Range	blank diameter: 65 – 85 mm blank thickness: up to 30 mm plano up to +15 dpt base curve prism up to 5° progressives, multi-focals, single vision lenses	plano up to +15 dpt base curve prism up to 5° progressives, multi-focals, single vision lenses
Dimensions (wxdxh)	701 x 711 x 1696 mm / 28 x 28 x 67 in	768 x 735 x 1539 mm / 30 x 29 x 61 in



ART-BLOCKER-A

ART-Blocker-A is a fully automated system for fast and easy blocking.

Features + Benefits:

- Multiple block-pieces and diameters optimize performance - increasing lens quality and saving adhesive
- No manual handling and front-side protection for improved yield
- Automated imaging and probing included
- Front side probing enables re-calculation of back curve for most accurate optical power
- No cooling time after blocking
- No tape required

ART-DEBLOCKER-2

ART-Deblocker-2, the next generation of fully automated ART deblocking technology, separates lens, block-piece, and adhesive using high-pressure water jet, enabling labs to fully automate their surfacing operation.

Features + Benefits:

- Dries both lens sides ready for inspection
- Accurately sorts blocks back in job tray after deblocking
- Reduces water usage by up to 80% with new, external water filtration system WFS-2 (required)
- Needs up to 18% less floor space than its predecessor
- Highest level of robustness
- Side and back door can be fully opened for best maintenance and serviceability



Lab 4.0 ready

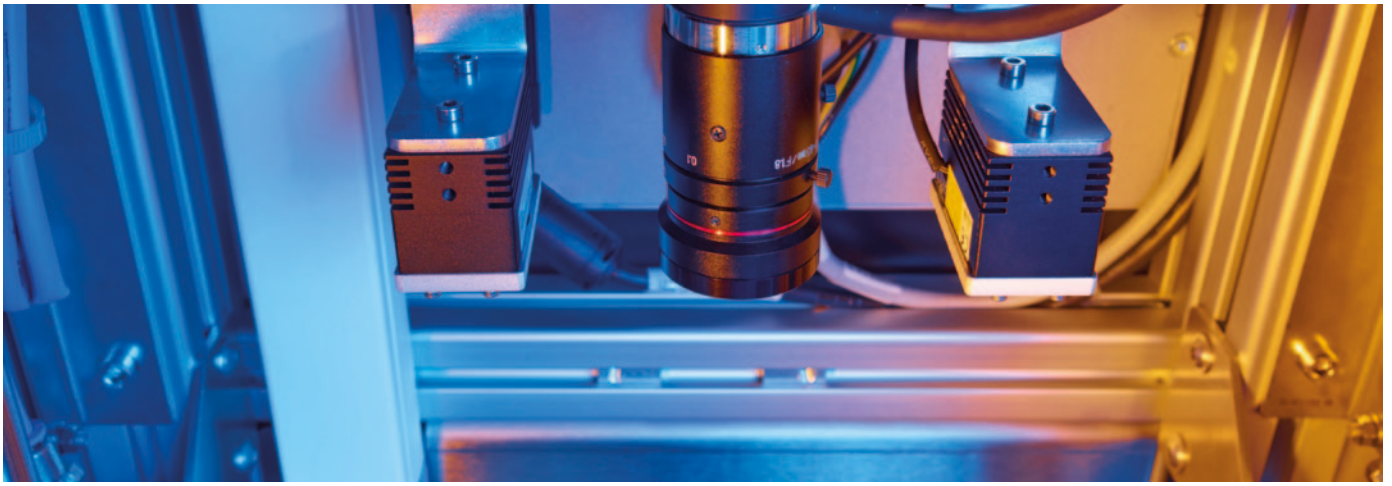


Lab 4.0 ready

Productivity	up to 100 lenses/hour	> 200 lenses/hour
Working Range	blank diameter: 58-85mm blank thickness: up to 30mm plano up to +15 dpt base curve prism up to 5°, progressives, multi-focals, single vision lenses	lens diameter: 50-85mm lens thickness: up to 30mm plano up to +18 dpt base curve prism up to 5.5°, progressives, multi-focals, single vision lenses
Dimensions (wxdxh)	1215 x 1236 x 1907 mm / 48 x 49 x 75 in without chiller	1502 x 2140 x 2078 mm / 60 x 85 x 82 in without water-filtration system and chiller

For detailed technical specifications, scan the QR code or go to: www.satisloh.com/techspecs





ART-GLUE-DETECTOR

The ART-Glue-Detector, an optional peripheral machine, detects any glue residue after deblocking, ensuring best lens quality.

Features + Benefits:

- After deblocking job tray is scanned and moves into the ART-Glue-Detector
- Detection of glue residue via camera and image recognition software
- Direct communication with LMS and MES
- ART-Glue-Detector identifies the few lenses that require manual cleaning and allows the vast majority of lenses to proceed without any manual intervention

Machine requirements:

- Special fluorescent UV-adhesive required
- Compatible with OPS and OPS premium block-pieces only
- Requires Satisloh job trays



Productivity	300 job trays/hour
Working Range	lens diameter: 55-85mm lens thickness: up to 30mm plano up to +15 dpt base curve prism up to 5°, progressives, multi-focals, single vision lenses
Dimensions (wxdxh)	with conveyor (standard): 1610 mm x 415 mm x 1815 mm without conveyor: 400 mm x 325 mm x 1820 mm

ALLOY PROCESS

Alloy blocking was the most common blocking process until now.

LAYOUTBLOCKER-PRA

The Layoutblocker-PRA is the best solution when high volume alloy blocking is required. With two blocking stations it provides precise, fast and easy blocking for highest productivity.

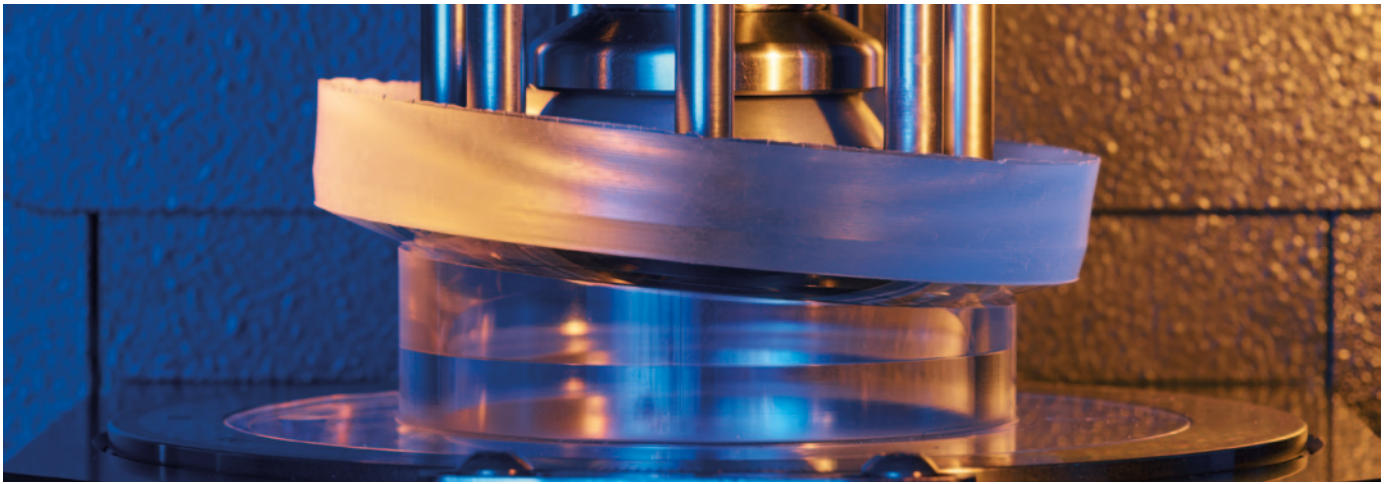
Process data can be entered from a host computer via optional bar code scanner or manually. Control software automatically checks the correct selection of the block-ring. The optical lens recognition system verifies the lens position, eliminating lens marking and operator errors. A “go/no go” indicator alerts the operator when the lens is correctly positioned. The system automatically adjusts prism angle, prism base and the axis of the blocking chuck. Finally, the precise auto-fill feature creates a consistent alloy wafer on every lens – minimizing operator intervention.

Features + Benefits:

- The standardized metal block-piece fits all common surfacing machines



Productivity	up to 120 lenses/hour
Working Range	plano up to +15 dpt prism up to 5° progressives, multi-focals, single vision lenses
Dimensions (wxdxh)	1050 x 950 x 1000 mm 41 x 37 x 39 in



ALLOY



ART

with OPS Premium block-pieces



Ecology/Health	<ul style="list-style-type: none"> • Alloy • Hazardous substance 	<ul style="list-style-type: none"> • Alloy-free • Operator safe
Waste Management	<ul style="list-style-type: none"> • Hazardous waste 	<ul style="list-style-type: none"> • Industrial waste (recyclable)
Process	<ul style="list-style-type: none"> • Taping • 30-60 min cooling time 	<ul style="list-style-type: none"> • No taping • No cooling (UV-curing) • Full lens support • Highest accuracy
Consumables	<ul style="list-style-type: none"> • Metal block-piece • Alloy • Tape • Unpredictable expense due to fluctuating alloy market prices 	<ul style="list-style-type: none"> • Plastic block-piece; re-use 300 times on average • Synthetic adhesive, predictable expense • No tape • Plannable cost
Process Integration	<ul style="list-style-type: none"> • Surfacing only 	<ul style="list-style-type: none"> • Complete integration incl. coating
Equipment Compatibility	<ul style="list-style-type: none"> • All manufacturers 	<ul style="list-style-type: none"> • All manufacturers

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