LenSx®
LASER

DON'T SETTLE FOR LESS THAN THE COMPLETE EXPERIENCE.

The advanced LenSx® Laser delivers the complete cataract experience.

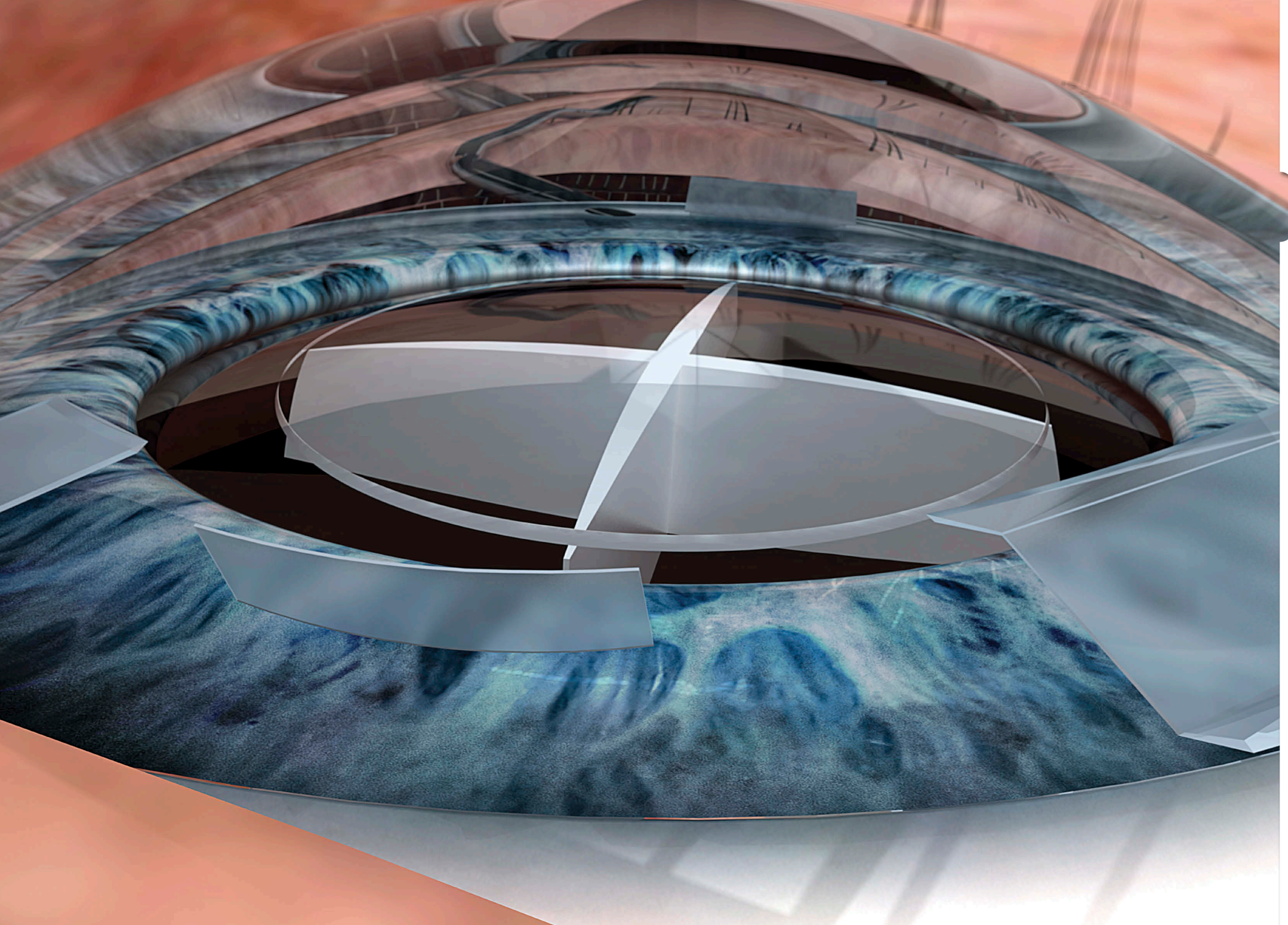
Alcon A Novartis Division

LenSx® LASER | Advancing CATARACT SURGERY

The complete anterior segment cataract workstation

With over 1,000 units in place to date, the category-defining LenSx® Laser has helped enhance more than 800,000 cataract procedures worldwide through:

- Easy-to-use and efficient user experience
- Enhanced procedure automation and intuitive user interface
- Precise and customizable incision architecture
- Pristine capsulotomies with versatile fragmentation patterns
- Simple and efficient one-piece patient interface
- Innovative, high-definition OCT technology



Advancing cataract surgery

At Alcon, we are dedicated to continuously moving cataract surgery forward. We offer innovative technologies, educational resources and trusted partnerships to help you not only improve your surgical outcomes, but change lives.

Technology

- The trusted LenSx® Laser is used in more laser cataract surgeries worldwide than any other femtosecond laser.[1]
- Built on a proven, upgradable platform, the LenSx® Laser is designed to grow with you and your practice for years to come.
- The LenSx® Laser offers proprietary innovations including the SoftFit™ Patient Interface and Variable Beam Profile.
- The LenSx® Laser utilizes multiple OCT technologies to deliver exceptionally accurate HD visualization throughout the procedure.
- Streamlined LenSx® Laser procedures commonly last less than two minutes from suction on to suction off.[1,2]

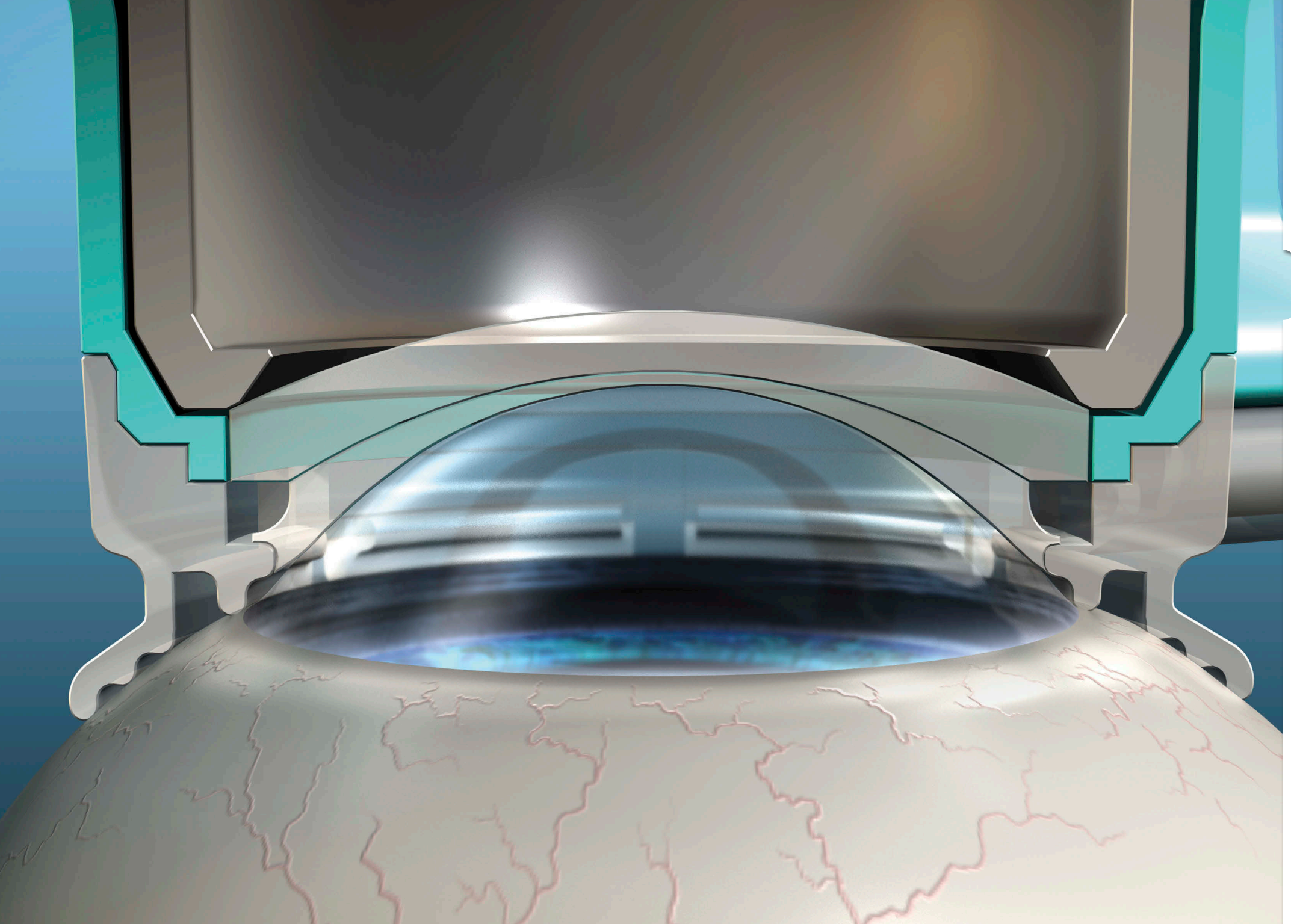
FACT: LenSx® Laser surgical outcomes are more precise and reproducible than those of manual cataract surgery.[3-6]

Education

- More than 3,500 surgeons worldwide have been trained on the LenSx® Laser.
- Practices around the globe benefit from robust patient- and staff-focused resources.
- Alcon offers surgeons ongoing support and education.

Partnership

- When you invest in the LenSx® Laser, Alcon invests in your success.
- The LenSx® Laser is backed by the largest network of field service engineers and clinical applications specialists in ophthalmology.
- The LenSx® Laser comes with excellent preventative maintenance, service and troubleshooting for maximized uptime.
- Alcon is committed to further advancing femtosecond laser technology and efficiency in partnership with the cataract surgeons we serve.



Docking simplicity for surgeons and patients

SoftFit™ Patient Interface: Different by design

Utilizing proprietary hydrogel technology, the SoftFit™ Patient Interface conforms to the patient's natural corneal curvature for simple, consistent docking and minimized corneal distortion.

- Fixates the eye, not the head, eliminating the need to strap down the patient
- Does not require an additional suction ring or water
- Enables fixation with light applanation; IOP rise is just 16 mmHg above baseline
- Delivers precise laser energy to the entire anterior segment
- No statistically significant difference from manual capsulorhexis in terms of edge smoothness and uniformity[4]

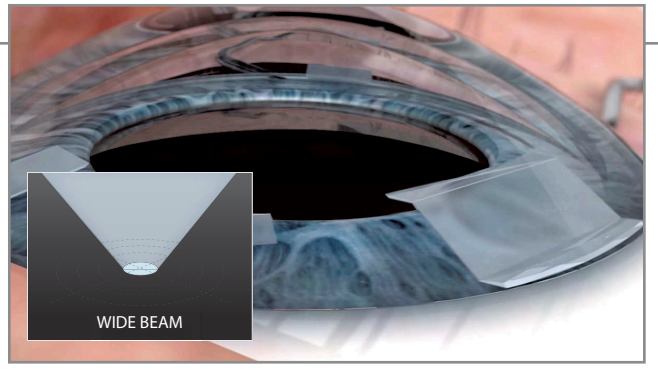
FACT: The SoftFit™ Patient Interface is not associated with tags or misdirected pulses.[4,7,8]

Variable Beam Profile:
Precision throughout the anterior segment

Unique among femtosecond cataract lasers, the LenSx® Laser features a patented Variable Beam Profile that precisely tailors laser energy delivery optimized for each structure within the eye.

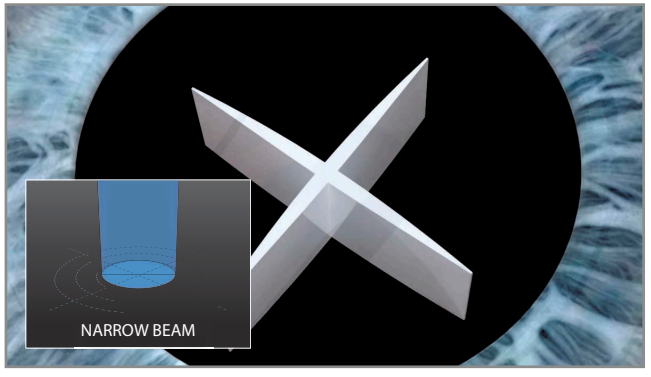
- Accurately and effectively performs all incisions, capsulotomy and fragmentation according to the surgical plan
- Enables surgeons to perform a wide range of procedures, including LASIK flaps
- Increases laser efficiency in corneal, capsular and lenticular tissue

FACT: The Variable Beam Profile of the LenSx® Laser adjusts the beam's focus angle at each surgical plane for truly versatile performance.



Wide beam is designed for corneal accuracy.

Mid beam puts focus on the capsule.



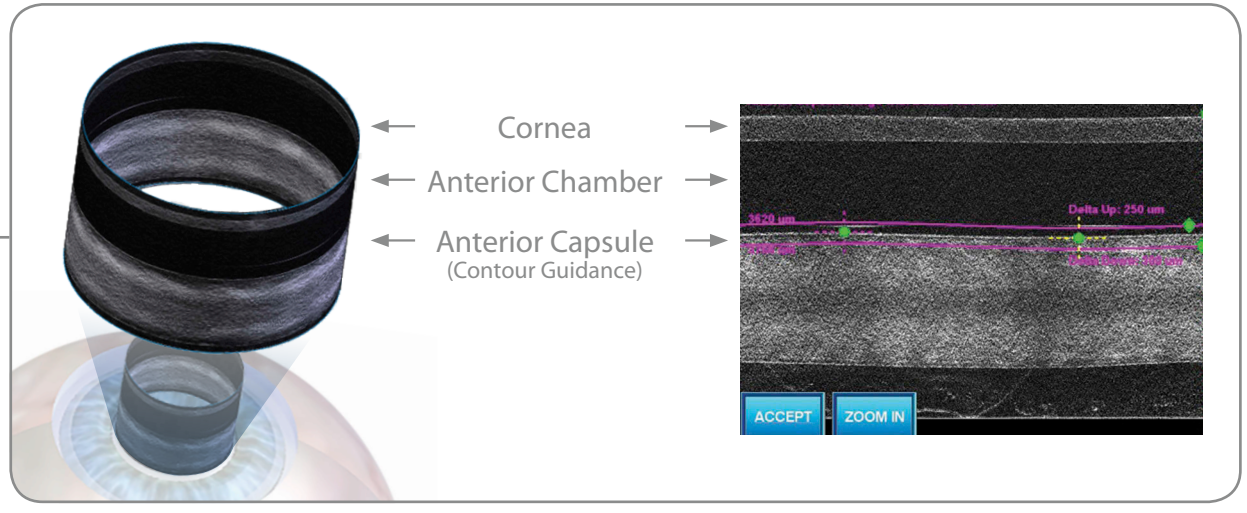
Narrow beam is intended for effective lens fragmentation.

High-Definition OCT: Advanced visualization

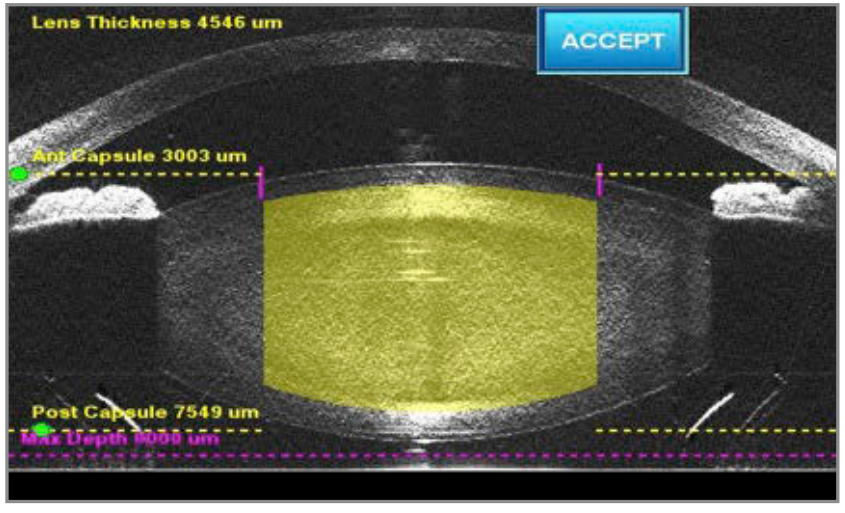
The LenSx® Laser utilizes multiple OCT technologies to deliver accurate HD visualization throughout the procedure.

- A proprietary circle scan provides a complete 360˚ view of the eye that is “unwrapped” to create a full image of the anterior capsule
  - Automatically recognizes maximum lens tilt for true contour-guided capsulotomies
- The HD OCT system also provides a full-thickness line scan of the entire anterior segment in a single scan
  - Images up to a depth of 8.5 mm, eliminating need to stitch multiple images together for a complete view
- Real, anatomical monitoring, not a computer-generated simulation

FACT: Stable eye fixation enables highly accurate, real-time imaging and laser treatment.



Circle scan



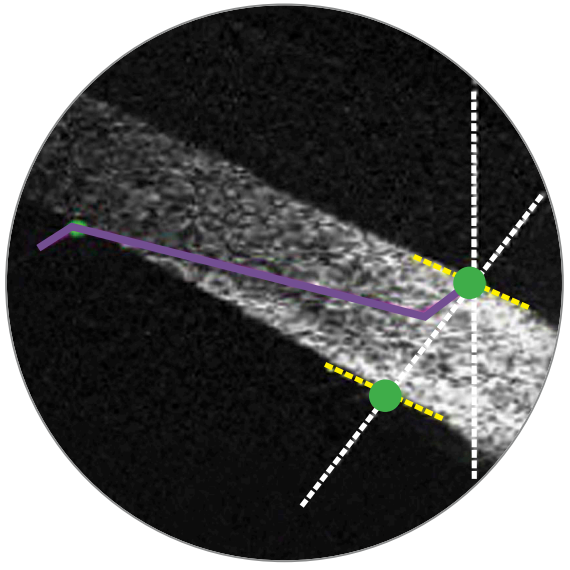
Line scan

Accuracy begins with the cornea

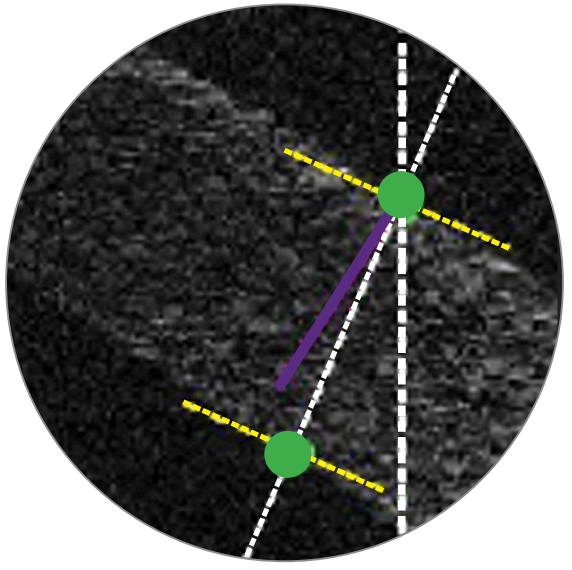
Complex cornea work automated and simplified

The LenSx® Laser delivers complex corneal work with precision and ease.

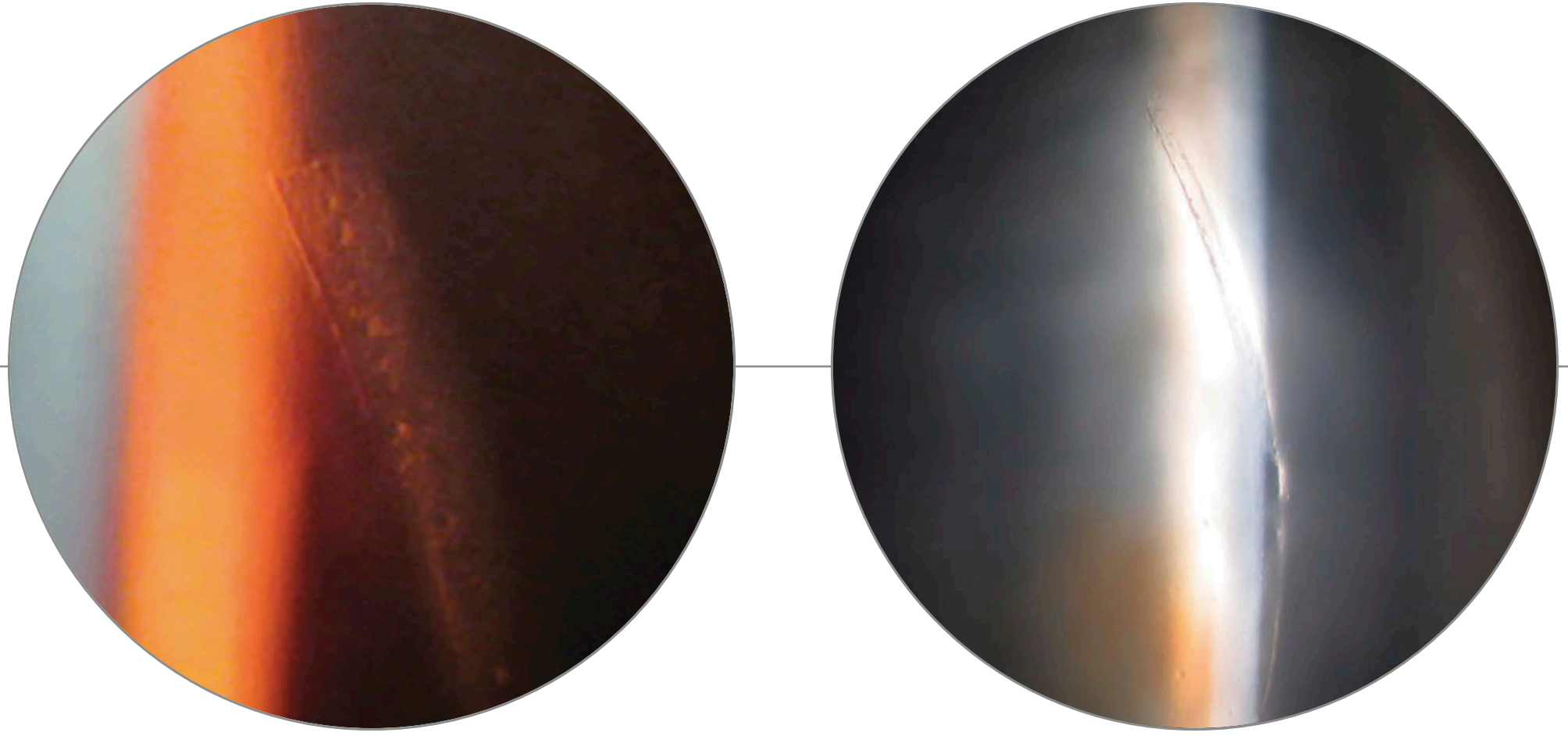
- Image-guided precision for highly accurate primary, secondary and arcuate corneal incisions
- Percent depth, corneal thickness, length and position are all imaged and calculated in real time
- Each incision is easily customized to the unique dimensions of your patients' eyes and/or your surgical preference



Multi-planar, self-sealing incisions are reproducible and stable[9]



Geometrically perfect arcuate incisions that are adjustable in size, location and depth



Photos courtesy of John Davidson, M.D.

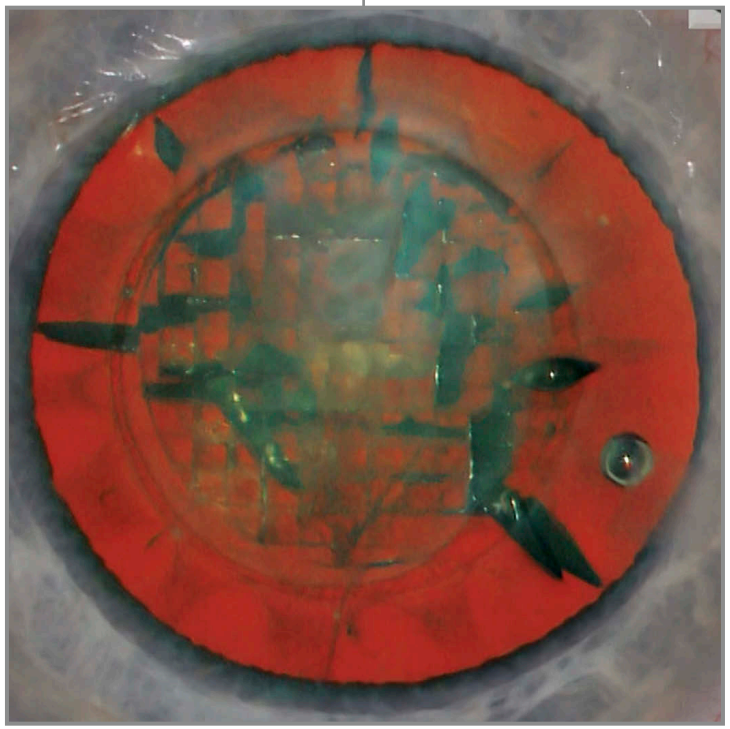
FACT: Compared to manual cataract surgery, a LenSx® Laser procedure demonstrated lower central endothelial cell loss, lower increase of corneal thickness at the incision site and better incision tunnel morphology.[10]

Pristine capsulotomies

With its optimized energy delivery, the LenSx® Laser delivers a complete, contour-guided capsulotomy with pristine edges.[7,11]

- Low capsulotomy anterior tear rate of only 0.2%, compared with up to 5.3% in manual surgery[7]
- Delivers superior geometric precision and centration, with reported better capsule strength compared to manual capsulotomies[7]
- No statistically significant difference in edge quality compared to liquid optic interface platforms[4]
- Results in better effective lens position versus manual, which may help reduce higher-order abberations[6]

FACT: Autocentration of the capsulotomy can be aligned with the limbus, dilated pupil or even undilated pre-op pupil when combined with the Verion® Image Guided System.

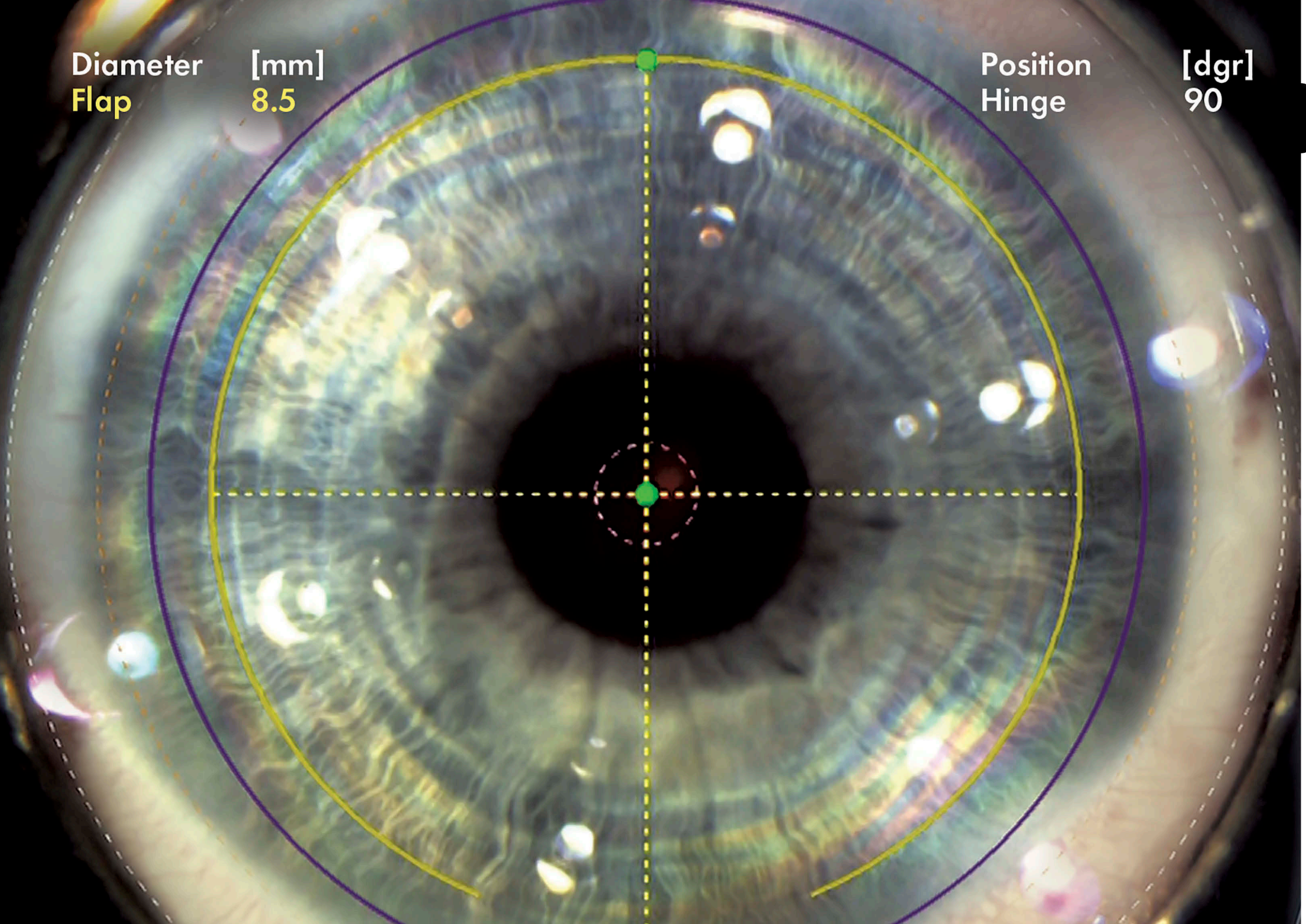


Fragmentation patterns to fit any cataract

With multiple fragmentation patterns and combinations available, the LenSx® Laser provides greater flexibility to fit more patient anatomies and surgeon preferences.

- Capable of performing customizable cylinder, drop, hybrid and grid patterns for even the most challenging lens densities
  - Grid pattern customization includes:
    - Zero-, one- or two-layer horizontal cuts
    - Zero, four or eight radial spokes that run through the lens in combination with grid fragmentation pattern
- Lens fragmentation helps reduce phacoemulsification time in the eye during cataract surgery
  - Reduces risk for lens capsule complications and corneal endothelial injury[8]
- The LenSx® Laser and the Centurion® Vision System are complementary technologies that help deliver quieter postoperative eyes

FACT: LenSx® Laser surgeries use less phacoemulsification and torsional time, less cumulative dissipated energy and less irrigation fluid.[11]


Diameter [mm]
Flap 8.5
Position [dgr]
Hinge 90

Enhanced flexibility for your practice

With innovative platform architecture that allows for continuous advancement, the LenSx® Laser offers customized LASIK flap creation.

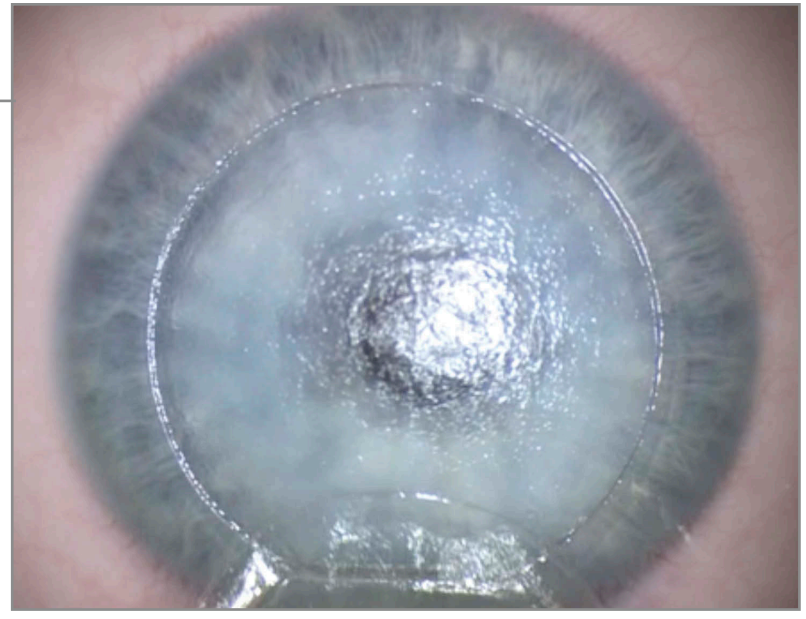
- Surgeon-selectable flap location, hinge and side-cut parameters
- Full adjustability of flap centration and diameter, even after light suction has been applied
- Touchscreen controls allow surgeons to quickly and easily shift from cataract to flap procedures

Precise corneal flap creation

- Creates a uniform bubble layer for easier lifting of the flap
- Delivers consistent flap thickness and smooth edges
- Helps minimize the appearance of an Opaque Bubble Layer (OBL)

LenSx® Laser Flap Parameters

Feature		Min	Max
Flap Thickness	[µm]	110	190
Flap Diameter	[mm]	8.5	9.5
Hinge Angle	[deg]	30	90
Hinge Position	[deg]	0	360
Side-Cut Angles	[deg]	60	110

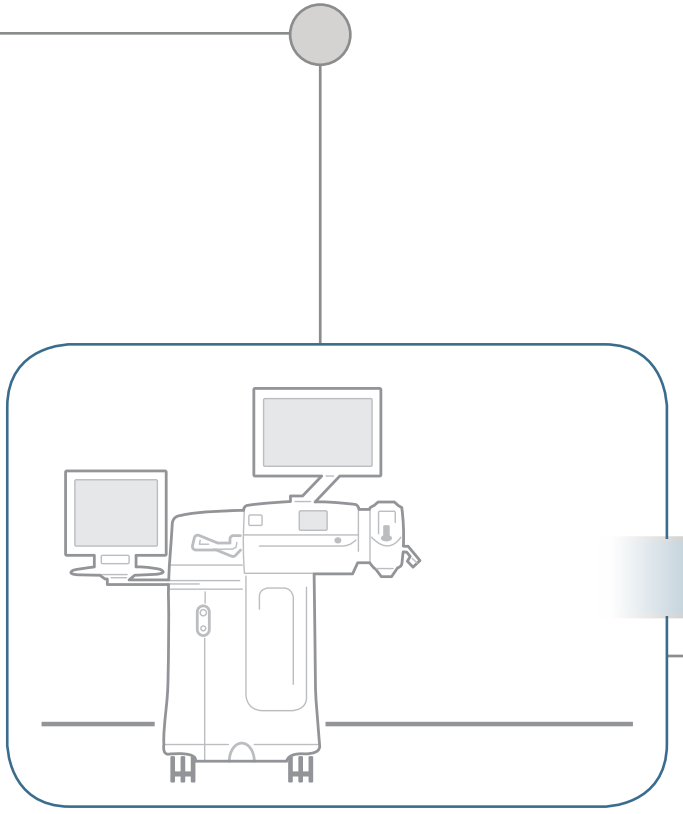


Completed flap using the LenSx® Laser

Designed for speed

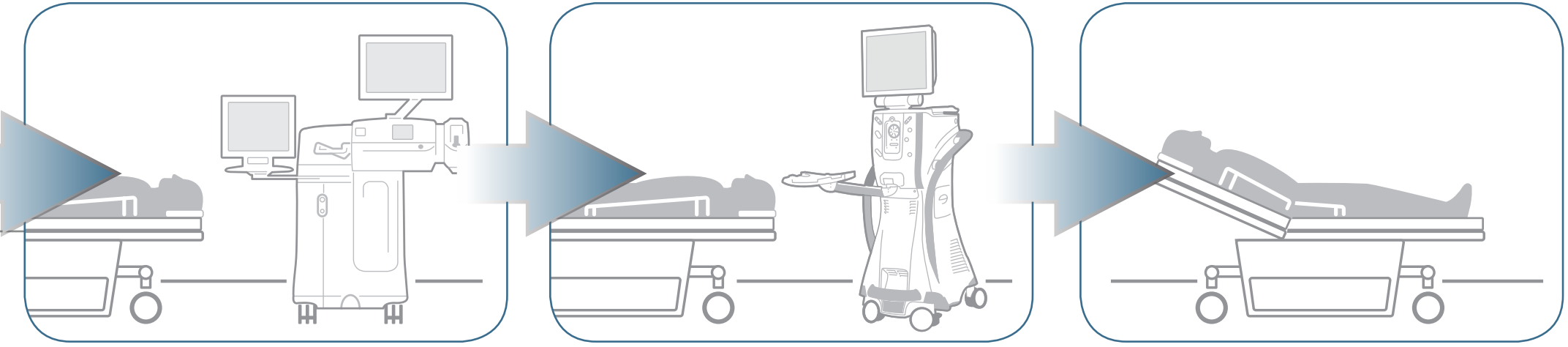
Through its advanced automation and rapid treatment times, the LenSx® Laser helps maximize surgical efficiency and patient flow.

- Total cataract procedure time is typically less than two minutes — including imaging, all treatment options, lens fragmentation, capsulotomy and all corneal incisions — with an average laser treatment time of 25–40 seconds[1,2]
- Total flap procedure is typically one minute or less — creating a laser flap in 15 seconds or less[1]
- Patient docking with the SoftFit™ Patient Interface is a fast, simple and straightforward
- An intuitive, easy-to-use graphic user interface, combined with its high-definition OCT and auto-centration feature, helps streamline planning and execution



Set up the LenSx® Laser in a dedicated area

FACT: The LenSx® Laser does not have a fixed bed, which reduces fall risk due to patient transfers to and from a gurney.



Guide the patient to the LenSx® Laser

Move the patient from the LenSx® Laser to OR for lens removal

After surgery, transport the patient to your recovery room

Femto and beyond

When combined with the LenSx® Laser, the Verion® Digital Marker helps to further enhance the cataract surgical experience.

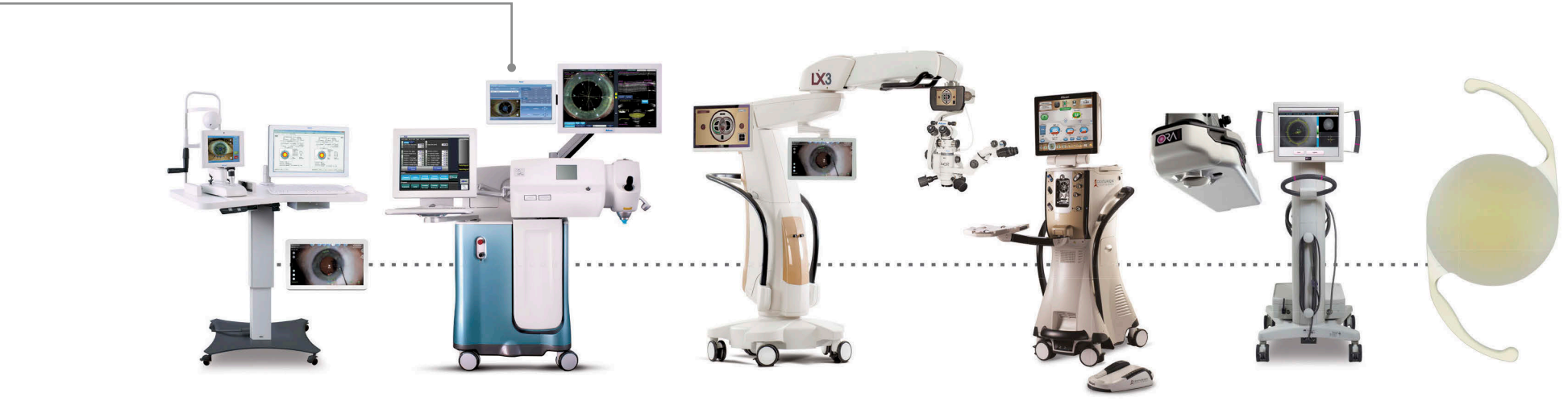
- Seamless integration: The Verion® Image Guided System allows you to create a complete surgical plan that moves with you from the clinic to the laser
  - Reduces laser planning and programming time
- Enables surgeon-selectable centration on the limbus, visual axis, dilated pupil or *preoperative undilated pupil*
- Automatically accounts and adjusts for cyclorotation in real time for greater intended effect with primary incisions, arcuate incisions and capsulotomy placement

Verion® Digital Marker

Leading integration from start to finish

The LenSx® Laser is part of The Cataract Refractive Suite by Alcon, which brings together the most advanced technologies for every phase of the cataract procedure.

- Streamlines surgical planning by seamless transfer of data
- Identifies and addresses potential sources of refractive error
- Helps surgeons more consistently hit their cataract refractive targets
- Collects, organizes and analyzes surgical data to help optimize patient outcomes



Verion® Image Guided System | *LenSx® Laser** | *LuxOR® LX3 Ophthalmic Microscope** | *Centurion® Vision System* | *ORA™ System with VerifEye+™ Technology* | *AcrySof® Advanced IOLs*

**Shown with the Verion® Digital Marker*

Focused on tomorrow

The LenSx® Laser grows as you do, with periodic hardware and software upgrades designed to improve all facets of femto technology. From great laser reliability to increased capabilities to ophthalmology's largest support and service infrastructure, Alcon is with you every step of the way.

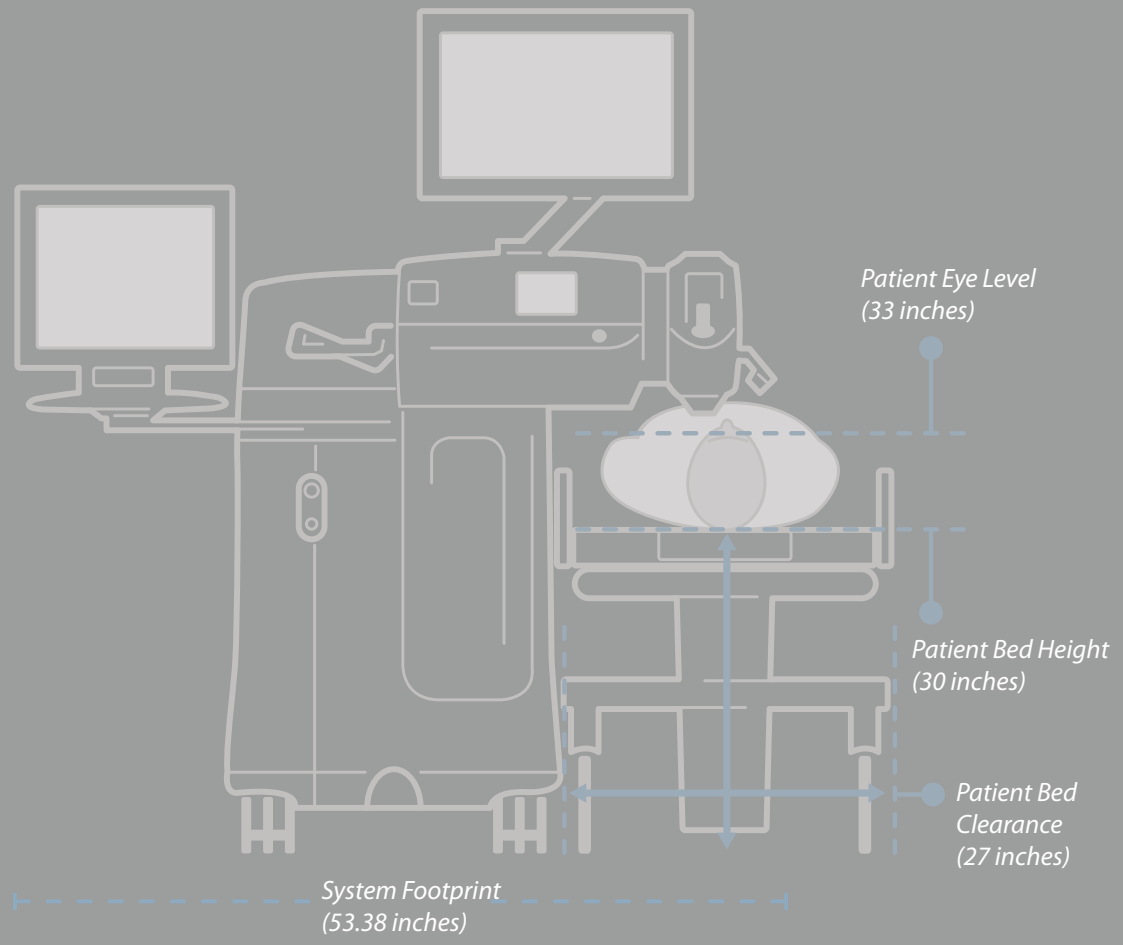
We've got work to do. Together.

Cataract surgery has come a long way. But there are still opportunities to do even more. At Alcon, we're proud to be your trusted partner in the journey to advance cataract surgery. Together, we can go further than ever before.

The LenSx® Laser is shown with the Verion® Digital Marker

Specifications

- System footprint: (width) 60” (1524 mm) x (length) 72” (1828 mm)
- System weight: 1055 pounds (479 kg)
- Minimum recommended room dimensions: 9’-8 1/8” x 7’-4 3/4” (2952.75 mm x 2256.14 mm)
- Stable room temperature: 65° F to 75° F (18° C to 24° C) including non-operational hours
- Stable room relative humidity: Less than or equal to 65% RH (non-condensing)
- Temperature control: Independent thermostat is recommended



LENSX® LASER IMPORTANT PRODUCT INFORMATION FOR CATARACT AND CORNEAL FLAP TREATMENTS
CAUTION: United States Federal Law restricts this device to sale and use by or on the order of a physician or licensed eye care practitioner. **INDICATION: Cataract Surgery Indication:** The LenSx® Laser is indicated for use in patients undergoing cataract surgery for removal of the crystalline lens. Intended uses in cataract surgery include anterior capsulotomy, phacofragmentation, and the creation of single plane and multi-plane arc cuts/incisions in the cornea, each of which may be performed either individually or consecutively during the same procedure. **Corneal Flap Indication:** The LenSx® Laser is indicated for use in the creation of a corneal flap in patients undergoing LASIK surgery or other treatment requiring initial lamellar resection of the cornea. **RESTRICTIONS:** Patients must be able to lie flat and motionless in a supine position. Patient must be able to understand and give an informed consent. Patients must be able to tolerate local or topical anesthesia. Patients with elevated IOP should use topical steroids only under close medical supervision. **CONTRAINDICATIONS: Cataract Surgery Contraindications:** Corneal disease that precludes applanation of the cornea or transmission of laser light at 1030 nm wavelength; descemetocele with impending corneal rupture; presence of blood or other material in the anterior chamber; poorly dilating pupil, such that the iris is not peripheral to the intended diameter for the capsulotomy; conditions which would cause inadequate clearance between the intended capsulotomy depth and the endothelium (applicable to capsulotomy only); previous corneal incisions that might provide a potential space into which the gas produced by the procedure can escape; corneal thickness requirements that are beyond the range of the system; corneal opacity that would interfere with the laser beam; hypotony, glaucoma* or the presence of a corneal implant; residual, recurrent, active ocular or eyelid disease, including any corneal abnormality (for example, recurrent corneal erosion, severe basement membrane disease); history of lens or zonular instability; any contraindication to cataract or keratoplasty; this device is not intended for use in pediatric surgery. **Corneal Flap Contraindications:** Corneal lesions, corneal edema, hypotony, glaucoma, existing corneal implant, keratoconus. This device is not intended for use in pediatric surgery.
WARNINGS: The LenSx® Laser System should only be operated by a physician trained in its use. The LenSx® Laser delivery system employs one sterile disposable Patient Interface consisting of an applanation lens and suction ring. The Patient Interface is intended for single use only. The disposables used in conjunction with ALCON® instrument products constitute a complete surgical system. Use of disposables other than those manufactured by Alcon may affect system performance and create potential hazards. The physician should base patient selection criteria on professional experience, published literature, and educational courses. Adult patients should be scheduled to undergo cataract extraction. **PRECAUTIONS:** Do not use cell phones or pagers of any kind in the same room as the LenSx® Laser. Discard used Patient Interfaces as medical waste.
COMPLICATIONS: Cataract Surgery AEs/Complications: Capsulotomy, phacofragmentation, or cut or incision decentration; incomplete or interrupted capsulotomy, fragmentation, or corneal incision procedure; capsular tear; corneal abrasion or defect; pain; infection; bleeding; damage to intraocular structures; anterior chamber fluid leakage, anterior chamber collapse; elevated pressure to the eye. **Corneal Flap AEs/Complications:** Corneal edema, corneal pain, epithelial in-growth, epithelial defect, infection, flap decentration, incomplete flap creation, flap tearing or incomplete lift-off, free cap.
ATTENTION: Refer to the LenSx® Laser Operator's Manual for a complete listing of indications, warnings and precautions.
*Glaucoma is not a contraindication when these procedures are performed using the LenSx® Laser SoftFit™ Patient Interface Accessory.

Verion® IMAGE GUIDED SYSTEM IMPORTANT PRODUCT INFORMATION
Verion® Reference Unit and Verion® Digital Marker
CAUTION: Federal (USA) law restricts this device to sale by, or on the order of, a physician. **INTENDED USES:** The Verion® Reference Unit is a preoperative measurement device that captures and utilizes a high-resolution reference image of a patient's eye. In addition, the Verion® Reference Unit provides pre-operative surgical planning functions to assist the surgeon with planning cataract surgical procedures. The Verion® Reference Unit also supports the export of the reference image, preoperative measurement data, and surgical plans for use with the Verion® Digital Marker and other compatible devices through the use of a USB memory stick. The Verion® Digital Marker links to compatible surgical microscopes to display concurrently the reference and microscope images, allowing the surgeon to account for lateral and rotational eye movements. In addition, details from the Verion® Reference Unit surgical plan can be overlaid on a computer screen or the physician's microscope view. **CONTRAINDICATIONS:** The following conditions may affect the accuracy of surgical plans prepared with the Verion® Reference Unit: a pseudophakic eye, eye fixation problems, a non-intact cornea, or an irregular cornea. In addition, patients should refrain from wearing contact lenses during the reference measurement as this may interfere with the accuracy of the measurements. The following conditions may affect the proper functioning of the Verion® Digital Marker: changes in a patient's eye between preoperative measurement and surgery, an irregular elliptic limbus (e.g., due to eye fixation during surgery, and bleeding or bloated conjunctiva due to anesthesia). In addition, the use of eye drops that constrict sclera vessels before or during surgery should be avoided.
WARNINGS: Only properly trained personnel should operate the Verion® Reference Unit and Verion® Digital Marker. Use only the provided medical power supplies and data communication cable. Power supplies for the Verion® Reference Unit and the Verion® Digital Marker must be uninterruptible. Do not use these devices in combination with an extension cord. Do not cover any of the component devices while turned on. The Verion® Reference Unit uses infrared light. Unless necessary, medical personnel and patients should avoid direct eye exposure to the emitted or reflected beam.
PRECAUTIONS: To ensure the accuracy of Verion® Reference Unit measurements, device calibration and the reference measurement should be conducted in dimmed ambient light conditions. Only use the Verion® Digital Marker in conjunction with compatible surgical microscopes.
ATTENTION: Refer to the user manuals for the Verion™ Reference Unit and the Verion® Digital Marker for a complete description of proper use and maintenance of these devices, as well as a complete list of contraindications, warnings and precautions.

CENTURION® VISION SYSTEM IMPORTANT PRODUCT INFORMATION
CAUTION: Federal (USA) law restricts this device to sale by, or on the order of, a physician. As part of a properly maintained surgical environment, it is recommended that a backup IOL Injector be made available in the event the AutoSert® IOL Injector Handpiece does not perform as expected.
INDICATION: The Centurion® Vision System is indicated for emulsification, separation, irrigation, and aspiration of cataracts, residual cortical material and lens epithelial cells, vitreous aspiration and cutting associated with anterior vitrectomy, bipolar coagulation, and intraocular lens injection. The AutoSert® IOL Injector Handpiece is intended to deliver qualified AcrySof® intraocular lenses into the eye following cataract removal. The AutoSert® IOL Injector Handpiece achieves the functionality of injection of intraocular lenses. The AutoSert® IOL Injector Handpiece is indicated for use with the AcrySof® lenses SN60WF, SN6AD1, SN6AT3 through SN6AT9, as well as approved AcrySof® lenses that are specifically indicated for use with this inserter, as indicated in the approved labeling of those lenses.
WARNINGS: Appropriate use of Centurion® Vision System parameters and accessories is important for successful procedures. Use of low vacuum limits, low flow rates, low bottle heights, high power settings, extended power usage, power usage during occlusion conditions (beeping tones), failure to sufficiently aspirate viscoelastic prior to using power, excessively tight incisions, and combinations of the above actions may result in significant temperature increases at incision site and inside the eye, and lead to severe thermal eye tissue damage. Good clinical practice dictates the testing for adequate irrigation and aspiration flow prior to entering the eye. Ensure that tubings are not occluded or pinched during any phase of operation. The consumables used in conjunction with ALCON® instrument products constitute a complete surgical system. Use of consumables and handpieces other than those manufactured by Alcon may affect system performance and create potential hazards. **AEs/COMPLICATIONS:** Inadvertent actuation of Prime or Tune while a handpiece is in the eye can create a hazardous condition that may result in patient injury. During any ultrasonic procedure, metal particles may result from inadvertent touching of the ultrasonic tip with a second instrument. Another potential source of metal particles resulting from any ultrasonic handpiece may be the result of ultrasonic energy causing micro abrasion of the ultrasonic tip.
ATTENTION: Refer to the Directions for Use and Operator's Manual for a complete listing of indications, warnings, cautions and notes.

1. Alcon data on file.
2. Yeoh R. Practical differences between 3 femtosecond phaco laser platforms. *J Cataract Refract Surg*. 2014;40(3):510.
3. Chen X, Chen K, He J, Yao K. Comparing the curative effects between femtosecond laser-assisted cataract surgery and conventional phacoemulsification surgery: a meta-analysis. *PLoS ONE*. 2016;11(3):e0152088.
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7. Lawless M. Femtosecond laser-assisted cataract surgery. *US Ophthalmic Rev*. 2014;7(2):82-88.
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11. De La Cruz J. A reduction in the femtosecond cataract learning curve: initial resident experience performing cataract surgery with and without femtosecond laser. FP-2989. XXXI Congress of the ESCRS; October 5-9, 2013; Amsterdam, Netherlands.

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