Living up to Life

Leica
MICROSYSTEMS

Leica M525 F50

The best value in surgical microscopes


F50

Leica M525 F50: High Performance and Value

The Leica M525 F50 surgical microscope meets the needs of today's surgeons – integrating sophisticated features that are unique to even the highest performing microscopes. The multidiscipline Leica M525 F50 offers high performance and value.

› Visible blood flow

A combination of Leica Optics, Leica FL800 fluorescence system, and IGS

› Enhanced safety

Illumination control for more light at safer levels

› Refined handling

Perfect balance and ease of movement

› A better image

High definition video for visualization, documentation, and teaching

› Trusted reliability

Leica quality and state-of-the-art components

Leica Product Design by Christophe Apothéloz

Visible Blood Flow

Where there is blood there is life.

Visualizing perfusion intraoperatively supports surgeon decision making. For the patient and surgeon, this can mean a better surgical outcome. Fluorescence microscopy with the Leica FL800 on the Leica M525 F50 opens a new dimension of vascular imaging.

LEICA FL800*

The Leica FL800 fluorescence system is used with the fluorescent agent Indocyanine Green (ICG) to view blood flow directly through the surgical microscope eyepieces or on a video monitor during surgery. ICG is a proven visualization aid in vascular neurosurgery, and is also used as an innovative technology for plastic/reconstructive surgery and experimentally in ENT.

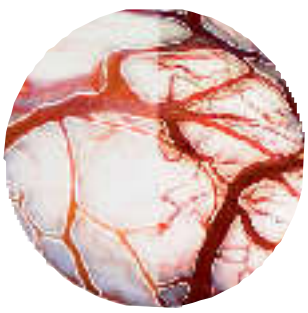
AT THE TOUCH OF A BUTTON

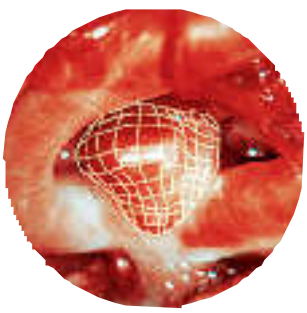
The press of a single button on the surgical microscope activates the Leica FL800 ICG process. Without interrupting surgery, the surgeon gains the ability to view blood flow in tissue and vessels intraoperatively in real time.

POSSIBLE INDICATIONS

The Leica FL800 fluorescence module can be used to view intra-operatively:

- Blood flow in the cerebral vascular area
- Blood flow of the coronary vascular and bypass grafts during coronary artery bypass (CABG) surgery
- Blood flow during plastic and reconstructive surgery

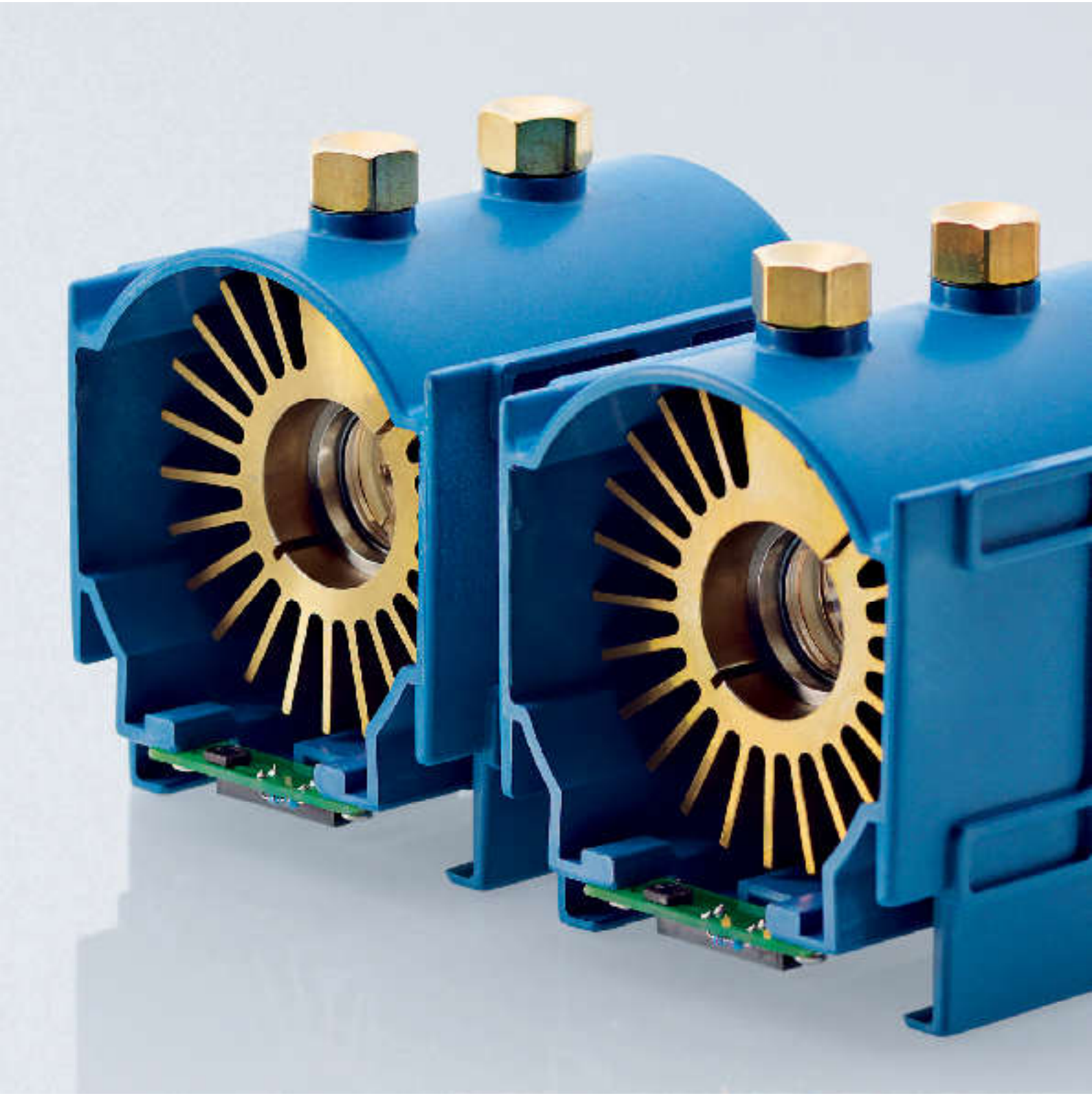




IGS INTEGRATION: The Leica DI C500 allows the surgeon to inject MRI, CT, IGS or endoscopy data in either the left or right eyepiece.

* Please check the status of Leica FL800 regulatory approval with your local Leica Microsystems representative.


RESET




LEICA F50

Enhanced Patient Safety

Best light at safer levels.

Illumination settings

Max. illumination

Long working distance.

Max. illumination (BrightCare™ inactive)

Decreased working distance creates burn potential in conventional microscopes.

Microscope with BrightCare™ activated

BrightCare™ automatically adapts light intensity to the working distance, providing safer illumination (up to 60% reduction of intensity).

BrightCare™: LIGHT INTENSITY

BrightCare™ optimizes the light intensity relative to the working distance. As working distance decreases, the light intensity is reduced automatically, minimizing incidents of patient burns.

Illumination settings

At low magnification

At low magnification, the illuminated field (yellow) fills in the field of view (green) completely.

At high magnification

In conventional microscopes, as magnification increases, the field of view decreases. The illuminated field remains unchanged. Light outside the field of view (red) could potentially cause tissue burns.

Microscope with AutoIris™

AutoIris™ automatically decreases the field of illumination as the field of view gets smaller. There is no peripheral illumination to cause tissue burns outside the field of view.

AutoIris™: LIGHT DIAMETER

AutoIris™ adjusts the diaphragm so that only the visible area is illuminated. When zoomed in, the light circle adapts automatically: the higher the magnification, the smaller the light circle. This prevents the possibility of heating the tissue outside of the field of view.

ADDITIONAL SAFETY: Two independent 300W xenon arc lamps provide safety back-up in case of one lamp's failure.


LEICA F50

Refined Handling

Sophisticated technology for focused work.

The Leica M525 F50 makes surgery easier because its intuitive functionality allows the surgeon and staff to focus on the surgery, not on the microscope.

EFFICIENT WORKFLOW

The Leica M525 F50 is easy to move and smooth to operate. Its hygienic design makes it easier for staff preparing for, and during surgery. Alternatively, the C50 ceiling mount option optimizes performance in space-restricted ORs.

SIMPLE OPERATION

The Leica M525 F50 surgical microscope can be controlled intuitively, quickly, and easily via the interactive control panel and handles. The ergonomically positioned handles facilitate individual activation of the axis or brake for accurate settings. Individual surgeon-preference settings can be stored by pressing a button, which provides substantial time savings.

TRUE BALANCE

Leica Microsystems' unique, ABC balance system makes balancing fast, accurate, and vibration-free. Unlike conventional systems, the Leica balancing concept brings the mass into the center of gravity individually via each axis. This principle ensures that the microscope is vibration-free and the surgery becomes free of interference.

ERGONOMIC HANDLING

The Leica M525 F50 takes up very little space in the operating room for optimal positioning. Its superior net reach, height, and small base allows the microscope to be conveniently positioned around or across the operating room table with minimal effort. This flexibility and unique ease of movement create ideal working conditions.

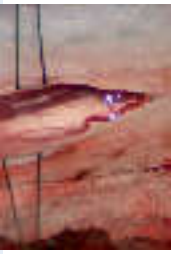
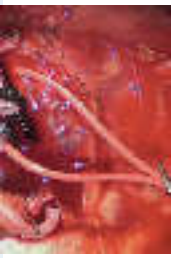

Leica


Leica
Balance Support > Spine
C
D
A
B
LIGHT


LIGHT
POWER
HDMD

A Better Image

Share what is seen – in high-definition quality.


OpenArchitecture™

The Leica M525 F50 offers options for digital capture of videos and still images in HD: the MedX Change® 2nd Generation HDMD® and the more compact HDMD® All-in-One. Both systems can be integrated with the stand and are user-friendly.

DOWNLOAD AND SHARE

The MedX Mobile application uniquely facilitates wireless transfer of HD videos and still images from the microscope capture system to the Apple® iPhone®, iPod touch® or iPad® within seconds. With a USB cable, selected files can also be transferred to most Android™ devices. This allows cases to be transported, viewed, and discussed with colleagues or the patient's family immediately after surgery.

FEATURES

The following features provide the basis for exchanging information:

- 4:3 and 16:9 aspect ratio at 720p and 30 fps
- MPEG4 video compression
- Picture-in-picture function
- HD camera
- 24" or 19" full HD monitor
- Flexible monitor arm integrated with the floor stand

Whether the surgeon wants to share still images or videos with staff in real time, show a colleague an interesting case, document the procedure for referring physicians, or facilitate consultation with a family – HD and the use of mobile devices are now the standard.

Trusted Reliability

Pure Leica Quality. Reflecting state-of-the-art surgical microscopy.

The multidiscipline Leica M525 F50 provides quality and value in every respect: design, engineering, materials, components, operation, and ergonomics. Every part is well-designed, reliable, and solid. Leica M525 F50 – the best value in surgical microscopes.

OPTICAL QUALITY

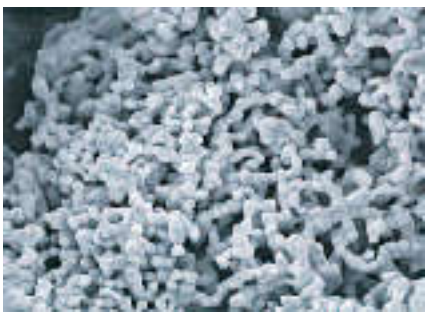
The Leica M525 optics feature high-resolution OptiChrome™ technology. By integrating high-quality glass, coatings, and design parameters, Leica Microsystems has developed a world-class advanced optical system. The result: extended working distance and increased depth of focus at the same magnification, high contrast, and crisper, sharper images.

DESIGN ENGINEERING

The Leica M525 F50 is designed to be a reliable key component in the operating room. The system features mostly metal and special vibration-dissipating materials to support the stability of the stand. In addition, the hygienic design and antimicrobial nano silver coated surfaces make disinfection easier.

TRUSTED RELIABILITY

Leica Microsystems manufactures to the highest quality standards. The use of superior materials, design engineering methods, and intelligent illumination control ensure a long service life and high reliability – and may mean added safety for the patient and operator. The Leica M525 F50 defines high-quality, efficiency in work, and long-term value.



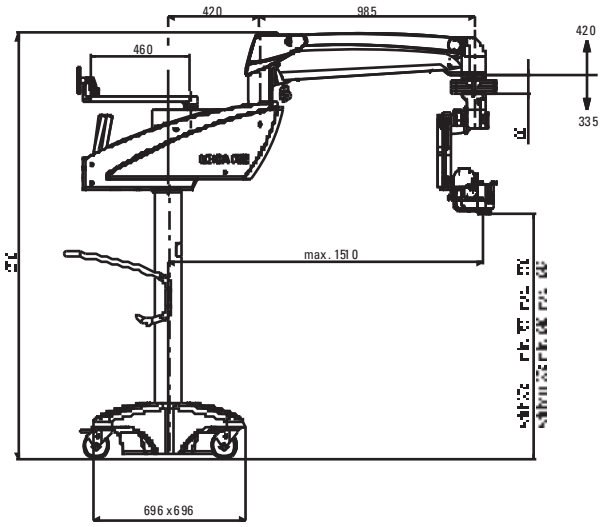
AgProtect™: Typical structure of a metal powder (Ag) created by inert gas condensation (nanopowder). This antimicrobial nano silver coating reduces infectious agents on the instrument and their transmission to users.

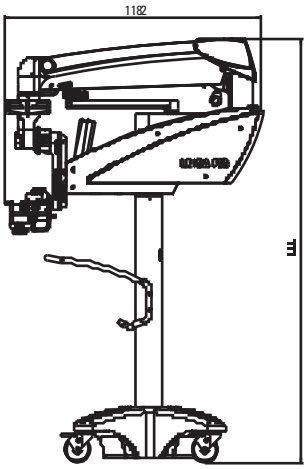
Ag Protect

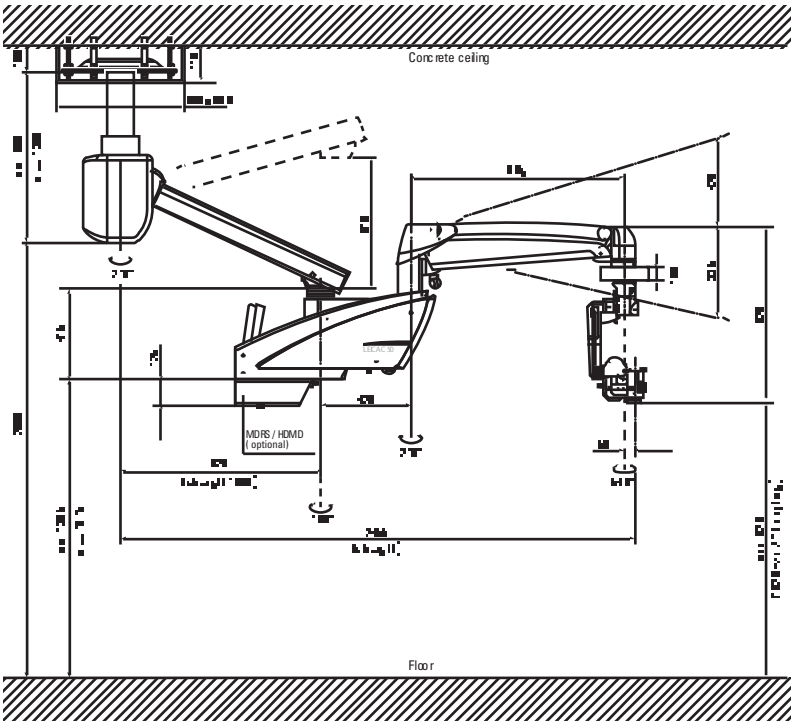

Leica

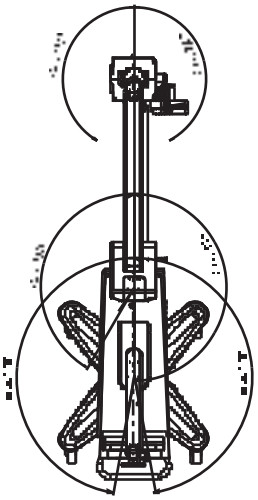
Technical Specifications

The Leica M525 F50 / C50 surgical microscope for Neuro / Spine / ENT and Plastic / Reconstructive Surgery features high-quality optics, vascular fluorescence, unique illumination control, smooth handling, and HD imaging.









Dimensions in mm

ELECTRICAL DATA

Power supply	100–230 V, 50/60 Hz, 300 VA
Safety class / Type	Class 1 / Type B

LEICA M525 MICROSCOPE

Magnification	6:1 zoom, motorized
Working distance	207 mm to 450 mm, variable through motorized multifocal length; manually adjustable
	Optional WD extender lens 218 mm to 535 mm (not for IGS applications)
Focusing	Motorized or manual via multifocal lens, manual via swing arm
Eyepieces	Widefield eyepiece for eyeglass wearers 10× and 12.5×, dioptric setting ±5 with adjustable eye cup
Objective	Multifocal lens, 207 mm to 450 mm variable working distance
Illumination	Two high performance 300 watt xenon lamp through fiber optic illumination field diameter with Gaussian light distribution
AutoIris™	Built-in, automatic zoom-synchronized illumination field diameter, with manual override and reset feature
BrightCare™	Safety technology for the working distance-synchronized light control

OPTICAL DATA

Range of magnification	1.2× – 12.8× with 10× eyepiece
Field of view	16.5 mm to 180 mm with 10× eyepiece

MICROSCOPE CARRIER

Rotation of optics	540°
Lateral tilt	45° to left / 45° to right
Inclination tilt	–30° / +120°
Brakes	1 brake for A/B axis, 1 brake for C axis
Indicator	LED for fluorescence mode status; LED for video record status
XY-unit (optional)	Motorized, movement range 62 × 62 mm, with automatic reset

LEICA F50 FLOOR STAND, LEICA C50 CEILING MOUNT

Type	Floor stand / ceiling mount with 6 electromagnetic brakes
Balancing	Manual balancing for the swing arm, manual balancing for the microscope carrier
Control unit	New generation touch panel technology. The latest electronics control for continuous control of all motor functions and the light intensity. Data shown by means of LCD. Built-in BrightCare™ technology for working distance-synchronized light control. Intelligent Setup System, menu selection based on unique software for user specific configuration, with built-in electronic auto-diagnosis and users support. Software-independent hard keys for illumination and main power switch. Indicator for main/backup illumination and fluorescence mode. Open architecture for future software upgrade.
Controls	10-function pistol grips for zoom, focus, all-free release of six brakes, side button for user-defined brakes, motorized lateral tilt and inclination (XY) or Leica DICOM functions. Except for the all-free button, all functions are freely programmable.
	12-function foot control with cable or wireless, and hand switch
Integration of documentation	Prepared for integration of video and digital recording systems. Open architecture for future documentation upgrades.
Connectors	Numerous built-in connectors for video, IGS, and control data transfer. Internal power 12 VDC, 19VDC, and AC connections
Carrier for monitor	500 mm long, flexible arm with 2 axes for the rotation and inclination required to carry optional video monitor
Surface coating	Coated with antimicrobial paint
Maximum range	1510 mm
Range of up / down	–335 mm / 4421 mm (756 mm)
Transport height	Min. 1950 mm
Weight	Approx. 350 kg fully loaded

ACCESSORIES

Leica ULT500	180° stereo observer ports with selectable lateral or opposite assistant: Main surgeon and opposite assistant 40% each eyepiece, lateral assistant / video 20% each eyepiece / beampath
Second observer	Dual stereo attachment: 50% each eyepiece
Beamsplitter	50% / 50%, 70% / 30%
Binocular tube	Variable angle 0° – 180°
	Variable angle 30° – 150°
Video adapter	Leica Manual Video Adapter (MVA), 55 mm, 70 mm, 107 mm focal length, c-mount, with iris/focus
	Leica Remote Video Adapter (RVA), 55 mm, 70 mm, 107 mm focal length, c-mount, with iris/focus
	Leica Zoom Video Adapter (ZVA), 3:1 zoom, 35 mm to 100 mm focal length, c-mount, with iris/focus
	Leica NIR Dual Video Adapter (DVA), 60.6 mm, 79.5 mm focal length, c-mount, with iris/focus
Imaging	Leica DICOM high resolution true color dual imaging module for correlated and non correlated data display, 1024 × 768 pixel resolution, 256 grayscale
IGS interface / compatibility	Open architecture for IGS systems
Vascular Fluorescence (optional)	Leica HL800 is available in USA, EU, and most other countries
Asepsis	Sterilizable protective glass for the objective; sterilizable components for all drive knobs, commercially available drapes
Network (optional)	DICOM compatibility for both videos and still images, archiving to patient records
Laser interface	Various commercially available laser micromanipulators and laser shutters can be attached

HD IMAGING

For more information, please refer to your local Leica Microsystems Sales Representative.

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 certificate for the international standards ISO 9001, ISO 13485 and ISO 14001 relating to quality management, quality assurance and environmental management.

CE

www.leica-microsystems.com

The fruitful collaboration "with the user, for the user" has always been the foundation of Leica Microsystems' innovative strength. On this basis, we have developed our five corporate values: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement.

MEDICAL DIVISION

What does a surgeon expect from an outstanding surgical microscope? – The highest image quality and greatest possible freedom of movement.

Compact and precise systems

Leica Microsystems' surgical microscopes are aligned with the surgeon and OR staff needs. A compact optical unit provides sharp, clear images, and the modular system provides the surgeon with optimal freedom of movement.

Innovations for your practice

We created the world's first Headmounted Microscope, thus creating a new standard of freedom of movement. The Horizontal Optics technology of the top-range model, the Leica M720 OH5, has revolutionized surgical microscopy with the improved working ergonomics. These are just two of the innovations Leica Microsystems offers your practice.

Leica Microsystems – an international company with a strong network of worldwide customer services:

USA · Buffalo Grove/Illinois	+1	800 248 0123	+1	847 405 0164
Canada · Concord/Ontario	+1	800 248 0123	+1	847 405 0164
Australia · North Ryde/NSW	+61	2 8870 3500	+61	2 9878 1055
Austria · Vienna	+43	1 486 80 50 0	+43	1 486 80 50 30
Belgium · Groot Bijgaarden	+32	2 790 98 50	+32	2 790 98 68
Denmark · Ballerup	+45	44 54 01 01	+45	44 54 01 11
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Germany · Wetzlar	+49	6441 29 40 00	+49	6441 29 41 55
Italy · Milan	+39	02 574 861	+39	02 574 03 392
Netherlands · Rijswijk	+31	70 41 32 100	+31	70 41 32 109
Portugal · Lisbon	+351	21 388 9112	+351	21 385 46 68
Spain · Barcelona	+34	900 210 992	+34	93 494 95 40
Sweden · Kista	+46	8 625 45 45	+46	8 625 45 10
Switzerland · Heerbrugg	+41	71 726 34 34	+41	71 726 34 44
United Kingdom · Milton Keynes	+44	800 298 2344	+44	1908 246 312
China · Hong Kong	+852	2564 6699	+852	2564 4163
· Shanghai	+86	21 6387 6606	+86	21 6387 6698
Japan · Tokyo	+81	3 5421 2800	+81	3 5421 2896
Korea · Seoul	+82	2 514 6543	+82	2 514 6548
Singapore	+65	6779 7823	+65	6773 0628