



TORONTECH

REPEATABLE ROTARY MICROTOME



Repeatable Rotary Microtome - ToronTome™ 450

Repeatable Rotary Microtome - ToronTome™ 450 is a precision Microtome developed for routine histology, pathology, biological, and industrial sectioning work. Repeatable Rotary Microtome - ToronTome™ 450 is a stable, high-precision instrument for wax-embedded, and plastic-embedded sections, with key motion components such as the guide rail, screw mandrel, and ratchet rod sourced.

This Rotary Microtome is built for laboratories that need repeatable section quality, smooth handwheel movement, flexible specimen clamping, and dependable blade handling. Maintenance-friendly operation, a spacious waste tray, finger protection, dual handwheel locking positions, and blade carrier options for disposable blades or steel knives.

ToronTome™ 450 is a good fit for labs that prefer a classic mechanical sectioning platform with precise specimen feed and strong operator control. The available documentation also notes clockwise or counterclockwise coarse-feed operation and a gravity-compensated handwheel intended to deliver uniform strokes and well-stretched sections.

APPLICATIONS

Repeatable Rotary Microtome - ToronTome™ 450 Applications

- Histology and pathology laboratories: ToronTome™ 450 is intended for routine tissue sectioning in histology and pathology settings. Repeatable Rotary Microtome - ToronTome™ 450 is ideal for routine histology work and that the related operating manual is for tissue sectioning in histology and pathology.
- Biological and research laboratories: this Microtome for biological laboratory use. That makes it suitable for research environments that prepare paraffin or plastic-embedded specimens for microscopic examination and general sample preparation.

- Industrial laboratories: this makes the Rotary Microtome relevant for laboratories that section embedded industrial specimens where stable feed, controlled thickness, and reliable mechanical movement are important.
- Routine paraffin and plastic sectioning: the system produces reproducible section quality in wax and plastic-embedded sections. That supports use in labs that process a range of embedded materials and want a manual microtome platform with stable sectioning behavior.



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

Repeatable Rotary Microtome - ToronTome™ 450 Key Features

- High-precision mechanical sectioning platform: ToronTome™ 450 as a high-precision, stable Microtome for reproducible wax and plastic sectioning.



- Maintenance-friendly bearing and guide design: a vertical cross-roller bearing mechanism intended for maintenance-free operation. This supports stable motion with less routine servicing.
- Smooth gravity-compensated handwheel: the patented gravity-compensation system helps the handwheel rotate smoothly and easily. This is intended to improve stroke uniformity during manual sectioning.
- Dual handwheel locking for safer handling: the handwheel can be locked at any position, and the handle can also be pulled to a 12 o'clock lock position. As a dual fail-safe locking arrangement for safer blade or specimen handling.
- Precise specimen feed: a high-precision specimen feed system with clockwise or counterclockwise feed-wheel operation. This gives the operator flexible control during block advance.
- Two-level quick trimming: a two-level quick block trimming function intended to improve work efficiency during setup and facing.



- Flexible specimen clamp options: ToronTome™ 450 supports both a universal cassette clamp and a standard specimen clamp. ToronTome™ 450 is a fast sample-clamp exchange in about five seconds.
- Disposable blade and steel-knife compatibility: the standard configuration includes a blade carrier for disposable blades, while optional accessories include a blade carrier for a blade holder or steel knife. This Disposable blade and steel-knife compatibility with both low-profile and high-profile disposable blades.
- Advanced blade carrier design: the blade carrier was made from special materials with a treated surface so wax sections are less likely to adhere and ribbon flow remains smoother and more continuous. The supplier page also notes lateral displacement of the knife base so more of the blade edge can be used without removing or readjusting the blade.
- Finger guard and debris protection: the system includes a finger protection guard, and the supplier also mentions a slot cover that helps protect the instrument interior from sectioning debris. These features support safer day-to-day operation and easier upkeep.
- Spacious integrated waste tray: a large integrated section waste tray for cleaner routine work around the cutting area.
- Safety alarm system: an adapted safety alarm system, and the operating manual includes dedicated safety-operation instructions and blade-holder safety precautions.

THEORY & METHOD

Theory and Method

A Rotary Microtome cuts thin sections by advancing a specimen block toward a blade in controlled increments. The specimen is mounted, aligned, and fed through the cutting path while the selected thickness setting determines the section produced during each stroke. Repeatable Rotary Microtome - ToronTome™ 450 can select the section thickness ranges, trimming through a small handwheel, and precise specimen feed for controlled cutting.

ToronTome™ 450 uses a manually driven handwheel system with a gravity-compensation mechanism intended to keep rotation smooth and uniform. According to the supplier, this helps the operator achieve even cutting motion and consistent,

well-stretched sections.

Section quality also depends on specimen orientation, blade condition, blade angle, and feed stability. The supplied materials note X/Y specimen orientation adjustment, rotatable specimen positioning, lateral blade displacement, and a blade carrier design intended to improve ribbon continuity and make use of the full blade length.

TECHNICAL SPECIFICATIONS

Repeatable Rotary Microtome - ToronTome™ 450 Technical Specification

Specification	Details
Product Type	Repeatable Rotary Microtome - ToronTome™ 450
Section Thickness Range	0.5 to 60 µm
Section Thickness Increments	0 to 2 µm in 0.5 µm steps, 2 to 10 µm in 1 µm steps, 10 to 20 µm in 2 µm steps, and 20 to 60 µm in 5 µm steps.
Trimming Thickness Range	0.5 to 60 µm (via small handwheel scale knob)
Horizontal Specimen Feed	24 mm
Vertical Specimen Stroke	60 mm
Precision Error	±5%
Sample Orientation	X/Y ±8°, rotatable 180°
Maximum Section Size	60 × 40 mm

Specification	Details
Dimensions	300 × 570 × 270 mm
Net Weight	28 kg

Standard accessories

- Two clamp types.
- One disposable-blade carrier.
- One waste tray.
- Four tissue molds.
- Fifty cassettes.

Optional accessories

- Blade carrier for blade holder or steel knife.
- Blade holder.
- Disposable microtome blades.
- Steel knife.



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