



# Leica RM2245

The Manual Microtome with High-Precision Motorized Specimen Feed

Living up to Life

**Leica**  
MICROSYSTEMS

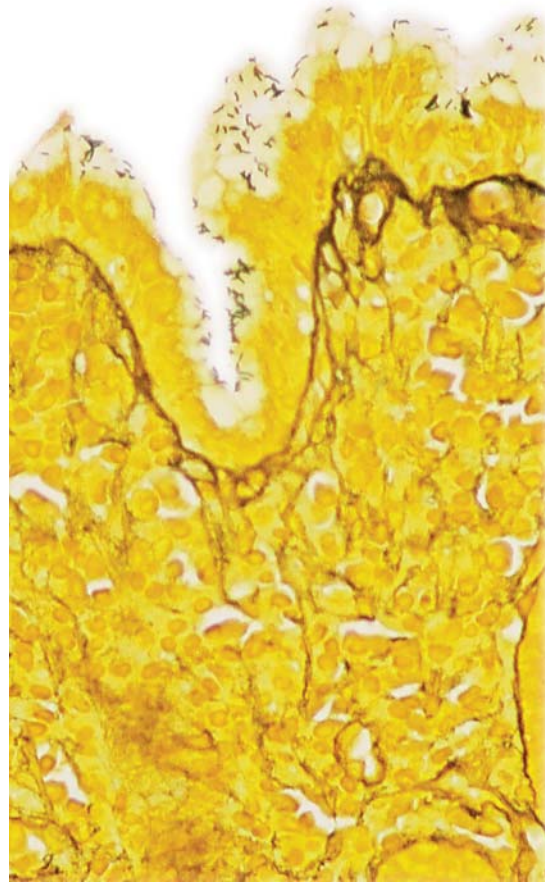
# The New Leica RM2245 – Efficiency Goes Hand in Hand with Comfort

The new Leica RM2245 semi-motorized rotary microtome represents the perfect combination of economic efficiency and user comfort. It is the instrument of choice for clinical histology and histopathology applications, as well as for industrial quality assurance.

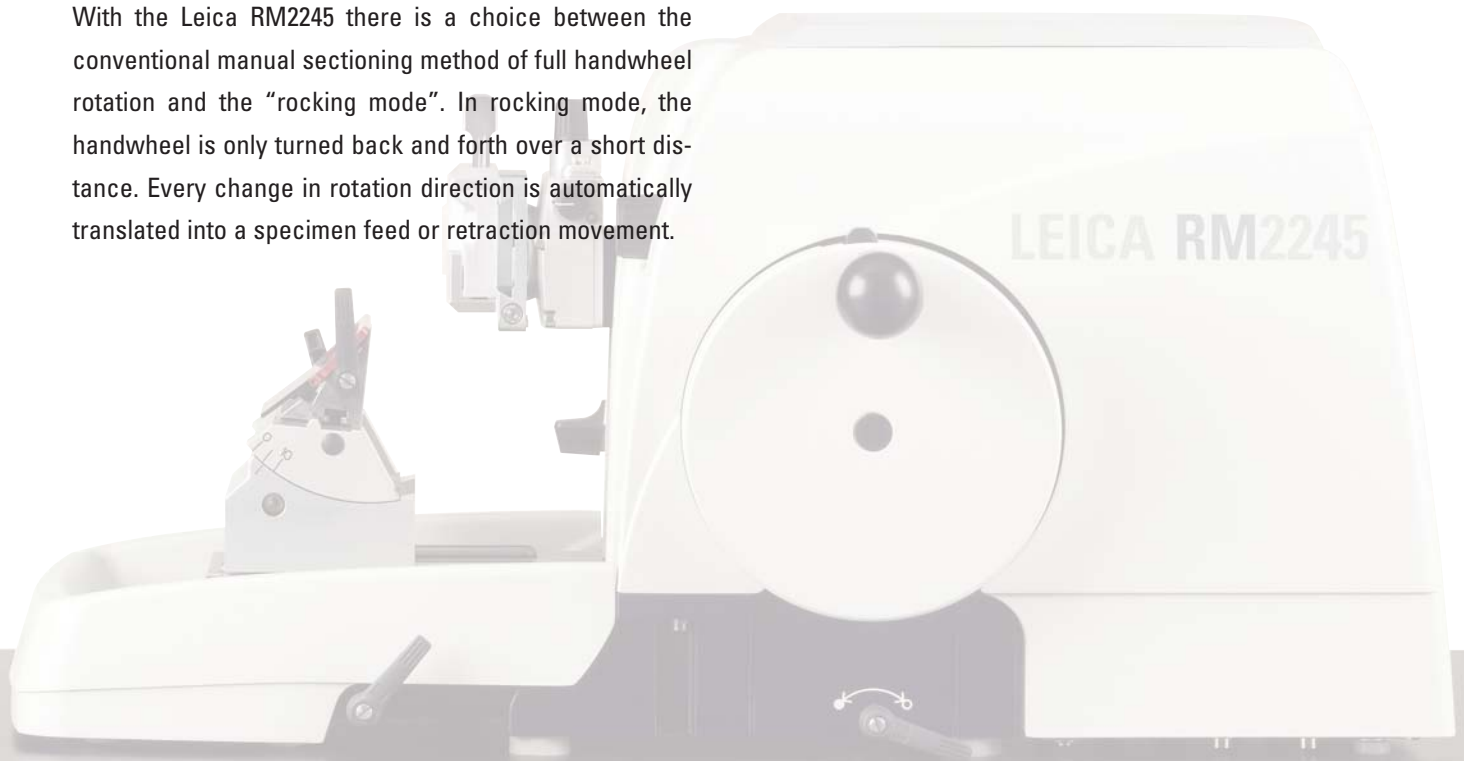
The Leica RM2245 is designed to meet the many requirements of modern laboratories. This task is fulfilled without compromise by combining proven technology and exemplary safety standards with functionality and ergonomic design.

Manual sectioning is enhanced by the high-precision motorized specimen feed, which results in efficient operation with maximum section reproducibility. Operator fatigue is reduced through the use of the patented spring system, which eliminates the need for a heavy counter balance weight in the handwheel. Enhanced user comfort results in maximum workplace efficiency and high specimen throughput.

With the Leica RM2245 there is a choice between the conventional manual sectioning method of full handwheel rotation and the “rocking mode”. In rocking mode, the handwheel is only turned back and forth over a short distance. Every change in rotation direction is automatically translated into a specimen feed or retraction movement.



Indiana University Histotechnology Program



# The Useful Details Show a Great Design Concept

## ■ Unobstructed work area

To provide improved access to the cutting area, several clamping levers that are not routinely used have been replaced by hidden clamping devices without compromising standard setting options.

## ■ Safety during sectioning

Safety is ensured by the integrated, red finger protection guard of the knife holder E that uniquely shields the blade edge. When used correctly the integrated finger protection guard rules out potential injuries because it can even remain on the blade edge during sectioning.

## ■ Comfortable operation

All functions are controlled via a compact, space-saving control panel with areas in contrasting colors and touch-sensitive buttons that allow 'blind operation'. Panel inclination is adjustable, and the panel can be positioned either on the left or right side of the instrument.

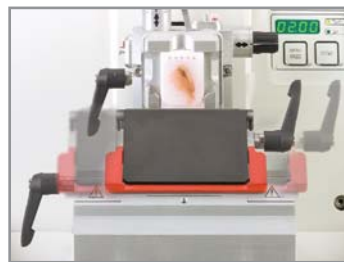
## ■ Convenient storage area

An integrated storage tray\* ensures that ancillary tools are on hand at all times. Alternatively a cooling plate with thermo element can be used for cold storage of specimen blocks either on top or on either side of the microtome.



### ■ Easy to clean

Due to the rounded shape of the Leica RM2245's one piece housing, section waste is easily removed. The integrated slot cover prevents debris from entering the internal mechanisms of the microtome.



### ■ Ergonomics and user safety

The smooth-running safety hand-wheel has an ergonomically shaped handle. A hand-wheel locking device for one-thumb operation locks the specimen head in the uppermost position, which is ideal for changing the specimen and/or blade. A second locking mechanism on the microtome base allows locking the object head in any position.

### ■ Stability

Maximum rigidity and stability are provided by the optimized microtome base plate.

### ■ Spacious, magnetized section waste tray

The spacious section waste tray reliably collects sectioning debris. It is safely held in position by magnets, yet is easily removable for emptying and cleaning.

### ■ Precision specimen orientation with clear zero reference point

This novel orientation mechanism sets new standards of precision and is very easy to operate. An important detail: Calibrated controls make it easy to adjust a specimen to an exact zero position indicated by red pins or a measurable variable on the x/y axis for re-cuts.

### ■ Lateral knife holder adjustment

The entire width of the microtome blade can be used without having to release the blade clamping mechanism. Using the entire knife edge saves costs, especially in laboratories with high specimen throughput. Three predefined stop positions (left, center, right) correspond to the width of a standard histology cassette.

## Well thought-out and proven

- **The Leica-patented Force Compensation System**  
for extremely smooth manual handwheel operation.
- **The Precision Micrometer Feed System**  
from 0.5  $\mu\text{m}$  to 100  $\mu\text{m}$  in sectioning mode and 1  $\mu\text{m}$  to 600  $\mu\text{m}$  in trimming mode via stepper motor.
- **The Leica Control Panel Concept**  
separate and intuitive control panel for instrument settings and communication display integrated in the instrument housing at eye level.
- **Accessories**  
a wide range of blade or knife holders and specimen holders is available for a variety of applications.

# Technical Specifications

## Section thickness

- Setting range: 0.5 – 100  $\mu\text{m}$
  - Setting values: from 0.5 – 5  $\mu\text{m}$  in 0.5  $\mu\text{m}$ -increments  
from 5 – 20  $\mu\text{m}$  in 1  $\mu\text{m}$ -increments  
from 20 – 60  $\mu\text{m}$  in 5  $\mu\text{m}$ -increments  
from 60 – 100  $\mu\text{m}$  in 10  $\mu\text{m}$ -increments
  - Trimming section thickness setting range: 1 – 600  $\mu\text{m}$
  - Setting values: from 1 – 10  $\mu\text{m}$  in 1  $\mu\text{m}$ -increments  
from 10 – 20  $\mu\text{m}$  in 2  $\mu\text{m}$ -increments  
from 20 – 50  $\mu\text{m}$  in 5  $\mu\text{m}$ -increments  
from 50 – 100  $\mu\text{m}$  in 10  $\mu\text{m}$ -increments  
from 100 – 600  $\mu\text{m}$  in 50  $\mu\text{m}$ -increments
- Object feed:** 28 mm  $\pm$ 1 mm, feed motion via step motor
- Vertical specimen stroke:** 70 mm
- Sectioning modes:** 2 manual modes (conventional full handwheel rotation and rocking mode)
- Specimen retraction:** 5 – 100  $\mu\text{m}$  in 5  $\mu\text{m}$ -increments, can be turned off

- Electric coarse feed:** 300  $\mu\text{m/s}$  and 900  $\mu\text{m/s}$
- Maximum specimen size (L x H x W):** 50 x 60 x 40 mm
- Specimen orientation:** horizontal: 8°, vertical: 8°
- Nominal supply voltages:** 100/120/230/240 V AC  $\pm$ 10%
- Nominal frequency:** 50/60 Hz
- Power draw:** 70 VA
- Dimensions basic instrument**
- Width (including handwheel): 413 mm
  - Depth (including waste tray): 618 mm
  - Height (with storage area on cover): 305 mm
  - Weight (without accessories): approx. 37 kg (87 lbs)
- Dimensions control panel**
- W x D x H: 94 x 164 x 50 mm
  - Weight: approx. 0.450 kg (1 lb)

Wide range of accessories on request.  
Technical specification subject to change.  
Certificates: CE, c-CSA-us

Up-to-date development, production and quality control procedures certified under DIN EN ISO 9001 to ensure highest quality and reliability.

## The Leica RM2245 features at a glance:

- Precision specimen orientation with zero point reference
- Compact, ergonomic overall design
- Section thickness totalizer and section counter
- Easy alternation between trimming and sectioning function
- Two motorized forward and backward specimen coarse feed speeds
- Programmable specimen retraction
- Low-maintenance cross roller bearings
- Single-handed operation universal cassette clamp
- Completely new knife holder concept for disposable blades, with finger guard in contrasting color
- Precise knife holder lateral movement
- User safety integrated into overall design
- Smooth-running handwheel with integrated quick-lock mechanism
- Ergonomically optimized handwheel handle
- Communication display integrated in instrument housing
- Enclosed micrometer mechanism
- Spacious magnetized section waste tray
- Intuitive control panel
- Wide range of accessories





# “With the user, for the user”

## Leica Microsystems

Leica Microsystems operates globally in four divisions, where we rank with the market leaders.

### ● Life Science Division

The Leica Microsystems Life Science Division supports the imaging needs of the scientific community with advanced innovation and technical expertise for the visualization, measurement, and analysis of microstructures. Our strong focus on understanding scientific applications puts Leica Microsystems' customers at the leading edge of science.

### ● Industry Division

The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

### ● Biosystems Division

The Leica Microsystems Biosystems Division brings histopathology labs and researchers the highest-quality, most comprehensive product range. From patient to pathologist, the range includes the ideal product for each histology step and high-productivity workflow solutions for the entire lab. With complete histology systems featuring innovative automation and Novocastra™ reagents, Leica Microsystems creates better patient care through rapid turnaround, diagnostic confidence, and close customer collaboration.

### ● Surgical Division

The Leica Microsystems Surgical Division's focus is to partner with and support surgeons and their care of patients with the highest-quality, most innovative surgical microscope technology today and into the future.

The statement by Ernst Leitz in 1907, “with the user, for the user,” describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: **Living up to Life.**

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