

From Eye to Insight

*Leica*  
MICROSYSTEMS



## M525 F20

Compact Microscope for ENT Surgery





Have you ever counted how many times the angle of incidence or the line of sight changes during ear, nose or throat procedures?

Easy to move, the Leica M525 F20 surgical microscope combines brilliant optics with precise maneuverability.

# Finger-Light Movement

Key benefits for the best surgeon comfort and surgical outcomes include:

## **Ease of movement**

A perfectly balanced system enables finger-light movement and effortless handling for fatigue-free, time-saving surgery.

## **Best view**

A crisp image and a large depth of field allow the surgeon to see more details. The surgeon does not have to refocus frequently, and this is especially important when working in narrow and deep cavities.

## **Safer illumination**

High-quality illumination gives enough light for deep operative sites while supporting patient safety.





### **Easy to Move**

With the Leica M525 F20 all microscope movement is easy and requires minimal force. The precise, balanced positioning and re-positioning of the system ensures efficient surgery. This extra positioning flexibility and superior maneuverability allows working for hours in comfort without fatigue.

### **Superior reach and more room to work**

Compact, yet offering superior reach, the well designed slim stand gives the surgeon the ultimate flexibility to place the microscope wherever it best fits his or her surgical needs. The slim stand provides more free working room.



Finger-light movement without vibration to easily achieve the most challenging views.

# Maneuverable and Compact

## **Finger-light movement**

Easy to move, the Leica M525 F20 stays perfectly balanced over the complete range of movement, thus making it possible to guide the microscope securely, even with just the eyes and nose.



## **Freedom of positioning**

Positioning and rotating the microscope and the slim stand requires minimal force. The system's design enables smooth, fine movement to easily achieve even the most challenging views.



## **More room to work**

The compact Leica M525 gives the surgeon more free working room. Combined with the innovative illumination and the wide range of binoculars the surgeon can work for hours in comfort.



# Unique Optics

## Always high-end optics

Ten years of research and clinical experience with OptiChrome™ optics have culminated in the world's most advanced and renowned optical system: the Leica M525 OptiChrome™. Standard for high-end microscopes, the Leica M525 delivers the following advantages needed for precision microsurgery:

- **Excellence in optics**

Large depth of field and bright illumination for crisp, brilliant, and detailed images.

- **Compactness**

Compact microscope with a large working distance range.

- **Added safety**

Smart working distance and zoom-synchronized illumination for enhanced patient safety.

## Protection and clear view

The Leica M525 interchangeable objective protection cover features optical glass with high-quality coatings to ensure the best possible visibility while maintaining sterility.



# Dedicated to Safety

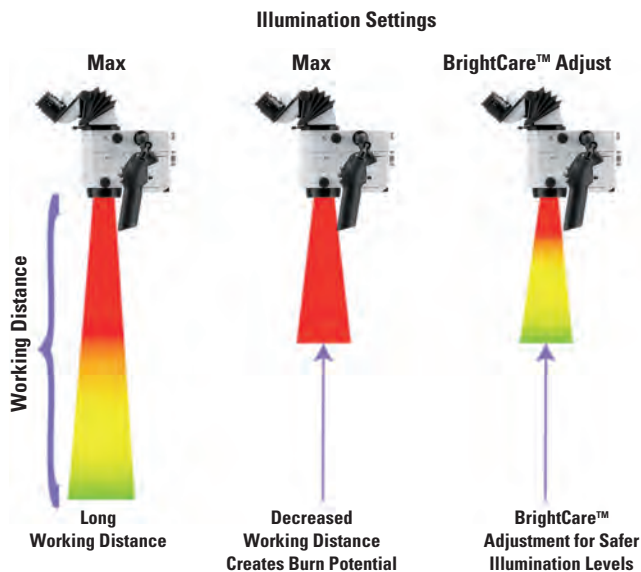
The Leica M525 F20 offers innovative illumination solutions for the benefit of the surgeon and added safety of the patient such as BrightCare™ and Autoliris™ – unique to Leica Microsystems.

## Safer, fast illumination

The Leica M525 F20 features two completely independent 180W xenon arc-lamp illumination systems. In the event of a lamp failure in the primary system, the second system will be available within one second with a switch of a lever, which gives the surgeon peace of mind that surgery will not be jeopardized.

## BrightCare™ – Working distance based illumination

As a microscope's working distance decreases, the intensity of the microscope light (without adjustments) increases, which can risk tissue burns to patients. The BrightCare™ working-distance-controlled light intensity feature addresses this issue to provide more safety for the patient by adjusting light intensity based on the working distance.



## Autoliris™ – Magnification based illumination

As magnification increases, the field of view becomes smaller, but the illumination field remains the same, which could potentially cause tissue burns. To provide additional safety for the patient, the Autoliris™ magnification-controlled illumination diameter automatically works with the zoom, providing a field of illumination that is only as wide as the surgeon's field of view.

Microscope at LOW Magnification



At low magnification, the field of illumination (yellow) fills the field of view (green).

Microscope at HIGH Magnification



Previously, as magnification increased, the field of view became smaller, but the illumination field remained the same. The illumination outside the field of view could potentially cause tissue burns (red).

Leica Microscopes with Autoliris™



Autoliris™ automatically works with the zoom, decreasing the field of illumination as the field of view decreases. There is no peripheral illumination to cause tissue burns outside of the field of view.



**Balancing**

Motorized control for faster, more precise AB-Balancing. The buttons are conveniently located above the optical head.

**Leica Zoom Video Adapter**

The focusable Leica Zoom Video Adapter with its unique 3x optical zoom matches the video image on the monitor with the view through the microscope.

**Pistol Grip**

Features zoom and focus buttons. The surgeon can also program the additional buttons according to his or her needs.



**Optional Leica Rotatable Beamsplitter**

Easy side-to-side change for the assistant – saves time between cases. Interface for optional video adapter at the rear.

**Modularity**

Leica Microsystems' wide range of observation accessories ensures the best positioning for both the surgeon and the assistant to offer the best possible view.

Furthermore, the interface for micro-manipulators is compatible with a variety of laser systems.



Straight binocular



30° – 150° binocular



Inclined binocular



Dual stereo attachment



Interface for laser micromanipulator



Optional monocular observer

Leica Design by Christophe Apothéoz



# Flexibility in all Situations



## Control Electronics

The graphical user interface ensures maximum flexibility for up to ten user-specific configurations. If desired, the surgeon can also choose pre-settings for Ear, Nose, Throat, and a variety of other needs.

## Camera Control Unit Holder

For different kinds of camera control units.



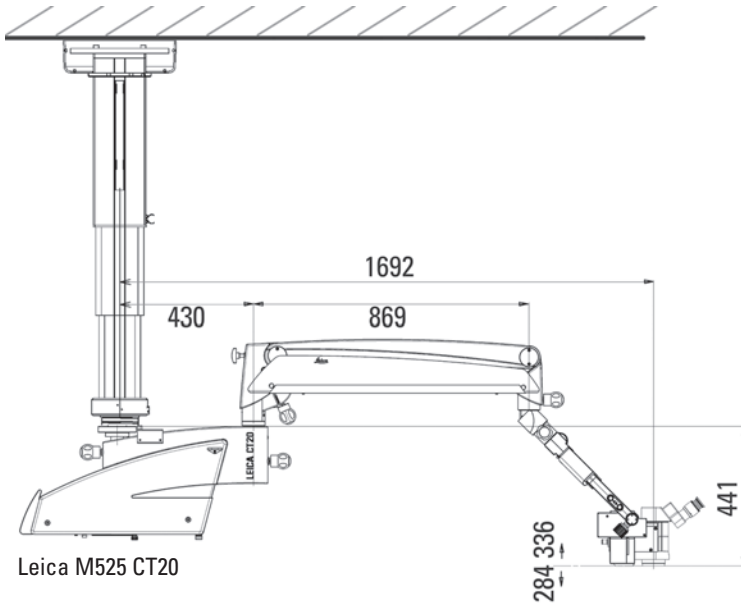
The Leica Microsystems' OpenArchitecture™ concept supports a wide range of custom solutions to meet the users' ergonomic requirements and surgical needs.

To create further freedom of movement Leica Microsystems also offers a Telescope Ceiling Mount, which stretches the limits of positioning in the operating room.

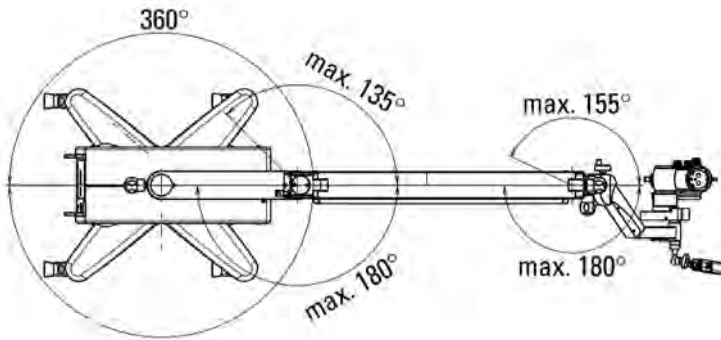
## Leica Quality

Excellence in optics, precision and reliability.

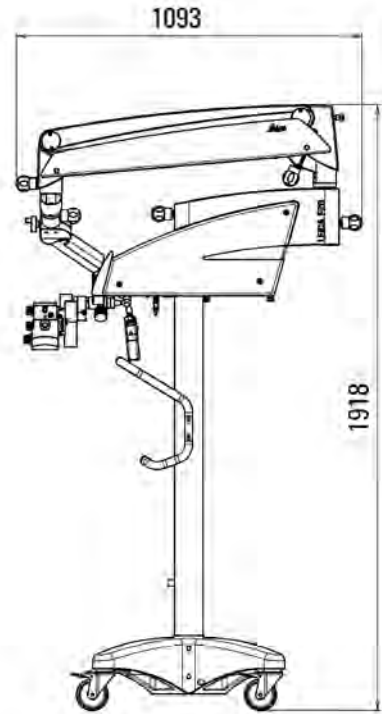
Dimensions in mm



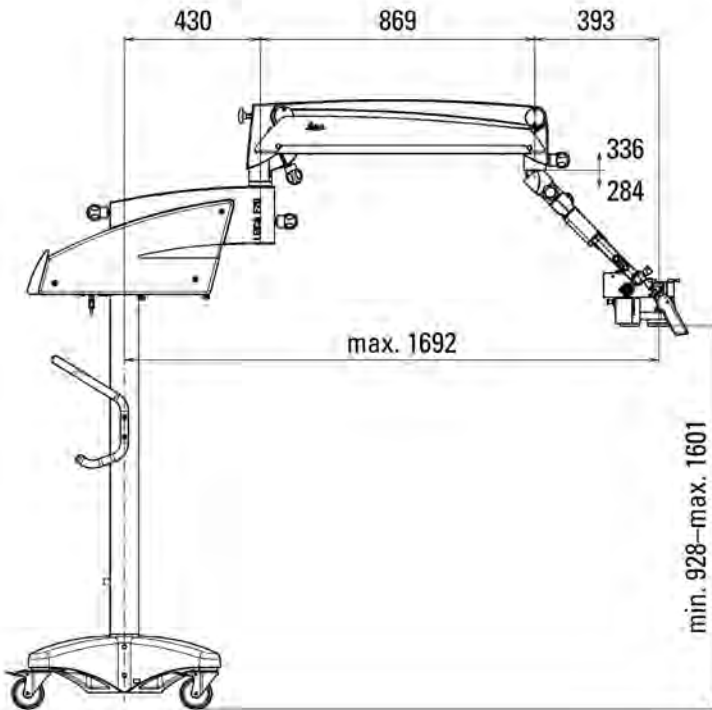
Leica M525 CT20



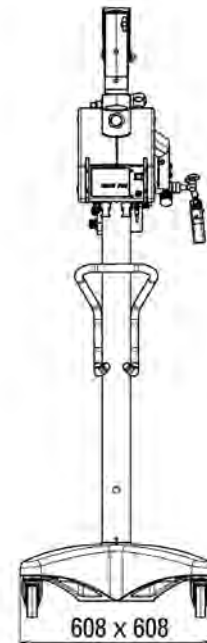
Leica M525 F20



Leica M525 F20



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Leica M525 F20

# Technical Data

## Leica M525 F20/CT20

<b>Electrical data</b>	<b>Leica F20 stand</b>	<b>Leica CT20 telescope ceiling mount</b>
Power supply	100–240 VAC (+/- 10%), 50/60 Hz, 500 VA	100/120 VAC (+/- 10%), 60 Hz, 1650 VA, incl. telescope 220/240 VAC (+/- 10%), 50 Hz, 1550 VA, incl. telescope
Classification	Class 1	
<b>Leica M525 Microscope</b>		
Magnification	6:1 zoom, motorized	
Working distance	207mm to 470mm, variable through motorized multifocal lens; manually adjustable	
Focusing	Motorized or manual via multifocal lens, manually adjustable	
Eyepieces	Widefield eyepiece for eyeglass wearers 10× and 12.5×, dioptic setting +/- 5 with adjustable eye cup	
Objective	Multifocal lens, 207mm to 470mm variable working distance	
Main illumination	High performance 180-watt xenon lamp through fiber optic	
Illumination	Illumination field diameter with Gaussian light distribution	
Field diameter	Automatically adjusted to the field of vision and manually adjustable	
Emergency lamp	High performance 180-watt xenon lamp through fiber optic	
Control unit	Graphic LCD data display with background illumination, menu provides up to 10 user-specific configurations	
<b>Optical data</b>		
Magnification range	1.2 to 12.8 with 10× eyepiece	
Field of view diameter	16.5mm to 180mm with 10× eyepiece	
<b>Leica M525 F20 stand</b>		
Type	Floor stand with 5 mechanical brakes	
Balancing	Manual and electrical balancing	
Hand grips	Controls for microscope zoom position, variable working distance via multifocal lens, includes free programmable buttons	
Maximum load	6.5kg of accessories to the microscope	
Maximum range	1692mm	
Maximum transport height	1918mm	
Weight with microscope fully configured	229kg	
<b>Accessories</b>		
Second observer	Dual stereo attachment: 70% / 30%, stereo attachment for second observer for beam splitter, mono observer	
Beam splitter	50% / 50% or 70% / 30%, rotatable beamsplitter	
Binocular tube	Variable angle 30° to 150°, straight, inclined binocular 45°	
Video adapter	3:1 zoom, 35mm to 100mm focal length, c-mount, with fine focus	
Asepsis	Sterilizable protective glass encasement for the objective; sterilizable components for all drive knobs, commercially available drapes	
Laser	Various commercially available lasers and laser shutters can be attached	





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Class I surgical microscope M525 F20

Not all products or services are approved or offered in every market and approved labeling and instructions may vary between countries. Please contact your local Leica representative for details.

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