

# Seeing more with the first digital microscope.



**ZEISS ARTEVO 800**

[zeiss.com/artevo800](http://zeiss.com/artevo800)



Seeing beyond



# Experience digital visualization for a new level of performance.

From the leader in optics for more than 170 years, ARTEVO® 800 from ZEISS unleashes a new era of ophthalmic surgical visualization.

The industry's first digital microscope, ZEISS ARTEVO 800 adds a new dimension to your surgical workflow. Whether your specialty is cataract, retina, cornea or glaucoma, you can experience the benefits of a digital microscope: with cloud connectivity in and outside the OR and digital image enhancements delivered by AdVision®. You can also take advantage of the improved ergonomics of heads-up surgery – an approach that a majority of surgeons confirm is a main advantage of working with the ZEISS ARTEVO 800.

Reimagine visualization capabilities thanks to outstanding depth of field, color, contrast and magnification. You can also see intraoperative OCT imaging, cataract assistance functions, phaco and vitrectomy settings, microscope parameters, patient information and more, directly in your line of sight – helping you to never miss a detail. The large 3D monitor makes it easy for everyone to observe each step for an immersive and ergonomic surgical experience.

Discover more about how ZEISS ARTEVO 800 can provide more certainty during surgery, helping to enhance your position as a leader in your field.

- > [Cataract](#)
- > [Retina](#)
- > [Cornea](#)
- > [Glaucoma](#)

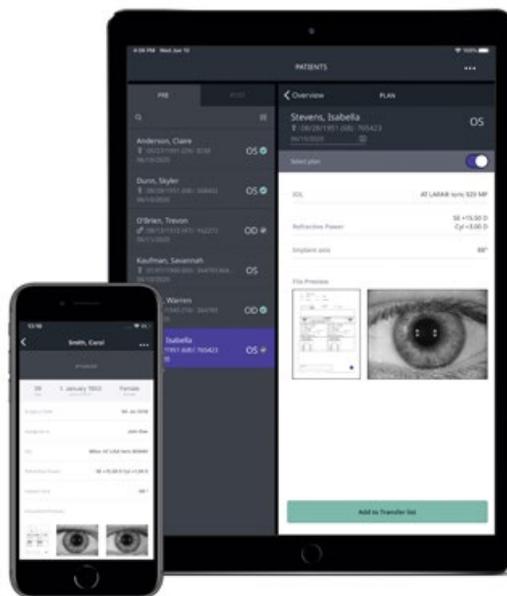
# Be at the forefront of cataract surgery.

In the competitive field of cataract surgery, ZEISS ARTEVO 800 is a game changer, providing the most advanced technology in ophthalmic visualization.

As you move into the future, the cutting-edge technology can help increase productivity and efficiency. Enhance your clinic's offerings and truly differentiate yourself within the market. The future is now!

## Save time during your workflow.

With integration into the ZEISS Cataract Suite via the ZEISS EQ Mobile app, you can wirelessly transfer and access your data. Streamline your refractive cataract workflow – from biometry and IOL calculation to surgical planning and post-operative data archiving. Throughout your day you can save time and achieve greater efficiency, anywhere and anytime.





*Cataract surgery with assistance functions  
Image courtesy of Sri Ganesh, MD, 2020*

**Precise<sup>1</sup> markerless toric IOL alignment.**

ZEISS ARTEVO 800 includes the new AdVision feature, which places relevant information directly in your line of sight, including cataract assistance functions that can be fully controlled by the surgeon. This can give you more control during surgery for a smooth surgical workflow. Especially for cataract surgeons, these assistance overlays prove beneficial for each step of surgery, such as markerless toric IOL alignment. You can take advantage of having phaco and microscope parameters, as well as patient information, in your view – all thanks to AdVision.

**Reduce light intensity for enhanced patient comfort.**

You can provide enhanced patient comfort during surgery based on a significant reduction in light intensity. More than 75% of surgeons report a significant reduction of light intensity – up to 85% compared to conventional microscopes.\*

The ability to minimize refocusing is enabled by the outstanding depth of field. Experience an extraordinary surgical view thanks to 25% higher resolution compared to competitor systems.\*

<sup>1</sup> Clinical data of Prof. Findl / Dr. Hirschschall presented at ESCRS 2013.  
\*Data on file.

# Experience more confidence during retina surgery.

When it comes to retina surgery, the visualization capabilities of ZEISS ARTEVO 800 provide exceptional details even when using reduced light intensity. More than 75% of surgeons report a significant reduction in light intensity\*, which can possibly result in lower phototoxicity.

The increased magnification and high-resolution OCT images allow you to more accurately identify and distinguish tissue structures of the retina – directly in your line of sight. That means you can make more informed decisions and perform with more confidence.

## Reduce phototoxicity using lower light intensity.

For the possibility to decrease phototoxicity for your patients, you can reduce light intensity by up to 85%\*. This is made possible thanks to the enhanced visualization of DigitalOptics with two 4K cameras, providing natural colors and extraordinary resolution. No matter the light intensity you choose, you can still operate with efficient brightness without compromising the view.

## Stay focused at every step.

Added to ZEISS ARTEVO 800 is the proven non-contact retina visualization system RESIGHT® 700 from ZEISS, enabling you to see a clear and detailed view of the retina. For more functionality, the AutoAdjust™ feature automatically adjusts your settings when you switch between anterior and posterior views.



**60D macular lens**

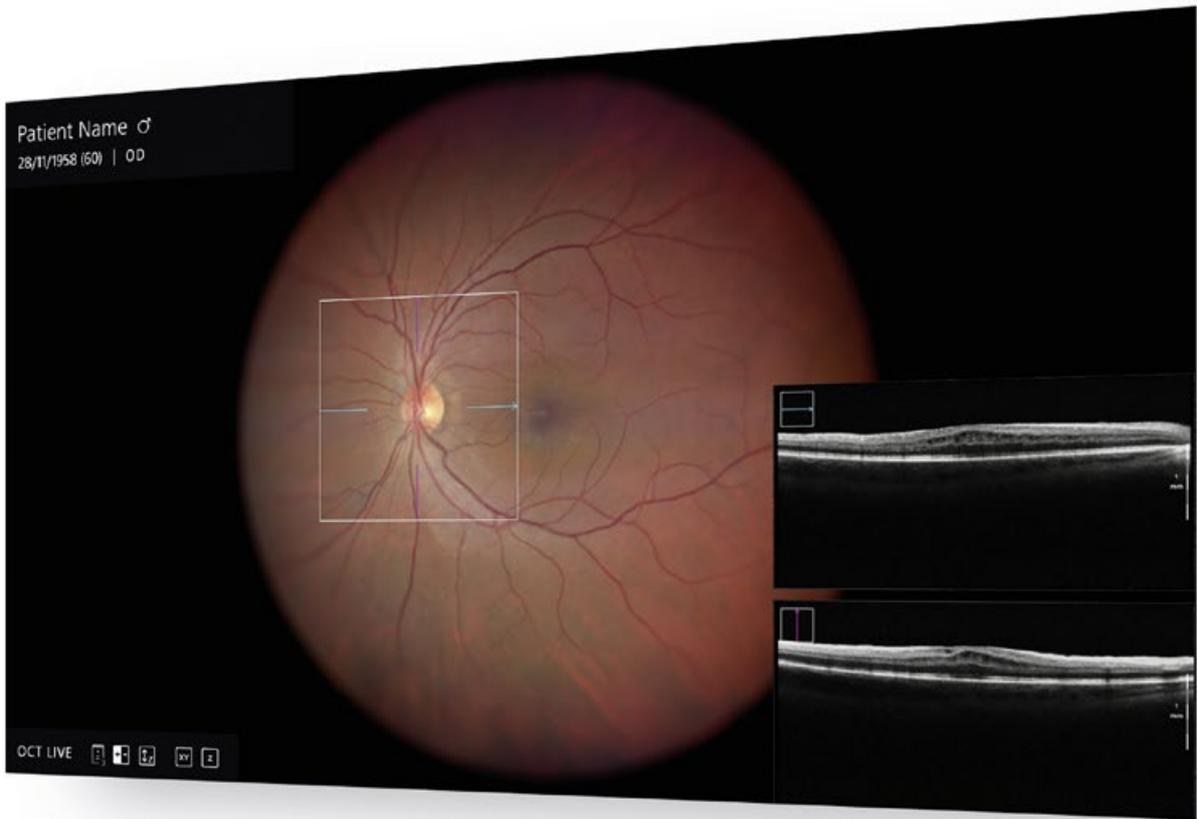
*For high magnification of the macula*



**128D wide-field lens**

*For peripheral visualization and a clear overview during vitrectomy*

\*Data on file



*Retina surgery with integrated intraoperative OCT*

**Make more informed decisions with integrated intraoperative OCT.**

While OCT scans can reveal the retina's distinctive layers and could help diagnose eye disorders, ZEISS ARTEVO 800 unleashes the full potential of intraoperative OCT images like never before. With 39% more image information\* and magnification at a new level, you can reveal significant insights, which allow strategy adjustments during surgery.

Intraoperative OCT can support during various retinal procedures. It can help to reveal epiretinal membrane, macular edema, posterior hyaloidal traction, and retinal detachment, for example.<sup>2</sup>

<sup>2</sup>Ehlers, Justis P., Joseph F. Griffith, and Sunil K. Srivastava. "Intraoperative OCT during Vitreoretinal Surgery for Dense Vitreous Hemorrhage in the PIONEER Study." *Retina (Philadelphia, Pa.)* 35.12 (2015): 2537

# See the fine details during **cornea** surgery.

ZEISS ARTEVO 800 helps you see more information during surgery and, therefore, have more control at every step. On the large 4K monitor, you can see remarkable OCT images, while the AdVision feature places critical information directly in your line of sight. You can manage every pathology in a unique way – and with more detail.

## **Control the details you see.**

ZEISS ARTEVO 800 allows you to view the eye like never before thanks to DigitalOptics. With 25% higher resolution than competitive devices\*, outstanding depth of field and natural colors, you can see the eye with remarkable clarity. The combination of high magnification and high resolution helps you to never miss a detail.

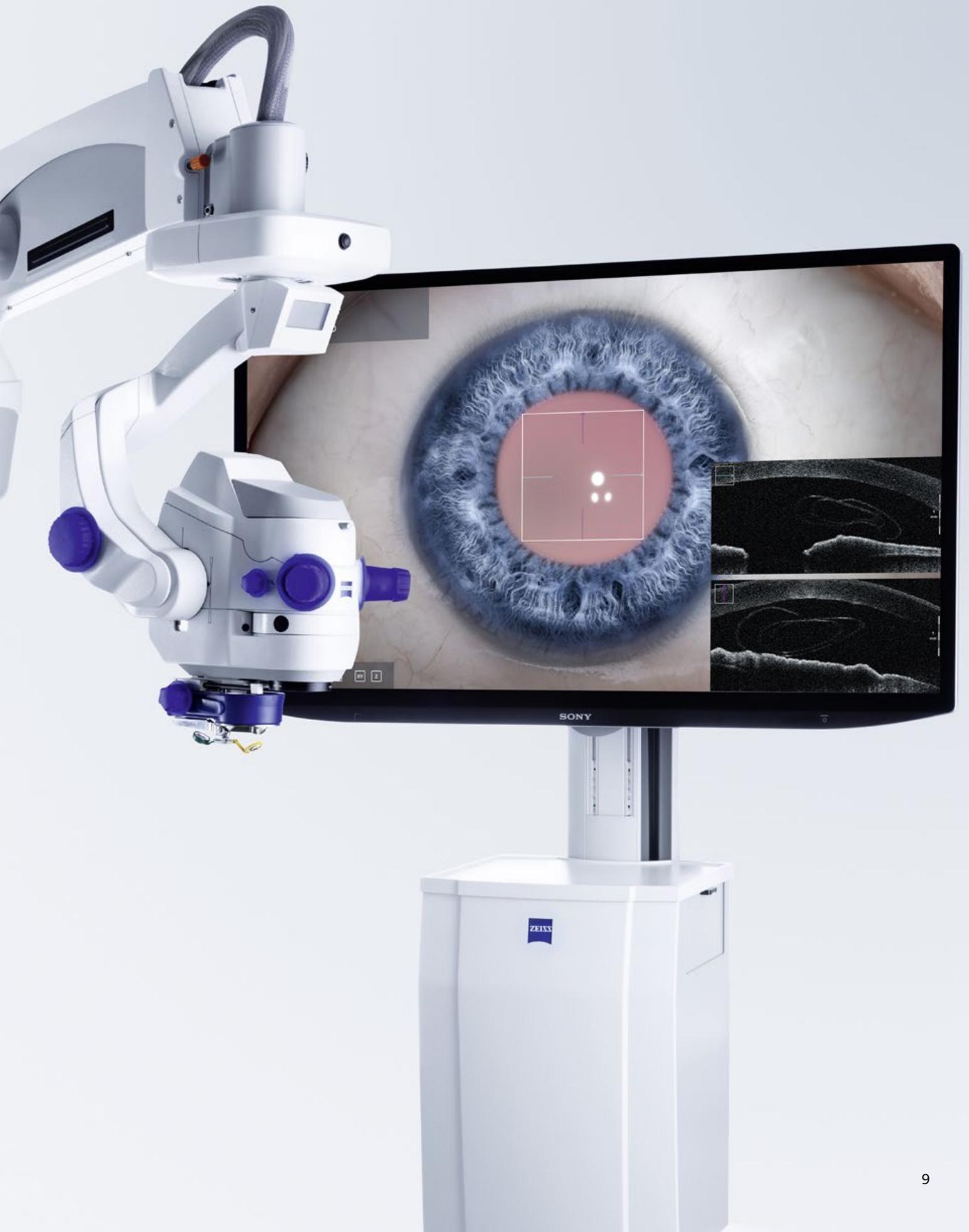
## **Get better OCT imaging and make informed decisions.**

Compared to previous intraoperative OCT capabilities, the OCT visualization of ZEISS ARTEVO 800 delivers 39% more image information\*. Fully controlled by you, the intraoperative OCT images help you unleash the potential of OCT imaging and take advantage of new insights, which could result in quick decision making.

The integrated intraoperative OCT can support in monitoring the graft orientation and assessing the interface with the patient's cornea in DMEK. For DALK procedures, dissection depth can be evaluated to potentially improve the reproducibility of the big-bubble procedure.

\*Data on file



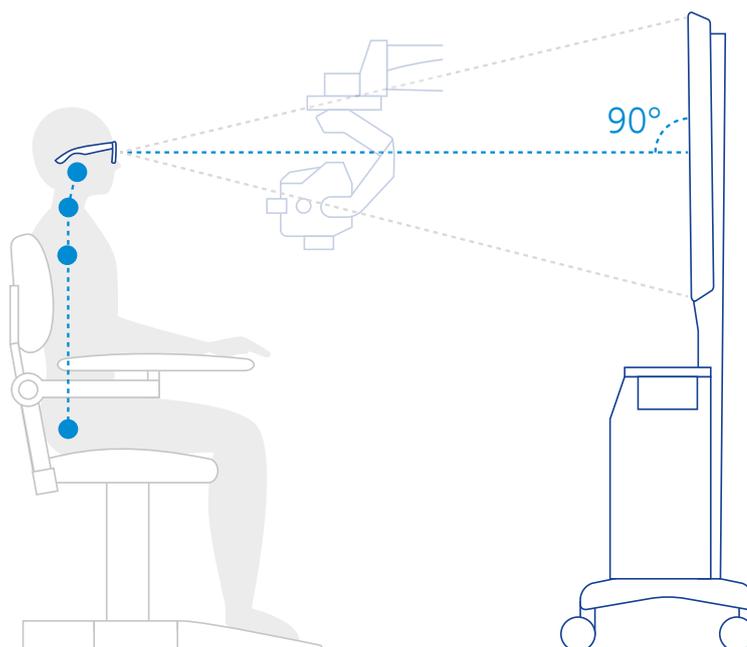


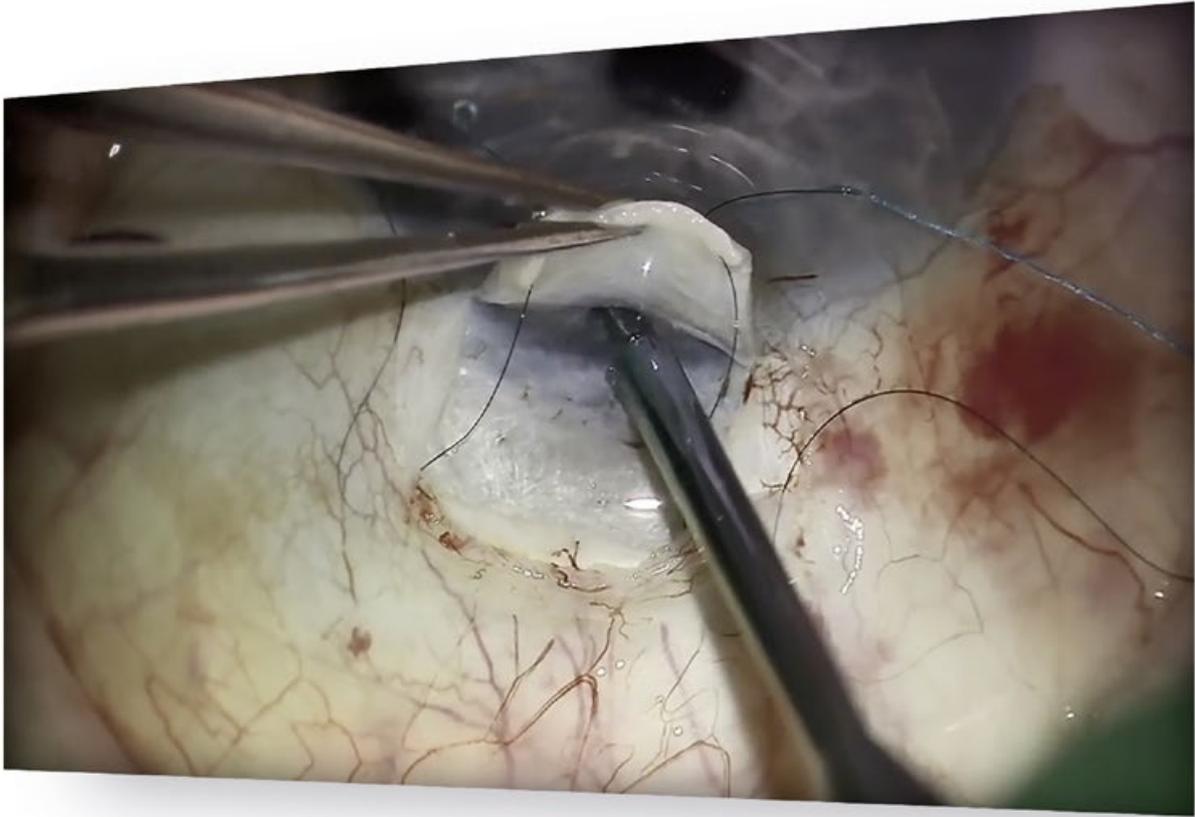
# Experience improved ergonomics during glaucoma surgery.

The design of ZEISS ARTEVO 800 allows for complete heads-up surgery, eliminating the need to look through the oculars of an analog microscope. As you view exceptional images on a large 3D monitor during time-intensive glaucoma procedures, the heads-up experience can result in reduced neck and back pain. In the short term, you can potentially treat more patients per day, while the more natural upright position can prove to be physically beneficial over the course of years.

## Get improved ergonomics for your health.

For many surgeons, serious neck and back pain from poor posture is a daily concern that can have long-term consequences, such as frequent headaches or chronic neck pain. Heads-up surgery is a recognized solution – and more than 90% of anterior segment surgeons confirm ergonomics as a main advantage of working with the ZEISS ARTEVO 800\*.





*Glaucoma surgery with integrated intraoperative OCT  
Image courtesy: Ingeborg Stalmans MD, 2020*

**Clearly distinguish the details of the eye.**

With amazing natural colors and 25% more resolution\*, you can distinguish the many shades of white seen during glaucoma surgery. The advanced optics of ZEISS ARTEVO 800 can help you make more informed decisions, giving you the opportunity to improve overall performance and reach the outcomes you expect.

**Look into the angle with the motorized tilt.**

To better observe the iridocorneal angle, tip the microscope head as needed with the motorized tilt. This allows for a flexible perspective of your glaucoma procedure.

\*Data on file.

## Teaching possibilities

Create an immersive teaching experience.

ZEISS ARTEVO 800 is an excellent ophthalmic microscope for teaching, letting you more easily demonstrate techniques using advanced 3D imaging technology. Your students can see everything you see, including brilliant OCT images and cataract assistance functions. They can also experience the enhanced visualization of DigitalOptics for natural colors, outstanding depth of field and high resolution.

Not only can students see the same images and information that you see while treating patients, you can provide guidance as they perform surgery using the same visualization. You can lead each student through surgery and offer precise instruction at every step. In a truly immersive and digital experience, you can engage the next generation of ophthalmologists in a completely new way.



<sup>3</sup>Dhimitri, Kenneth C., et al. "Symptoms of musculoskeletal disorders in ophthalmologists." *American journal of ophthalmology* 139.1 (2005): 179-181

<sup>4</sup>Diaconita, Vlad, et al. "Survey of occupational musculoskeletal pain in injur in Canadian ophthalmology." *Canadian Journal of Ophthalmology* 54.3 (2019): 314-322

<sup>5</sup>Kaup, Soujanya, et al. "Ergonomic practices and musculoskeletal disorders among ophthalmologists in India: An Online appraisal." *European Journal of Ophthalmology* 30.1 (2020): 196-200.

\*Data on file

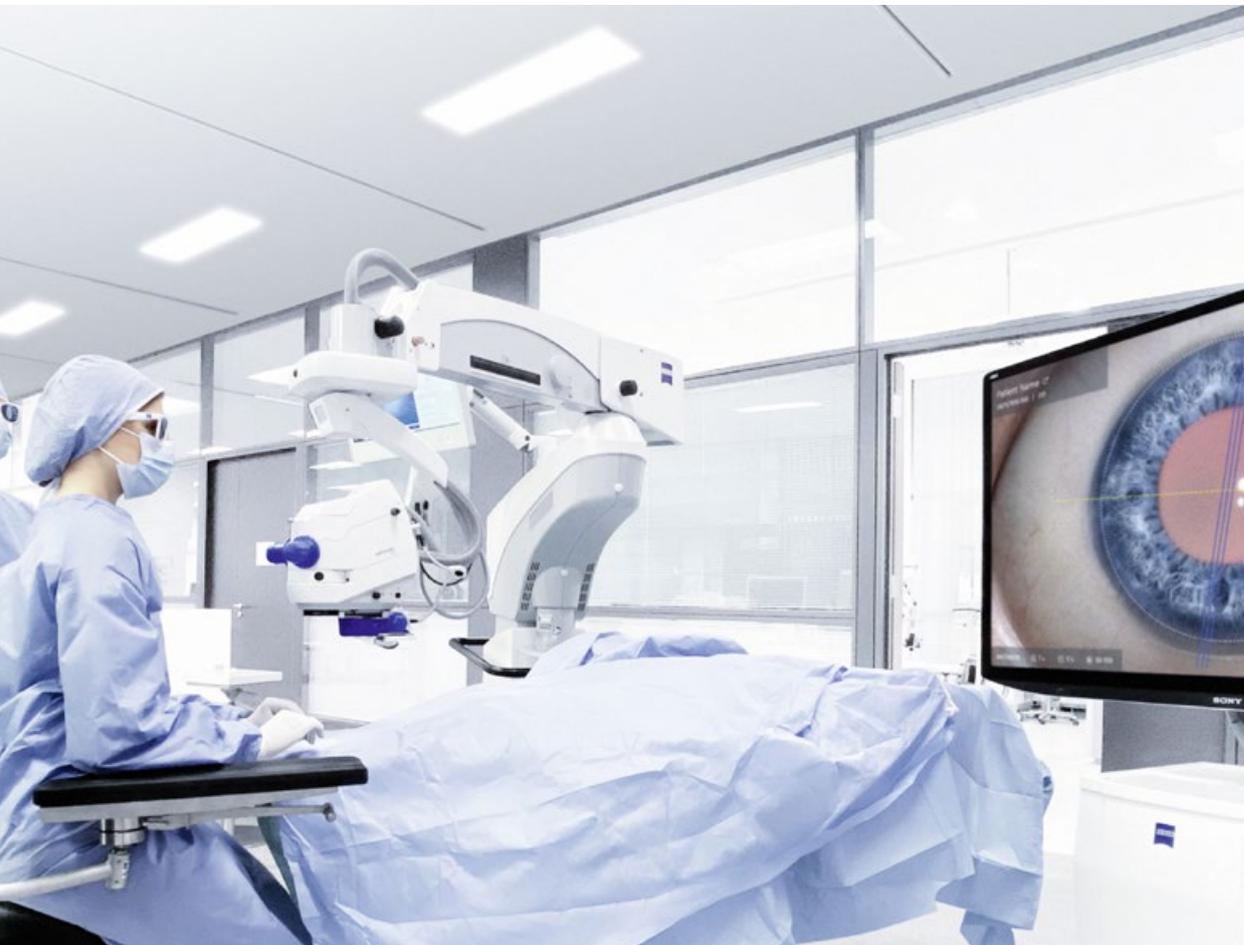
## Ergonomics matter in your OR

Reduce neck and back pain.

More than half of ophthalmic surgeons suffer from neck and back pain with one cause being poor ergonomic practices in the operating room.<sup>3,4,5</sup> Long-term effects include reduced productivity and serious musculoskeletal disorders.<sup>5</sup>

Working heads-up with ZEISS ARTEVO 800 enables you to sit up straight and reduce physical discomfort. Even during long days in surgery, you can stay relaxed and focused. This matters – just think of the number of days you spend in the OR over your career.

Benefit from the new freedom of movement provided by heads-up surgery – an approach that a vast majority of surgeons confirm is a key advantage of working with the ZEISS ARTEVO 800.\*



*Your students can clearly follow the surgery.*

## Hybrid Mode

Switch seamlessly between two views.

When necessary, you can easily switch between digital and hybrid views without compromising visualization. Hybrid Mode allows you to use classic oculars in combination with digital capabilities. And no matter which mode you choose, your students will still see the same view that you see thanks to the 3D glasses and high resolution monitor. Superb OCT imaging, remarkable resolution, natural colors, outstanding depth of field and more will always be visible.



### **Hybrid Mode**

*For greater flexibility in the OR, you have the freedom to choose between digital and hybrid visualization without compromising the quality of visualization.*

## AutoAdjust

Stay focused on your surgery.

Designed to follow the surgeon's workflow, AutoAdjust automatically adjusts settings without additional interaction – for example, when switching between anterior and posterior segments.



### **AutoAdjust**

*Stay focused on your surgery. AutoAdjust anticipates your workflow and adjusts your settings automatically.*

# Technical data

## ZEISS ARTEVO 800

<b>Visualization</b>	2x 3-Chip 4K Cameras External 55" 4K 3D video monitor Digital and hybrid mode available
<b>Surgical microscope</b>	Magnification: 4–24.2x (10x tube, 175 mm objective lens) Focusing: electric/motorized, focus range: 70 mm DigitalOptics Digital enhancements
<b>Illumination</b>	SCI (Stereo-Coaxial Illumination) included Xenon, LED and Halogen available Optional filters available
<b>Slit illumination</b>	Integrated slit illuminator (width: 0.2 mm, 2 mm, 3 mm, 4 mm) External slit illumination VISULUX available

## ZEISS Intraoperative OCT

<b>Scan parameters</b>	A-Scan depth: 2.9 and 5.8 mm in tissue Scan length adjustable 3–16 mm Scan rotation adjustable 360° Scan modes for live and capture acquisition: Live: 1-line                      Capture: 1-line 5-lines                      5-line cross hair                      cube
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## ZEISS RESIGHT family

<b>Fundus viewing systems</b>	ZEISS RESIGHT 700 (motorized)
<b>Lenses available</b>	60D and 128D

## ZEISS CALLISTO eye

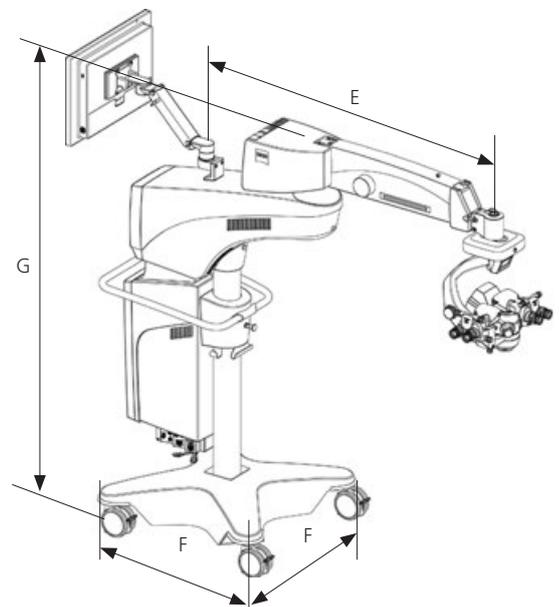
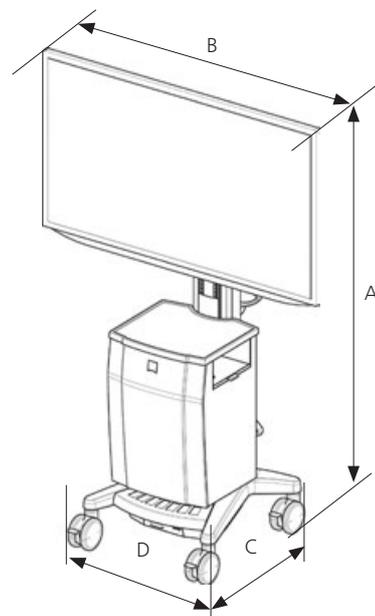
<b>Assistance functions</b>	<b>Z ALIGN®:</b> perform toric IOL centration on the visual axis provided by the IOLMaster and perform rotational alignment <b>Incision:</b> position incisions, optionally on the steep axis; add opposite clear cornea incision and paracenteses <b>Rhexis:</b> size and shape capsulorexis and align the IOL on the visual axis provided by the IOLMaster <b>LRI:</b> perform relaxing incisions <b>K TRACK®:</b> estimate the local corneal curvature in combination with a keratoscope
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## Connectivity

<b>Data management</b>	DICOM module for image and video data transfer to and from PACS (e.g., ZEISS FORUM) Cloud Connectivity (depending on availability of EQ mobile)
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## Measurements

<b>Monitor</b>	Total height (A) 1830 mm Monitor width (B) 1265 mm Monitor cart length (C) 721 mm Monitor cart width (D) 621 mm
<b>Microscope</b>	Swivel arm length (E) 893 mm Microscope footprint (F) 805 mm Total height (G) 1880 mm





ARTEVO 800  
RESIGHT 700  
CALLISTO eye Panel PC



0297

RESCAN 700  
CALLISTO eye Software



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