

AUTOMATIC GLASS COVERSLIPPER



Automatic Glass Coverslipper - ToronCVS™ 100

ToronCVS™ 100 Automatic Glass Coverslipper mounts cover glass on stained slides at 600 slides per hour, working with staining racks from all major stainer brands. Torontech supplies this unit to laboratories that already run an automated stainer and want the coverslipping step off the bench and out of the operator's hands. The cabinet measures 388 mm across the front, so it drops in beside an existing instrument. A 7-inch color touchscreen runs the setup.

Rack compatibility decides whether a standalone coverslipper is worth buying. The ToronCVS™ 100 accepts racks from the common stainer platforms, so slides transfer straight across without repositioning into a proprietary carrier. A magazine holds 200 cover glasses, and an output store keeps 60 finished slides ready for collection. Loading once covers a long run.

Sensors track the mountant needle position, detect slide removal, and flag system faults before a run goes wrong, while an anti-collision plate protects the transport path. A dual air purification system with activated carbon filtration draws xylene vapor away from the operator. Circular dispensing motion spreads the resin evenly, which holds overflow and bubble formation down. Standard cover glass and common mounting media are the only consumables.

APPLICATIONS

Automatic Glass Coverslipper - ToronCVS™ 100 Applications

The ToronCVS™ 100 suits any laboratory finishing stained slides by hand or looking to add coverslipping capacity without replacing a working stainer.

- Histology and Surgical Pathology: automatic glass coverslipping of H&E and special stain slides after staining, removing the repetitive manual step at the end of the workflow
- Laboratories with an Existing Stainer: rack compatibility across major stainer platforms lets the unit join a working staining line without replacing equipment that still has service life left

- Cytology Laboratories: covering of Papanicolaou and non-gynecologic preparations where clarity through the mountant affects screening speed
- Digital Pathology and Slide Scanning: uniform resin film with no blank margins or trapped air, which lowers the number of tiles a whole slide scanner rejects
- Solvent Exposure Reduction Programs: enclosed operation with dual carbon filtration moves xylene handling off the open bench, supporting laboratory safety reviews
- Slide Archiving: sealed cover glass protects the section from air and slows stain fading on slides retained in the case record
- Teaching and Research Laboratories: consistent coverslipping across many operators, so slide quality does not vary with individual technique



FEATURES

Automatic Glass Coverslipper - ToronCVS™ 100 Key Features

The ToronCVS™ 100 combines open rack compatibility, sensor-driven fault detection, and enclosed solvent handling in a cabinet narrow enough to sit beside the stainer it serves.

- **Universal Staining Rack Compatibility:** accepts racks from all major stainer brands, so slides move across from the existing staining line with no transfer into a proprietary carrier
- **600 Slides per Hour:** covering throughput matches the output of a routine staining line, keeping finished slides moving instead of stacking up for manual work
- **200-Coverslip Magazine:** a full magazine carries a long run without reloading, so the operator sets up once and leaves the instrument to it
- **60-Slide Output Storage:** finished slides collect inside the unit and stay ready for pickup, which decouples the operator from the end of the run
- **Circular Motion Dispensing:** resin is laid down in a continuous circular path for an even film, limiting overflow past the cover glass and cutting bubble formation
- **Spray Needle Position Detection:** the instrument verifies where the dispensing needle sits in real time, protecting mountant volume and film consistency through long runs
- **Anti-Collision Plate:** a mechanical guard protects the transport path from crashes caused by a misplaced slide or rack
- **Slide Removal and Fault Detection:** sensors register slide removal and identify system faults as they happen, so a problem stops the run instead of ruining a batch
- **7-Inch Color Touchscreen:** a clear display keeps setup, status, and alarms in one place for straightforward operation
- **Dual Air Purification with Carbon Filtration:** two-stage extraction with activated carbon treats xylene and solvent vapor before it reaches the room, improving bench air quality
- **Compact 388 mm Width:** a narrow footprint fits between existing instruments where a full-size coverslipper will not go
- **No Dedicated Consumables:** standard cover glass and common resinous mounting media keep the cost per slide low and leave supply sourcing open

THEORY & METHOD

Theory and Method

A mounting medium does three jobs at once. Optically it must refract light like the glass around it, near an index of 1.5, or every boundary between tissue, resin, and cover glass scatters light and softens the image. Mechanically it bonds the cover glass down and holds it flat. Over the long term it seals the section from air, which slows oxidation and stain fading on slides kept for the case record.

Bubbles form when the resin fails to wet the glass ahead of the descending cover slip. Air pockets get pinned at the contact line and stay there once the medium sets. Dispensing the resin in a circular path lays down a continuous film with no dry gaps, so the wetting front advances as one edge rather than several. Volume control matters as much as pattern: too little resin leaves blank margins, too much overflows past the cover glass and fouls the rack.

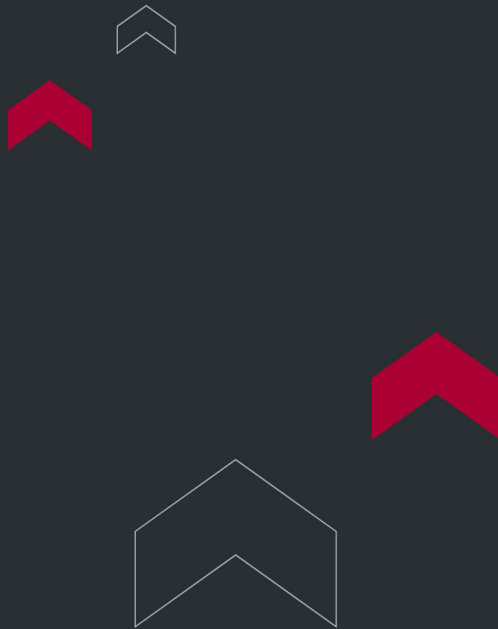
Xylene carries most resinous mountants because it mixes with the alcohols used for dehydration and refracts light close to glass. It also evaporates readily, which is what lets a slide dry, and what puts vapor into the room. Manual coverslipping exposes the technician to that vapor slide by slide across a shift. Enclosing the step and pulling the air through activated carbon removes the exposure from bench level.

TECHNICAL SPECIFICATIONS

Automatic Glass Coverslipper - ToronCVS™ 100 Technical Specifications

Parameter	Specification
Covering Speed	600 slides per hour
Cover Slip Load Capacity	200 cover glasses

Parameter	Specification
Slide Output Storage	60 slides
Cover Glass Size	24 × 40 mm to 24 × 60 mm
Slide Size	25 × 75 mm
Rack Compatibility	Staining racks from all major stainer brands
Coverslipping Mode	Glass cover slip with circular motion mountant dispensing
Display	7-inch color touchscreen
Detection Functions	Spray needle position sensing, slide removal detection, system fault detection, anti-collision plate
Fume Treatment	Dual air purification system with activated carbon filtration
Power	400 W
Voltage	110 to 220 V AC, 50/60 Hz
Dimensions (W × D × H)	388 × 586 × 615 mm
Weight	38 kg



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