# Leica M50, M60 and M80

**Routine stereomicroscopes combine legendary Leica Microsystems optical quality, ergonomic design, and an extensive range of accessories**

Living up to Life

Leica
MICROSYSTEMS

## M50 features

- Magnification range 6.3 – 40 ×
- Five defined, step magnification levels
- High depth of field for observing samples over an extended area

## M60 features

- Zoom range 6.3 – 40 ×
- Seven switchable, locking zoom levels
- High depth of field for observing samples over an extended area

## M80 features

- Zoom range 7.5 – 60 ×
- Eight switchable, locking zoom levels
- Optics with excellent contrast for a detailed view of the sample

## Common features

- Modular product range – the microscope can be perfectly adapted for its intended application
- Parfocally matched optics system: The sharpness remains constant when the magnification is adjusted
- Field number 23 for an even greater overview
- 76 mm standard interface for quick, simple integration
- Wide range of achromatic and planachromatic objectives
- Ergonomic design: best possible adjustment for individual users
- ESD-dissipating design helps prevent damage caused by electrostatic discharge
- Focus column with integrated cable channel keeps the workplace uncluttered

**The New Leica M Series**

Leica Microsystems introduces the Leica M50, M60 and M80, three new high-quality routine stereomicroscopes of the CMO product line from Leica Microsystems. Optical brilliance combines with an array of accessories to create the perfect customized solution for an individual user's experiments.

**Magnification in steps or smooth zoom**

The Leica M50 stereomicroscope includes precise, reproducible magnification steps for repeated examinations, measurements, drawing or photography of samples under identical conditions. The five easily selectable position levels can be set without moving the eyes from the eyepieces. This ensures that the results remain comparable at all times without great effort.

The Leica M60 and M80 zoom stereomicroscopes can be used for a wide range of routine applications with switchable grid levels. The large working distance and brilliant imaging power show the finest details without losing the field of view over large workpieces.

Common to all three microscopes is the Leica range of accessories. Whether the work requires a variety of illumination types, a wide selection of objectives, or a swing-arm stand – Leica Microsystems has a solution for everything!

Do you already own stereomicroscopic equipment and are thinking of switching to Leica? No problem! The Leica M50, M60 and M80 fit into microscope carriers the same 76 mm diameter interface microscope carriers as with previous models and are therefore compatible with many suppliers. They adapt easily to existing components and add high-quality imaging power to existing inspection processes.

# Routine microscopy: the ever-changing challenge

## Ergonomic design

- Ergonomic design at the workplace can improve employee welfare, motivation and performance
- Ergonomic can positively affect profitability
- An investment in ergonomically designed instrumentation amortizes quickly

### Leica ErgoModules®

- ErgoWedge® ±15°
- ErgoTube® 10° – 50°
- ErgoTube® 45°
- Straight Tube
- ErgoModule® 30 mm – 120 mm
- ErgoWedge® 5° – 25°
- ErgoWedge® ± 15°
- Manual and motorized mechanical stage
- SmartTouch™
- Motorized focus drive

# The benefits of ergonomic design

Ergonomically designed workstations and efficient work processes are essential in today's welfare of people in the workplace. A well designed work environment can improve the motivation and performance. When correctly applied, ergonomically designed instrumentation can make a strong contribution to increased productivity and improved profitability.

Occupational medical studies show that workstations with optical equipment place high demands on a person's posture, hands and eyes. Compared to computer workstations, microscope workstations can be much more demanding for users.

Initially higher investment costs for ergonomically designed workstations are amortized very quickly and are a long-term benefit for all involved: with better performance, a higher quality work product, and, last but not least, fewer absences.

**The correct viewing height**

When matching the viewing height of the microscope to the physical height of a user, a few millimeters are crucial. If the user has to change his or her head position to use the instrument, the entire body can assume an unnatural posture, which may cause headaches, a stiff neck, and reduced work performance. Using a tube with variable viewing heights such as Leica Microsystems' new ergobinocular tube can solve this problem with a few simple twists of the user's wrist.

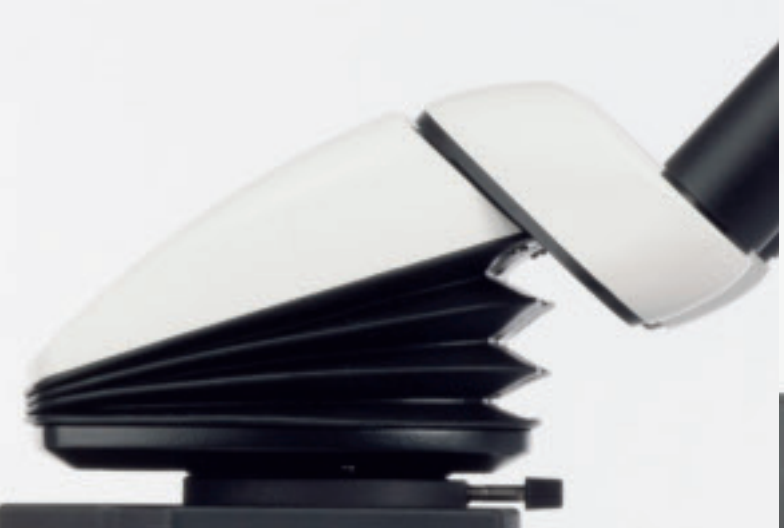
**The correct posture**

Routine work while seated at the microscope in an incorrect posture can cause tension in the neck and back muscles, and in the worst case even postural defects of the spine. All the control elements of Leica stereomicroscopes are arranged for the greatest possible comfort of the user. In this way, they actively combat muscle tension and fatigue.










## LED illumination

- Minimum maintenance with LED service life of 50,000 hours
- Realistic image with color temperature similar to daylight
- Constant color temperature over the complete brightness range
- Uncluttered workplace with compact design
- Silent operation without fan

## KL200 LED

- Modular design gives numerous fiber optic accessory options
- Modular concept: easily replaceable and exchangeable
- Compact, lightweight, integrated design

## LED3000 RL

- Compact design makes for easier side access to the sample
- Simple assembly on all objectives with major diameter of 58 mm
- Uniform illumination of large object fields
- Latest-generation white LEDs for high color fidelity
- Extra information gained by adjustable segments
- Accessories: Diffuser and polarization set
- Optimized for working distances from 65 – 150 mm

## LED3000 NVI™

- Precise, shadow-free inspection of depressions and holes
- Significantly brighter than a 150 W cold-light source
- Simple assembly on all objectives with major diameter of 58 mm
- Suitable for working distances from 60 to 150 mm
- On-board control panel for easy operation

# The best illumination

**Large selection of different illumination**

The correct illumination reveals the full power of a microscope – it gives the maximum possible amount of information from a sample. The choice depends on whether the user is viewing large, high-relief sample or reflective metal surfaces for material faults, for example. In each case, a near-vertical or goose-neck illumination will give completely different information and as a result, completely different results.

The study of embryos, drosophila, zebrafish or thread worms requires powerful **transmitted light bases** to enable brilliant, true color imaging of low-contrast specimens. For example, drosophila wing mutations can be sorted with bright/dark contrast. Even transparent specimens are presented in amazing contrast using the Rottermann relief contrast method.

The modular **Leica KL200 LED** cold-light source is one of the most powerful and compact light sources in its class and is suitable for a wide range of applications in industry. In addition to the oblique illumination with single or double-armed light guides, it is also available for other illumination techniques. The Leica KL200 LED can be integrated directly with the stand – the illumination is transported with the stereomicroscope like a backpack. The range also includes the powerful **Leica KL200 LED.** It operates as an integrated or stand-alone illumination and generates a very bright, natural light without the use of a daylight filter.

The highly compact **Leica LED3000 RL ring illuminator** uses latest-generation LEDs and a focusing lens specially developed by Leica. This increases the brightness and homogeneity of the illumination. The LED3000 RL is ideally suited for various applications in the routine area. Conveniently adjustable segments (full, half, quarter ring) are used to gain new data about the sample without having to move it.

New and unique: the **Leica LED3000 NVI™.** Optimized for routine stereomicroscopy, this illumination source represents the ideal solution for shadow-free illumination of preparation tasks.


LEICA M80
PLAN 1.0x

# Leica Stereo Bases

## Incident light bases

- Small Incident light base
- Compact standard Incident light base

## Transmitted light bases

- Small Incident light base with optional transmitted light base
- TL Series (ST, BFDF, RC™, RCI™) with different transmitted light types for all requirements

## Boomstands

- For all applications that require space for large samples
- Various equipment options for different tasks and attachments
- ESD-dissipating equipment helps prevent damage caused by electrostatic discharge

## XL Universal Plate

- Stationary Incident light base
- Ample space for very large specimens
- Optional gliding stage with 300 × 300 mm traverse path
- Compatible with all Leica stereomicroscope columns
- Separate ESD-dissipating socket for safety from electrostatic discharge

Preparing and manipulating organ and plant tissues in the biomedical laboratory require that the entire organism be constantly observed throughout a range of continuous magnifications. Both the setup and procedures for preparing specimens require a variety of actions within a large working distance. The Leica M50, M60 and M80 modular stereomicroscopes are perfectly equipped for these tasks: the swing arm stand series with variable suspended load enables the stereomicroscope to be positioned exactly where it is needed relative to the specimen.

The extended length of the swing arm, the load it can support, and the connection for the focus arm with many adaptation options ensure flexibility with outstanding vibration-dissipation – and crystal clear images in any work situation. Even for the most demanding applications, work is easier under ergonomic conditions with ample space for setting up the preparation and a large working distance for unhindered specimen manipulation. Easily reproducible settings ensure fast, efficient work processes and provide consistent data for further study or scientific publication.

Leica M50 with stereozoom incident and transmitted light base

Leica M60 with standard swingarm stand

# The Correct Base

**Incident light or transmitted light?**

A wide selection of stereomicroscope bases is available. For taking biopsies or observing zebrafish larvae in transmitted light, for example, the small incident light base with optional transmitted light sub-base is a versatile alternative to a swing arm stand. Or, use a transmitted light base to view a specimen in the best light, with the option of also using darkfield, diagonal transmitted light or Rottermann contrast, depending on the stand.

**Careful experiment control**

In vivo experiments must be carefully controlled to maintain the best culturing conditions for the organism. The Leica MATS heating stage keeps specimens at an exact temperature to ensure that study results are as reliable as possible. An adapter is available to enable the use of Leica Microsystems' wide range of accessories for live cell imaging. Accessories include incubation systems and pH level controls for strictly controlled studies of live specimens.

Leica M80 with TL ST transmitted light stand,
Leica MATS heating stage and binocular ErgoTube®

## Requirements

- True-to-life spatial representation
- Large specimen fields
- Ample working space
- Outstanding image quality
- Comfortable viewing and simple operation

## Leica M50 / M60 / M80

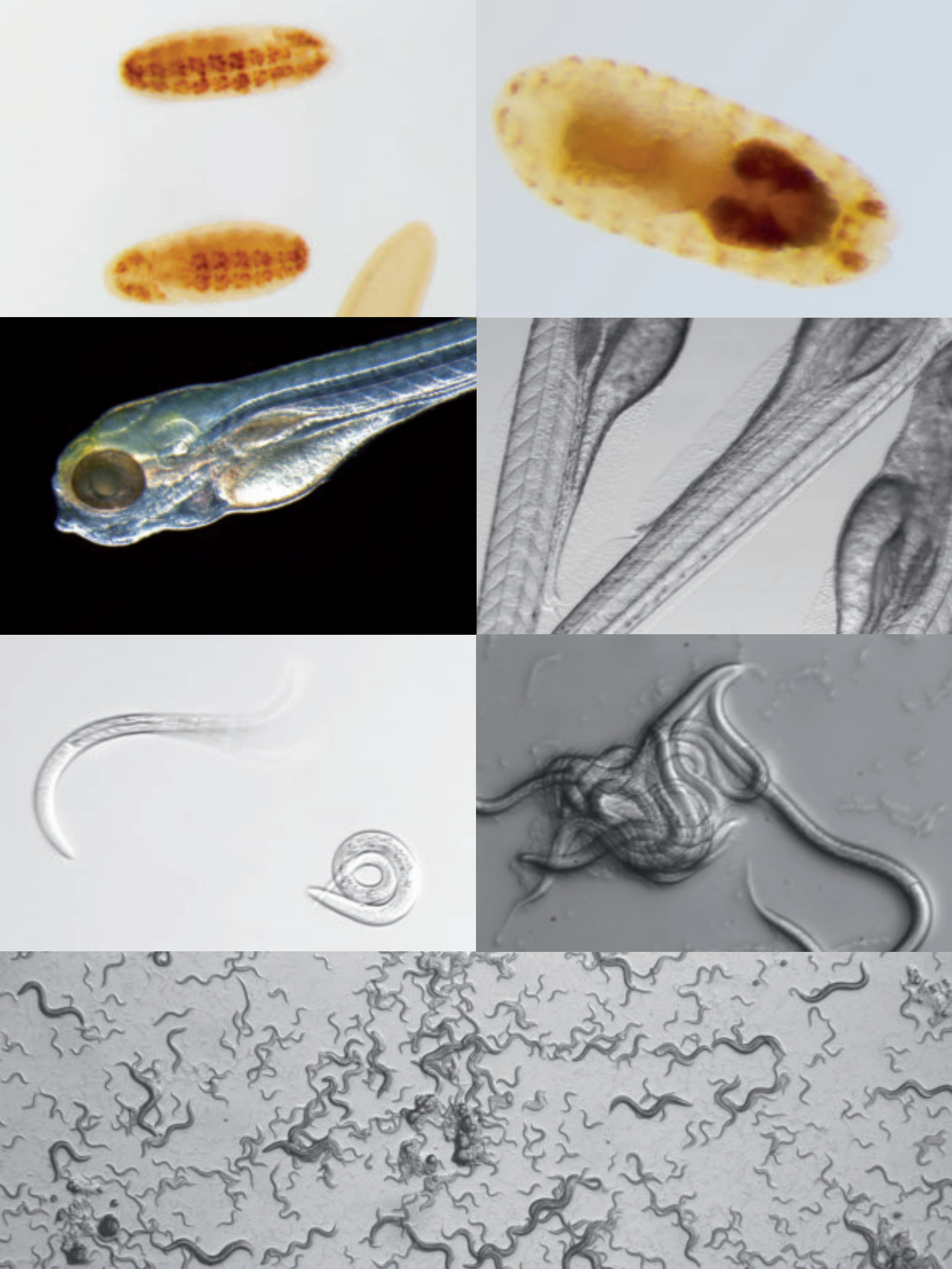
- CMO optics design with parallel beam paths – 3D viewing and full modularity
- Field number 23 for an even greater overview
- Working distance up to 303 mm – observation and preparation of even large specimens
- Consistent achromatic and plan-achromatic correction – Specimen details reproduced in true color and shape
- Powerful resolution: 225 lp/mm with the Leica M50 and 308 lp/mm with the Leica M80 with constant light intensity – maximum information collection
- Ergonomic operating concept – increased comfort for daily work

# Flexible Even to the Smallest Details

Biological specimens place particularly high demands on a stereomicroscope. At the same time, true-to-life spatial representation of large specimen fields and a generous working distance are also required. Outstanding image quality, exceptional viewing comfort, and easy operation are essential for fast, accurate specimen manipulation.

Leica Microsystems offers system components for routine stereomicroscopy that are individually adaptable to a vast range of biological applications.

The largest selection of achromatic and planachromatic objectives enables the stereomicroscope to be tailored to specific test conditions. A large working distance provides a comfortable amount of space for preparing mice, insects, and other model organisms. Leica Microsystems' swing arm stands can accommodate even very large experimental setups. Powerful resolution up to 225 lp/mm with the Leica M50/M60, and 308 lp/mm with the Leica M80, ensure excellent image quality with constant light intensity at all zoom levels. The new Leica LED3000 NVI vertical incident light source provides shadow-free illumination of the preparation field. This enables preparation of specimens in working distances from 60mm to 150 mm without distracting shadows.



# “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.

## • Medical Division

The Leica Microsystems Medical 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**.

## Active worldwide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## and representatives in more than 100 countries

In accordance with the ISO 9001 certificate, Leica Microsystems (Switzerland) Ltd, Industry Division, has at its disposal a management system that meets the requirements of the international standard for quality management. In addition, production meets the requirements of the international standard ISO 14001 for environmental management.

www.leica-microsystems.com

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MICROSYSTEMS

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