



MICROTOME HUMIDIFIER

Microtome Humidifier - ToronPath™ MH

ToronPath™ MH is a precision microtome humidifier designed to make paraffin section cutting more consistent, comfortable, and efficient. Utilizing mature micro-hole atomization technology, the ToronPath™ MH generates a fine, evenly distributed mist (6 µm droplet size) that simultaneously atomizes and humidifies the surface of the paraffin block and the surrounding air. This targeted humidification effectively eliminates the drying and static electricity that commonly affect paraffin sections, resolving problems such as cracks, wrinkles, chatter marks, difficulty unfolding sections, and slow sectioning speed.

Compact enough to sit directly on the microtome or nearby, the ToronPath™ MH microtome humidifier features adjustable fog volume, cycle-cooling temperature control, a no-drip side atomization outlet, a low-water auto-shutoff protection device, and a convenient side water filling port — making it a practical and reliable addition to any histopathology cryostat or rotary microtome workstation.

APPLICATIONS

Microtome Humidifier - ToronPath™ MH Applications

The ToronPath™ MH series is engineered for diverse clinical and research environments:

- Rotary microtome workstations requiring controlled paraffin block and section surface humidification
- Histopathology and anatomical pathology laboratories experiencing section artifacts such as cracks, wrinkles, or chatter marks
- Cryostat environments where static electricity causes sections to lift or fold incorrectly
- High-throughput pathology labs needing consistent sectioning quality with minimal operator intervention
- Research institutions performing paraffin-embedded tissue sectioning for downstream staining and analysis
- Any laboratory setting where dry ambient conditions negatively impact section quality or cutting speed



FEATURES

Microtome Humidifier – ToronPath™ MH Key Features

- Micro-hole atomization technology: generates a fine, evenly distributed 6 µm mist droplet that rapidly achieves the required relative humidity within 1–2 seconds
- Eliminates common sectioning artifacts: effectively resolves cracks, wrinkles, chatter marks, difficulty unfolding sections, and slow sectioning speed caused by dryness and static electricity
- Adjustable fog volume: atomization output volume (0–1 mL/min) can be flexibly increased or decreased on demand to suit varying block types and ambient conditions
- Cycle-cooling temperature control: water can be cycle-cooled to a working temperature of 10–15 °C to maintain optimal mist generation quality
- No-drip side atomization outlet: unique outlet design prevents liquid accumulation and dripping at the mist exit; flexible pipe allows precise directional adjustment toward the cutting surface
- Low-water protection device: built-in sensor automatically stops the atomizer and prompts the operator to refill when the water level drops too low, protecting the unit from dry-run damage
- Side water filling port (open design): conveniently accepts warm water, ice water, ice cubes, and other additives; compatible with standard 550 mL purified or mineral water bottles
- Compact, lightweight form factor: small size and 2 kg net weight allow placement directly on the microtome stage or on any nearby surface without occupying significant workspace
- Wide voltage compatibility: operates on 100–240 V / 50–60 Hz for use in North American and international laboratory environments

THEORY & METHOD

Theory and Method

The ToronPath™ MH) operates on micro-hole atomization technology, a proven method that forces water through precisely engineered micro-holes to produce a fine, well-distributed mist with a droplet size of approximately 6 µm. This extremely fine mist is directed via a flexible side atomization outlet pipe toward the paraffin block surface and the immediate surrounding air, rapidly raising the local relative humidity to the required level within 1-2 seconds of activation.

By maintaining adequate moisture at the cutting interface, the humidifier counteracts the drying effect that causes paraffin sections to crack, curl, or develop chatter marks, and simultaneously dissipates the static electricity that causes sections to adhere to the blade or fold during collection. The atomization volume is continuously adjustable to match the demands of different block compositions, ambient conditions, and operator preferences.

A cycle-cooling function maintains water temperature in the range of 10-15 °C to optimize mist output quality. A built-in low-water detection circuit automatically stops the atomizer chip and alerts the operator when the water reservoir reaches a critically low level, preventing dry-run damage. The unique no-drip outlet design ensures no liquid accumulates or drips at the mist exit, keeping the microtome surface clean and dry.

TECHNICAL SPECIFICATIONS

Microtome Humidifier - ToronPath™ MH Technical Specifications

Atomization Technology	Micro-Hole Atomization
Mist Droplet Size	6 µm
Atomization Rate	0-1 mL / min (adjustable)
Humidity Reach Time	Within 1-2 seconds

Cooling Temperature Range	10-15 °C (cycle-cooling)
Water Filling Port	Side-fill, open design; compatible with 550 mL purified/mineral water bottles
Atomization Outlet	Side-mounted flexible pipe; no-drip design; angle adjustable
Low-Water Protection	Auto-stop with operator alert when water level is too low
Input Voltage	100-240 V / 50-60 Hz
Dimensions (W × D × H)	235 mm × 180 mm × 156 mm
Net Weight	2 kg
Placement	On microtome stage or nearby surface



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