From Eye to Insight

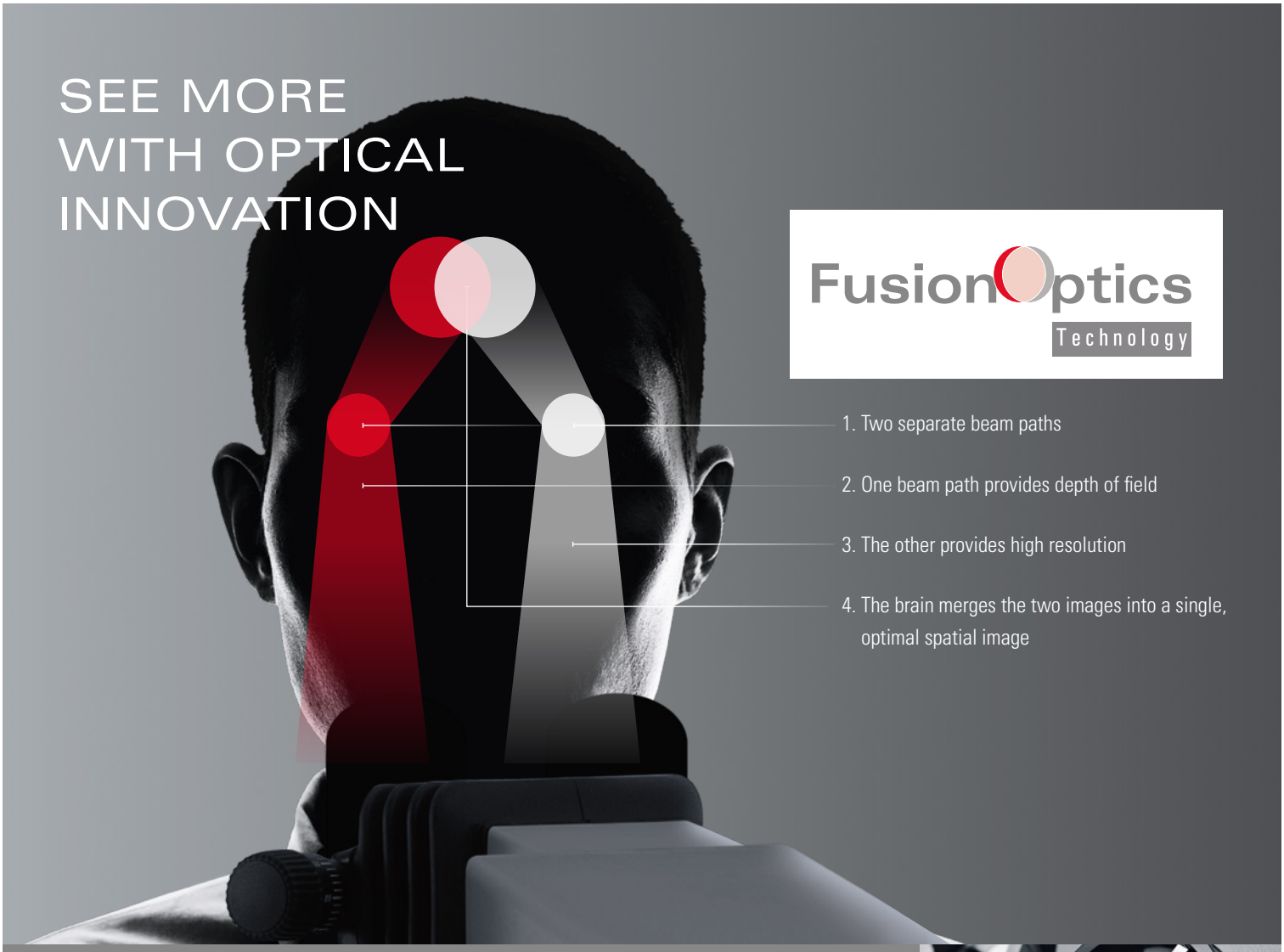
Leica
MICROSYSTEMS

PRECISION COMES STANDARD

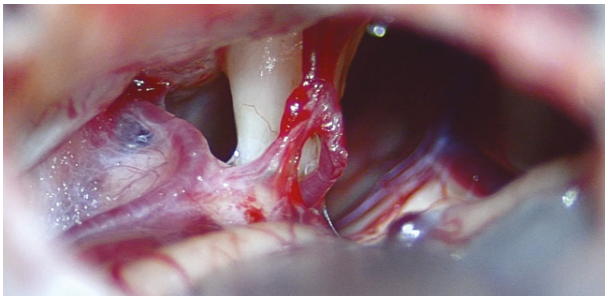
M530 OHX with FusionOptics

For Neurosurgery · Spine Surgery · Plastic and Reconstructive Surgery · ENT Surgery

SEE MORE WITH OPTICAL INNOVATION



More than 30% increased depth of field expands the area that you see in full focus. FusionOptics technology, combined with powerful illumination and apochromatic optics, redefines optical image clarity.

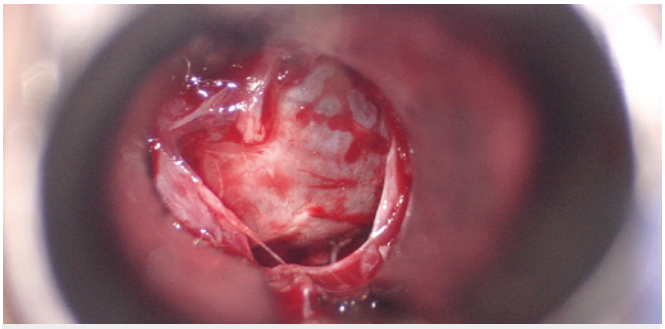


See more, refocus less with FusionOptics

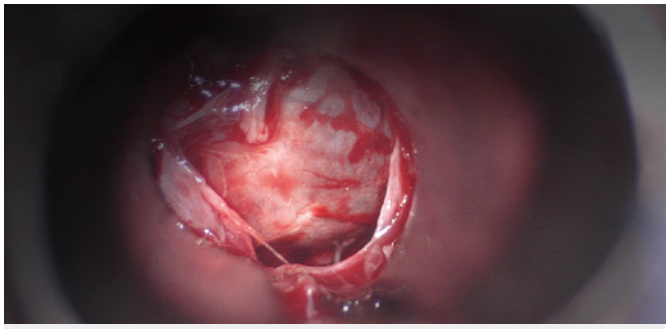
Achieving depth of field and high resolution in one image has always been a struggle. Leica Microsystems has overcome this challenge with FusionOptics. Making use of the power of the human brain, this technology captures different information from each beam path, delivering the highest possible resolution to the left eye and maximum depth of field to the right. The brain then easily merges the visual information into a single, optimal spatial image with amazing clarity and a significantly expanded area in full focus.

Deeper insights

Small Angle Illumination (SAI) combined with bright 400-Watt xenon light provides a concentrated light beam that penetrates to the bottom of deep, narrow cavities. The result is better illumination with less shadow. SAI provides you with more details and an improved depth perception.



With SAI at 400 mm working distance

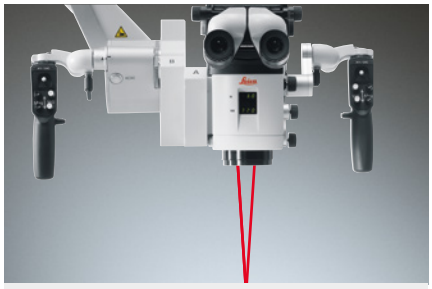


Without SAI at 400 mm working distance

Fast, clear vision for your surgery and the entire team

- Additional 40% magnification boost with the optional Magnification Multiplier
- Fast focusing with two laser beams acting as a focusing reference to quickly provide a defined focus point for all three viewing positions (surgeon, assistant, camera)
- Independent fine focus for the rear assistant with a range of +/- 5 diopters
- A selection of binoculars all with full 360°-rotation to allow adjustment to different heights and positioning needs

Magnification Multiplier for 40% boost



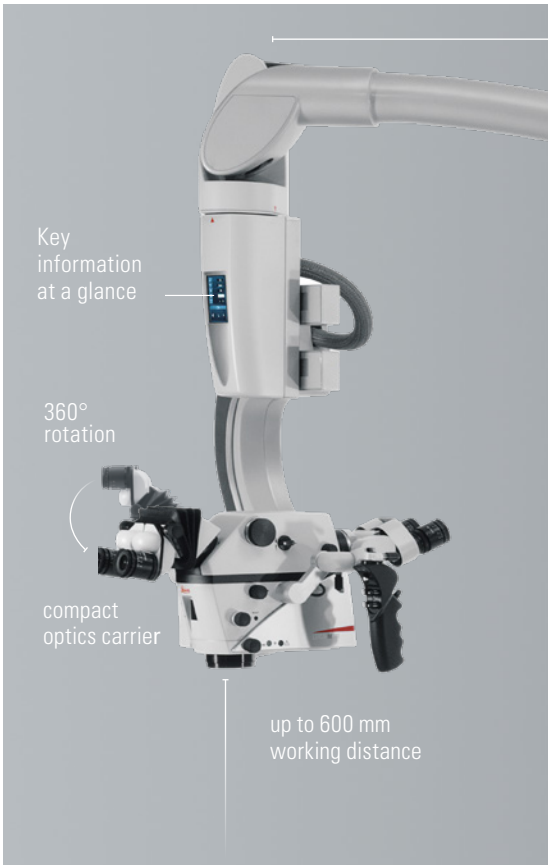
SpeedSpot for fast focusing

Fine focus for rear assistant

COMFORT AND EFFICIENCY BUILT IN

Ergonomic working positions, smooth maneuverability and ease of use for comfort and streamlined workflow.

The M530 OHX surgical microscope is designed to fully adapt to you and the needs of your surgical specialty. Its ergonomic features and smooth maneuverability limit physical distraction and workflow interruptions so you can stay even more focused on the critical task at hand.



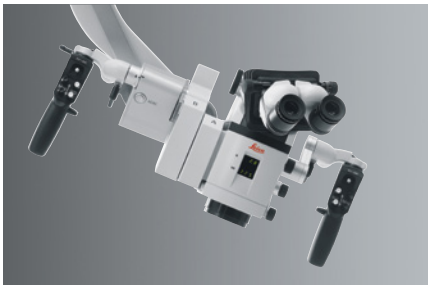
More space to work

With a compact base for space-restricted areas, extensive overhead clearance and one of the longest reaches on the market, the M530 OHX offers you positioning flexibility and more space to work whatever the surgery.

Intuitive graphical user interface

Ease of use

Setting up the M530 OHX microscope is fast and simple with the intuitive touch panel. For your comfort and efficiency key functions can be controlled via handgrip, foot or mouth switch. To confirm settings just glance to the surgeon information panel above the optics carrier.



Optics carrier with full movement and tilt range

Smooth handling

With cables routed internally and electromagnetic brakes, maneuvering is smooth and effortless, reducing the potential strain of harsh movements. The optics carrier has an extensive range of movement. Fast stabilization keeps workflow interruptions to a minimum.

Auto balance conveniently accessible

Quick balancing

Simply auto-balance the system with only two pushes on the AC/BC button, located by the left handgrip, to fully balance or rebalance all six axes, even through a sterile microscope drape.

* WARNING: Balance the microscope before the operation. Never carry out the intraoperative auto-balancing above the patient. For further details, please consult the IFU.

Long arm reach

Extensive overhead clearance

27" 2D-4K stand monitor

Control unit
LCD touch panel for user and microscope settings

Positioned for your comfort

- Compact optics carrier – less distance from eyepieces to the objective lens, so arms can remain in a natural position
- Motorized XY-microscope tilt and selective brakes settings for optimal microscope positioning
- A range of binoculars for main surgeon and assistant, all with full 360°-rotation for different operating positions and body frames
- The design of the optics carrier enables comfortable upright working postures for the main and assistant surgeon
- 600 mm working distance allows for easy maneuvering and passing of instruments in spine procedures

Comfortable working posture and large working distance during spine surgery

CUSTOMIZABLE TO YOUR NEEDS

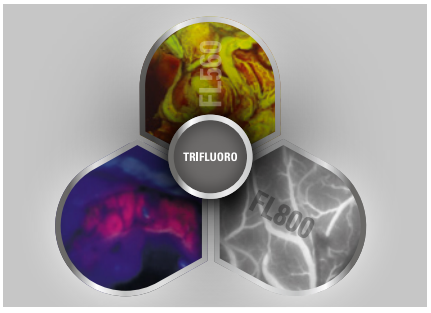
A modular yet integrated design for configuration flexibility and efficiency for your needs and those of your clinical specialty.

Configuration for otolaryngology and neuro-otology

The IVA530 configuration, with its compact design, is ideal for procedures in otolaryngology and neuro-otology, with optimized light for only the main surgeon and a left or a right assistant. The integrated video adapter allows integration of the HD C100 camera, and the video signal is upscaled for optimal display on the 2D 4K 27" monitor.

Advanced configuration for neuro, spine, and PRS

The ULT530 optics carrier configuration is designed for neurosurgery, spine, and plastic & reconstructive procedures. Interfaces for left, right, and rear assistant binoculars ensure optimal support for collaborative workflows. The integrated HD C100 camera enables high-quality image capture and documentation. For fluorescence imaging, an optional NIR-camera supports advanced visualization for enhanced intraoperative precision.



Advanced fluorescence imaging

The M530 OHX surgical microscope offers three fluorescence filters–FL560 for yellow, FL400 for high-grade tumor, and FL800 for vascular visualization–allowing surgeons to switch quickly between modes for efficient technique comparison without disrupting surgical flow.

Compatible surgical devices

Benefit from an enhanced surgical view in conjunction with Image Guided Surgery Systems (IGS). Overlay anatomical and functional IGS data onto the microscope's white light image and display it on the IGS monitor.

Share and document your work

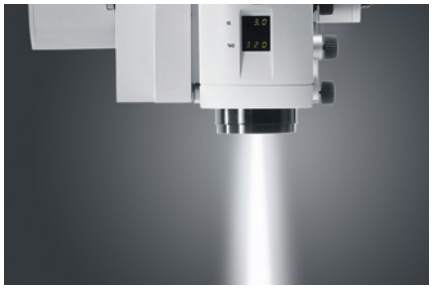
Visualize surgery in brilliant 4K resolution on a 27" monitor. Benefit from standard HD recording and image extraction via the HD C100 camera system or further advance your recording and archiving via the documentation system EVO 4K, featuring DICOM/PACS connectivity and wireless streaming to mobile devices (iOS).

REINFORCE PATIENT SAFETY

Innovative design, illumination controls & fail safes help optimize patient safety and minimize interruptions.

Consistent lighting

BrightCare Plus compensates for decreased light intensity as bulbs age. An internal luxmeter provides real-time light intensity data to the BrightCare Plus system. Light intensity is calculated on actual bulb output, not by using an algorithm or formula.



Bright 400-Watt xenon illumination

Safe, maximum brightness

Separate operating systems for video & microscope

Reliable illumination system

The M530 OHX microscope features two redundant 400-Watt xenon arc-lamp illumination systems, with independent lamps and boards. The microscope automatically switches to the second illumination system when needed.

Maximum brightness always

The efficient light transmission of the M530 OHX ensures that the maximum possible amount of light is always being provided. Therefore, you can operate at safer light levels and still see more than ever before.

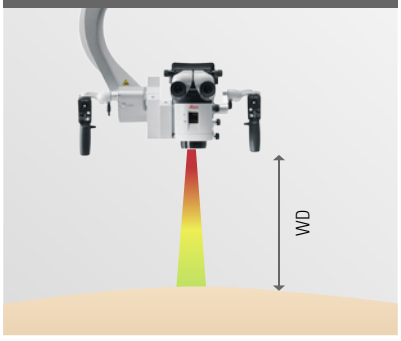
Stay operational

To ensure full operability, the microscope and the video have completely independent operating systems. In the rare case of a video system error, the microscope retains full functionality and surgery can continue uninterrupted.

Optimal light intensity

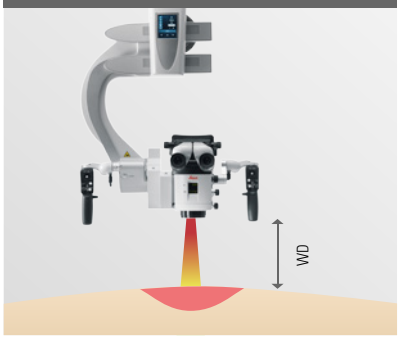
BrightCare Plus optimizes the light intensity relative to the working distance (WD).

Maximum illumination



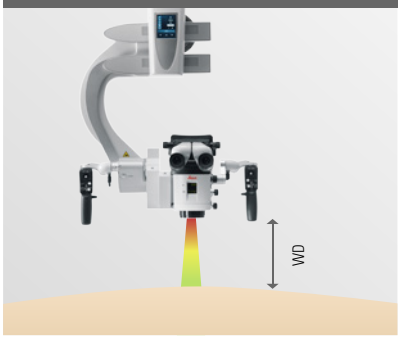
Long working distance

Maximum illumination with BrightCare Plus OFF



Decreased working distance at same illumination setting (left) creates burn potential in conventional microscopes.

Microscope with BrightCare Plus ON

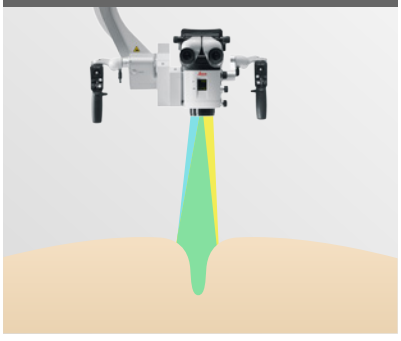


BrightCare Plus automatically adapts light intensity to the working distance, providing safer illumination (up to 60% reduction of light intensity).

Auto-adjusted field of illumination

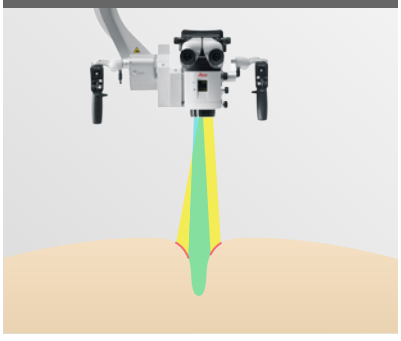
AutoIris automatically adjusts the diaphragm to illuminate only the visible area.

Conventional microscope at low magnification



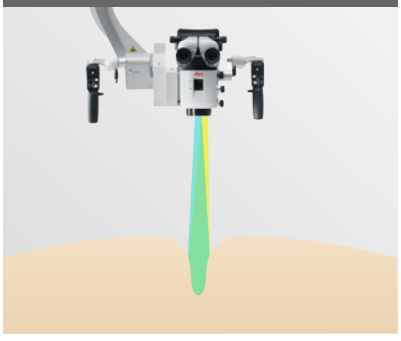
At low magnification, the field of illumination (yellow) fills the field of view (green) completely.

Conventional microscope at high magnification



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

Leica microscope with AutoIris



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

TECHNICAL SPECIFICATIONS

OPTICS AND ILLUMINATION

FusionOptics	For increased depth of field and high resolution for main surgeon and opposite assistant
Fully apochromatic optics	For high contrast, natural colors without chromatic aberrations
Magnification	6:1 zoom, motorized
Total magnification	1.0× to 12.1× with 10× eyepiece
Magnification multiplier	1.4× (optional accessory)
Focus	Motorized via multifocal lens, with manual adjustment
Fine focus	±5 diopter available for opposite assistant (ULT)
Objective / working distance	225–600 mm, motorized multifocal lens, continuously adjustable and manual adjustment option
Field of view	17.4 to 210 mm ø with 10× eyepiece
Eyepieces	Wide-field eyepieces for persons wearing glasses 8.3×, 10× and 12.5× dioptric adjustment, ±5 diopter settings and adjustable eyecup
Integrated 360° rotatable adapter	For main surgeon binocular (IVA, ULT) and opposite assistant (ULT)
Illumination	- High-output 2x 400-W redundant xenon arc-lamp systems via fiber optics cable - Continuously variable illumination field diameter with Gaussian distribution - Continuously adjustable brightness at constant color temperature
SpeedSpot	Laser focusing aid for fast and exact positioning of the microscope

MANEUVERABILITY

Optics	- 540° rotation - 50° lateral tilt to left and right - -30° /+120° inclination tilt
XY speed	Zoom linked XY speed
Balancing	One button/two pushes complete automatic balancing of stand and optics
Intraoperative balancing	Automatic intraoperative AC/BC balancing of AC and BC axes
Brakes	Floor stand with 6 electromagnetic brakes
Carrier for monitor	700 mm flexible arm with 4 axes for rotation and inclination

MODULARITY

IVA530 optics carrier configuration	- Full stereo view for main surgeon, semi stereo view for 2 side assistants and C-mount interface for an optional HD C100 camera
ULT530 optics carrier configuration	- Full stereo view for main surgeon and opposite assistant, semi stereo view for up to 2 side assistants - Optionally integrated HD C100 camera compatible with FL400 and FL560 - High sensitivity, built-in HD NIR video camera for ICG-imaging (FL800)
FL400	Module for fluorescence visualization of high grade tumors with 5-ALA
FL560	Fluorescence observation filter module
FL800	Vascular fluorescence module for blood flow visualization with ICG
Compatibility	- Easy integration of neuronavigation systems and laser systems (please ask your Leica Microsystems representative) - Video signal to external monitors
Connectors	- Numerous built-in connectors for video, IGS and control data transfer (CAN, Ethernet) - Internal power supply 12 VDC, 19 VDC and AC terminals
2D HD Video	Fully integrated 2D HD video and recording available

CONTROL

Control unit	- Programmable touch screen with user-friendly graphical user interface for control of microscope and stand - Built-in electronic auto-diagnosis and user support - Software independent hard keys for illumination and auto-balancing - Indicator for main/backup illumination and fluorescence modes
Control elements	- Pistol handle with 10 programmable functions - Optional mouth switch - Optional 12-function wireless footswitch
IR sensor	For remote control of the external HD C100 camera

SAFETY

AutoIris	Built-in automatic zoom-synchronized illumination field diameter, with manual override and reset feature
BrightCare Plus	Safety function through working distance-dependent limitation of the brightness, controlled by a built-in luxmeter

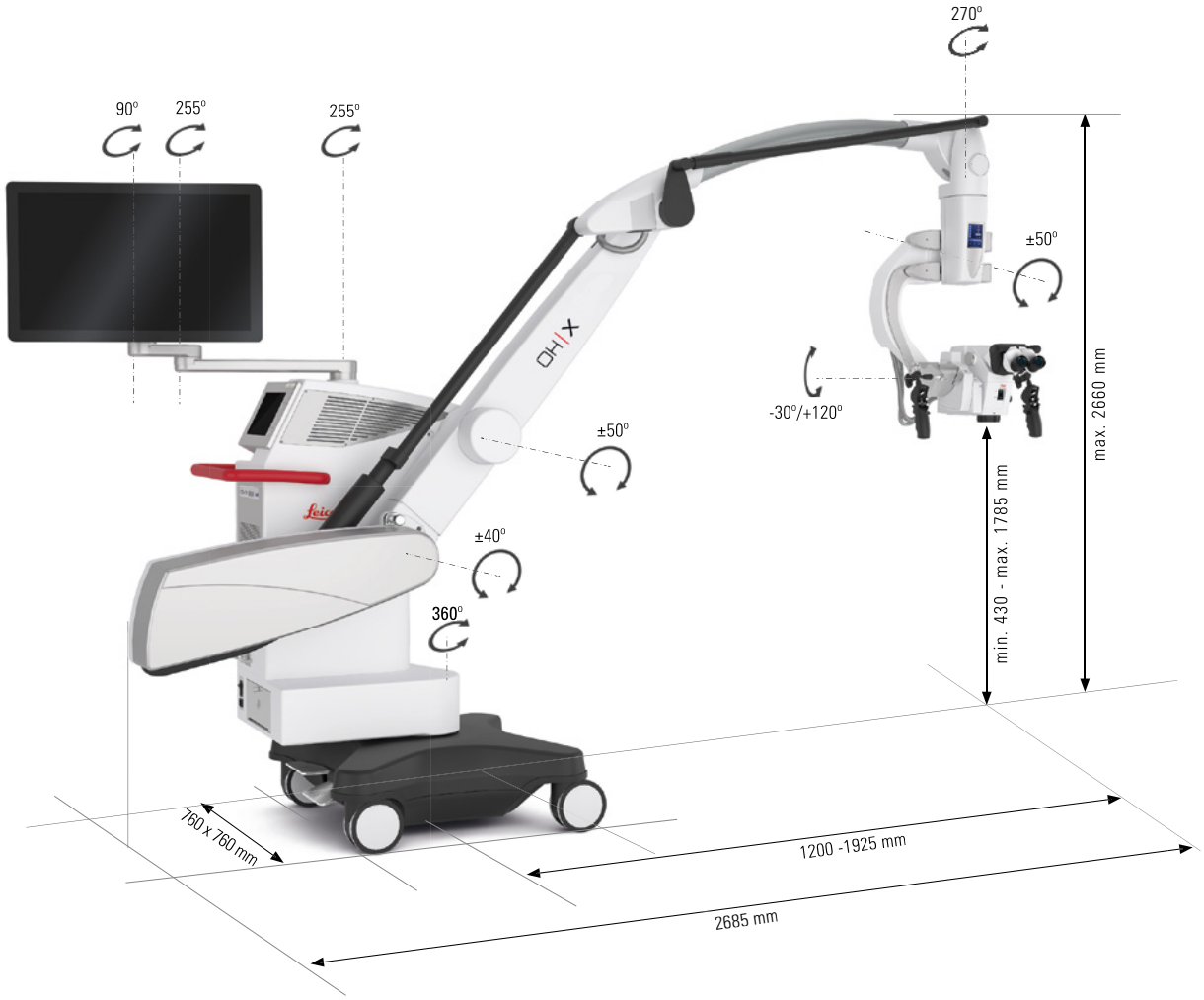
CONSTRUCTION

Base	760 × 760 mm with four 360° rotating casters with a diameter of 150 mm each, one parking brake
Materials	All solid metal construction coated with a paint which is designed to provide an antimicrobial effect on surfaces
Load	Min. 6.7 kg, max. 12.2 kg from microscope dovetail ring interface
Weight	Approx. 335 kg without load
Indicator	LEDs for fluorescence mode status and video record status

TECHNICAL DATA

Ambient conditions in use	- +10 °C to +40 °C - +50 °F to +104 °F - 30% to 95% rel. humidity - 800 to 1060 mbar atmospheric pressure
Power connection	- 1200 VA - 100-240 V ~50/60 Hz - Integrated circuit breaker
Protection class	Class 1

STAND DIMENSIONS



Specifications in mm

Leica Microsystems (Schweiz) AG
Max Schmidheiny-Strasse 201
9435 Heerbrugg, Switzerland

CE 0123

Class IIa FL800 ULT

CE

Class I surgical microscope M530 OHX incl. accessories

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