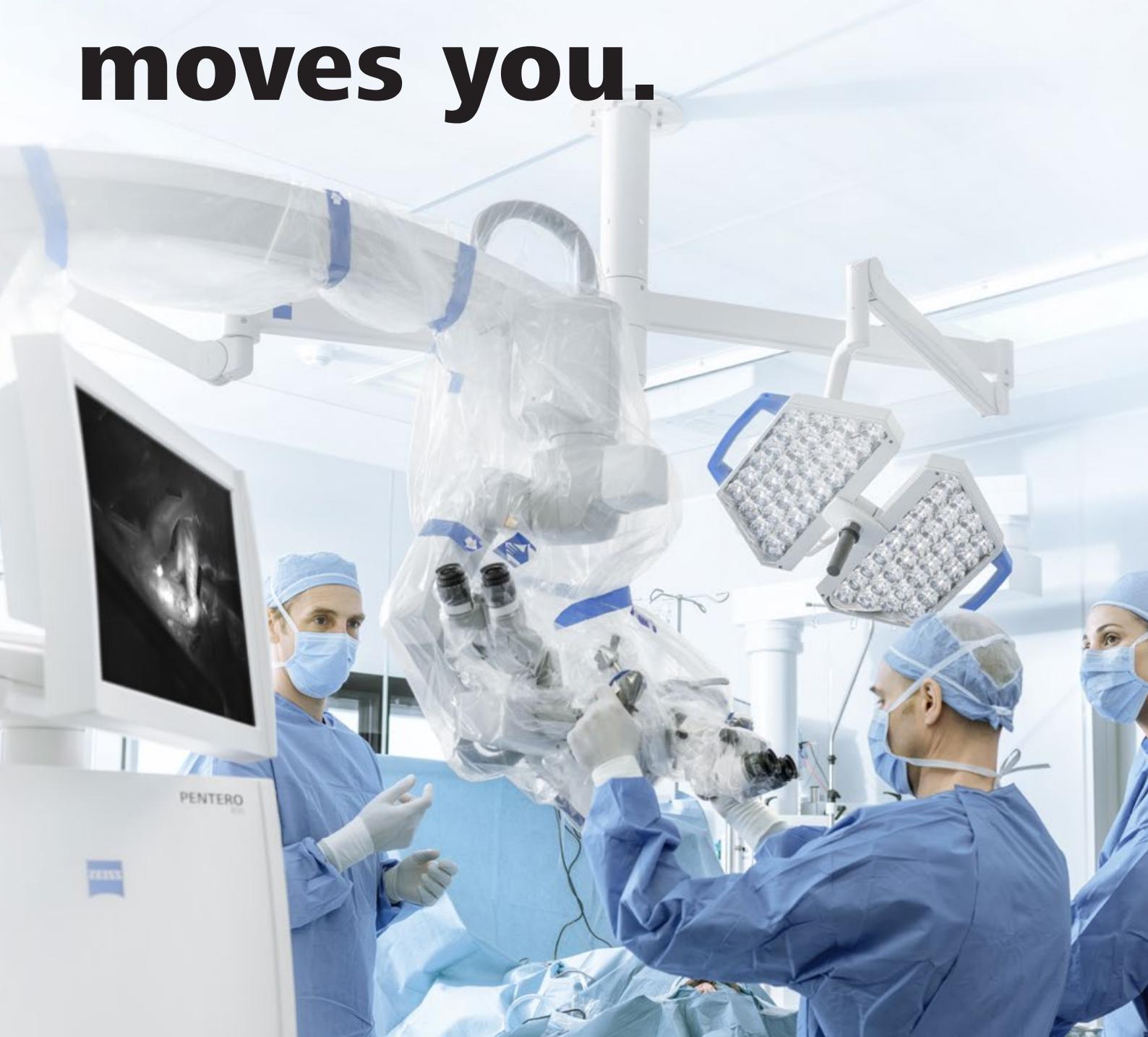


When visualization moves you.



ZEISS OPMI PENTERO 800

zeiss.com/opmi-pentero-800



Seeing beyond



In pursuit of surpassing the daily challenges of surgery

Demanding surgical procedures on delicate structures through deep channels, long hours of concentration requiring precise hand-eye coordination, and, of course, the ever increasing need to maximize OR efficiency – these are all challenges today's surgeons face.

Precisely these critical demands of today's surgical environment inspired the development of OPMI® PENTERO® 800 from ZEISS.

With its proven apochromatic optics, unparalleled ergonomics, and workflow-conducive features, ZEISS OPMI PENTERO 800 delivers crisp visual clarity while optimizing procedural efficiency.

Visualize the details

When navigating the anatomy through deep channels and complex structures, optimum illumination and magnification are absolutely essential. Equipped with advanced apochromatic optics, two-channel xenon illumination, and a fully integrated video chain, ZEISS OPMI PENTERO 800 brings all your details of interest sharply into view – both in the eyepieces and the on-screen display.



Illumination and depth of field

The two-way illumination minimizes shadows in deep channels and cavities. Surgeons are able to choose between maximum light and resolution or depth of field.



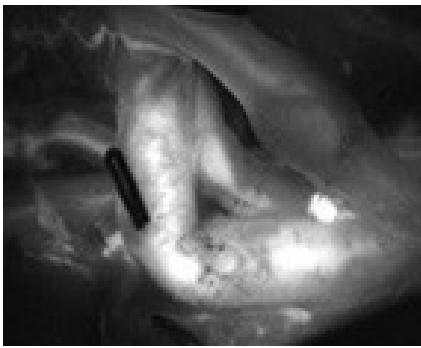
Fully integrated video chain

Camera, recorder, editor, and monitor are fully integrated into the surgical microscope, delivering consistently sharp images without external equipment.



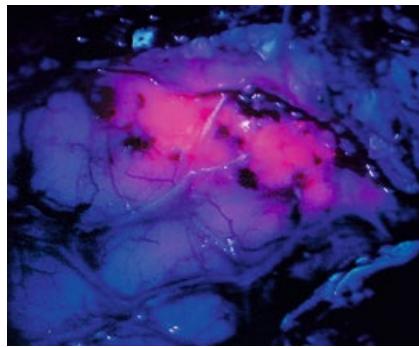
High-quality data injection

Display additional information directly through the eyepieces with the integrated navigation interface and MultiVision heads-up display.



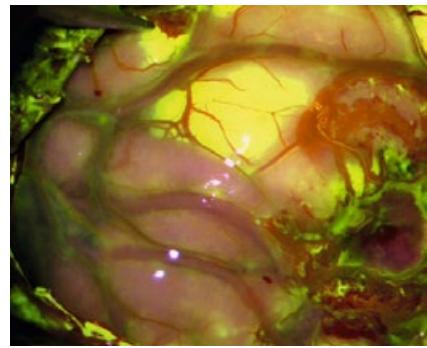
ZEISS INFRARED 800

The fully integrated ZEISS INFRARED 800* for ZEISS OPMI PENTERO 800 enables intraoperative visual assessment of blood flow and vessel patency during anastomosis procedures.



ZEISS BLUE 400

ZEISS BLUE 400* is capable of supporting fluorescence-based surgery by providing visualization in the 620–710 nm range in HD quality.



ZEISS YELLOW 560

ZEISS YELLOW 560* fluorescence module highlights fluorescence-stained structures while visualizing non-stained tissue in its natural-like color.

* Please use the fluorescent agent as per the approval status for the application in your country.

Perform at ease

Understanding the rigorous and demanding routine of the modern surgeon, ZEISS OPMI PENTERO 800 features intelligent ergonomic properties designed to enhance handling while streamlining overall surgical workflow. Functions like the free-floating suspension and a dynamic foldable tube facilitate increased magnification and positioning flexibility as well as user comfort. These unique design elements help to significantly minimize physical strain for the operating surgeon and surgical assistant.



Free-floating movement

Effortlessly move the device into any desired position, on demand.



Fast focus

The AutoFokus functionality enables instant adjustment of the focal plane for a sharp image – every time.



Dynamic foldable tube

Highly flexible and height adjustable, the Foldable Tube f170/f260 provides both surgeons and assistants with enhanced ergonomics and viewing comfort.



Accurate movements

Precisely reposition the device in high magnification with the X/Y function using the handgrips or the foot control panel.



Wireless foot control

Conveniently control up to 14 different surgical microscope functions with the wireless foot control panel.



Intuitive operation

Whether by touchscreen, handgrips, or mouth switch, the intuitive operation is designed for maximum ease of use.

Maximize OR efficiency

Time is of the essence in the OR.

A faster room turnaround enables a higher patient throughput and procedural efficiency. AutoBalance, AutoDrape® and FlexiTrak functions enable OR personnel to realize this efficiency potential. The intuitive user interface provides direct access to all surgical microscope functions via the touchscreen, including patient data, preset configurations, video recording, and DICOM module.



One-step AutoBalance

Automatically balance the surgical microscope to enable a fast setup and optimum mobility, even when draped.



Quick, easy draping

Simply activate AutoDrape to automatically evacuate the air from the sterile drape within seconds.



Clarity and sterility

The unique VisionGuard® optical lens from ZEISS provides an optimally clear view through the objective while enabling sterility.



Highly agile

The unique FlexiTrak function facilitates optimum maneuverability from one room to the next and device steering to any desired position.



Short prep time

Reduce preparation time with preset functions for individual users and quick patient data setup.



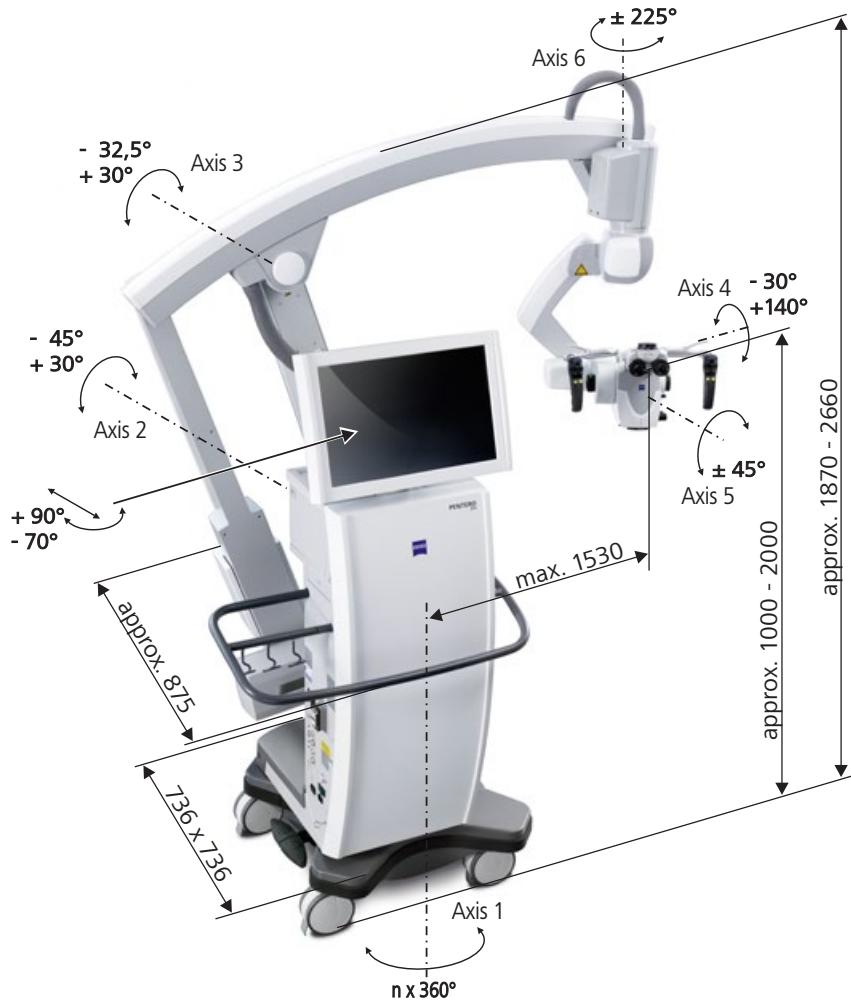
Maximum system uptime and convenience

ZEISS OPTIME service agreements help ensure the readiness of medical equipment when it is needed.

OPMI® PENTERO® 800 from ZEISS

Technical data

Rated voltage	(115 V): 100 V–125 V (230 V): 220 V–240 V
Current consumption	Max. 1.200 VA
Rated frequency	50 Hz–60 Hz
Electrical standard	Complies with IEC 60601-1:2005+A1:2012; UL 60601-1; CAN/CSA-C22.2 Protection class I, degree of protection IP20 Class 2 laser product as per IEC 60825:2007, IEC 60825:2014
Weight	Weight max. 365 kg Weight of the surgical microscope incl. transport container: approx. 610 kg



Technical data

Standard and optional features

Apochromatic optics	Motorized focus; Varioskop® with working distance 200–500 mm	●
	Motorized zoom; 1:6 zoom ratio	●
	10x magnetic widefield eyepieces with integrated eyecups	●
Illumination	Superlux® 330 light source with 2x 300 W xenon	●
	Automatic Iris Control for adjusting the illumination to the field of view	●
	Individual light threshold setting	●
	Focus Light Link: working distance controlled light intensity	●
	Display of remaining lamp life time	●
Operation	Multifunctional programmable handgrips	●
	Magnetic clutches for all axes	●
	Touchscreen user interface	●
	XY robotic movement in 3 axes (variable speed)	●
	Autofocus with 2 visible laser dots, automatic mode with magnetic brakes	○
Setup	AutoBalance	●
	AutoDrape – air evacuation functionality	○
	Mouth switch fine balance	●
Video	22" HD video touchscreen on extendable arm	●
	Integrated 3-CMOS SD video camera	●
	Integrated video still image capturing on HDD and USB-media	●
	Integrated 3-CMOS HD video camera	○
	Integrated SD or HD video recording and editing	○
	Adaptation of consumer (SLR) photo/video camera	○
Intraoperative fluorescence*	BLUE 400	○
	INFRARED 800	○
	YELLOW 560	○
Connectivity/ Data management	Video-in for external SD video sources	●
	Navigation interface	○
	Interface for micromanipulator	●
	DICOM module	○
Accessories	12.5x magnetic widefield eyepieces with integrated eyecups	○
	Straight tube, focal length f = 170 mm	○
	Stereo co-observation tube	○
	Foldable Tube f170/f260, including the PROMAG function for additional 50 % magnification and integrated rotate function	○
	Wired foot control panel	○
	Wireless foot control panel	○
	Mouth switch	○
	3-Step Magnification Changer	○

* OPMI PENTERO 800 can be equipped with up to two of the three available fluorescence options.

● Standard ○ Option

Vessel patency of anastomosis, Plastic & Reconstructive, Hand and Burn Surgery, University Clinic, Bogenhausen, Germany (Page 1, Page 5)

BrainLAB AG, Feldkirchen, Germany (Page 2, Page 4)

Glioma surgery using BLUE 400, Department of Neurosurgery, University Hospital Münster, Münster, Germany (Page 5)

Tumor resection with YELLOW 560, Indiana University Department of Neurosurgery, Goodman Campbell Brain and Spine, Indianapolis, USA (Page 5)

Spinal cord AVM (arterio-venous malformation), Barrow Neurological Institute, Phoenix, Arizona, USA (Page 6)

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OPMI PENTERO 800

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