



Ophthalmic Lenses

TURNKEY LINES OR COMPONENT PROCESSES

Reliable machines and processes, including validation, are key to meeting your production demand and OEE. ATS Life Sciences has more than two decades of experience in engineered-to-order and integrated contact lens automation solutions.

Proven engineering for your entire family of products, including multi-purpose machining, precision dispensing for multiple recipes, supported by rigorous validation.

End-to-end lines, including cartoning into consumer-ready secondary packaging, or islands of automation to ramp up production.

ATS has delivered hundreds of contact lens machines and lines over two decades with a strong history of reliability and longevity.

Ramp up production with a complete engineered-to-order ophthalmic automated solution or integrate islands of automation into existing processes.

Proven technology and machining for repeat or complex processes including custom shapes for unique vision problems.

Whether you're setting up a new turnkey line or looking to improve the performance of particular stations, our complete process and opportunity analysis is designed to maximize the benefit of your installation and demonstrate OEE.

Let's discuss your
project in detail.

Contact us at lifesciences@atsautomation.com



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Key Benefits

ATS is a leader in the automated manufacture of contact lenses; you can have the confidence that comes with working with a partner with over two decades of experience.

Capabilities for your family of products including multiple lines and recipes.

Rapid ramp-up is possible to meet production demands allowing you to capitalize on market opportunities.

Total process analysis optimizes productivity and monitoring in industrial operations.

Features

- Accelerated start-up for certain applications*
- Improved quality and consistency
- Improved cycle times
- Increased flexibility for custom molds and recipes
- Traceability
- Validation along/throughout the production process
- End-to-end turnkey solutions
- Modular add-ons for specific processes
- Cosmetic or prescription lenses

*Contract manufacturing solutions

Details

High-speed Mold Unload	Custom mold take-out tooling and sprue handling, capable of \approx 1 second mold open time
Sorting and Traceability	Controlled handling and physical organization of numerous mold geometries being processed simultaneously with optional birth record traceability
Nitrogen Environments	Airlocks and sealed enclosures with temperature and oxygen level control
Monomer Dispensing	Recipe-driven, controlled dispense (typical tolerances of \pm 1 μ L of photo-initiated monomers)
Controlled Mold Closing	Servo-controlled custom closing profiles, completed within critical-to-quality time limits from monomer dispense
Custom Curing	UV and visible light curing with compliant safety shielding and/or temperature and time-controlled tunnel with product tracking
Color Pad Printing	A variety of colors for cosmetic and prescription lenses
Automated Delensing	Dry lens separation or mold processing for wet lens removal. Lens handling with void elimination for maximizing downstream hydration performance
Hydration	Wet-bench extraction and hydration system with FIFO tracking, fully compliant/intrinsic safety for IPA processing or WFI processing
Automated Inspection	High-speed vision systems perform multiple checks throughout production – mold cavities, cured lenses, wet lenses, laser marking quality, final packaging
Blister Feeding	Bulk feeding of blisters to match required pitch/orientation for downstream processing
Plasma/Corona Treatment	Surface treatment of blisters or lenses
Saline Dispensing	Recipe driven dispense of saline with fill-level sensing. Experience using numerous pumping technologies with provision for purging, priming and corrosion resistance
Foil Cutting/Singulation	Foil de-reeling with custom die cutting or singulation of pre-cut foils from supplied stacks
Blister Sealing	Configurable and controlled heat sealing with optional force auditing. Copper alloy heads designed to maximize temperature uniformity
Laser Marking	Permanent, machine-readable identification on a variety of materials. Class 1 laser-safe enclosures are verified and filed with the CDRH where applicable
Tray Handling	Sorting sealed blister packs into custom tray configurations for storing or autoclaving
Cartoning	Fully integrated systems for cartoning blister packs into consumer-ready secondary packaging