

From Eye to Insight

Leica
MICROSYSTEMS

Surgical microscope with 4K camera for training & teaching

LAYING THE FOUNDATION FOR SURGICAL PROFICIENCY

M320 training microscope

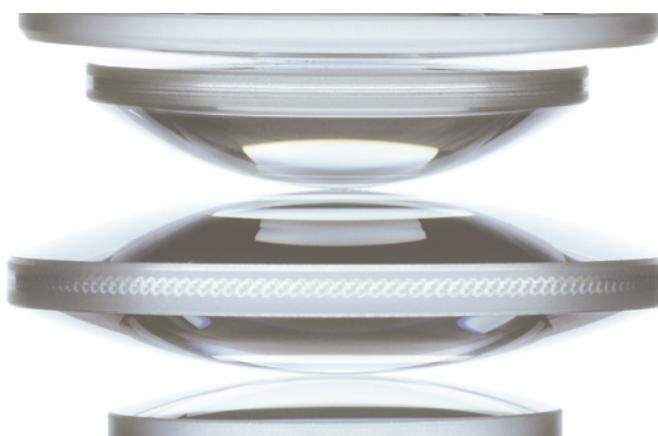


M320 Surgical Training Microscope



Laying the foundation for surgical proficiency begins with the right training environment. The M320 surgical training microscope empowers medical educators to deliver an effective, modern learning experience—supporting skill development with high-quality surgical optics, brilliant 4K imaging, effortless knowledge sharing, and flexible, ergonomic configurations tailored to the needs of today's training labs.

SEE EXACTLY WHAT YOU NEED TO SEE



Crystal clear visualization and imaging

- High resolution and large depth of field for impressive detail
- Premium quality apochromatic optics combined with LED illumination for an enhanced visualization of deep cavities
- Fully integrated 4K medical camera for brilliant images and videos



Efficient and powerful LED illumination

- › LEDs with high color perception and reproduction for easy differentiation of anatomical details
- › Two light paths deliver homogenous LED light which is particularly suitable for small, deep, and narrow cavities
- › Direct illumination concept with integrated LEDs in the optics carrier contributes to the high light intensity of the M320



Smooth workflow

- › 5-step magnification changer allows simple, quick magnification adjustments for minimum interruption to workflow
- › Effortless image acquisition via hard keys, remote control, or mobile App
- › Document your procedures instantly in ultra-high resolution with just the touch of a button



Focus effortlessly

The optional MultiFoc objective for the M320 allows you to switch quickly and easily between different focus levels. Simply adjust the working distance within a range of 200 mm to 300 mm by micro-movements of the adjustment knob. By limiting the time and effort of refocusing, you maintain efficiency and concentration while retaining an ergonomic posture.

- › Maintain efficiency and concentration, since you can work uninterrupted
- › Retain a comfortable working position, since you need to move less
- › Position the adjustment knob on the right, left, or centrally





The integrated 4K camera and recording system available for the M320 allow teachers and students to share their microscopic view on a large screen and record images or videos in crystal-clear anatomical detail and true-to-life colors.



Benefits of the 4K imaging with the M320:

- > Document in ultra-high resolution for impressive presentations and work instructions for students
- > Instruct students to follow your guidance with a live-streamed microscope view on a large screen
- > Check on your students' progress by looking at their microscope views displayed in their workstations on a 4K screen
- > Transfer image and video to personal computers
- > Benefit from a quick wireless image transfer to mobile devices



Built-in or modular imaging solutions

- Record procedures for documentation or teaching with the fully integrated, cable-free Leica IVC III 4K camera
- Upgrade your M320 if you need to add digital imaging to your modular microscope* or use the c-mount for an external camera



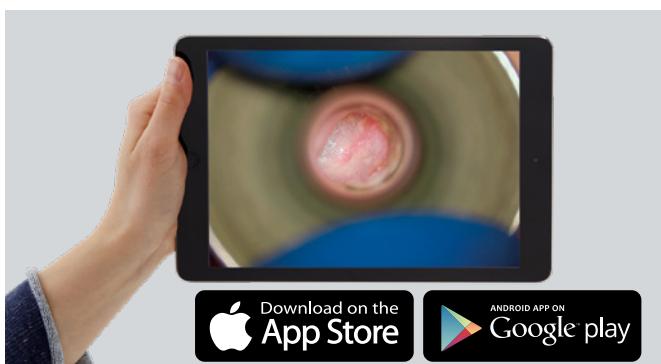
Flexible image acquisition and viewing options

- Start video or image recordings conveniently via remote control or directly on the microscope's hard keys
- Share images with your students on a 4K monitor in order to illustrate and explain procedures in training



Easy image transfer and storage

- Store images and video in 4K quality conveniently on an SD card for easy transfer to a computer
- Transfer images directly to your PC via USB connection and save them



View, record, and share via Leica View App

- Stream the live microscope view from the M320 surgical training microscope to a mobile device
- Capture images and video directly from the mobile device
- Access recorded pictures and videos from the SD card gallery of the M320
- Download assets to a mobile device to have them conveniently at hand to deepen the learning experience

* No retrofit for previous generations of M320
** Streaming resolution to today's generations of mobile devices: 720p30
*** Only with optionally ordered Wi-Fi dongle



DESIGN YOUR IDEAL TRAINING SPACE

You can be sure to find a M320 surgical microscope which corresponds to your teaching needs and the requirements of your center. The M320 training microscopes are very flexible to configure and can be used for training in various clinical disciplines.



- Choose from a variety of M320 stand options: short or long arm, with or without camera integration, with or without stand-mounted monitor
- Create a modern look and feel in your training center with the timeless design of the M320
- Benefit from antimicrobial microscope coating supporting your hygiene protocols
- Teach healthy habits with ergonomic accessories for different body frames, specialties, and working preferences
- Keep the cost of ownership low: LED illumination makes costly replacements, e.g., for fiber optics, unnecessary

Microscope design for ease of use and high user comfort



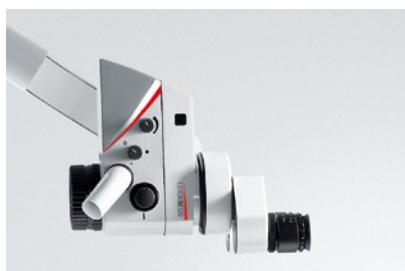
Antimicrobial coating



Jointless and cable-free for easy cleaning



Handles can be removed and sterilized



Straight binocular tube

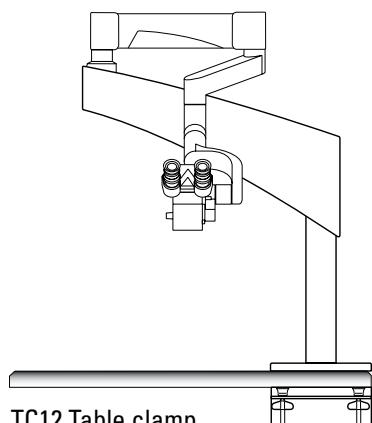


Binocular tube for 30°–150° movement

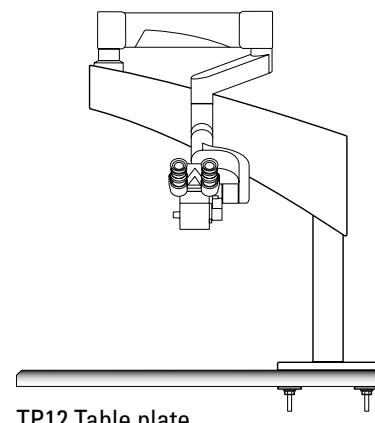


Binocular tube for 180° movement

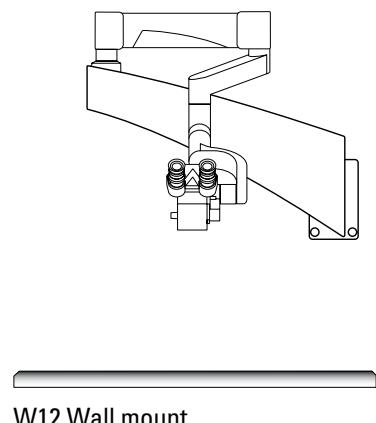
M320 training microscope technical data



TC12 Table clamp



TP12 Table plate



W12 Wall mount

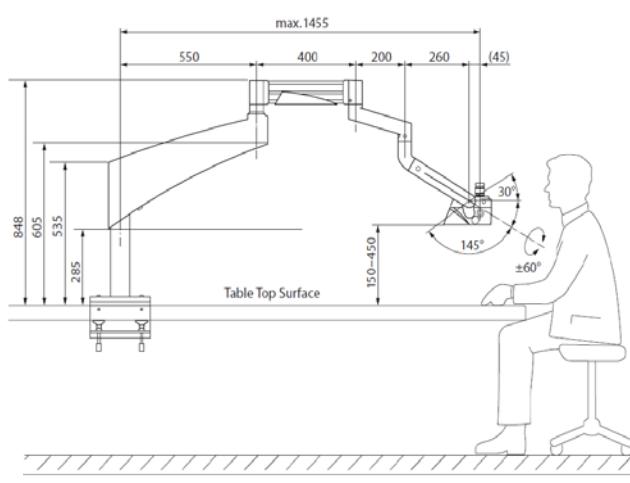
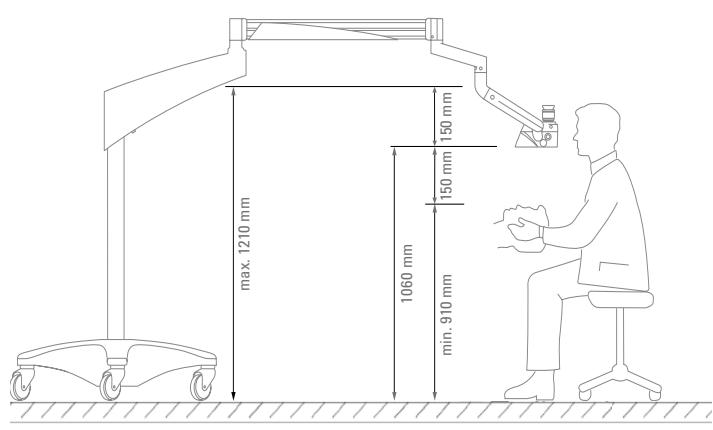


Table stand with short swing arm



Floor stand F12 with long swing arm

Microscope

Magnification	Manual APOchromatic 5-step magnification changer 6.4 / 10 / 16 / 25 / 40x
Stereo base	24 mm
Objectives	Fixed focal lengths from $f = 200$ mm up to $f = 400$ mm Fine focusing lenses with $f = 200, 250, 300$ mm MultiFoc objective lens with variable working distance of 200 mm to 300 mm
Eyepiece	10 × 21B, 12.5 × 17B, 8.33 × 22B, 10 × 21B with reticule
Reset functions	Limit switch for light on/off
Light source	Direct and long-lasting 2-LED illumination integrated into the optics carrier
UV filter	UV and IR-free LED illumination
Built-in orange filter	OG530
Light intensity adjustment	Using a knob on the optics carrier

Camera

M320 4K video and photo camera	Integrated 4K video camera with 4K video resolution and 12 MP still photo resolution, camera also has playback function for video and photo and thumbnail view, video (MPEG-4) and photo (.jpg/.raw) storage on SD memory card (system comes with a 64 GB SD memory card), or transfer via USB. Video signal available in HDMI (1 video connector), video/photo control through IR remote control and two hard keys on camera body, all camera settings adjustable via onscreen menu.
Remote control	IR remote control for M320 4K video and photo camera
M320 IVA Integrated Video Adapter	Integrated (optional) video adapter for attachment of external c-mount cameras, focal length of optics: $f = 55$ mm

Limitations of Use

The M320 surgical microscope may be used in enclosed rooms and on flat surfaces with max. 0.3° unevenness, or at stable walls or ceilings that fulfill Leica Microsystems' specifications (please refer to the installation manual for more information).

ACKNOWLEDGEMENT

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Class I surgical microscope M320

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