

High quality microscope for dental surgery

## LEICA M320 FOR DENTISTRY

For you, for your patient



## ENABLING YOU TO ACHIEVE YOUR GOALS

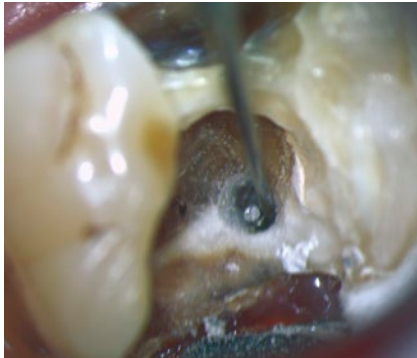


To achieve your core goal of delivering excellent surgical outcomes, you need a tool that enhances your vision and enables you to work comfortably throughout your career. This is why we have designed the Leica M320 to deliver premium optical quality as well as significant ergonomic advantages. What is more, a state-of-the-art full High Definition (HD) camera can be integrated into the microscope. The camera helps you to build patient trust for long-term relationships by enabling you to share visual information and create comprehensive records. You can easily demonstrate your successes to your team and the wider dental community via live video or HD recordings.



## DESIGNED FOR YOUR SPECIALTY

The high-quality optics, high magnification, and bright daylight-temperature LED light coupled with ergonomic design features, ensure that the Leica M320 responds to the demands of a wide range of dental specialties.



### Endodontics

Shadow-free illumination even in deep cavities for:

- Easy location of additional root canals
- Accurate visualization of complex pulp structures
- Precise management of obstruction or perforation in root canals
- Controlled root filling

In combination with microsurgical mirrors, even deep cavities in the molar region are visible.

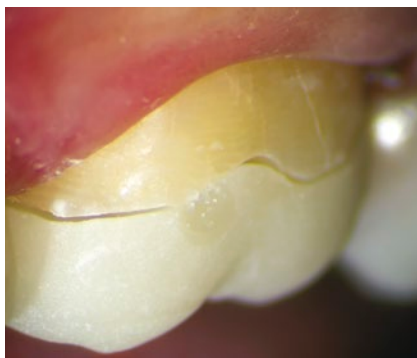


### Restorative Dentistry

The features of the M320 can support you with:

- Precise insertion of restorative materials and accurate finishing
- Earlier diagnosis of caries lesions
- Clear differentiation between healthy and carious tissue under gingiva
- Identification of cracks in the dentin, enamel and even in fillings

Built-in orange filter prevents polymerization of composite materials during treatment.



### Prosthodontics & Aesthetic Dentistry

The features of the M320 can support you with:

- Highly precise preparation of teeth for crowns or bridgeworks
- Avoiding adjoining tissues such as gums or mucous membrane
- Thorough checking of impressions for accurate preparation of prosthetics
- Accurate evaluation of fit and bonding of crowns or bridges



### Periodontics and Implantology

The features of the M320 can support you with:

- Precise inspection of the surgical site
- Easy flap control
- Controlled management of soft and bone tissues
- Accurate suturing of the soft tissues means low tissue trauma
- May facilitate the use of micro-suturing techniques for primary wound closure which may result in improved clinical outcomes

## SEE EXACTLY WHAT YOU NEED TO SEE

The core role of a dental microscope is to enable you to clearly see minute anatomical details even in deep or narrow cavities so that you can apply your skills precisely and efficiently. This helps you to achieve the best possible results, which makes for satisfied, loyal patients. The outstanding optics and LED illumination of the Leica M320 support you in achieving excellent results by delivering exactly what you need – a crisp, bright, true-color image, with impressive depth of field.



### Bright, true-to-life color images

- Two daylight temperature LEDs deliver bright, vivid colors for easy differentiation of anatomical details
- Long bulb lifetime of approx. 60,000 hours for minimal cost of ownership
- Light source integrated into the optics carrier with no external fibreoptics for long-lasting light intensity

### Crystal clear visualization

- High resolution and large depth of field for impressive detail
- Premium quality apochromatic optics combined with LED lighting deliver an enhanced view even in deep cavities
- Full range of objective lenses including the optional Leica M320 MultiFoc objective for efficient adjustment of working distance



### Work at your own pace

- Integrated orange filter (530 nm) prevents premature curing of composites



### Minimum workflow interruption

- 5-step magnification changer allows simple, quick magnification adjustment for minimum interruption to workflow
- Magnification steps of 6.4, 10, 16, 25, 40x





## STRENGTHEN YOUR PATIENT'S TRUST

Some patients become nervous in the dental chair when they are unsure what a procedure entails. This is where the optional integrated full High Definition (HD) camera and monitor can support you. Using either live images or play-back, you can walk your patient through the steps of a procedure to help them overcome the fear of the unknown. By storing video and images in each patient's file, you and your team can easily review full patient history before each visit, further reinforcing confidence.



The Leica M320 – supporting  
your practice through the whole  
workflow, today and in the future



## SHARE YOUR EXPERTISE

With an optional integrated full HD video camera, monitor and USB connectivity, your team can view every detail of your surgery in real time, for live training. The high definition video and images are easily transferred to PC via USB cable and can then be shared by email, online or at seminars. Not only can you pass your knowledge on to a wider audience, you can also further enhance your professional reputation.



### Integrated and modular

- Cable-free, fully integrated full HD camera with 10 MP images and video up to 1080p for crystal-clear anatomical detail and true-to-life color (optional)
- Modular design for easy upgrading



### Simple image storage

- Store images and video on SD memory card (up to 32 GB)
- Easily transfer to patient file via the SD memory card or via USB



### Flexible use and viewing

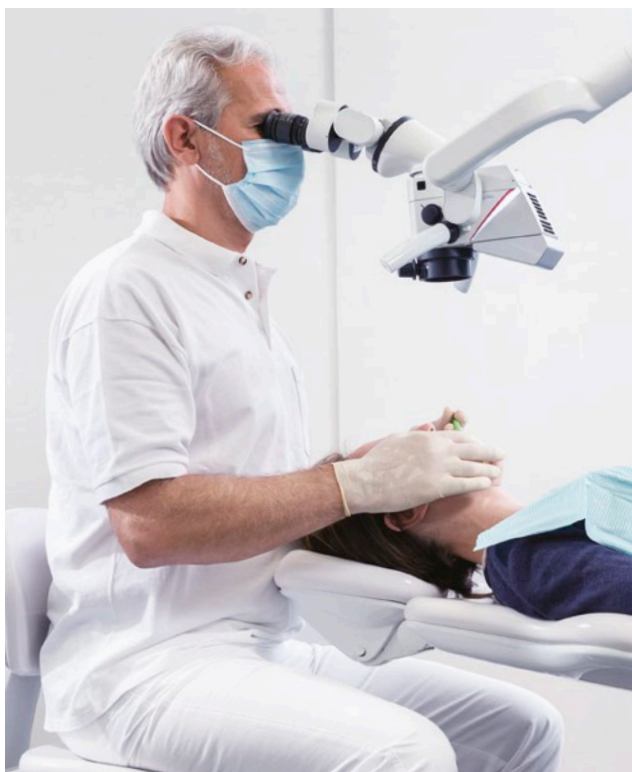
- Simple operation via remote control or directly on the microscope
- Live streaming to an external monitor for viewing by your assistant and patient

## ENHANCE YOUR COMFORT AND EFFICIENCY

Musculoskeletal pain caused by a hunched working position and harsh, repetitive movements, can have a serious impact on both your professional and personal life. We have conceived the Leica M320 to help you avoid this. How? By designing the stand to be effortlessly maneuvered and by offering a choice of configurations and accessories to adapt to your body frame and working preferences. You can achieve a comfortable, upright posture, allowing you to concentrate on applying your surgical skills to the full throughout your entire career.



Hunched working position without a microscope



Upright neutral posture achieved using the Leica M320

## GET COMFORTABLE

Ensure you are sitting comfortably by selecting the objective lense, binocular tubes and ergonomic accessory that best suits your body frame, specialty and working preference.



**Binocular tube with 45° angle**

- Ideal for simple procedures



**ErgoWedge accessory**

- Enhanced positioning and ergonomic benefits (used in combination with the 45° angle binocular tube)



**Binocular tube with 180° movement**

- Adjusts to your various needs
- Improved ergonomony and working flexibility



**ErgonOptic Dent accessory**

- Extends the reach of the microscope (used in combination with 180° binocular tube)
- Allows you to swivel the optics carrier to the angle you need while maintaining an ergonomic posture





"With the MultiFoc Objective of my Leica M320 microscope I can easily and quickly switch between different focus levels during examination and treatment, thus being much more flexible than with a magnifying loupe."

Thorsten Wegner, Dentist, Germany

### STAY FOCUSED

The optional Leica M320 MultiFoc Objective with variable working distance from 200 mm to 300 mm allows you to adjust working distance with a simple turn of the adjustment knob. By limiting the time and effort of repositioning, you maintain efficiency and concentration while retaining an ergonomic posture.

- Interruption to workflow is decreased so you maintain efficiency and concentration
- Movement is reduced so you can retain a comfortable working position
- The adjustment knob can be positioned according to the left, right or centrally as preferred

### MANEUVER WITH EASE

The Leica M320 is robust yet extremely light and easy to maneuver, decreasing the potential strain of harsh movements. Quick and accurate positioning and ultra-fast stabilization ensure workflow interruptions are kept to a minimum so that you can maintain efficiency.

- Integrated cables for maneuverability and long-life
- Robust yet easily adjustable for accurate positioning
- Vibration-minimizing bearings for fast stabilization
- The ErgonOptic Dent allows you to smoothly rotate the 180° binoculars into the required position



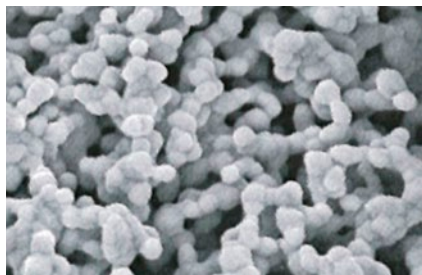
## ENSURE YOUR EQUIPMENT FITS YOUR PRACTICE



The Leica M320 has been conceived with your dental practice in mind. The range of mounting options and clean, integrated design, respond effortlessly to your working preferences, space and hygiene demands. The streamlined design also compliments the high-quality image of your dental practice which can reinforce patient confidence and set you apart.

### MEETS YOUR HYGIENE DEMANDS

In a surgical environment, a high level of cleanliness is a prerequisite. The surface of the Leica M320 is designed for easy cleaning and is additionally protected with a permanent antimicrobial coating that reduces contaminants on the microscope.



Leica AgProtect antimicrobial nano silver (Ag) coating reduces pathogens on the microscope surface



Virtually jointless with cables routed internally for easy cleaning



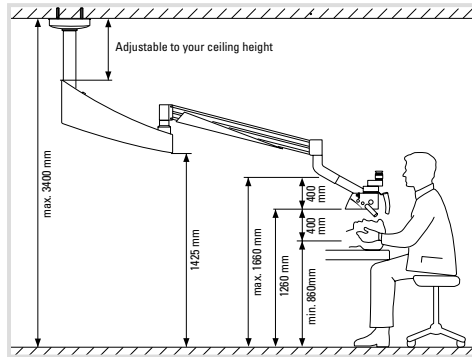
Handles can be removed and sterilized



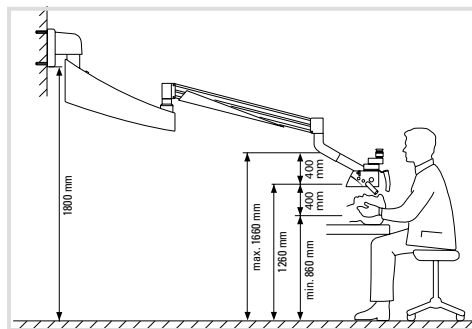
## MEETS YOUR SURGERY DEMANDS

Whatever your surgery layout, specialty and working style, the Leica M320 is the all-in-one solution for your practice.

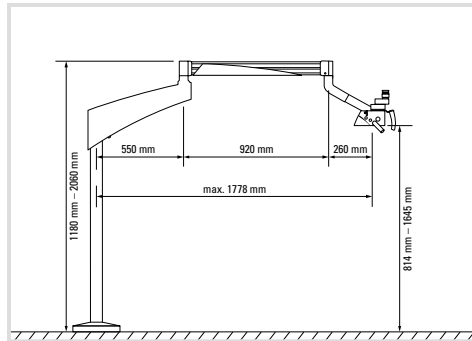
- Available with a robust floor stand, wall mount or ceiling mount
- Can be integrated into dental treatment units from a number of leading manufacturers
- Sleek design



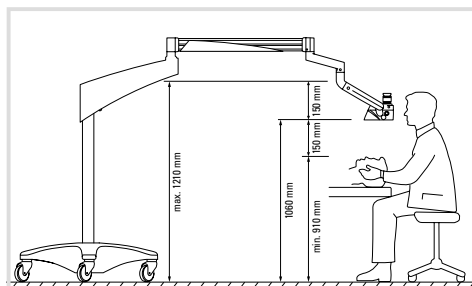
Leica C12 ceiling mount



Leica W12 wall mount



Leica FP12 floor plate



Leica F12 floor stand

## Leica M 320 Technical Data

### MICROSCOPE

Magnification	Manual <b>APOchromatic</b> 5-step magnification changer 6.4/10/16/25/40×
Stereo base	24 mm
Objectives	Fixed focal lengths from f=100 mm up to f=400 mm, Fine focusing lenses with f=200, 250, 300 mm MultiFoc Objective lense 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, with average service life of 60,000 h
UV filter	UV and IR-free LED illumination
Built-in orange filter	OG530
Light intensity adjustment Using a drive knob on the optics carrier	

### VIDEO ACCESSORIES

Leica M320 HD video and photo camera	Integrated full HD video camera with 1080p, 1080i or 720p video resolution and 2, 5 or 10 Megapixel still photo resolution, camera, also has playback function for video and photo and thumbnail view, video (MPEG-4) and photo (jpg) storage on SD memory card (system comes with a 4GB SD memory card), or transfer via USB, video signal available in HDMI, video/photo control through IR remote control and two hard keys on camera body, all camera settings with onscreen menu
--------------------------------------	---

Remote control	IR-remote control for Leica M320 full HD Video & Photo Camera
Leica M320 IVA Integrated Video Adapter	Integrated (optional) video adapter for attachment of external c-mount cameras, focal length of optics: f=55 mm

### LIMITATIONS ON USE

The Leica 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 (see installation manual).

## STANDARDS

Council Directive 93/42/EEC on Medical Devices (MDD) and its amendments. Classification: Class I, in compliance with Annex IX, rule 1 and rule 12 of the directive. Medical Electrical Equipment, Part 1: General Requirements for Safety IEC 60601-1;

EN 60601-1; UL60601-1; CAN/CSA-C22.2 NO. 601.1-M90. Electromagnetic compatibility IEC 60601-1-2; EN 60601-1-2.

The Medical Division, within Leica Microsystems (Schweiz) AG, holds the management system certificates for the international standards ISO 9001, ISO 13485, and ISO 14001 relating to quality management, quality assurance and environmental management.



CONNECT  
WITH US!

Leica Microsystems (Schweiz) AG · Max Schmidheiny Strasse 201 · CH-9435 Heerbrugg  
T +41 71 726 3333 · F +41 71 726 3399

[www.leica-microsystems.com](http://www.leica-microsystems.com)

