



SEMI AUTOMATIC MICROTOME - TORONTOME™ 520

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Semi Automatic Microtome ToronTome™ 520 is a precision Microtome designed for controlled tissue sectioning in histology and pathology workflows. This Rotary Microtome combines manual handwheel operation with electronic control of section thickness, trimming thickness, mode selection, and speed, giving labs a practical balance between operator control and repeatable performance. Semi Automatic Microtome - ToronTome™ 520 suitable for routine laboratory sectioning and highlights stable stepper-motor-assisted feed, specimen retraction, and LCD-based parameter display.

ToronTome™ 520 is suited for laboratories that need dependable paraffin sectioning, convenient specimen handling, and safer daily operation. A universal cassette clamp, standard specimen clamp, protection guard, overload protection, sleep mode protection, and handwheel locking at any position, all of which support routine bench use in medical and research settings.

APPLICATIONS

Semi Automatic Microtome - ToronTome™ 520 Applications

- Histology and pathology laboratories: this Microtome is intended for tissue sectioning in histology and pathology laboratories. This semi-automatic rotary model for fine sectioning with controlled thickness settings, which makes it suitable for preparing embedded tissue sections for staining and microscopic examination.
- Medical and research sample preparation: The instrument also fits medical and research laboratories that need repeatable trimming and sectioning across routine sample-preparation work. Features such as section counters, thickness control, specimen retraction, and adjustable sample orientation support consistent block preparation before analysis.

- Training and routine laboratory use: because this Rotary Microtome keeps manual handwheel control while adding electronic setting and display functions, it can also work well in training or routine-use environments where users want direct cutting control with a simpler semi-automatic workflow.



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

Semi Automatic Microtome - ToronTome™ 520 Key Features

- Stepper-motor-driven sectioning support: the instrument uses a Germany stepper motor for more precise, reliable, and quiet slicing. As a stepper-motor-driven sectioning system built for stable feed motion and repeatable operation.
- LCD control panel for sectioning parameters: ToronTome™ 520 uses an LCD-based control interface that displays section thickness, trimming thickness, and section count. The same interface is used to control thickness, speed, and operating mode, making setup faster during routine use.
- Automatic specimen retraction: The machine includes an automatic specimen retraction function that reduces friction between the sample and the back of the blade during return movement. This supports smoother sectioning and helps reduce mechanical wear on the cutting edge.
- Broad blade compatibility: the blade carrier is designed to accept both high-profile and low-profile disposable blades. This gives laboratories more flexibility when matching blade type to tissue type, section quality targets, and purchasing preferences.
- Lockable handwheel for safer handling: the handwheel can be locked at any position, which helps improve safety and convenience during specimen loading, trimming, cleaning, and blade handling. This is one of the main practical safety features listed on the supplier page.
- Flexible specimen clamping: a universal cassette clamp and a standard specimen clamp. This gives users the option to work with common tissue block formats without changing to a different machine platform.

- Sample orientation adjustment: the specimen head supports 8° adjustment along the X and Y axes and 360° rotation. This allows precise block alignment before trimming and sectioning, which is important for obtaining even, usable sections.
- Built-in operator protection: the machine includes a protection guard along with a safety alarm system, overload protection, and sleep mode protection. Together, these functions support safer daily use and help protect the instrument during repeated laboratory operation.
- Easy-clean waste tray: the waste tray can be removed easily for cleanup. This helps reduce mess around the cutting area and supports faster maintenance between specimens.

THEORY & METHOD

Theory and Method

A Rotary Microtome advances a specimen block toward a blade in small, controlled increments so the operator can produce thin sections for microscopic examination. In use, the specimen is clamped, aligned, trimmed, and then cut through repeated forward motion while the section thickness setting determines how much material advances with each cycle.

ToronTome™ 520 follows this method with semi-automatic control elements. The machine uses a stepper motor, electronic panel control for thickness, mode, and speed, and an LCD display that shows section thickness, trimming thickness, and the section counter.

The unit also includes automatic specimen retraction function that helps reduce friction between the specimen and the back of the blade during return travel, which supports smoother sectioning and helps reduce unnecessary blade wear.

Sample orientation and feed settings also affect section quality. The official page lists 8° adjustment along the X and Y axes with 360° rotation, along with defined horizontal and vertical specimen travel, which helps the operator align the block more precisely before cutting.

TECHNICAL SPECIFICATIONS

Semi Automatic Microtome - ToronTome™ 520 Technical Specification

Parameter	ToronTome™ 520
Product type	Semi Automatic Microtome / Rotary Microtome
Section thickness range	0.5-100 µm
Section thickness increments	0.5-2 µm in 0.5 µm steps; 2-10 µm in 1 µm steps; 10-20 µm in 2 µm steps; 20-50 µm in 5 µm steps; 50-100 µm in 10 µm steps
Trimming thickness range	5-500 µm
Optional trimming maximum	600 µm optional
Trimming thickness increments	5-10 µm in 5 µm steps; 10-100 µm in 10 µm steps; 100-200 µm in 20 µm steps; 200-500 µm in 50 µm steps
Horizontal specimen stroke	20 mm
Optional horizontal stroke	28 mm optional
Vertical specimen stroke	60 mm
Optional vertical stroke	70 mm optional
Specimen feed speed	1250 µm/s by click; 2000 µm/s with continuous pressing
Specimen retraction	12 µm

Parameter	ToronTome™ 520
Maximum section size	50 × 45 mm
Optional maximum section size	55 × 55 mm optional
Precision error	±5%
Dimensions	32 × 50 × 30 cm
Net weight	30 kg



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