

JUST GO

The CATALYS System

**TAKE THE
FAST TRACK
TO SURGICAL
EXCELLENCE**

MAKE YOUR MOVE



CATALYS

Precision Laser System

LENS EXTRACTION

CATALYS PRECISION LASER SYSTEM

Johnson & Johnson VISION

Put Your Practice in the Premium Fast Lane WITH THE CATALYS SYSTEM

It's all ahead of you — head-turning clinical capabilities, premium growth and a gentle experience.



Outstanding Clinical
OUTCOMES

Don't let opportunity pass you by.
Seize your premium future with
the **CATALYS** System.

MAKE YOUR MOVE.



Seamless Practice
INTEGRATION



Premium Patient
EXPERIENCE



CATALYS PRECISION LASER SYSTEM pg 3

GO CONFIDENTLY

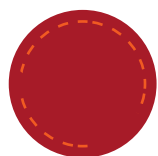
In the pursuit of excellence, the **CATALYS** System is your ultimate guide. With its precision and outstanding performance, you can strive for more than just standard results—you can pursue outstanding outcomes.

HIGHLY ACCURATE AND RELIABLE CAPSULOTOMIES

- Consistently higher precision and accuracy compared to manual continuous curvilinear capsulorhexis (CCC)¹
- Maintains near-perfect size and shape postoperatively²

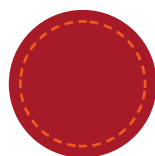
STRONG, RELIABLE CAPSULOTOMIES

- Twice as strong as manual capsulotomies²
- True non-applanating interface does not demonstrate corneal folds⁴



INCOMPLETE CAPSULOTOMY

Corneal folds are associated with incomplete capsulotomies and have been frequently observed with applanating interfaces.⁴



COMPLETE CAPSULOTOMY

Since the **CATALYS** System patient interface does not demonstrate corneal folds, it does not interfere with laser delivery.⁴

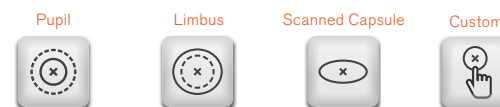
PRECAUTIONS: The **CATALYS** System has not been adequately evaluated in patients with a cataract greater than grade 4 (via LOCS III); therefore no conclusions regarding either the safety or effectiveness are presently available. Cataract surgery may be more difficult in patients with an axial length < 22 mm or > 26 mm, and/or an anterior chamber depth < 2.5 mm due to anatomical restrictions.¹⁹

>99% Proven high rate
of complete 360° capsulotomies³

Complete capsulotomy
in less than one second⁵



MULTIPLE CENTRATION TYPES including scanned capsule, for effective lens centration⁶



POWERFULLY EFFECTIVE FRAGMENTATION

- Complete softening and segmentation⁷
- Optimized lens fragmentation volume with automatic tilt management¹⁹
- Multiple fragmentation patterns¹⁹
- High-quality fragmentation, even in dense cataracts⁸

CUSTOMIZABLE FRAGMENTATION OPTIONS

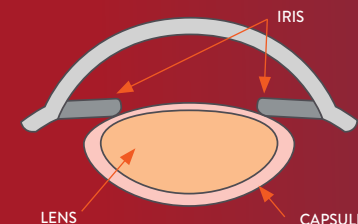
with an adjustable softening grid for complete softening and segmentation⁷



*Safety and effectiveness have not been established for cataracts higher than grade 4.

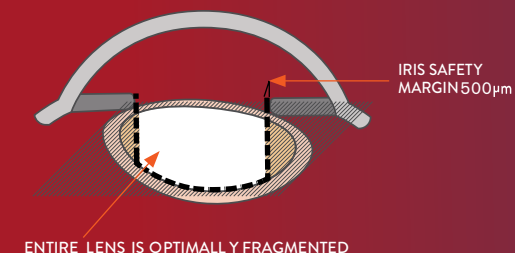
OPTIMIZE FRAGMENTATION WITH LENS TILT MANAGEMENT¹⁹

UNTILTED LENS



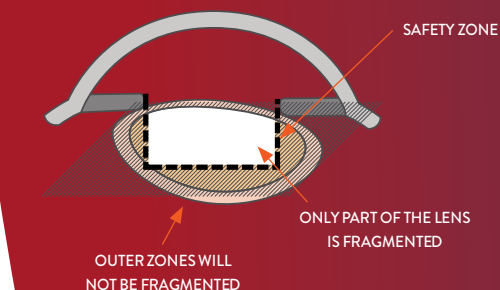
TILTED LENS WITH TILT MANAGEMENT

The **CATALYS** System detects lens tilt and adjusts the safety zone accordingly.



TILTED LENS WITHOUT TILT MANAGEMENT

If lens tilt is not detected, the volume of lens fragmentation is not optimized.



GO ACCURATELY

The **CATALYS** System offers highly precise and personalized treatments, including intrastromal and anterior penetrating incisions, allowing you to tailor each procedure and deliver impressive clinical outcomes.

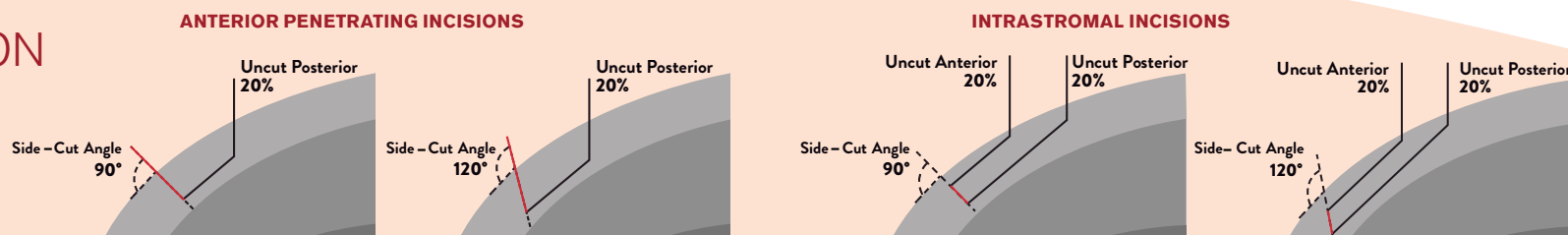
FINE-TUNED INCISION PLACEMENT

- Optimized cataract incision placement and personalization with **INTEGRAL GUIDANCE** Technology¹⁹
- Wide side-cut angle (anterior) range of 30–150° for anterior penetrating and intrastromal incisions¹⁹
- Incredible flexibility in incision type and depth for arcuate incisions¹⁹

Arcuate incisions clinically validated within:

- $0.83 \pm 0.66\%$ of intended optical zone⁹
- $0.22 \pm 0.20^\circ$ of intended axis⁹
- $0.22 \pm 0.29^\circ$ of intended length⁹

FLEXIBLE INCISION OPTIONS



PRECAUTIONS: Cataract surgery may be more difficult in patients with an axial length < 22 mm or > 26 mm, and/or an anterior chamber depth < 2.5 mm due to anatomical restrictions.¹⁹



The Laser

The **CATALYS** System features a femtosecond laser designed specifically for cataract surgery, which is just part of what makes it an accurate laser cataract surgery platform.¹

PURSUE PREMIUM OUTCOMES

Achieve excellence with a platform engineered for premium results.



Incisions personalized to each patient's unique anatomy¹⁹



Like manual surgery, **CATALYS** System procedures result in low capsular tear rates¹⁰



Lower subconjunctival hemorrhage rates associated with non-contact patient interface⁴



Minimal postoperative corneal edema and inflammation¹¹



Non-applanating patient interface generates a modest IOP increase compared to an applanating interface¹²



Enables fluidics-driven lens extraction¹⁹



GO BEYOND

Push the boundaries of image guidance with full-volume, 3D, high-resolution, streaming Optical Coherence Tomography (OCT) imaging and **INTEGRAL GUIDANCE** Technology.

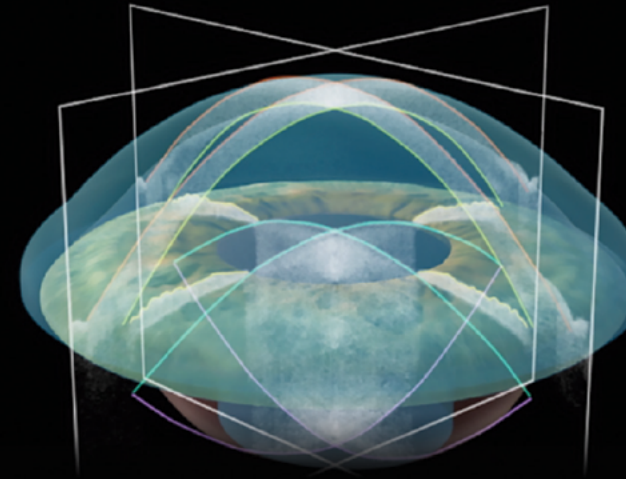
3D OCT IMAGING¹⁹

- Identifies anterior cornea, posterior cornea, iris, anterior lens and posterior lens
- Performs > 10,000 A-scans to capture high-resolution data for the full volume of the anterior segment
- Displays axial and sagittal cross sections from completed scans
- Refreshes at 0.5–2.0 Hz for real-time visualization of the eye throughout treatment

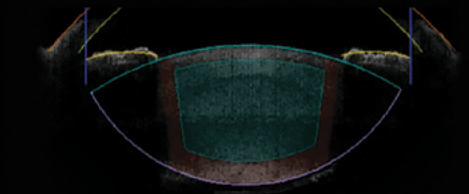
INTEGRAL GUIDANCE TECHNOLOGY¹⁹

- Generates accurate pictures of the anterior chamber using 3D OCT imaging data
- Maps incision orientation and depth based on the treatment plan
- Provides safety zones that adapt for lens tilt to maximize lens fragmentation volume¹³

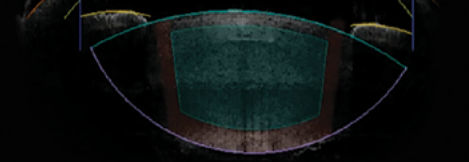
COMPLETED SCANS PROVIDE AXIAL AND SAGITTAL CROSS SECTIONS



UNTILTED LENS



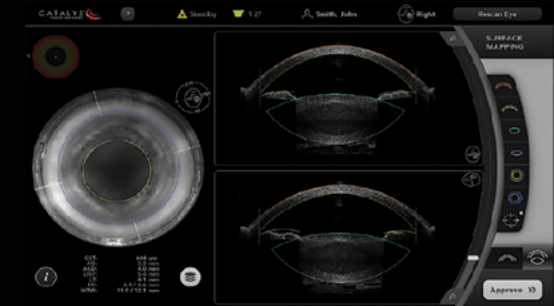
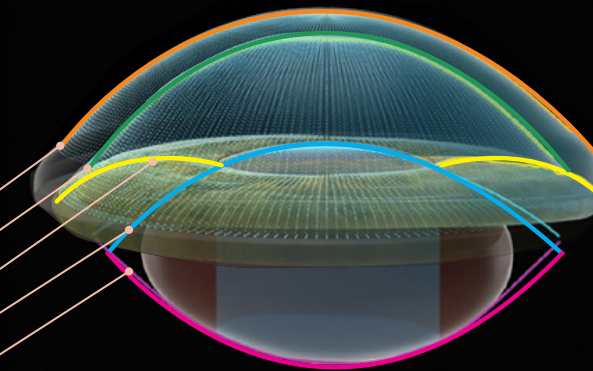
LENS TILT



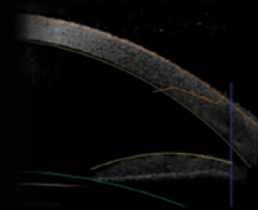
BACK YOUR OUTCOMES with guided delivery that accounts for lens tilt, eye movement and unique ocular structures



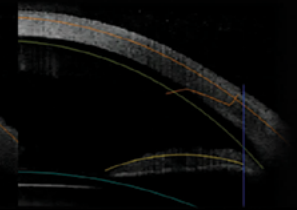
- ANTERIOR CORNEA
- POSTERIOR CORNEA
- IRIS/PUPIL
- ANTERIOR CAPSULE
- POSTERIOR CAPSULE



◀ EYE STILL

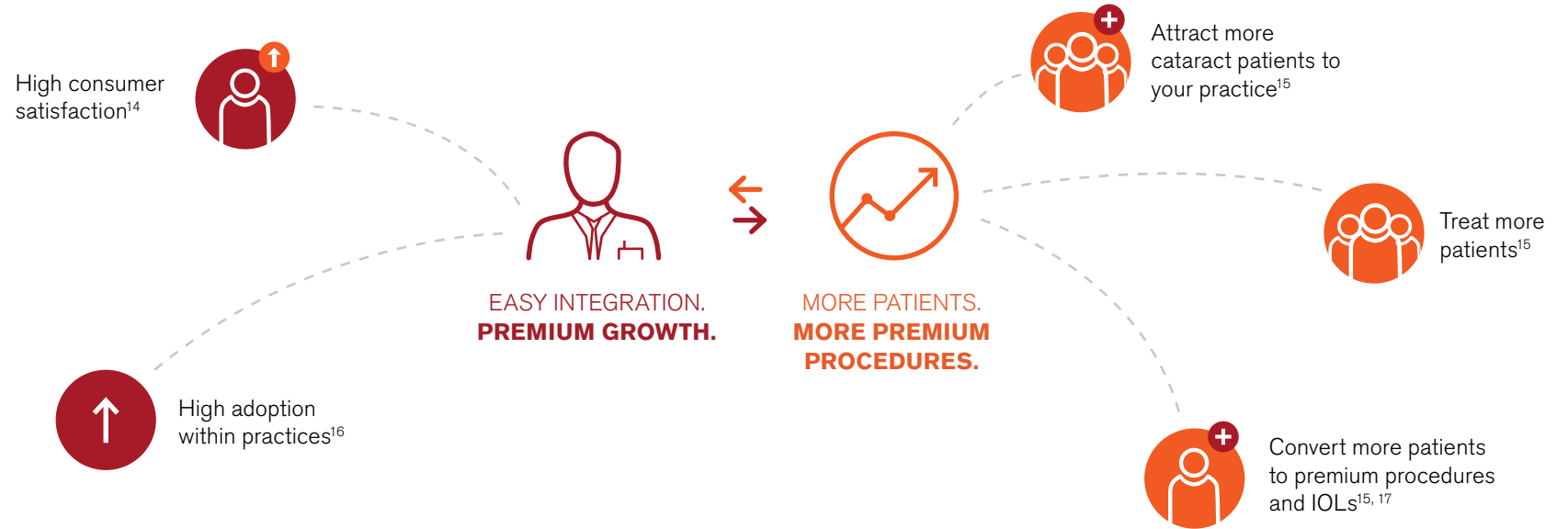


◀ EYE MOVEMENT



GO FAST

Boost premium conversion with a system designed to seamlessly fit into your practice.



EASY TO LEARN EASY TO LOVE

Seamless implementation, elegant operation. The **CATALYS** System gets you smoothly from standard to premium with a four-step process.



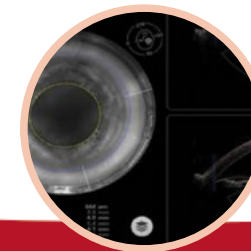
1. JUST PLAN

Start each procedure with template-based treatment plans and surgeon setups for fast, efficient surgical planning and customization.¹⁹



2. JUST ENGAGE

Ensure a quick and gentle procedure with guided docking and the non-applanating **LIQUID OPTICS** Interface, which ensures lower IOP rise⁴ and does not demonstrate corneal folds.⁴



3. JUST VISUALIZE & CUSTOMIZE

Review and confirm anatomical landmarks created by high-resolution, 3D OCT imaging. Validate incision placement according to your treatment plan with **INTEGRAL GUIDANCE** Technology.¹⁹



4. JUST TREAT

Treat with confidence, achieve your surgical plan and experience the **CATALYS** System's outstanding clinical performance.

PRECAUTIONS: Patients must be able to lie flat and motionless in a supine position and able to tolerate local or topical anesthesia.¹⁹

GO EASY

GO EASY When you can deliver a fully personalized, gentle procedure, it's no wonder more cataract patients would prefer the **CATALYS** System.¹⁸

PATIENT-FOCUSED PROCEDURES

- Quick and gentle docking for patient comfort
- Personalized surgical procedure from planning to incision
- Adaptive user interface for outstanding clinical outcomes



Non-applanating patient interface offers comfortable, streamlined docking⁴



Minimal post-op corneal edema and inflammation¹¹



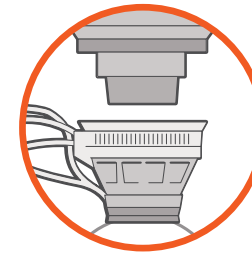
Gentle, guided docking with reduced forces during treatment¹¹



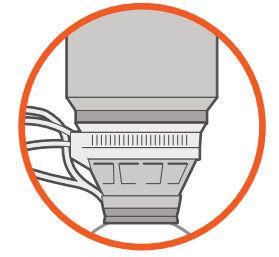
Interface design minimizes scleral contact, reducing post-surgery eye redness⁴



STEP 1



STEP 2



STEP 3

IT ALL STARTS WITH AN OUTSTANDING INTERFACE

- True non-applanating surface does not demonstrate corneal folds, resulting in outstanding incisions⁴
- Not contraindicated for patients with glaucoma¹⁹
- Clear optical path with wide aperture optimal for corneal incisions⁴

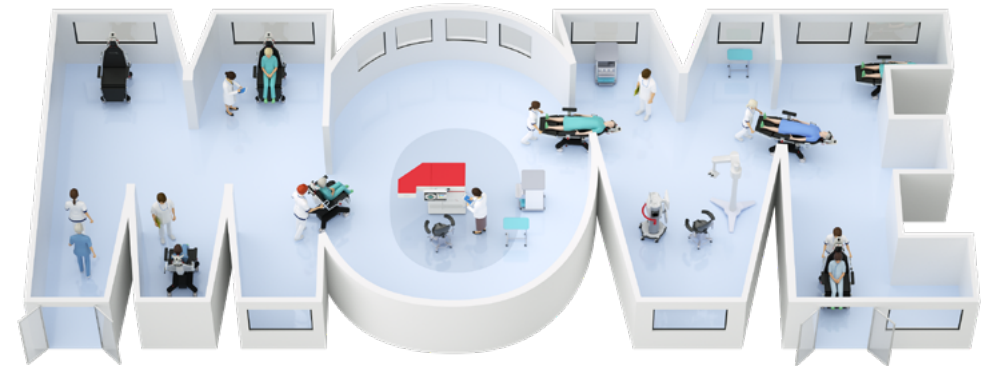


The **CATALYS** System

with **two patient interface sizes** so you can deliver a gentle docking experience to **more patients.**

JUST GO

Surgical excellence is just within reach. Make LCS yours for outstanding clinical performance designed to fuel your premium future. Once you get in the LCS fast lane, you'll never look back.



Outstanding Clinical **OUTCOMES**

- An accurate LCS platform¹
- Complete capsulotomy in < 1 second⁵
- > 99% complete capsulotomy rate³
- Complete softening and segmentation⁷
- Incredibly flexible incision options¹⁹
- Automatic lens tilt and cyclorotation¹⁹



Seamless Practice **INTEGRATION**

- More patients and premium procedures^{15,17}
- High consumer satisfaction¹⁴
- Easy on both surgeons and patients²⁰



Premium Patient **EXPERIENCE**

- More patients prefer the **CATALYS** System¹⁸
- Quick, gentle docking and a true non-applanating interface⁴
- Two interface sizes for the ability to dock more patients*
- Precise, personalized incisions for outcomes that stand apart¹⁹



*This comparison is based on publicly available sources regarding LENSAR System, LenSx System and VICTUS System in the U.S. as of October 2015. They are subject to change at the discretion of their respective manufacturers.



EXPERIENCE OUTSTANDING USABILITY

The **CATALYS** System mobile patient bed brings a new level of simplicity to your LCS and phacoemulsification workflow.²¹



MAXIMIZE PREMIUM EXPERIENCES

Deliver premium patient comfort in your **CATALYS** System and phaco procedures.²¹

Secure proper positioning and system orientation for guided docking to your **CATALYS** System



Ease movement on and off the bed



Provide exceptional comfort and stability

Integrate seamlessly with your **CATALYS** System with Bluetooth® connectivity



Configure easily with one-touch memory positions based on your surgical preferences



Delivers single-operator use for initial positioning and adjustments throughout



Rechargeable battery



Adapt to multiple postures and back conditions



SYSTEM SPECIFICATIONS¹⁹

CATARACT Operating System

- User interface to streamline treatments
- Anatomical information through **INTEGRAL GUIDANCE** System dimensions
- High magnification streaming OCT video for precise visualization and review of incisions
- Automatic limbus offsets aid in accurately placing cataract incisions at the clear cornea boundary
- Guided docking to help reduce force during lock
- User customizable settings, advanced treatment reporting and searching



LIQUID OPTICS Technology

- Gentle docking procedure with minimal intraocular pressure rise¹², allowing for a broad inclusion criteria
- LIQUID OPTICS** Interface consists of suction ring, disposable lens, and fluid catchment
- Offered in two sizes to give you the flexibility to choose the interface that is optimal for each patient

- **LIQUID OPTICS** Interface
 - Diameter (outer/inner): 21.6 / 14.5 mm
- **LIQUID OPTICS** Interface 12
 - Diameter (outer/inner): 19 / 12 mm

LIQUID OPTICS Technology

INTEGRAL GUIDANCE System Optical Coherence Tomography

- Type:** 3D spectral domain
- Wavelength:** 820 - 930 nm
- Resolution:** axial = 30 µm; lateral = 15 µm
- Streaming:** 0.5 - 2 Hz

User Controls

- Docking:** Guided with vacuum footswitch and docking keypad
- User interface:** 61 cm (24 inch), high-definition touchscreen monitor
- Patient chair:** Configurable joystick for x,y, height adjustment
- Laser:** Footswitch

Femtosecond Laser System - Operating Parameters

- Type:** Diode pumped solid-state
- Wavelength:** 1030 nm (near infrared)
- Pulse duration:** < 600 fs
- Pulse energy range:** 1-10 µJ
- Pulse repetition rate:** 120 kHz

Operating Conditions

- Relative humidity:** 0 to 80% at 32°C (90°F) non-condensing
- Temperature:** 15°C (59°F) to 32°C (90°F) - Temperature-controlled environment
- Electrical:** 200-240 V AC, Single Phase, 15 A
- Weight:** System: 340 kg (750 lbs); Patient chair: 172 kg (380 lbs)
- Space required:** 3.04 m (10') x 3.35 m (11') minimum required for system installation

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1. O'Meara MC, et al. "Laser Capsulotomy" - Textbook of Refractive Laser Assisted Cataract Surgery (ReLACS). Krueger RR, et al. (eds.) Springer, New York: Springer Science+Business Media, LLC 2013. p. 79-99. Print. REF2015CT0275. 2. Friedman NJ, et al. Femtosecond laser capsulotomy. JCRS. 2011 Jul;37(7):1189-98. REF2014CT0023. 3. Day AC, et al. Efficacy of anterior capsulotomy creation in FLACS. JCRS. 2014;40(12):2031-2034. REF2014CT0621. 4. Talamo J, et al. Optical patient interface in femtosecond laser-assisted cataract surgery. JCRS. 2013; 39(4): 501-510. REF2015CT0427. 5. Scott W, et al. Clinical comparison of effect of sub-one second femtosecond laser capsulotomy on capsulotomy irregularities. Presented at ASCRS ASOA. REF2015CT0226. 6. Lee YE, Joo CK. Assessment of lens center using optical coherence tomography, magnetic resonance imaging, and photographs of the anterior segment of the eye. Invest Ophthalmol Vis Sci. 2015;56:5512-5518. REF2017CT0142. 7. Conrad-Hengerer I, et al. Effect of femtosecond laser fragmentation of the nucleus with different softening grid sizes on effective phaco time in cataract surgery. JCRS. 2012; 38(11): 1888-94. REF2014CT0024. 8. Dick BH, et al. On the way to zero phaco. JCRS. 2013; 39(9):1442-1444. REF2015CT0248. 9. Culbertson D. Why Use a Femtosecond Laser for Incisions? Presented at ESCRS, Sep. 2012, Milan, Italy. REF2014CT0043. 10. Data on File - Strongest capsule compilation sheet. 2015. REF2015CT0222. 11. Conrad-Hengerer I, et al. Femtosecond Laser-Induced Macular Changes and Anterior Segment Inflammation in Cataract Surgery. JRS 2014;30(4):222-226. REF2014CT0272. 12. Donaldson K, et al. Femtosecond laser-assisted cataract surgery. JCRS. 2013;39:1753-1763. REF2014CT0134. 13. Conrad-Hengerer I, et al. Effect of femtosecond laser fragmentation on effective phacoemulsification time in cataract surgery. JRS 2012; 28(12): 879-83. REF2014CT0030. 14. Kadence International. LCS market assessment study USA V3. November 2014, p. 30. REF2015CT0228. 15. Ondrias D. Integrating laser cataract surgery. Optometry Times. March 2015. REF2015CT0235. 16. Kent C. Who's getting femto laser cataract surgery? Review of Ophthalmology, 2015. REF2015CT0233. 17. Aker A. Femto-cataract: Why the business model works. Ophthalmology Times, May 2015;40(8):1, 20-21. REF2015CT0232. 18. Rivera R, et al. Comparative analysis of FLACS using two femtosecond laser platforms. Presented at ESCRS Congress London, UK; September 2014. REF2015CT0225. 19. Operator Manual for the CATALYS™ Precision Laser System. Doc. #0160-6413, Rev. D, July 2020, REF2021CT4168. 20. Bafna S. Advances in laser cataract surgery technology enhance ease, effectiveness of procedure, Part 1. Ocular Surgery News. 2012. (US). REF2015CT0234. 21. CATALYS™ MPB Claims Matrix. PP2021CT4713.

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