

PATHOLOGY PRINTER



Pathology Printer

ToronPath™ series is a comprehensive range of pathology printer solutions engineered to replace error-prone manual labeling with fast, accurate, and permanent digital specimen identification. Purpose-built for anatomic pathology, surgical pathology, histology, and cytology workflows, the series spans three product families — the Slide Printer lineup, the Tissue Cassette Printer lineup, and the Microtome Humidifier — each designed to address a distinct stage of the specimen processing chain.

Whether your laboratory requires a high-throughput UV laser tissue cassette printer for the grossing station, a compact slide printer for the histology bench, or a precision microtome humidifier to eliminate sectioning artifacts, ToronPath™ delivers a tailored solution. Every pathology printer in the series produces permanent, chemically resistant markings that withstand immersion in xylene, alcohol, and decalcifying fluids. Integrated standalone computing platforms with built-in operating systems eliminate the need for external computers, while native LIS, HIS, PIS, and PACS compatibility ensures seamless integration into existing hospital and laboratory information networks.

The result is a pathology printer ecosystem that reduces transcription errors, accelerates specimen throughput, lowers consumable costs, and upholds specimen traceability from the grossing room through long-term archival — all in compliance with international standards including ISO 15189, CLSI guidelines, and IEC 61010-1.

Applications

The ToronPath™ pathology printer series is optimized for a broad spectrum of clinical, academic, and research environments:

- **Anatomic & Surgical Pathology:** High-volume laboratories requiring rapid, permanent labeling of both tissue cassettes and glass microscope slides across multiple specimen types.
- **Histology Departments:** Hospital and academic medical center labs transitioning to LIS/HIS-integrated, barcode-driven workflows to improve specimen traceability and reduce labeling errors.

- Cytology Departments: Facilities using QR code and barcode-based specimen tracking on standard glass slides for cytological examination and long-term archiving.
- Biobanks & Tissue Repositories: Institutions requiring archive-quality, chemically resistant identification that maintains integrity through extended xylene, alcohol, and decalcifying fluid exposure.
- Research & Veterinary Laboratories: Labs demanding high-resolution QR code support for complex multi-parameter data capture and full chain-of-custody traceability on cassettes and slides.
- Bench-Constrained & Satellite Sites: Small clinics and satellite pathology labs needing a compact pathology printer footprint without compromising print quality or throughput.
- Microtome Workstations: Any histopathology or cryostat cutting environment experiencing section artifacts (cracks, wrinkles, chatter marks, static-related folding) that require targeted paraffin block humidification.

Product Comparison

Tissue Cassette Printers — ToronPath™ TC Series

Feature	ToronPath™ TC-100UV	ToronPath™ TC-UV	ToronPath™ TC / ToronPath™ TC-i	ToronPath™ TC-LS
Printing Technology	UV Laser (Non-contact)	UV Laser (Non-contact)	Thermal (TC) / IR Laser (TC-i)	Infrared (IR) Laser
Print Resolution	2500 dpi	2500 dpi	300 dpi (TC) / 2500 dpi (TC-i)	2500 dpi
Print Speed	≤ 3 s / cassette	≤ 4 s / cassette	5–7 s (TC) / ≤ 4 s (TC-i)	≤ 3 s / cassette
Max Output Collection	≥ 100 cassettes	≥ 28 cassettes	≥ 5 cassettes	≥ 100 cassettes
Footprint Width	313 mm	430 mm	≤ 110 mm	313 mm
Best For	Max throughput for high-volume clinical labs	High-speed precision with sliding rail output	Space-constrained grossing stations	Cost-efficient laser-quality identification

Slide Printers — ToronPath™ SP Series

Model	Technology	Resolution	Max Capacity	Best For
ToronPath™ SP-UV	UV Laser	2500 dpi	≥ 100 slides	Standard clinical pathology and hospital slide printing workflows.
ToronPath™ SP-150UV	UV Laser	2500 dpi	≥ 150 pcs (Batch)	Contamination-free retrieval with FIFO batch management and lacquer-out output.
ToronPath™ SP-DUV	Dual UV Laser	2500 dpi	≥ 200 slides	High-volume continuous use via dual-hopper loading for extended unattended operation.
ToronPath™ SP-140UV	UV Laser	2500 dpi	≥ 140 slides	Light-sensitive environments; features light-absorbing design for reduced reflection and scan-then-print support.
ToronPath™ SP-260 / i	Thermal (SP-260) / IR Laser (SP-260i)	300 dpi (Thermal) / 2500 dpi (IR)	≥ 260 slides	Space-constrained labs requiring a slim ≤ 110 mm width and high-capacity loading.
ToronPath™ SP-IR	Infrared Laser	2500 dpi	≥ 100 slides	Cost-efficient infrared laser slide printer for standard glass slide identification.

Microtome Humidifier — ToronPath™ MH

Feature	ToronPath™ MH (SA100)	Best For
Technology	Micro-Hole Atomization	Any rotary microtome or cryostat workstation experiencing paraffin section artifacts.
Droplet Size	6 µm	Laboratories requiring fine, uniform mist without surface wetting or dripping.
Atomization Rate	0–1 mL / min (adjustable)	Sites with variable block compositions and ambient humidity levels.
Humidity Reach Time	Within 1–2 seconds	High-throughput labs needing immediate moisture delivery between cuts.
Dimensions (W×D×H)	235 × 180 × 156 mm, 2 kg	Compact benchtop or on-microtome placement in space-constrained environments.
Input Voltage	100–240 V / 50–60 Hz	North American and international laboratory environments.

Why Choose the ToronPath™ Series for Your Pathology Printer Needs?

Selecting the right pathology printer is a critical infrastructure decision for any clinical or research laboratory. The ToronPath™ series is built around six core advantages that directly impact specimen safety, operational efficiency, and total cost of ownership:

Consumable-Free Laser Technology	UV and infrared laser pathology printers in the ToronPath™ series use non-contact laser beams to permanently mark tissue cassettes and glass slides — with no ribbons, inks, or toners required. This eliminates consumable procurement costs, reduces the risk of contamination from ribbon fragments or ink spills, and removes ongoing maintenance overhead associated with thermal transfer systems.
Ultra-High Resolution Identification	With a standard resolution of 2500 dpi across all laser-based pathology printer models, the ToronPath™ series renders complex 2D QR codes, high-density barcodes, and fine alphanumeric text clearly on the small surface areas of both tissue cassettes and microscope slides — meeting the stringent demands of modern Pathology Information Systems (PIS) and barcode-driven LIS workflows.
Superior Chemical Resistance	Every marking produced by a ToronPath™ slide printer or tissue cassette printer is designed to be permanent. Imprints are integrated directly into the cassette or slide coating material, enabling them to withstand repeated immersion in xylene, alcohol, and decalcifying fluids without fading, smearing, or peeling — preserving specimen identity from grossing through long-term archival.
Seamless LIS/HIS/PIS/PACS Integration	All ToronPath™ pathology printers feature standalone computing platforms with built-in operating systems, eliminating the need for dedicated external PCs at each instrument. Every model offers native compatibility with LIS, HIS, PIS, and PACS, enabling error-free bidirectional data transmission, automated print queue management, and full traceability from specimen accession to final report.
Advanced Laboratory Safety	Integrated composite air treatment functions are built into laser-based pathology printer models to capture particulates generated during the laser ablation process, maintaining a clean and safe air environment for laboratory personnel. For the microtome humidifier, a no-drip outlet design and light-absorbing materials further ensure a clean, safe workstation environment.
Unmatched Versatility Across Every Workflow	From the ultra-compact 110 mm width of the ToronPath™ TC / ToronPath™ TC-i and ToronPath™ SP-260 / ToronPath™ SP-260i — ideal for space-constrained grossing stations and histology benches — to the dual-hopper ToronPath™ SP-DUV and 100-cassette ToronPath™ TC-100UV for maximum throughput, and the ToronPath™ MH microtome humidifier for artifact-free sectioning, the series provides a purpose-fit pathology printer for every laboratory volume, budget, and clinical requirement.



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