

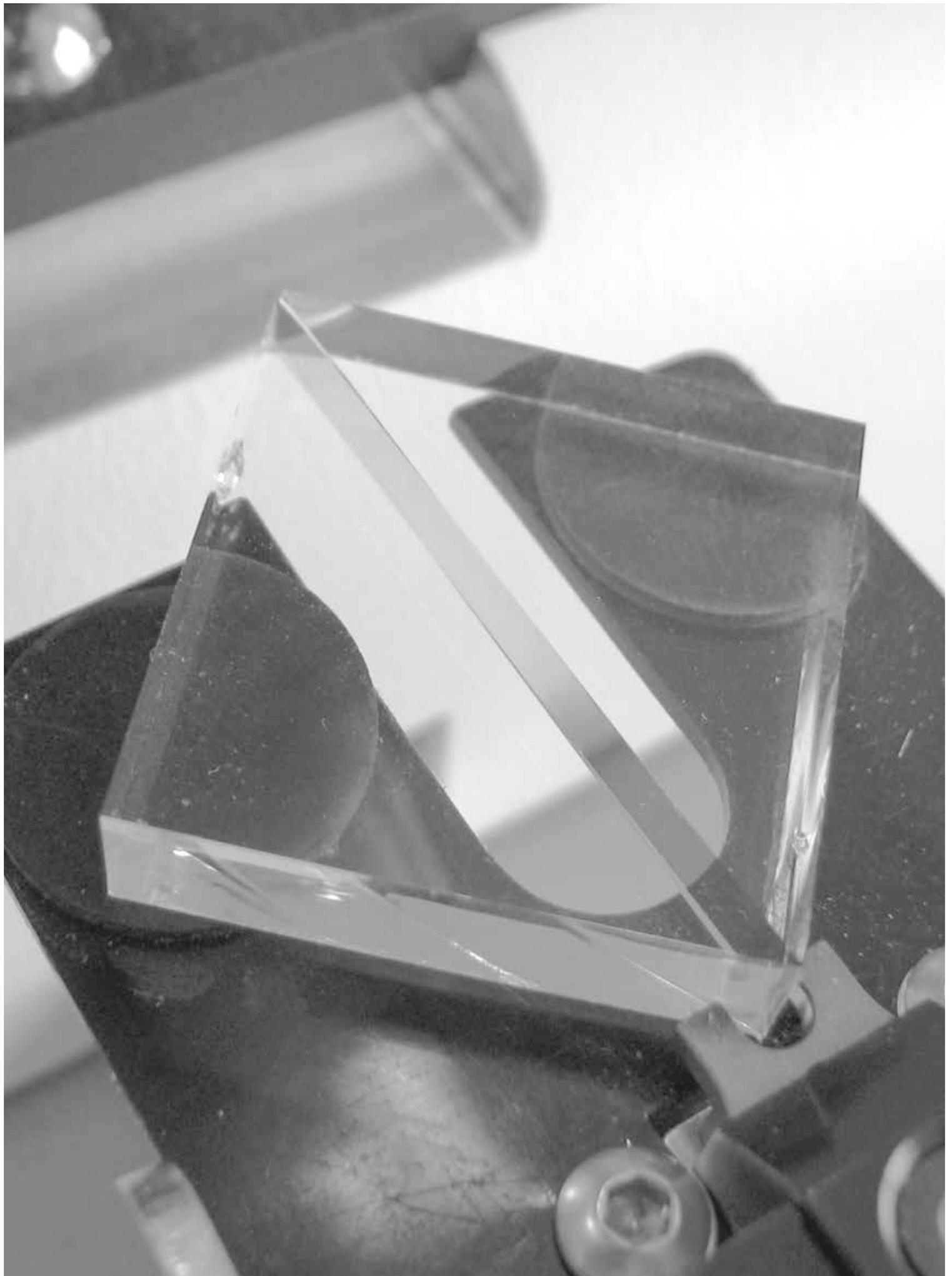
From Eye to Insight

*Leica*  
MICROSYSTEMS

## LEICA EM KMR3

Glass Knifemaker





# 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 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.

Want to learn more?

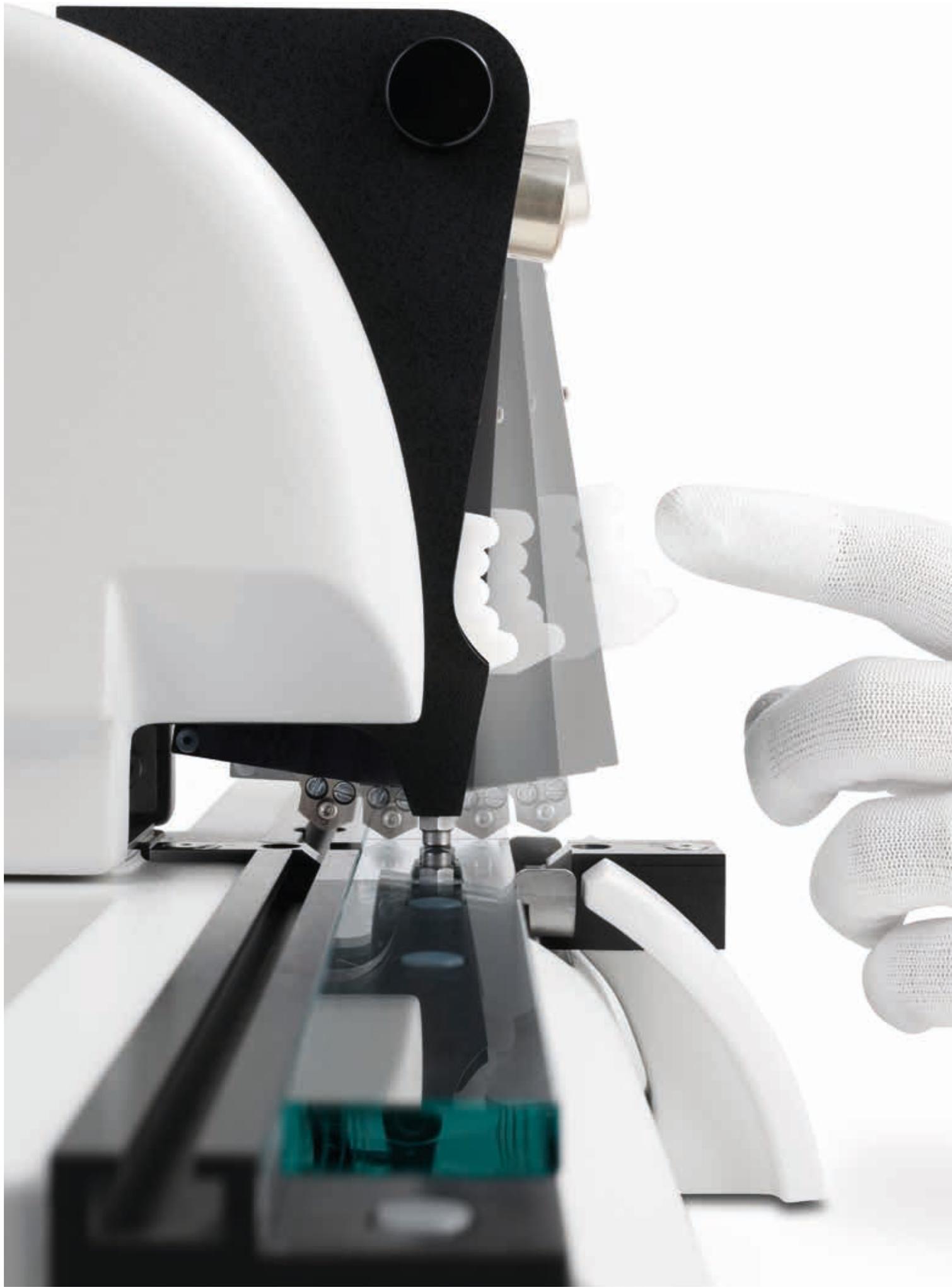
Read the tutorial on Leica Science Lab here:



[www.leica-microsystems.com/science-lab/  
brief-introduction-to-glass-knifemaking-  
for-electron-and-light-microscope-applications/](http://www.leica-microsystems.com/science-lab/brief-introduction-to-glass-knifemaking-for-electron-and-light-microscope-applications/)

## **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



## 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.

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

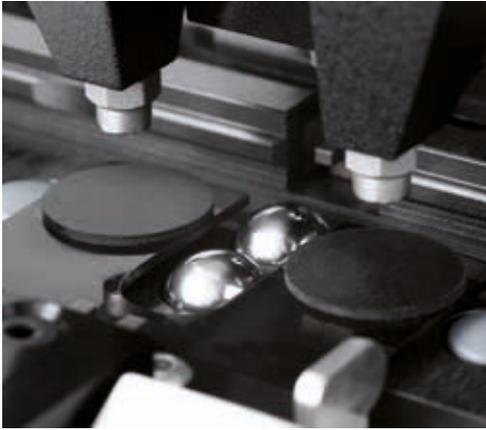
### PRECISE SCORING-MECHANISM

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.

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

## 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.



# KNIFE MAKING WITH THE LEICA EM KMR3 – EASIER THAN EVER BEFORE



**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.



**Step 4:**  
The breaking wheel fea-  
tures 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.



ISO 9001:2008  
ISO 14001:2004

No.00805/0  
No.02783/0

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