Leica M525 MS3

Precise balance and movement

Leica
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Leica

M525 MS3

Leica Microsystems introduces the innovative combination of a compact microscope for microsurgery with the top class standard of electromagnetic brakes and robotics. Merging the best features of the Leica M525 MS2 and Leica M525 OH4, with both electromagnetic and robotic movements, the Leica M525 MS3 offers the neurosurgeon, spine surgeon or otolaryngolist, another alternative in surgical microscopes. Easy to move, precisely balanced and coupled with the brilliant optical performance of the Leica M525 platform, the new Leica M525 MS3 will perform superbly in the operating room.

A new feature of the new Leica M525 microscope is the coupling of the illumination brightness control to the working distance for even more reliable work at short distances.

The new Leica M525 optics featuring OptiChrome™

The Leica M500 neurosurgical optical system has gained countless satisfied users since 1997.

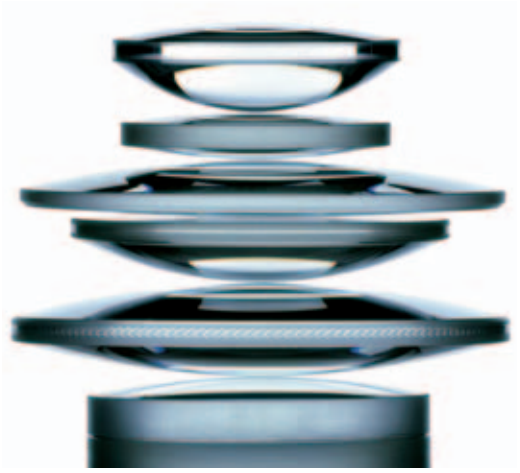
Leica now takes innovation a step further with the new Leica M525, featuring the latest generation of OptiChrome™ technology – the integration of all new glass, coating and design parameters that deliver the following decisive advantages:

- **Longer** 32% extended working distance to 470mm
- **Deeper** 30% increased depth of field at same magnification
- **Brighter** 30% more light intensity
- **Sharper** Higher contrast and crisper, sharper image
- **Smarter** Zoom-synchronized illumination field diameter

Ten years of relentless research and clinical experience of OptiChrome™ optics have now culminated in the world's most advanced optical system: the new Leica M525 OptiChrome™.

To position the Leica M525 MS3, the surgeon uses newly designed hand grips made of a highly durable metal casting. Ergonomically designed with a solid feel, the hand grips control all the standard parameters such as focus, zoom, and electromagnetic brakes. A simple to use joystick on either hand grip activates the motorized tilt and inclination (XY) of the Leica M525 MS3 optics carrier. If desired, one of the joysticks can be defined to control the Leica Dual Imaging or any IGS navigation system.

The concept



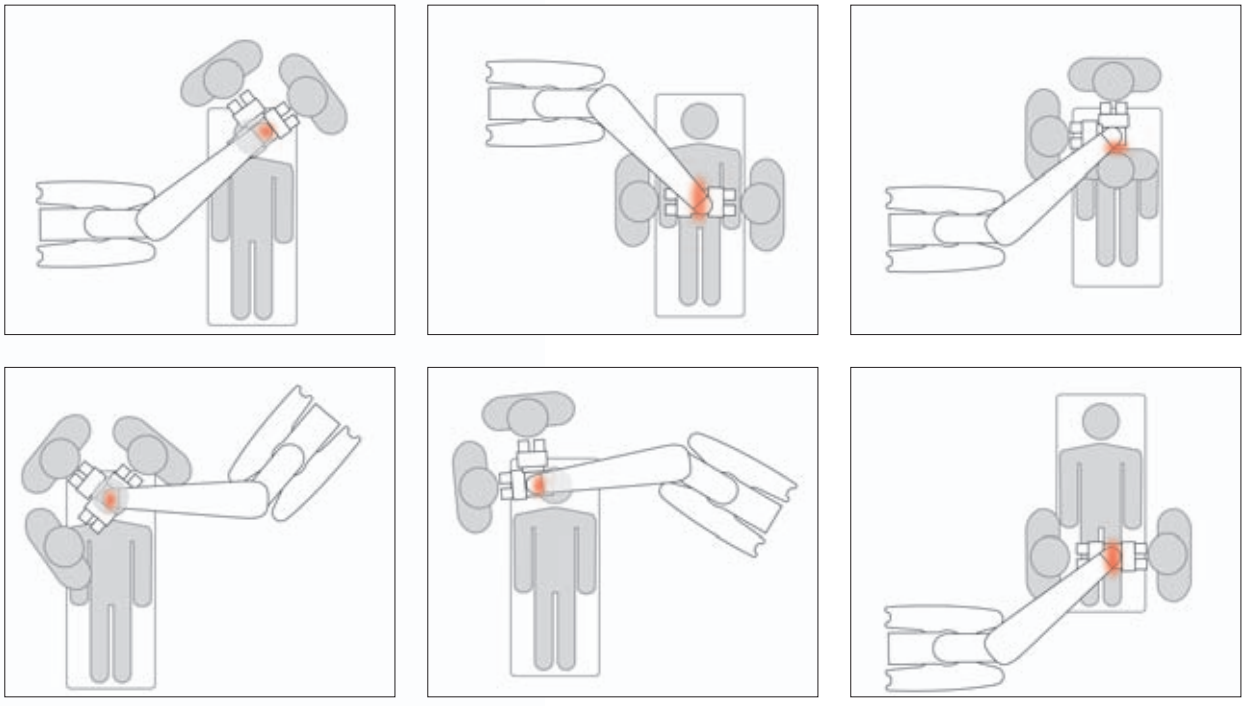
For over 150 years, the Leica name has stood for outstanding optical quality. Outstanding features of the Leica M525 optical platform such as optimum image contrast, clear imaging, color fidelity and image sharpness are now combined with a selection of floor and ceiling mounts that meet the varied requirements of neurosurgery, spinal column surgery and otolaryngology.

The Leica M525 MS3 combines an easy to handle floorstand design with electromagnetic movement in six axes and robotic movement in three axes. With the feature of electrically driven tilt and inclination movement, the Leica M525 MS3 is clearly placed above the standard of customary floor stands with six electro-magnetic brakes.

Leica Design by Christophe Apothéloz

Positioning

The Leica M525 MS3 can be made even more compact by folding it together and requires very little floor space. Unfolding the system for placement around the operating table is simple and easy, as is the balancing. With the long range of the Leica M525 MS3, the stand fits perfectly into any surgical set up. The flexibility of the stand allows for many positioning options.



The 100° swivel range allows it to easily reach even difficult positions.

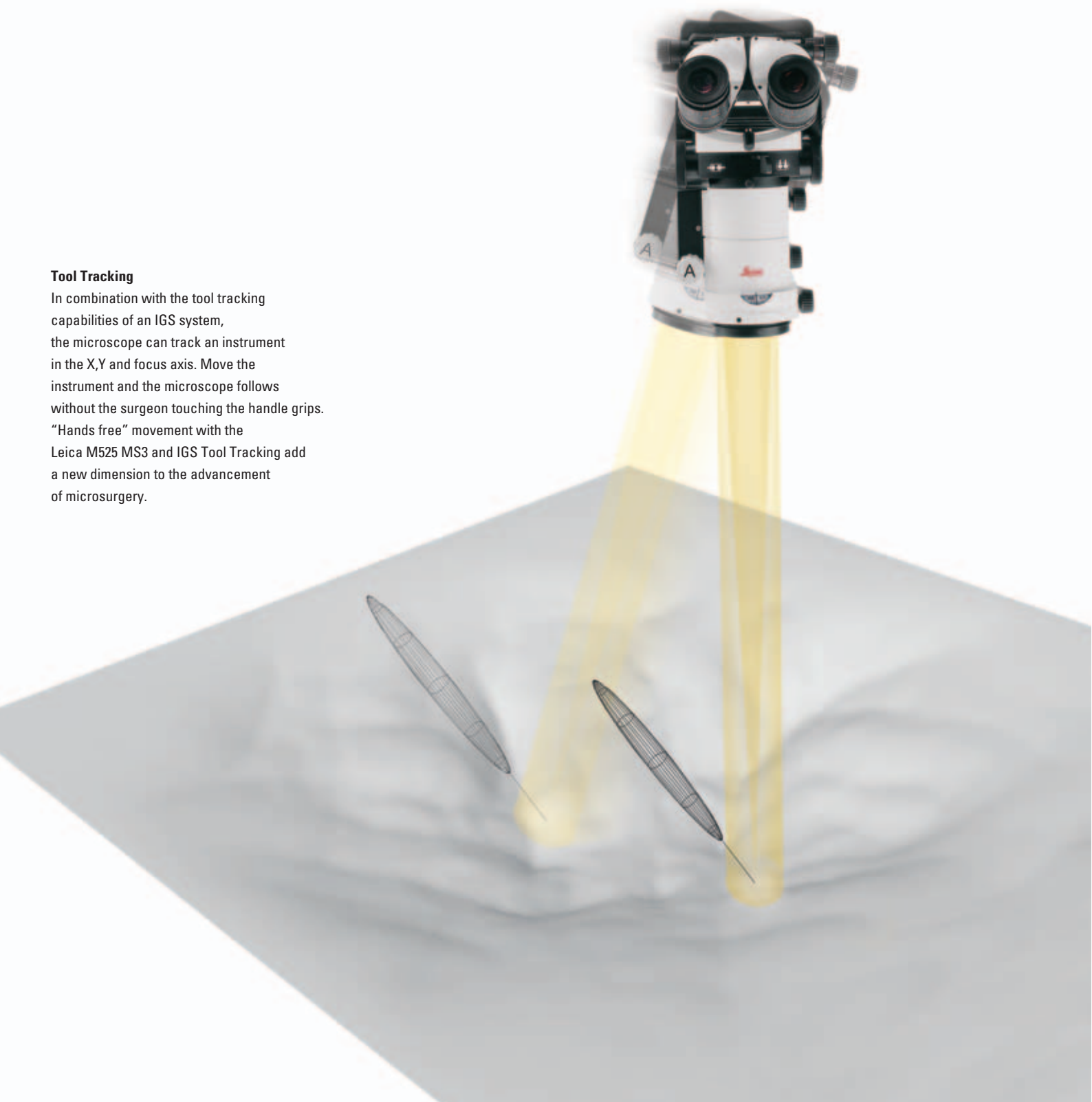
XY control

For fine control, the motorized tilt and inclination of the Leica M525 MS3 optics carrier can be controlled by a joystick integrated into either handle. Or, if preferred, the surgeon may use a foot control. The speed of the movement can be easily adjusted at any time during the surgical procedure.

The handle of the Leica M525 MS3 has a robust and ergonomic design that allows it to be easily controlled, even through a sterile drape.

Tool tracking with IGS

Tool Tracking
In combination with the tool tracking capabilities of an IGS system, the microscope can track an instrument in the X,Y and focus axis. Move the instrument and the microscope follows without the surgeon touching the handle grips. “Hands free” movement with the Leica M525 MS3 and IGS Tool Tracking add a new dimension to the advancement of microsurgery.



Precise movement
Perfect balance

A 150° tilt range, together with a highly compact optics carrier, ensures that the surgeon has comfortable positioning, even during complex procedures.

The swing arm is automatically balanced at the touch of a button.

Compatibility prepared for all data

The Leica DI C500 allows the surgeon to input data from any external source such as MRI, CT, IGS, and endoscopes. With an IGS computer, the CT or MRI can be fully correlated to the image in either eyepiece. The fully correlated image can be laid over the actual image or a shutter can be used, allowing the actual microsurgical image in one eyepiece and the fully correlated image in the other eyepiece. Non-correlated images such as endoscopes can be projected with the highest resolution and contrast available in the marketplace today.

In combination with IGS systems
or used independently, the Leica DI C500 Dual Imaging Module handles more data formats then ever before – high-resolution RGB video signals, correlated data from IGS systems, standard CT or MRI data and more.

Endoscopy
The Leica M525 MS3 can be used easily for neuro endoscopy applications in combination with the Leica DI C500. With the Leica DI C500, the surgeon will view in whichever microscope eyepiece he chooses, what he could observe on a high resolution monitor. The quality is the highest in today's market.

The Leica ULT 500
is the ultra-observation tool for the surgeon, the assistant and video documentation.
A simple lever allows the light to be directed either to a 180° assistant or a 90° assistant.

Leica Microsystems worldwide

Leica Microsystems is active in the fields of microscopy, specimen preparation, image analysis, laser technology, medical technology, and equipment for the semiconductor industry. The international technology group headquartered in Wetzlar, Germany has grown from such traditional brand names as Leitz, Wild, Reichert, Jung, and Cambridge Instruments. Leica's division of Surgical Microscopy is located in Switzerland, known worldwide for quality and precision.

Made by Leica

Leica Microsystems develops innovative technologies and system solutions that offer high value to users worldwide. Leica quality has earned international respect. Our high-quality standards apply equally to all eleven of our production centers in seven countries.

At your service

Technology is just one key to the success of Leica Microsystems. Serving you is the other. Your local Leica representative is ready to give you friendly and competent advice – in your language and wherever you are. Prompt support and service have the highest priority at Leica Surgical Microscopy. We will handle all your needs directly and dependably. For us, that's just as normal as the perfect organization of our delivery, setup, and training services.

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Leica Microsystems – the brand for outstanding products

Leica Microsystems' mission is to be the world's first-choice provider of innovative solutions to our customers' needs for vision, measurement and analysis of microstructures.

Leica, the leading brand for microscopes and scientific instruments, developed from five brand names, all with a long tradition: Wild, Leitz, Reichert, Jung and Cambridge Instruments. Yet Leica symbolizes innovation as well as tradition.

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

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and representatives of Leica Microsystems in more than 100 countries.

The Business Unit SOM, 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.

CE

Winner 2005

Innovationspreis
der deutschen Wirtschaft
The World's First Innovation Award

The companies of the Leica Microsystems Group operate internationally in three business segments, where we rank with the market leaders.

• Microscopy Systems

Our expertise in microscopy is the basis for all our solutions for visualization, measurement and analysis of microstructures in life sciences and industry. With confocal laser technology and image analysis systems, we provide three-dimensional viewing facilities and offer new solutions for cytogenetics, pathology and materials sciences.

• Specimen Preparation

We provide comprehensive systems and services for clinical histo- and cytopathology applications, biomedical research and industrial quality assurance. Our product range includes instruments, systems and consumables for tissue infiltration and embedding, microtomes and cryostats as well as automated stainers and coverslippers.

• Medical Equipment

Innovative technologies in our surgical microscopes offer new therapeutic approaches in microsurgery.

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Conformity CE

- Medical devices directive 93/42/EEC
  Classification: Class I, in compliance with appendix IX, rule 1, with reference to rules 10 and 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

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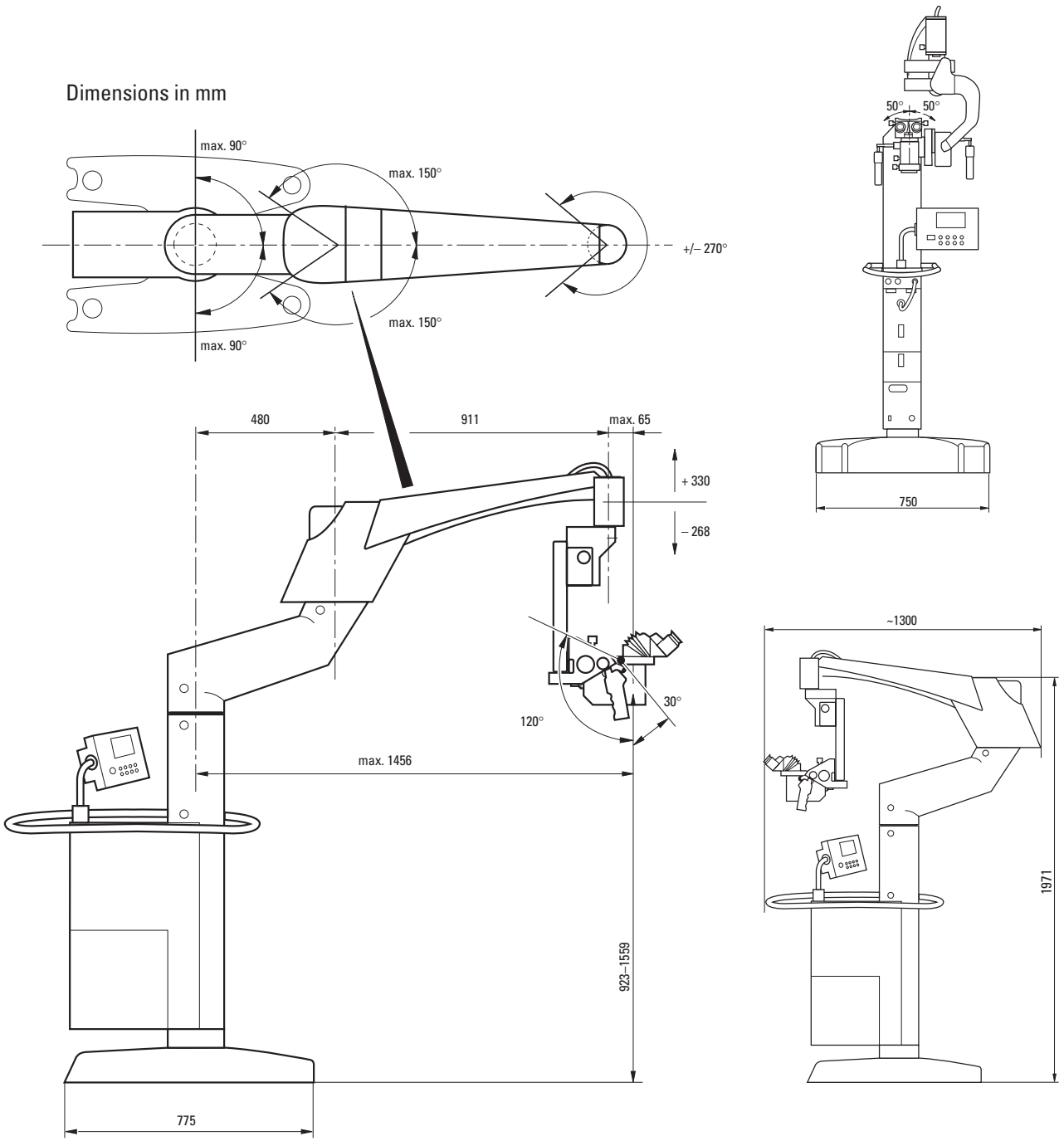
Dimensions in mm



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Technical data
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Electrical Data	
Power Supply	100 / 230 VAG + 10% / – 15%, 50/60Hz, 1500 VA
Classification	Class 1
Type	Type B
Leica M525 Mikroscope	
Magnification	6:1-zoom, motorized
Working distance	207mm – 470mm, variable through motorized multifocal lens, manually adjustable
Focusing	Motorized or manual via multifocal lens, manual via swingarm (Leica MS stand)
Eyepieces	Wide-field eyepieces for spectacle wearers 10× and 12.5×, dioptric setting +/–5 with adjustable eye cup
Objective	Multifocal lens, 207mm – 470mm variable working distance
Main illumination	High performance 300-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	21V/150-watt halogen lamp through fiber optic
Control unit	Graphic LCD data display with background illumination, menu provides up to 8 user-specific configuration with built-in auto diagnostic system
Optical data	
Magnification range	1.2× – 12.8× with 10× eyepiece
Field of view diameter	16.5mm – 180mm with 10× eyepiece
Leica M525 MS3 stand	
Type	Floor stand with six electromagnetic brakes
Balancing	Automatic balancing for the swingarm, manual balancing for the microscope carrier
Handgrips	zoom adjustment working distance adjustment for multi-focal lens ALL FREE button releases all six brakes on stand side selector button configurable with three user-defined brakes X/Y or DIC function via joystick
Maximum load	9.3kg of accessories to the microscope
Maximum reach	1477mm
Range of up / down	600mm
Maximum transport height	1980mm
Weight with microscope fully loaded	310kg
Accessory	
Binocular tubus	Variable angle of observation, with drive for adjusting interpupillary distance, 30° – 150°, 0° – 180°
Beam splitter	50% / 50%, 70% / 30%
Second observer	180° dual stereo attachment: 70% / 30%, stereo attachment for second observer for beam splitters
Asepsis	Sterilizable protective glass cover for the objective, sterilizable components for all drive knobs, commercially available drapes
Laser	Various commercially available lasers can be attached