# From Eye to Insight





# M525 F20

Easy-to-use and Maneuverable Surgical Microscope



Easy to move and re-position with just one hand, the Leica M525 F20 surgical microscope combines brilliant, premium optics with a highly maneuverable floor stand for Neuro, Spine, ENT, and Plastic surgery.

# Finger-Light Movement

Key benefits for more surgeon comfort and support for surgical outcomes include:

# **Ease of movement**

A perfectly balanced system enables feather-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, safer illumination gives enough light for deep operative sites while supporting patient safety.



# Easy to position

With the Leica M525 F20 all microscope movement is easy and requires minimal force. The precise, balanced positioning and repositioning of the system ensures efficient surgery. This extra posi-tioning flexibility and superior maneuverability allow the surgeon to work for hours in a comfortable position.

# 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 pro-vides more free working room.



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

# Maneuverable and Compact

# Smooth, lightweight movement

Easy to move, the Leica M525 F20 stays perfectly balanced over the complete range of movement. The surgeon only needs one hand to move the Leica M525 F20 during surgery.



# Freedom of positioning

Positioning the microscope 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 F20 gives the surgeon more free working room. Combined with the inno-vative, safer illumination and the wide range of binoculars the surgeon can work for hours in comfort without fatigue.



# **Unique Optics**

# **Excellent optics**

Leica Microsystems is continually improving its optics based on research and clinical experience. The Leica OptiChrome optical system is built into the M525 F20 and delivers the following advantages needed for precision microsurgery:

# Best view

The large depth of field and bright illumination provides crisp, brilliant, and detailed images.

# • Room to work

The compact Leica M525 microscope features a large working distance for more space to work.

# More added safety

The smart working distance and zoom-synchronized illumination enhances patient safety.

The Leica M525's interchangeable objective protection cover features optical glass with high-quality coatings. This ensures 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 Autolris – 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 is available within one second with a switch of a lever, which gives the surgeon peace of mind that surgery will not be jeopardized.

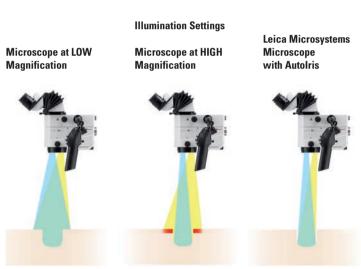
# BrightCare - Working-distance-controlled illumination

As a microscope's working distance decreases, the intensity of the microscope light (without adjustments) increases. This can pose a risk of 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.

# Max Max BrightCare Adjusted Decreased working distance creates burn potential BrightCare auto adjustment for safer illumination levels (up to 60% decrease based on the working distance)

# **Autolris – Magnification-controlled illumination**

As magnification increases, the field of view becomes smaller, but the illumination field remains the same. This can potentially cause tissue burns. To provide additional safety for the patient, the Autolris 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.



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

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).

Now, Leica's AutoIris 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 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 3× 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.



Straight binocular

30° – 150° binocular



Modularity

observation accessories ensures the best positioning for both the surgeon and assistant to offer the best possible view. Furthermore, the interface for micromanipulators is compatible with a variety of laser systems.



Inclined binocular



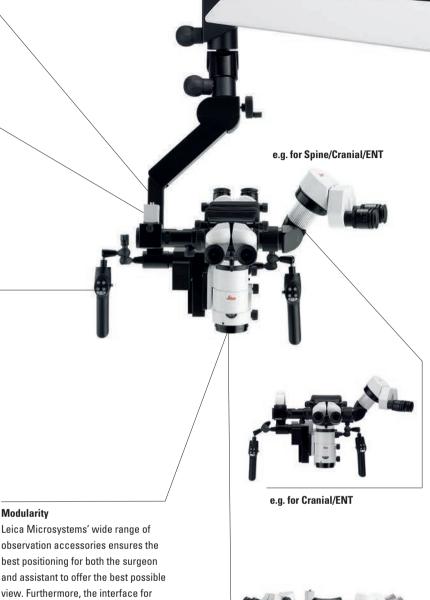
Interface for laser micromanipulator



Dual stereo attachment



Optional monocular observer



**Optional Leica Rotatable Beamsplitter** Easy side-to-side change for the assistant saves time between cases. Interface for an optional video adapter at the rear.

Leica Design by Christophe Apothéloz



# Flexibility in all Situations



Leica

### **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 ENT, neurosurgery, spine, and a variety of other needs.

### **Camera Control Unit Holder**

For different kinds of camera control units.



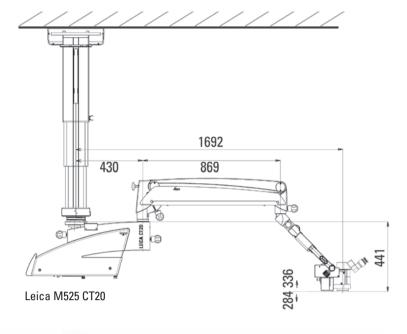


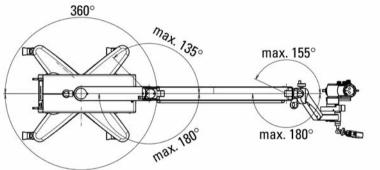
The Leica Microsystems' OpenArchitecture concept supports a wide range of custom solutions to meet the users' ergonomic requirements and surgical needs.

To create even more freedom of movement, Leica Microsystems also offers a Telescope Ceiling Mount, which provides additional positioning options in the operating room.

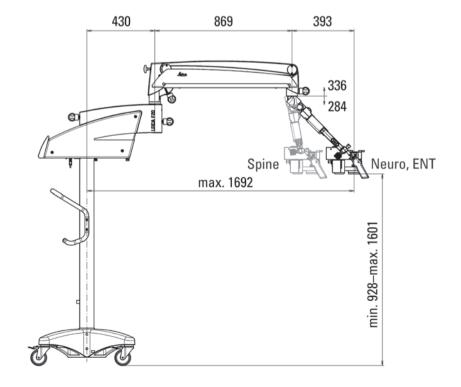
# **Leica Microsystems Quality**

Excellence in optics, precision, and reliability.



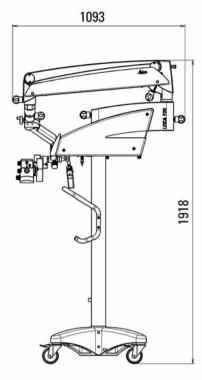


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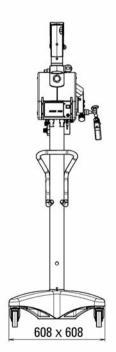


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# Dimensions in mm



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Leica M525 F20

# Technical Data Leica M525 F20/CT20

Electrical Data	Leica F20 Stand	Leica CT20 Telescope Ceiling Mount
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	
Leica M525 Microscope		
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 $10\times$ and $12.5\times$ , dioptric setting $\pm$ 4 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	
Optical Data		
Magnification range	1.2 to 12.8 with 10× eyepiece	
Field of view diameter	16.5mm to 180mm with 10× eyepiece	
Leica F20 Floor Stand		
Туре	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	
Control unit	Graphic LCD data display with background illur	mination, menu provides up to 10 user-specific configurations
Maximum load	6.5kg of accessories to the microscope	
Maximum range	1692mm	
Minimum transport height	1918mm	
Weight with microscope	229kg	
fully configured		
Accessories		
Second observer	Dual stereo attachment: 70% / 30%, stereo atta	chment 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 commercially available drapes	e objective; sterilizable components for all drive knobs,
Laser	Various commercially available lasers and lase	er 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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