

Turning complex into clarity.



ZEISS KINEVO 900 S

zeiss.com/kinevo



Seeing beyond

Join the digital (r)evolution

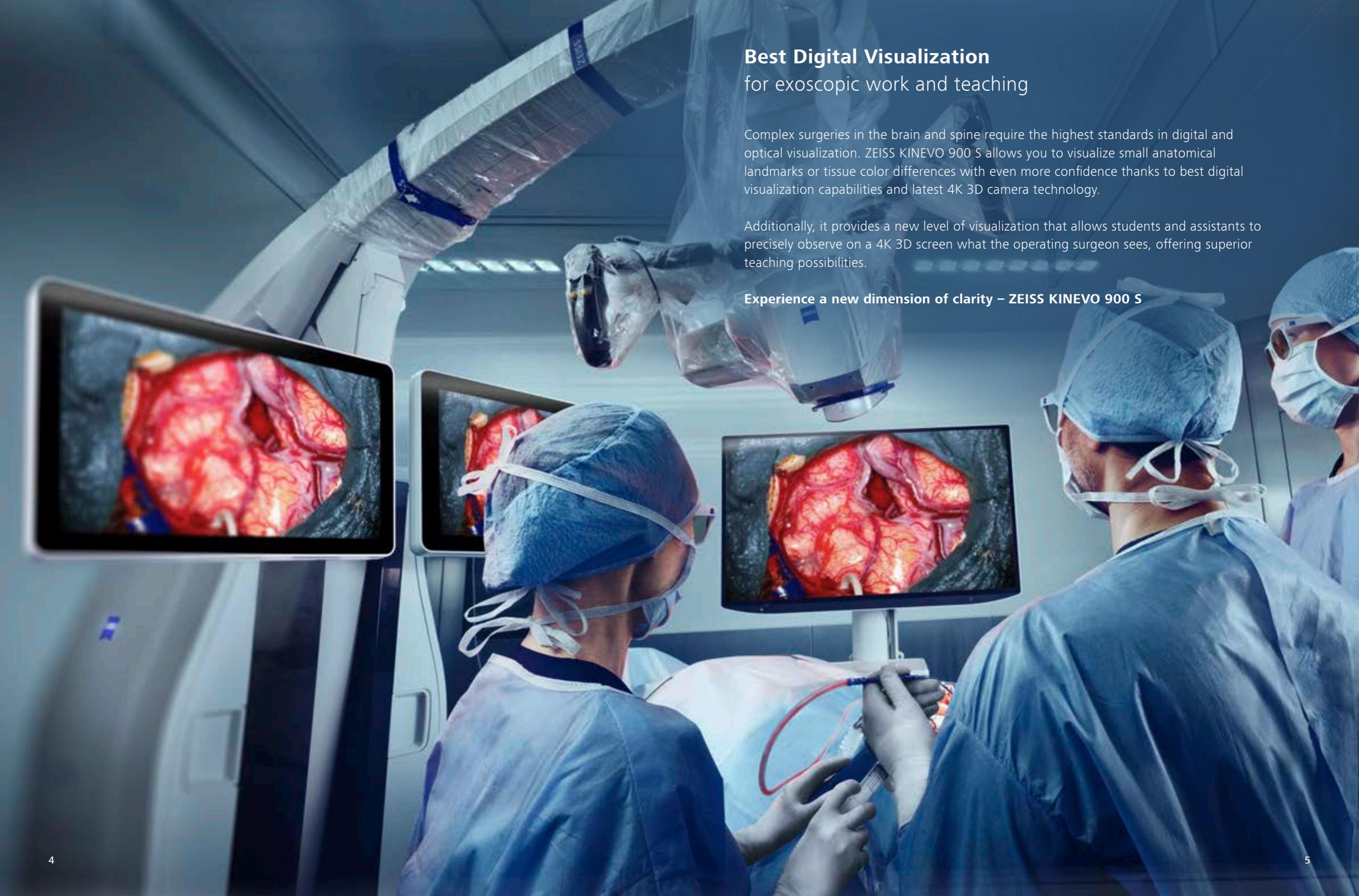
A complex world requires clear solutions. Our groundbreaking KINEVO® platform, which was introduced in 2017, set a new benchmark in assisting surgeons with additional insights for better clinical decisions, while reducing complexity and manual repositioning.

Now, it has undergone an (r)evolution, taking on the challenges of modern microsurgery. Manual repositioning or adjustment for small changes now belongs to the past in most cases - with the all-new ZEISS KINEVO 900 S. Turning complex into clarity.

The new system brings all the benefits of the successful ZEISS KINEVO 900, while providing you:

- **Best Digital Visualization**
- **Cobotic Assistant**
- **Connected Intelligence**



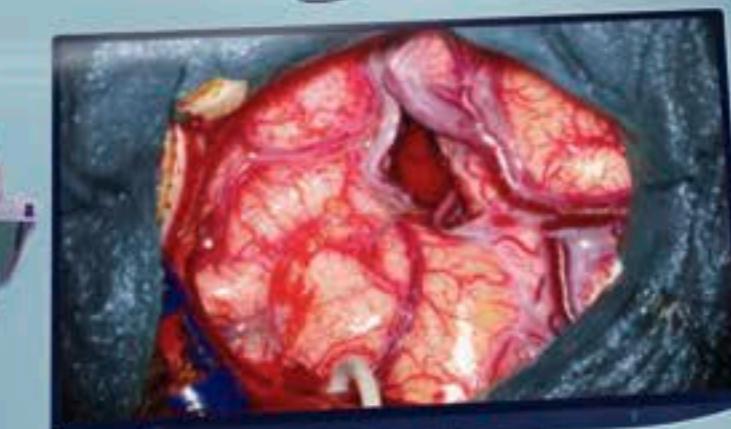
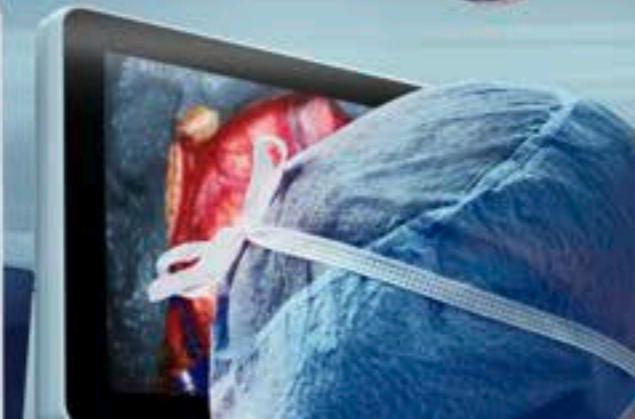
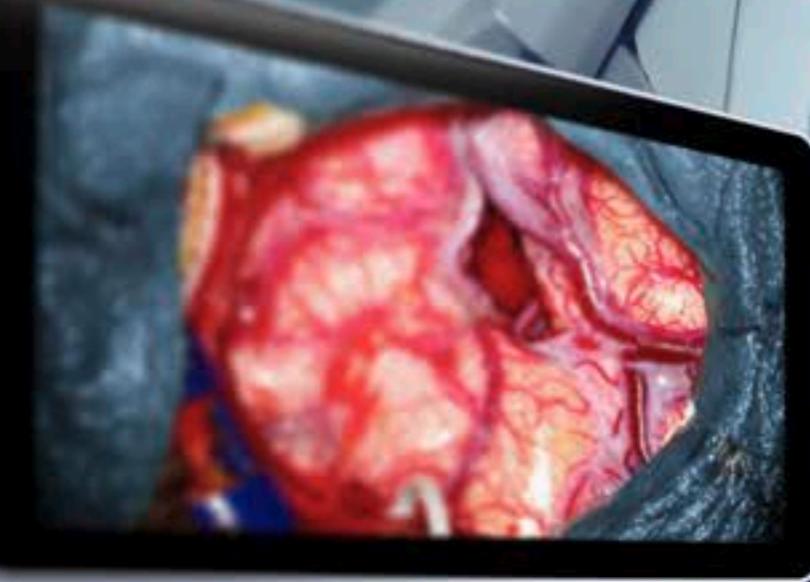


Best Digital Visualization for exoscopic work and teaching

Complex surgeries in the brain and spine require the highest standards in digital and optical visualization. ZEISS KINEVO 900 S allows you to visualize small anatomical landmarks or tissue color differences with even more confidence thanks to best digital visualization capabilities and latest 4K 3D camera technology.

Additionally, it provides a new level of visualization that allows students and assistants to precisely observe on a 4K 3D screen what the operating surgeon sees, offering superior teaching possibilities.

Experience a new dimension of clarity – ZEISS KINEVO 900 S





4K 3D technology

Work exoscopically with ease

ZEISS KINEVO 900 S offers the highest standard in digital visualization with its 4K 3D technology. By harnessing the latest technology, its enhanced 4K camera shows more visible and detailed lines, more resolution, and more colors than ever before. This will allow you to capture and share detailed procedures in high-quality 4K recordings, increasing visibility and impact in the surgical community.



Video presets

Be ready in no time

Save valuable time during surgery with the new KINEVO 900 S. Predefined video settings on the main screen simplify your work and all other settings can be adjusted with ease. Synchronized video settings for the camera and screen provide greater confidence and time efficiency. Working completely exoscopically is now easier than ever before.



HMDmd CR3

Innovating Surgical Visualization

Experience the cutting-edge capabilities of the HMDmd CR3* wearable monitor, designed to display high-definition images in both 2D and 3D. It has a direct plug & play with the new ZEISS KINEVO 900 S and offers improved ergonomics. This innovative, lightweight device (250g/9oz) is specifically tailored for use in hospital environments, providing medical professionals with a portable and convenient solution for medical imaging display.



*System combination under development. Not available for sale. Only for co-observation and training purposes.

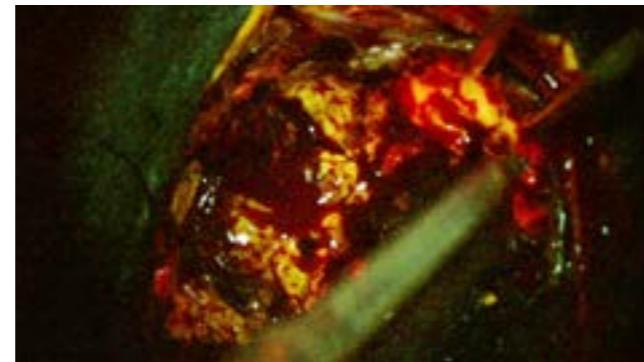
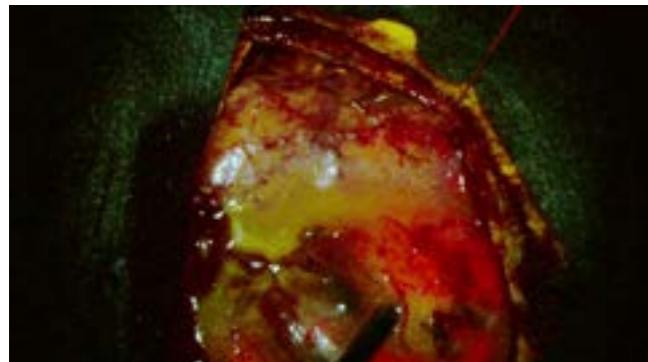
ZEISS BLUE 400 S

Understand the background

The high-quality visualization of the new ZEISS BLUE 400 S, especially of the non-fluorescent parts, supports the visualization of tissue associated with Grade III & IV glioma during neurosurgeries with less frequent switching between fluorescence and white light imaging modes.

With the visualization of non-fluorescent anatomy more similar to white light impression, the understanding of anatomy on non-fluorescent tissue will increase.

Additionally, ZEISS KINEVO 900 S will be available with ZEISS BLUE 400, ZEISS INFRARED 800 with FLOW 800 Option and ZEISS YELLOW 560.



ZEISS BLUE 400 S – Application Examples

Visualization of a suspected high-grade glioma. Due to visualization of non-fluorescent anatomy more similar to the white light impression, less frequent switching between fluorescence and white light imaging modes are necessary.

DepthPro – for deeper insights

Experience enhanced efficiency and precision in your medical procedures with the new DepthPro mode. This solution provides greater depth of field in both the digital and optical mode, allowing you to choose the appropriate settings with more options and see everything in your field of view focused with just a click, whenever needed.

A photograph of a surgical procedure. In the foreground, a surgeon wearing a blue surgical cap and mask is focused on the task. In the background, a robotic arm with a camera is positioned above the patient. Two large monitors on articulated arms are positioned to the right of the surgeon, displaying a close-up view of the surgical site. The monitors show a red, vascular tissue structure. The overall lighting is dim, typical of an operating room, with the monitors and the robotic arm being the primary light sources.

Cobotic Assistant

for a better performance with robotics

What's a cobotic assistant and what can it do for you? Collaborative robotics, known as cobotics, fosters a working partnership between you and the ZEISS KINEVO 900 S. It offers an uninterrupted surgical workflow by automatically centering the focus area, switching between fluorescence modes when prompted, or capturing pictures and videos, helping you to keep your hands in the surgical field.

Keep your focus – ZEISS KINEVO 900 S

AutoCenter

Stay in focus

Especially during cases with high magnification needs, it might be necessary to touch the device for the numerous amounts of small positional changes during surgery, distracting your focus.

The new AutoCenter function assists you by bringing the tissue you are currently visualizing to the center of the field of view for optimized illumination and visualization, all hands-free. It identifies surgical tools within the live video and centers the field of view to the tips of the tools by using the motorized xy-functionality. This enables hands-free positioning and ensures optimized illumination, visualization, and documentation of the surgical anatomy in the field of view.



Improved Robotics

Move it effortlessly

Motors in all axes support accurate, smooth, and effortless positioning of the microscope during use. Functions known from ZEISS KINEVO 900 together with new functions allow for more convenient and accurate intraoperative microscope positioning, making your work as efficient and excellent as possible.



Z-Mode

The stand's kinematic design allows for a new movement mode of the microscope that only moves along the optical axis of the microscope, keeping the center and the size of the visualized anatomical structures. This allows you to work hands free while freeing up space between system and surgical field.

PointLock

KINEVO 900 S offers an innovative movement and positioning feature: PointLock (Pivot). The visualization head can be easily repositioned in this way while keeping the point of interest focused in the center of the field of view.

PositionMemory

Sensors in all axes allow the position of the visualization head to be precisely detected. Any position can be stored as a bookmark and recalled. This enables you to position the microscope exactly at a specific anatomical landmark in the surgical field of view.

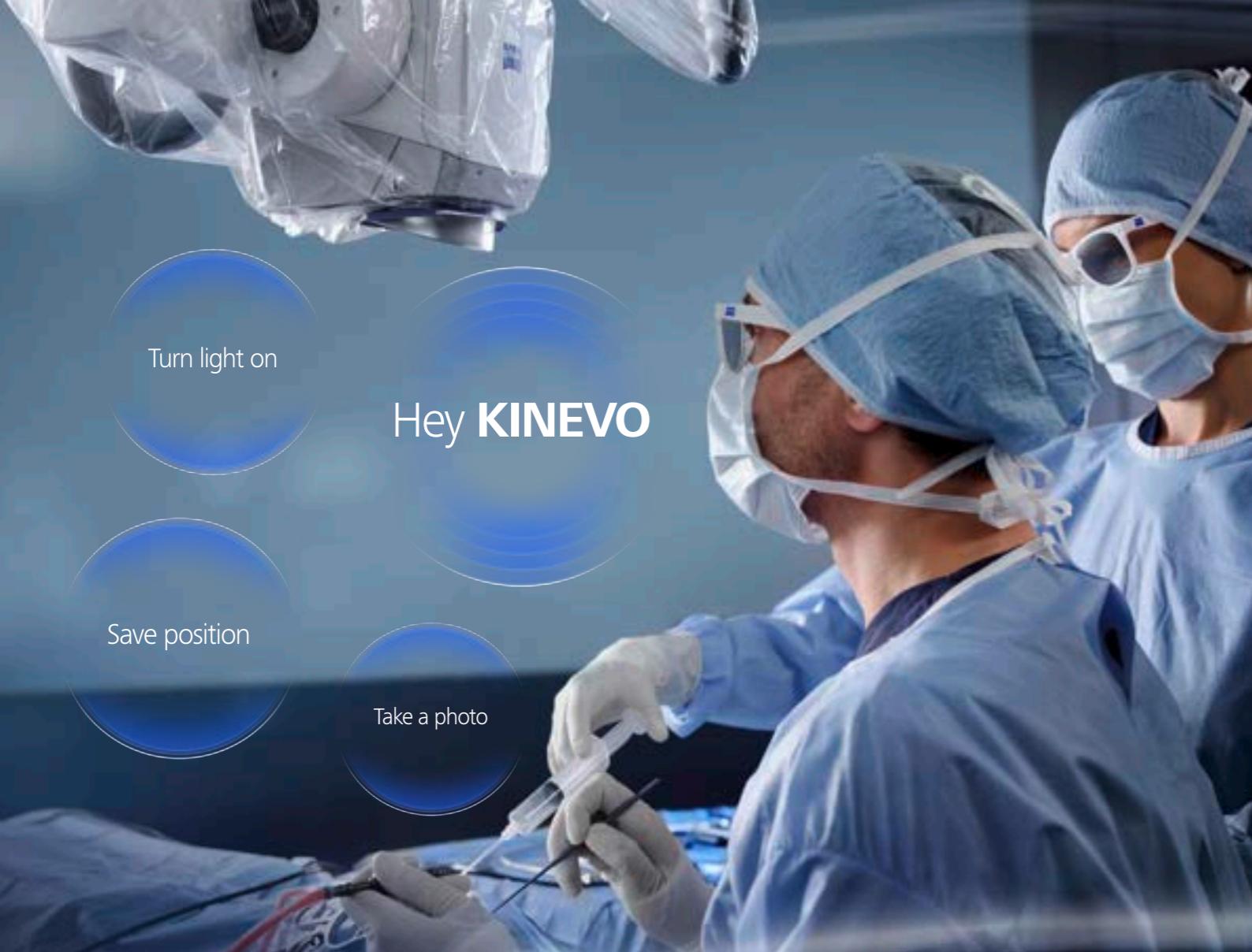


Park & Height Assistant

KINEVO 900 S offers extended manual surgeon-controlled functionalities as you can define specific "no-fly zones", which help you to park the device after your surgery (Park Assistant) or define your OR height as maximum height (Height Assistant).

Inertia Reduction

This innovative feature takes the mass of the device and any attached instruments into account, allowing for smoother and more precise movement during procedures.



Voice Assistant

Say "Hey KINEVO"

Save time while still being able to access important functions on your device. But how can you achieve both? By simply giving your ZEISS KINEVO 900 S voice commands with the ZEISS Voice Assistant – Hey KINEVO!

Experience the same convenience as with voice assistants from your everyday life – with the innovative technology by ZEISS. In keeping with the trend toward digital technology in the OR and elsewhere, a unique Voice Assistant functionality has been implemented in ZEISS KINEVO 900 S, which allows intuitive interaction with the system using voice commands. This lets you concentrate on your surgery without having to change the device position manually or change the fluorescence mode.

Additional features and benefits

The extra in efficiency

ZEISS KINEVO 900 S offers an intuitive, modern user interface as well as a comprehensive set of extra functions and accessories to support you throughout the entire clinical workflow – from OR preparation to performing surgery to case documentation.



Optical accessories

Several optical accessories available for main and co-observation enabling maximum flexibility



ZEISS QEVO

With the Micro-Inspection Tool QEVO® from ZEISS, you can eliminate blind spots in the microsurgical view and effectively look around corners.



Wireless foot control panel

Conveniently control up to 14 different functions, including AutoCenter.



ZEISS SMARTDRAPE

For optimal results, SMARTDRAPE® from ZEISS has been developed and specifically adapted to integrate with the robotics functions of the KINEVO 900 S. Equipped with advanced features such as the asymmetric drape ring shape with a stronger magnetic and a simple self-locking mechanism, SMARTDRAPE® provides clear instructions, minimizes potential errors, and enhances the efficiency of the draping process.

Connected Intelligence

for proactive support in surgical and non-surgical tasks

Data nowadays plays an essential role in modern surgery, including in teaching and patient management. Especially in your day-to-day routine with the Robotic Visualization System®, being able to easily transfer and use the data instantly across systems is essential for smooth and efficient processes.

Get connected – ZEISS KINEVO 900 S



ZEISS OPTIME complete⁺

Data-driven proactive care

Along with ZEISS KINEVO 900 S we are introducing OPTIME[®] complete⁺ from ZEISS, a new generation of digital, connected services.¹

Powered by data-driven insights, ZEISS OPTIME complete⁺ provides proactive and convenient services so that you can benefit from an optimal system performance and focus on what matters most: your patient.

Utilizing system data insights together with our profound service expertise, we guide you across multiple touchpoints in your daily routines for optimal results and proactive risk mitigation.

- **Guaranteed uptime²** with proactive services
- **Empowered performance** through tailored support
- **Enhanced productivity** with digital fleet management

Find out more



1 OPTIME complete⁺ services and feature availability depend on system and local accessibility. Not all features are available for all systems.

2 As defined in the terms & conditions of the OPTIME service contract.



ZEISS Livestream

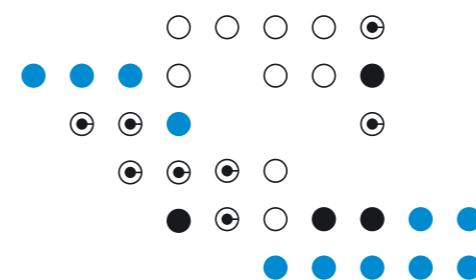
Broadcast your expertise

ZEISS Livestream offers an integrated video livestreaming solution for remote education and presentation. Simply schedule the live surgery as an upcoming webinar and send out invitation links to your remote participants to effectively stream your surgical procedure to anyone around the world in real time.



ZEISS Surgical Cloud

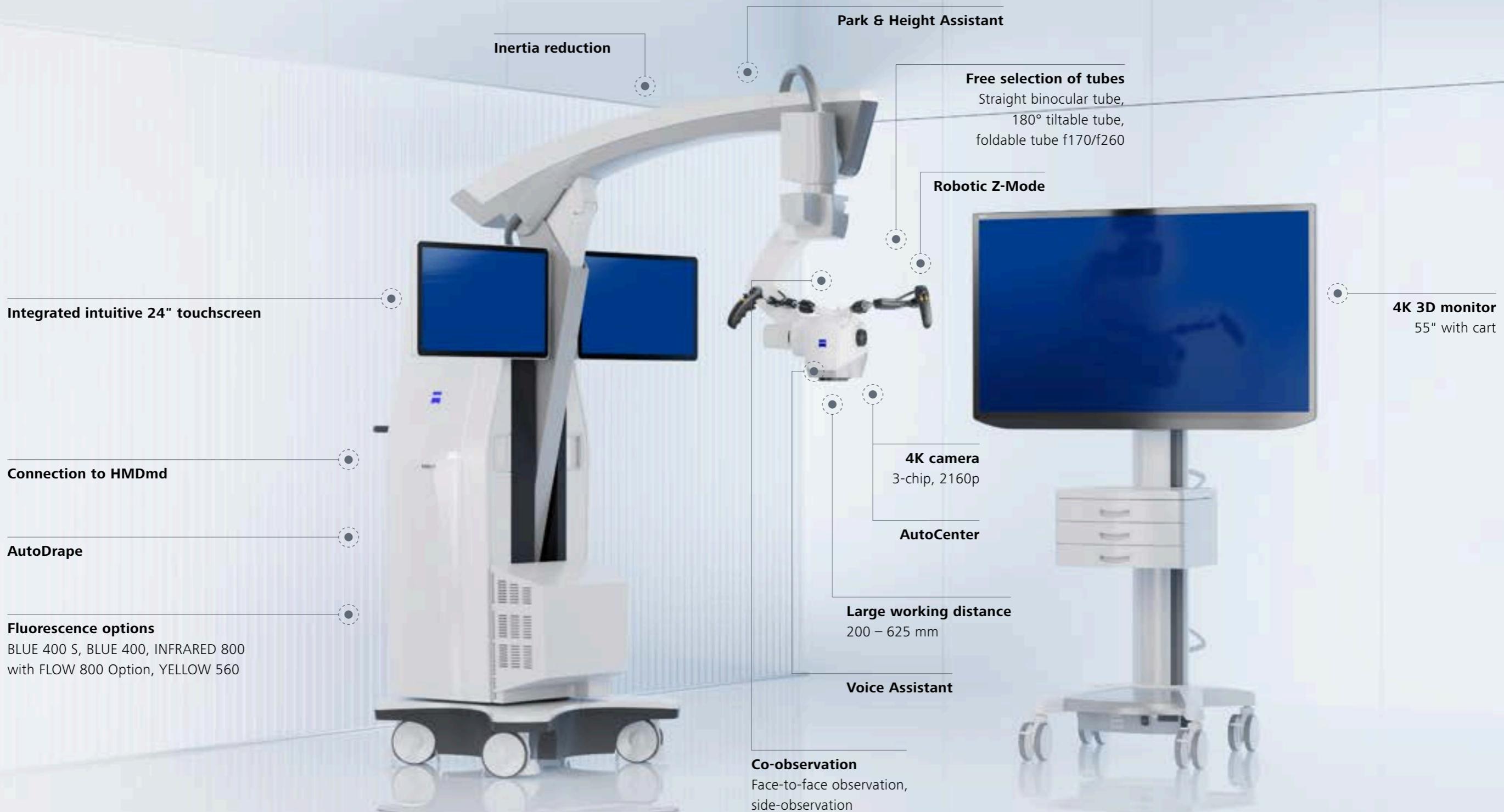
Manage your data



ZEISS KINEVO 900 S comes with modern software and offers integrated interfaces to all common hospital systems, enabling you to easily exchange data with peers. It allows you to synchronize recorded images and videos directly and securely, captured throughout surgery in a central digital location. With this, stored data can easily be accessed, anytime, anywhere.

All features at a glance

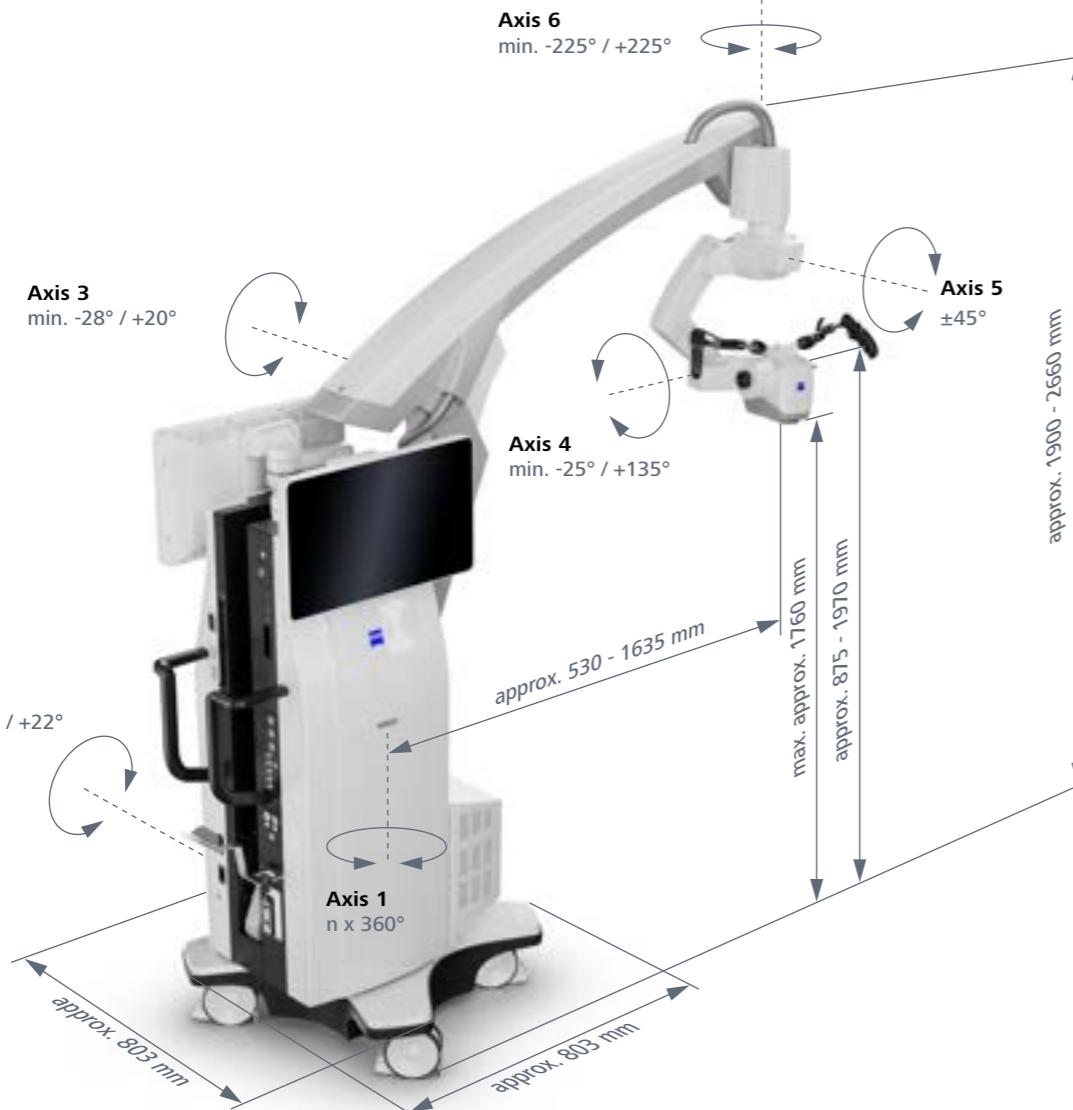
KINEVO® 900 S from ZEISS



Technical Data

KINEVO® 900 S from ZEISS

| Technical Data | |
|---------------------|--|
| Rated Voltage | 100 V–240 V AC |
| Current Consumption | max. 1.500 VA |
| Rated Frequency | 50 Hz–60 Hz |
| Electrical Standard | IEC 60601-1, IEC 60601-1-2, IEC 60825, IEC 62304, C AN/CSA-C22.2 NO. 60601-1 Degree of protection against electric shock: Class 1 Class 2 laser product as per IEC 60825-1 |
| Weight | Total weight of device with max. add. load: Max. 395 kg Total weight of the device incl. single-use transport box: Approx. 525 kg |



| Packages | K900S Select | Standard | Comfort | Premium | Digital Plus |
|--|--|----------|---------|---------|--------------|
| System | KINEVO 900 S | | | | |
| Main Tubes | 180° Tiltable tube | | | | |
| | Foldable tube f170/f260 | | | | |
| Eyepieces | 10x widefield eyepiece | | | | |
| | 12.5x widefield eyepieces | | | | |
| Co-Observation | Left / right with stereo co-observer | | | | |
| | Face-to-face | | | | |
| Tube for co-observation 90° | Straight tube f170 | | | | |
| | Tiltable tube 180° | | | | |
| | Foldable tube f170/f260 | | | | |
| Fluorescence¹ / QEVO | BLUE 400 | | | | |
| | BLUE 400 S | | | | |
| | YELLOW 560 | | | | |
| | INFRARED 800 with FLOW 800 Option | | | | |
| | QEVO | | | | |
| Video System | 4K 2D Video Package - Fully integrated 4K 3-chip camera, 2160 p | | | | |
| | 4K 3D Video Package - Fully integrated 3-chip cameras, 2160 p | | | | |
| | Native 4K 3D Video Package - Fully integrated 3-chip camera with native resolution, 2160 p and HDR | | | | |
| Video Options | Video Recording HD | | | | |
| | Video Recording 4K | | | | |
| | Integrated second video monitor 2D | | | | |
| | Integrated second video monitor 3D | | | | |
| | External 55" 4K 3D monitor with cart | | | | |
| Illumination | Xenon – Fully integrated Xenon light source, 300W | | | | |
| Focus | Laser Autofocus | | | | |
| Working Distance | 200 – 625 mm | | | | |
| Balance | AutoBalance | | | | |
| XYZ-Movement | XYZ robotic movement in 6 axes (variable speed), Z-Mode | | | | |
| | AutoCenter | | | | |
| Cobotics | Inertia Compensation | | | | |
| | Voice Assistant | | | | |
| Visualization | Integrated DepthPro | | | | |
| | MultiVision | | | | |
| | Digital MultiVision | | | | |
| | Panorama and Brilliance Image Modes | | | | |
| | Hybrid Option ² | | | | |
| Networking & Storage | Integrated 2TB hard drive | | | | |
| | Navigation Module | | | | |
| | DICOM Package – Patient data exchange with PACS system via DICOM | | | | |
| | Shared Network Package – Storage on shared network directories | | | | |
| | ZEISS Surgical Cloud and ZEISS Livestream Preparation | | | | |
| | ZEISS Smart Services Package – Connectivity for ZEISS Smart Services | | | | |
| | WLAN Package | | | | |
| Navigation | Navigation Package | | | | |
| Foot Control Panel | Foot Control Panel wired / wireless | | | | |
| Head Mounted Display | HMDmd CR3 | | | | |

¹ Standard Package: max. 2 fluorescence options - YELLOW 560 and BLUE 400 can only be combined with INFRARED 800, not with each other; FLOW 800 option not available

² Activates MultiVision

● Basic ○ Configurable □ Option

Vestibular Schwannoma: Image courtesy of Dr. Murek & Prof. Raabe, Inselspital Bern, Bern, Switzerland (Cover)

Possible GBM: Image courtesy of Prof. Philippe Schucht, Inselspital Bern, Bern, Switzerland (page 4 and page 5)

Glioblastoma surgery: Image courtesy of Prof. Kathleen Seidel, Inselspital Bern, Bern, Switzerland (page 6)

BLUE 400 S with high-grade glioma (HGG): Image courtesy of Prof. Kathleen Seidel, Inselspital Bern, Bern, Switzerland (page 8 and page 9)

Glioblastoma surgery: Image courtesy of Prof. Kathleen Seidel, Inselspital Bern, Bern, Switzerland (page 10 and page 11)

Craniotomy surgery: Image courtesy of Prof. Andreas Raabe, Inselspital Bern, Bern, Switzerland (page 13)

Glioblastoma surgery: Image courtesy of Prof. Kathleen Seidel, Inselspital Bern, Bern, Switzerland (page 16 and page 17)

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KINEVO 900 S

BLUE 400

BLUE 400 S

YELLOW 560

INFRARED 800 with FLOW 800 Option

SMARTDRAPE

QEVO



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