

# Duo-FLEX

Automated soft tool polishing system  
for all organic materials and lens formats

Exceptional form accuracy, long lasting soft tools,  
outstanding throughput and price/performance ratio.

**satisloh**<sup>®</sup>

Duo-FLEX  
uses only 7 polishing cap types -  
covering the full working range of free-form,  
toric or spherical lenses



## Duo-FLEX soft tool polishing system for All-Format lens surfaces

Duo-FLEX is a fully automated, dual lens, CNC controlled polishing system providing outstanding price/performance ratio in terms of surface quality, form accuracy, process stability, throughput and economics.

Designed for heavy duty automated production lines, the Duo-FLEX throughput matches that of Satisloh VFT generators. The Duo-FLEX loads two lenses simultaneously while job tray rests on the conveyor belt.

The new tangential polishing kinematic ensures optimized process and lens quality by improved tool/lens adaptation as well as equally distributed polishing slurry at all times.

Polished lenses are pre-cleaned and dried in a washing station before returning to the tray - avoiding slurry residue on lens surfaces.

A large tool magazine drum holds up to 7 types of polishing tool geometries. The long-life multi-use soft polishing tools consist of a hard base cap with soft sandwich layers made of a sophisticated foam layer as well as an industry proven polishing pad. The implemented tool and lens loading system keeps the Duo-FLEX running for many hours without operator intervention.

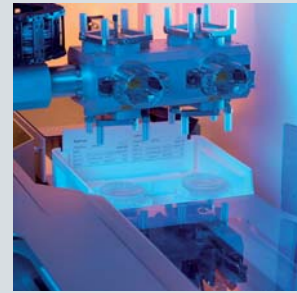
All current lens formats and organic materials can be processed covering the full working range of today's and tomorrow's lens production. The polishing process is based on Satisloh's soft tool technology.

## Features

- Fully automated CNC controlled polishing system utilizing Satisloh's long life "curvature-optimized" soft tools
- Polishes concave, spherical, toric, free-form surfaces, all presently known organic materials
- Automatically washes and dries polished lenses before they're loaded back into job tray
- Tool management software selects appropriate polishing tool according to lens curvature
- Macro controlled polishing process utilizing lens data and curvature information
- Small footprint of only 1592 x 2090 mm / 63 x 82 inches
- Fully Remote STEP capability – internet based communication for troubleshooting

## Benefits

- Saves labor costs, increases lab efficiency with fully automatic operation and long life soft tools
- Tangential polishing kinematic ensuring stable process and optimized lens quality
- 4-finger gripper handling avoids touching polished lens surfaces
- High process security through encoded tool interface system, ensures proper tool selection and application
- Matching throughput between VFT and Duo-FLEX – no need for external conveyor or transfer systems to deliver trays to multiple polishing machines
- Fast return on investment by process automation & elimination of hard lap tools and associated labor cost
- Continuous operation ensured by large integrated tool storage - up to 72 polishing tools (18 rows x 4 each)
- Mixed operation: allows for automatic selection of different process macros each optimized for a different lens types: toric/spherical as well as back side progressive and free-form surfaces
- The perfect complement to Satisloh's VFT generators for automatic and economic lens generation



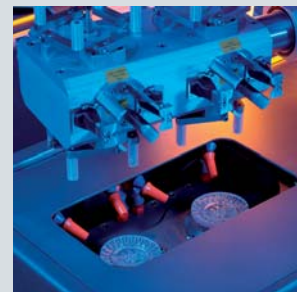
4-finger grippers collect lenses from job tray



Polishing tool drum holds 72 polishing tools of 7 different curvatures



Dual lens polishing



4-finger grippers deliver polished lenses to dual washing station

Duo-FLEX

## Technical Information:

### Dimensions (wxdxh):

1592 x 2090 x 1989 mm  
63 x 82 x 78 inches;  
incl. conveyor  
Conveyor belt height:  
1100 mm / 43 inches

### Weight:

approx. 980 kg/ 2160 lb

### Energy Requirements:

200-480 V, 50/60 Hz, 3 phase,  
8 kW, 20 A breaker

### Compressed Air:

Approx. 75 l/min, 6 bar  
Tap water: approx. 20 l/h

### Tool Concept:

Multi-use hard base caps with  
conforming layers

### Tool Reception:

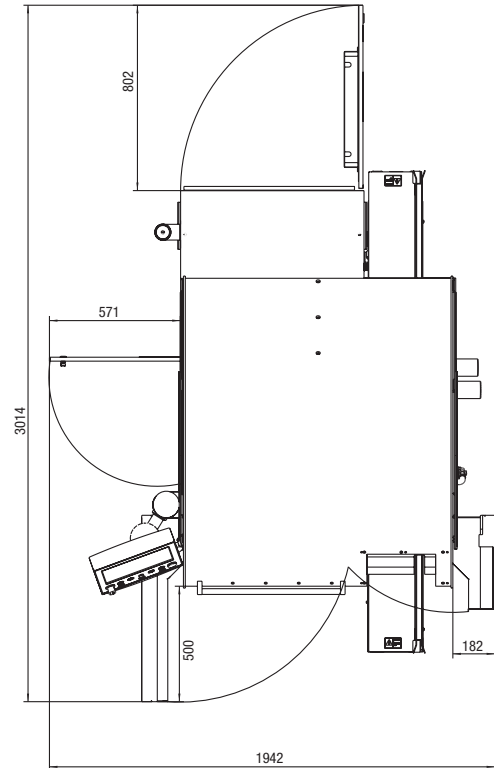
Proprietary interface for fast and  
secure tool exchange

### Working Range for Standard Process (n=1.523):

- Base curve convex/concave:  
0-14 dpt.  
(strongest meridian: 14 dpt.)
- Cylinder 0-4 dpt.:  
Lens diameter: 48-85 mm

### Interfaces:

VCA protocol, TCP/IP with Satisloh  
data communication standard



## Options & Accessories:

- Pmatic-16 slurry system, 40 l slurry tank or SlimChill
- Remote diagnostics of control computer via internet
- i-FLEX-Server software for data administration
- Consumables package
- Enhanced polishing processes
- Axis alignment and service kits
- STEP program and extended warranty

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