



TORONTECH

AUTOMATIC ROTARY MICROTOME



Automatic Rotary Microtome - ToronTome™ 500

Automatic Rotary Microtome ToronTome™ 500 is a precision Microtome designed for paraffin sectioning, trimming, and routine tissue preparation in pathology and histology workflows. This Rotary Microtome combines automatic and manual operation, giving laboratories more control over delicate sectioning tasks and repetitive daily work. Automatic Rotary Microtome built with 5-inch color touchscreen, specimen retraction, rocking mode, memory positioning, and a paraffin clamp cooling system.

ToronTome™ 500 is also available with an SDS section flotation system for a more complete sectioning workflow. That configuration combines cutting, flotation, illumination, and heating support in one setup. The result is a practical platform for labs that want cleaner section transfer, faster handling, and better operator comfort during serial sectioning.

APPLICATIONS

Automatic Rotary Microtome - ToronTome™ 500 Applications

- Histology and pathology laboratories: ToronTome™ 500 is suitable for routine paraffin sectioning in hospital, diagnostic, and research laboratories. It supports the preparation of thin sections for staining, slide preparation, and microscopic review. The cooling and retraction functions also help support smoother work with temperature-sensitive paraffin blocks.
- Research and academic laboratories: this Microtome fits life science, biology, and medical research environments that need repeatable section thickness and flexible trimming control. Automatic and manual modes give users a practical balance between throughput and direct operator control. The touchscreen interface also helps simplify setup for multi-user labs.

- Laboratories seeking integrated section handling: the SDS flotation configuration is useful for labs that want sectioning and flotation support in one workstation. It is well suited for workflows where operators need fast transfer from cutting to water bath handling. This can help reduce extra movement around the bench and make the process easier to manage.



Standards

- **ISO 9001:2008** is a foundational international standard for quality management systems that mandates strict process control and comprehensive documentation to ensure manufacturing consistency. Within the industrial testing sector, it established the rigorous framework for quality manuals and corrective actions required to guarantee that equipment consistently meets exact technical specifications and global regulatory compliance.

FEATURES

Automatic Rotary Microtome - ToronTome™ 500 Key Features

- Automatic and manual sectioning modes: ToronTome™ 500 supports both manual and automatic sectioning. This gives the lab flexibility for routine production work, fine trimming, and operator-preferred cutting styles.
- 5-inch color touchscreen: the unit is equipped with a 5-inch color touchscreen that displays real-time data clearly. This interface helps the operator adjust settings quickly and monitor sectioning conditions during use.
- Ergonomic waste tray design: a new ergonomic standard with an integrated arm-type section waste tray. This layout is intended to improve operating comfort and keep the sectioning area more organized.
- Cross-fed handwheel: the system includes a left-side coarse feed handwheel and a manual handwheel arrangement designed for easier operation. It also supports clockwise or counterclockwise coarse feed control.
- Rocking mode: a rocking mode is included for controlled trimming and short-motion operation. This is helpful when the user wants more precise manual control without completing a full rotation cycle.
- Specimen retraction: the instrument supports adjustable specimen retraction from 0 to 100 µm. This function helps reduce reverse-contact friction and supports smoother cutting performance.
- Paraffin clamp cooling system: a paraffin block clamp cooling range of 0C to -10C. This helps maintain paraffin block stability during sectioning and can improve handling in routine histology work.
- One-touch restore and memory positioning: the system supports one-key return to zero, memory positioning, and return to the stored memory position. These functions help simplify repetitive workflows and block repositioning.

- Adjustable positioning and feed system: the specimen positioning system supports X/Y orientation adjustment of plus or minus 8 degrees with a zero scale. Horizontal and vertical feed values are also configurable, which helps users align blocks more precisely for trimming and sectioning.
- Optional wet and dry sectioning configuration: ToronTome™ 500 can be configured for switchable wet or dry sectioning modes. This allows the system to adapt to different workflow preferences and lab layouts.
- Flexible accessory compatibility: with a range of optional specimen clamps, knives, and blade holders. Users may also integrate stereomicroscopes and other auxiliary equipment depending on application needs.
- SDS section flotation system: The SDS configuration provides a complete sectioning solution with integrated flotation support. The bath features anti-scalding protective edges, a large grip area, and multiple locating points for stable placement.
- Illuminated and heated flotation bath: the flotation bath supports illumination and automatic brightness adjustment, making the heating process easier to observe. The heating system is very responsive, with rapid and precise temperature control.

THEORY & METHOD

Theory and Method

A Rotary Microtome works by advancing a specimen block toward a blade in controlled increments so thin sections can be cut for microscopic examination. The operator sets the desired section thickness, aligns the specimen, and performs trimming or sectioning through manual or automated movement. Section quality depends on steady feed motion, accurate block alignment, blade condition, and controlled return movement.

ToronTome™ 500 uses automatic and manual sectioning modes to support different cutting preferences. The system includes specimen retraction, which helps reduce friction between the sample and the blade during return travel. ToronTome™ 500 can be used for rocking mode, coarse advance, memory positioning, and one-key return functions to make repetitive work easier.

When configured with the SDS flotation system, the cut sections can be transferred to a heated flotation bath for spreading and handling. The added paraffin clamp cooling system helps stabilize block condition during cutting. This combination supports a smoother workflow from sectioning to section pickup.

TECHNICAL SPECIFICATIONS

Automatic Rotary Microtome - ToronTome™ 500 Technical Specification

Parameter	ToronTome™ 500
Product type	Automatic Rotary Microtome
Section thickness range	0.25 - 1000 µm
Section increment	0.25 - 5 µm (0.25 µm step)
	5 - 10 µm (1 µm step)
	10 - 20 µm (2 µm step)
	20 - 50 µm (5 µm step)
	50 - 100 µm (10 µm step)
	100 - 200 µm (20 µm step)
	200 - 600 µm (50 µm step)
	600 - 1000 µm (100 µm step)
Trimming thickness range	0.25 - 1000 µm
Trimming increment	Same as section increment

Parameter	ToronTome™ 500
Specimen retraction	0 - 100 µm, adjustable
Maximum horizontal feed	20 / 28 mm, customizable
Maximum vertical feed	60 / 70 mm, customizable
Section accuracy	±5%
Maximum section size	50 × 70 mm
Paraffin block clamp cooling	0°C to -10°C
Flotation bath illumination	Supported
Operating temperature	5°C - 40°C
Voltage	100 - 240 V, 4 - 6 A, 50/60 Hz
Screen size	67 × 110 mm
Positioning system	X/Y ±8° with zero scale
Coarse advance	Supported
Sectioning mode	Manual / Automatic
Coarse feed handwheel direction	Clockwise or counterclockwise
Memory positioning	Supported
Return to memory position	Supported
One-key reset to zero	Supported

SDS Section Flotation System Configuration

Parameter	ToronTome™ 500 with SDS System
Paraffin clamp cooling system	Supported
Flotation bath illumination	Supported
Flotation bath temperature	20 - 60°C, adjustable
Flotation bath volume	1.0 L
Heated pump bath volume	500 mL
Required liquid	Distilled water
Dimension	640 (L) × 490 (W) × 340 mm (H)
Weight	Net 38 kg / Gross 45 kg

Dry Sectioning Configuration

Parameter	ToronTome™ 500 Dry Configuration
Dry sectioning size	550 × 490 × 340 mm
Dry sectioning weight	Net 35 kg / Gross 42 kg

Optional Configuration

Available setup options

- Switchable dry and wet sectioning modes
- Optional specimen clamps
- Optional knives and blade holders
- Integration with stereomicroscopes and other auxiliary equipment



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