OPMI PENTERO 800 from ZEISS

Never compromise
Performing 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 – are all challenges facing the modern day surgeon.

It is precisely these critical demands of today’s surgical environment which inspired the development of the new OPMI® PENTERO® 800 from ZEISS.

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

In the pursuit of surpassing the daily challenges of surgery –

ZEISS OPMI PENTERO 800
Never compromise.
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 eyepiece and the on-screen display.

ZEISS OPMI PENTERO 800
Never compromise.

Two-way illumination
Shadows in deep channels and cavities are minimized with the two-channel xenon illumination of the surgical microscope.

Unmatched depth of field
The integrated electronically controlled double-iris diaphragm enables surgeons 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.

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

Image: vessel patency after anastomosis

Magnification boost
Quickly increase magnification by an additional 50% with the PROMAG™ function on the Foldable Tube f170/f260.

Achieve further increase in magnification for applications requiring sub mm visualization, with a ZEISS 3-step magnification changer.

Image: navigation through optic/nerve

*INFRARED 800 has a trademark registration as IR 800™. 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.

ZEISS OPMI PENTERO 800
Never compromise.

Free-floating movement
Effortlessly move the device into any desired position, on demand.

Fast focus
The AutoReFocus function allows 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 enhanced ergonomics and viewing comfort.

Accurate movements
Precisely reposition the device in high magnification with the X/Y function using the handgrip 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 touch screen, handgrips or mouth switch, the intuitive operation is designed for maximum ease of use.

Image: spinal cord AVM (arterio-venous malformation)
Maximize OR efficiency

Time is of the essence in the OR. A faster room turnaround enables a higher patient throughput and procedural efficiency. Enter AutoBalance, AutoDrape® and FlexiTrak™ – functions that 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.

ZEISS OPMI PENTERO 800

Never compromise.

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.

Remote Service
To optimize device uptime and minimize service costs, ZEISS offers web-based remote service support.

Highly agile
The unique FlexiTrak function assures 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.
The moment you expand the surgical boundaries beyond what seems possible. This is the moment we work for.

MICROSURGERY
MADE BY ZEISS

The moment you expand the surgical boundaries beyond what seems possible. This is the moment we work for.

OPMI PENTERO 800 from ZEISS

Technical data

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<th>Feature</th>
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<td>Contact consumption</td>
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<td>Field frequency</td>
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<td>Weight max. 365 kg</td>
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<tr>
<td></td>
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<tr>
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Standard and optional features

**Achromatic optics**
- Motorized focus; Varioskop® with working distance 200–500 mm
- Motorized zoom; 1:6 zoom ratio
- 10x magnetic eyepieces with integrated eyecups

**Illumination**
- Superlux® 330 light source with 3 x 300 W xenon
- Automatic Iris Control™ for adjusting 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**
- Multifunction programmable handgrips
- Magnetic clutches for 360° rotation
- 3-Step magnification changer for each axis
- 3x visible dots laser for autofocus
- Autofocus with 2 visible dots; automatic mode with magnetic brakes

**Setup**
- Mountable – no permanent fixation
- Mount control head balance

**Video**
- 22" HD video touchscreen on extendable arm
- Integrated 3-CMOS SD video camera
- Integrated 3-CMOS HD video camera
- Integrated video still image capturing on HDD and USB-media
- Integrated video recording and editing
- Adaptation of consumer (SLR) photo/video camera

**Intraoperative Fluorescence**
- INFRARED 800 for OPMI PENTERO 800

**Connectivity/Datamanagement**
- Video-in for external SD video sources
- Navigation interface
- Interface for micromanipulator
- Remote diagnosis via internet/VPN
- DICOM module

**Accessories**
- 12.5 x magnetic 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
- 3-Step Magnification Changer

**Application images courtesy of:**
- BrainLAB AG, Feldkirchen, Germany (p. 5); Barrow Neurological Institute, Phoenix, Arizona, USA (pgs. 1, 4, 6); Prof. Dr. med. univ. Milomir Ninkovic, Head of the Department, Plastic & Reconstructive, Hand and Burn Surgery, University Clinic, Bogenhausen, Germany (p. 5)
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