



# Leica EM KMR3

Balanced-break Glass Knife Maker

Living up to Life

*Leica*  
MICROSYSTEMS

# The First True Balanced-break Knife Maker

Since the introduction of the world's first glass knife maker in 1962, Leica Microsystems has continuously refined the technique of high-precision glass knife making. Central to the design of the new Leica EM KMR3 knife maker is the precise balancing of the instrument's mechanical components to produce a 100% balanced break of the glass. This technical precision produces an outstanding, high-quality knife edge. In addition, the instrument is ergonomically-designed to provide comfort and ease of use.

**From students and routine users, through experienced cryo-ultramicrotommists, the new Leica EM KMR3 is the unsurpassed instrument of choice for producing high-end glass knives.**

## Your benefits:

- Highly reproducible, outstanding knife quality
- Automatic reset of the breaking and scoring mechanism
- Easily accessible scoring pressure adjustment
- Ergonomic design for comfortable use
- Fast learning curve – everyone in the laboratory can produce excellent-quality glass knives immediately



Leica Design by Werner Hölbl

# Knife Making with the Leica EM KMR3

## Step 1:

Align the glass strip with the Leica EM KMR3's **precision click stop**.



## Step 2:

Simply lower the breaking head to its **defined clamp position**.



## Step 3:

Push the button to perform an accurate score. After the break, the scoring mechanism **automatically resets** to the start position – ready for the next score.



# ... is Easier than Ever Before

## Step 4:

The breaking wheel features defined positions and **automatically resets** after the break.



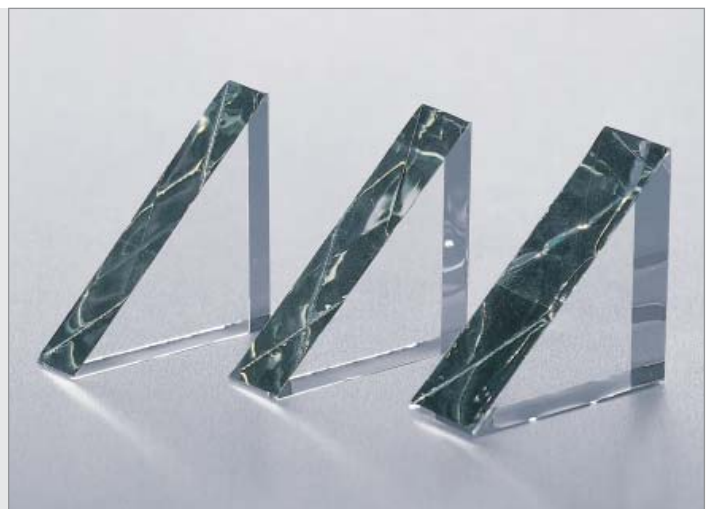
## Step 5:

The instrument's unique drawer enables **safer, convenient glass knife removal** without using additional tools.



## The result:

Create perfect glass knives from **6.4 mm, 8 mm or 10 mm** glass strips.



# Make High-quality Knives

All relevant parameters for exact corner-to-corner break are precisely factory-adjusted and pre-set. Only the corner-to-corner breaking method produces a knife with a resulting knife angle as close to 45° as possible.

## New scoring mechanism

A push of a button performs the absolutely even score necessary for a high-quality break. Two scoring lengths can be selected. The longer length scores the glass strip to break it into squares, and the shorter score is used before breaking the final knives.

After the break, the scoring mechanism **automatically** resets to the start position and is ready for the next score.



All the new features of the Leica EM KMR3 make the production of glass knives easier and more reproducible for electron and light microscope applications.

## The balanced break concept

The technique of producing a straight, controlled break in a strip of scientific-quality glass requires that the knife maker apply equal weight and pressure to each side of the score. In addition, the support elements that touch the glass from below must have minimum surface contact to avoid uncontrolled stress applied to the glass prior to the break.

The Leica EM KMR3 **simultaneously moves the two breaking pins** to apply exactly the same force to each side of the glass strip.

In addition, high-precision steel hemispheres provide **minimum glass surface contact** for unsurpassed knife edge quality.



# “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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