



Leica M525 F20

Easy-to-use and Maneuverable Surgical Microscope

Living up to Life

Leica
MICROSYSTEMS



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 better 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 the deepest operative sites while providing more patient safety.



Easy to position

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 allow the surgeon to work 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.



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 innovative, 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 the world's most advanced and renowned optical system. Standard for high-end microscopes, the Leica M525 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 the largest working distance range of microscopes in this class.

- **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

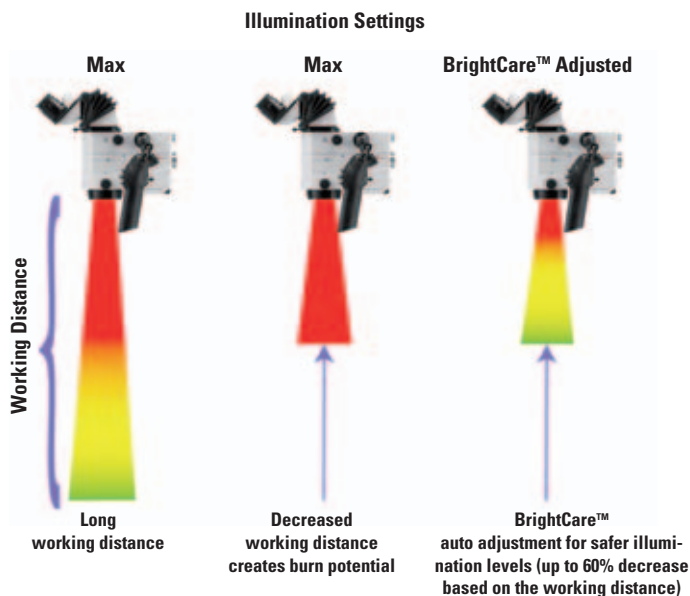
The Leica M525 F20 offers innovative illumination solutions for the benefit of the surgeon and added safety of the patient such as BrightCare™ and Autolris™ – unique to Leica Microsystems.

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.

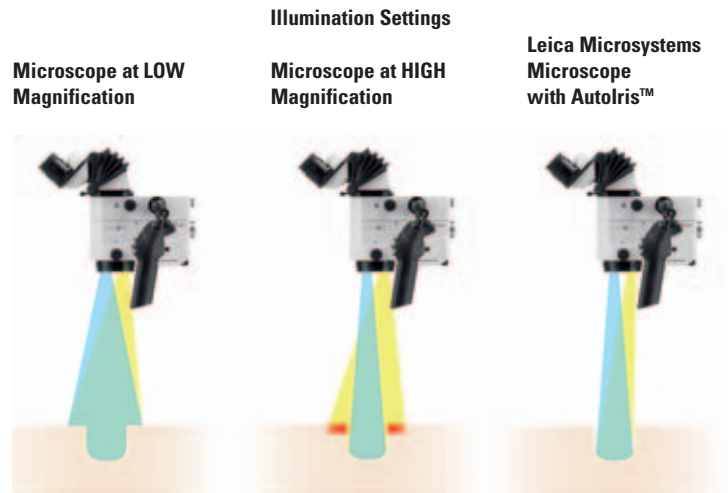
BrightCare™ – Working-distance-controlled illumination

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.



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 Autolris™ 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.



e.g. for Spine/Cranial/ENT



e.g. for Cranial/ENT

Modularity

Leica Microsystems' wide range of 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.



Straight binocular



30° – 150° binocular



Inclined binocular



Dual stereo attachment



Interface for laser micromanipulator



Optional monocular observer

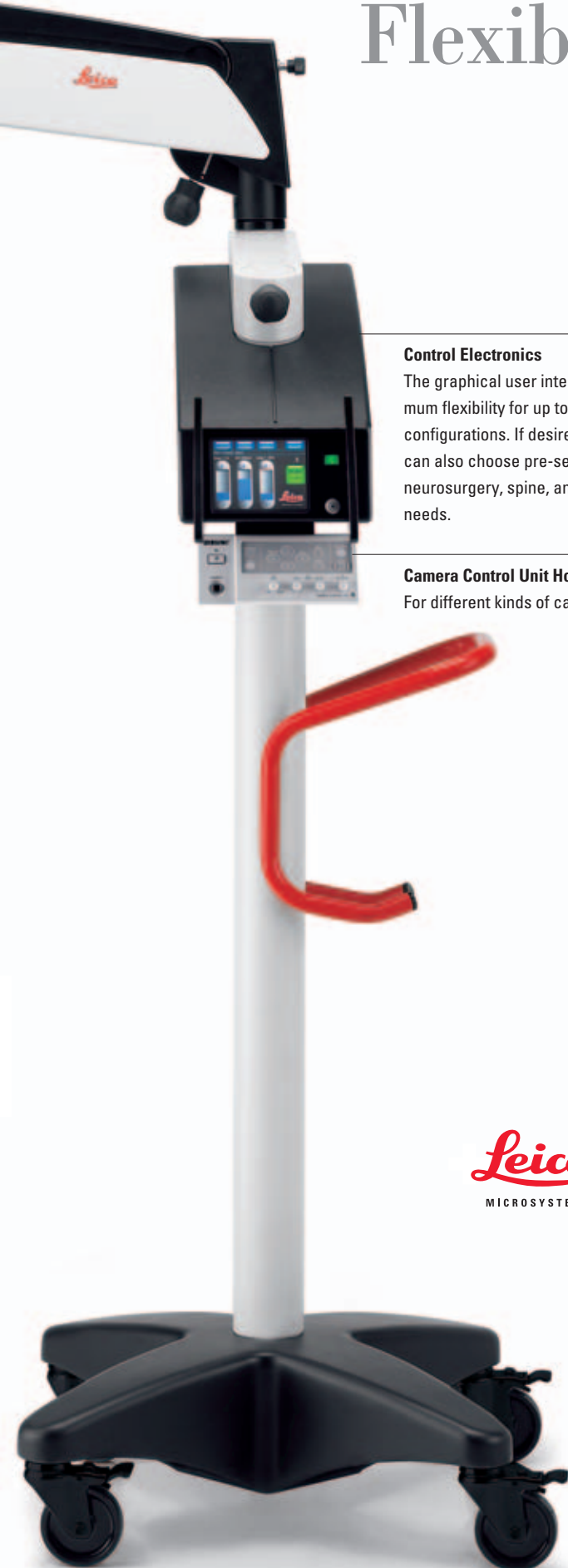


Optional Leica Rotatable Beamsplitter

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 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 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.

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× 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	
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		
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	
Control unit	Graphic LCD data display with background illumination, 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 fully configured	229kg	
Accessories		
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	
Conformity 	<ul style="list-style-type: none"> Medical devices directive 93/42/EEC Classification: Class I, in compliance with appendix IX, rule 1, with reference to 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 <p>The Surgical Division, within Leica Microsystems (Schweiz) AG, has the management system certificate for the international standards ISO 9001:2000 / ISO 13485:2003 and ISO 14001:2004 relating to quality management, quality assurance and environmental management.</p>	

“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.

• Surgical Division

The Leica Microsystems Surgical 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

Australia:	North Ryde	Tel. +61 2 8870 3500	Fax +61 2 9878 1055
Austria:	Vienna	Tel. +43 1 486 80 50 0	Fax +43 1 486 80 50 30
Belgium:	Groot Bijgaarden	Tel. +32 2 790 98 50	Fax +32 2 790 98 68
Canada:	Richmond Hill/Ontario	Tel. +1 905 762 2000	Fax +1 905 762 8937
Denmark:	Herlev	Tel. +45 4454 0101	Fax +45 4454 0111
France:	Nanterre Cedex	Tel. +33 811 000 664	Fax +33 1 56 05 23 23
Germany:	Wetzlar	Tel. +49 64 41 29 40 00	Fax +49 64 41 29 41 55
Italy:	Milan	Tel. +39 02 574 861	Fax +39 02 574 03392
Japan:	Tokyo	Tel. +81 3 5421 2800	Fax +81 3 5421 2896
Korea:	Seoul	Tel. +82 2 514 65 43	Fax +82 2 514 65 48
Netherlands:	Rijswijk	Tel. +31 70 4132 100	Fax +31 70 4132 109
People's Rep. of China:	Hong Kong	Tel. +852 2564 6699	Fax +852 2564 4163
Portugal:	Lisbon	Tel. +351 21 388 9112	Fax +351 21 385 4668
Singapore		Tel. +65 6779 7823	Fax +65 6773 0628
Spain:	Barcelona	Tel. +34 93 494 95 30	Fax +34 93 494 95 32
Sweden:	Kista	Tel. +46 8 625 45 45	Fax +46 8 625 45 10
Switzerland:	Heerbrugg	Tel. +41 71 726 34 34	Fax +41 71 726 34 44
United Kingdom:	Milton Keynes	Tel. +44 1908 246 246	Fax +44 1908 609 992
USA:	Bannockburn/Illinois	Tel. +1 847 405 0123	Fax +1 847 405 0164

and representatives in more than 100 countries

The Surgical Division, within Leica Microsystems (Schweiz) AG, holds the management system certificates for the international standards ISO 9001:2000 / ISO 13485:2003, and ISO 14001:2004 relating to quality management, quality assurance and environmental management.

