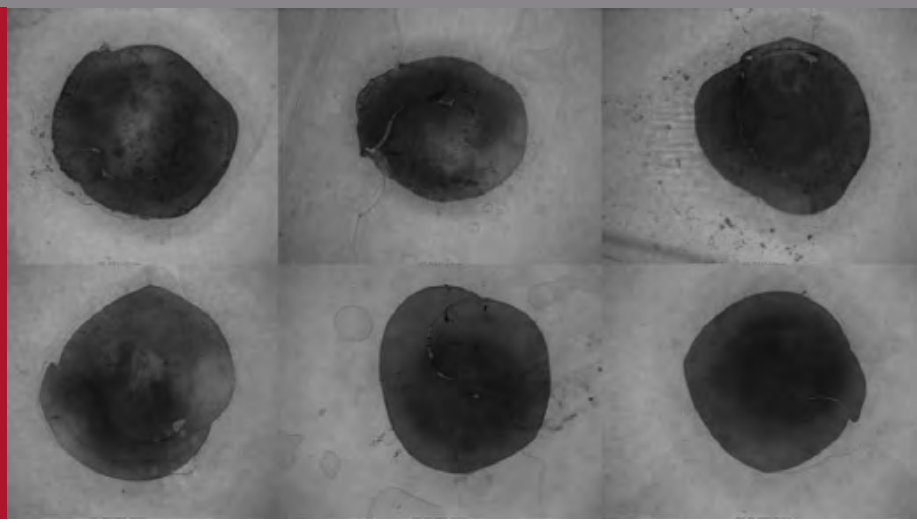
PRECISION
that changes everything

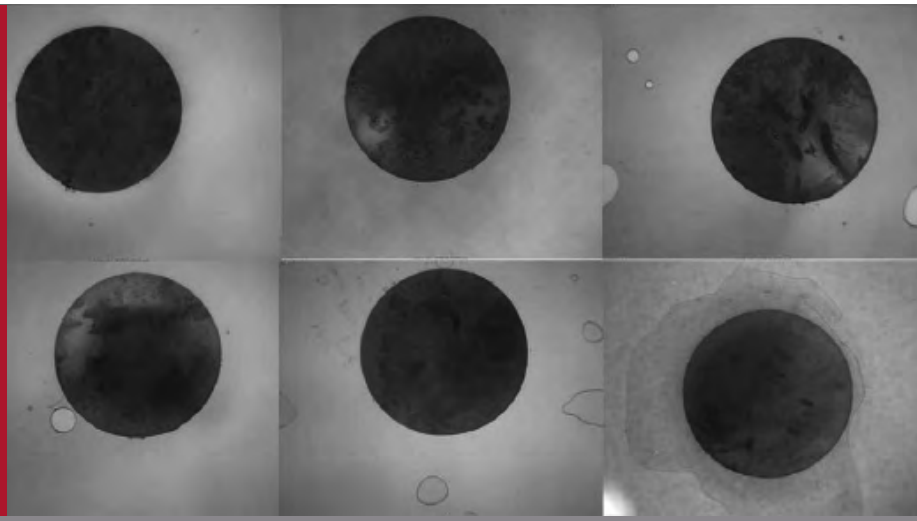
CATALYS

Precision Laser System

Abbott
A Promise for Life

Conventional manual capsulorhexis





CATALYS laser capsulotomy

The accuracy and predictability of the capsulotomy is a key determinant of effective lens position.[1]

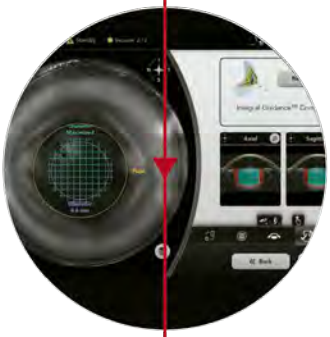
Comparative images taken from 1. Friedman et al. Femtosecond laser capsulotomy. J Cataract Refract Surg 2011; 37:1189–1198.

Developed and manufactured in Silicon Valley

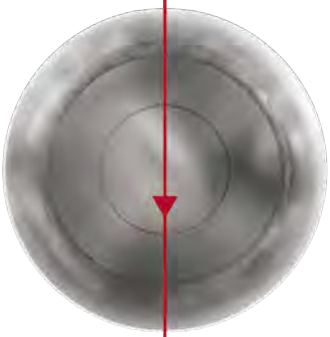
Precision
at every step

Plan

Engage



Visualize
& Customize



Treat

Abbott
Medical Optics

1

Plan

with template-based software that streamlines the workflow prior to patient docking.

Integral Guidance Imaging complete

2

Engage

with the ***Liquid Optics*** Interface for a stable, comfortable patient dock and clear optical path for high resolution imaging and precise laser delivery.

The novel interface design results in minimal intraocular pressure rise.[2-4]

Positional guides and force sensors facilitate the docking process.

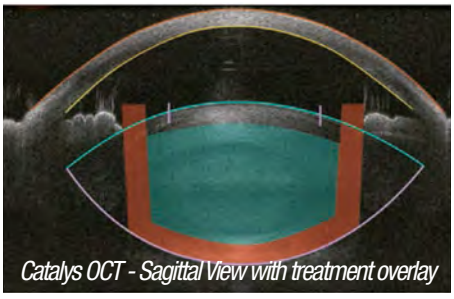
Liquid-filled suction ring maintains corneal integrity. [2-3]

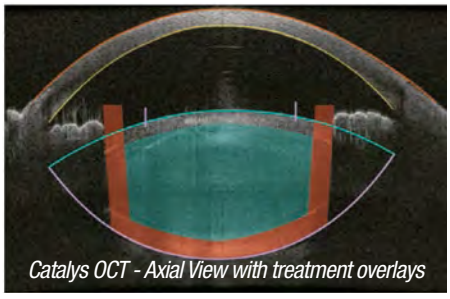
3

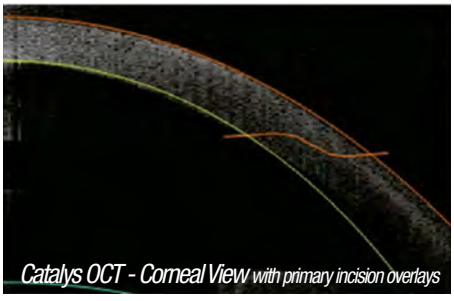
Visualize & Customize

With ***Integral Guidance*** Imaging for accurate and quick treatment plan customization.

Integrated full-volume 3D spectral domain Optical Coherence Tomography (OCT) visualizes from anterior cornea through posterior lens.

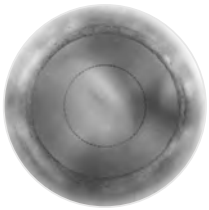






Sophisticated algorithms automatically customize treatment plan in 3D.

4



Treat

Perform anterior capsulotomy, lens fragmentation, corneal arcuate incisions, primary incisions and sideports with the state-of-the-art femtosecond laser.

Create precise anterior capsulotomy and corneal incisions in just seconds, and fragment the lens thoroughly while maintaining a consistent safety margin from the iris and posterior capsule. The system-integrated ***Integral Guidance*** processing ensures that adequate safety margins with respect to iris, lens capsule, and cornea are maintained regardless of eye morphology, orientation, or tilt, thus assuring safe delivery of the treatment laser pulses.

CATALYS Precision Laser System

System Specifications

System Dimensions and Weight	
Femtosecond laser system, operating parameters	
Type	Diode pumped solid-state
Pulse energy range	1 to 10 µJ
Wavelength	1030 nm (near infrared)
Pulse repetition rate	120kHz
Pulse duration	<600fs
Optical coherence tomography	
Type	3D spectral domain
Wavelength	820-930nm
Resolution	axial = 30 µm; lateral = 15 µm
Video system	Monochrome near infrared live video with 40 µm lateral resolution and a 17 mm field of view
Patient chair	Integrated Dexta chair with custom headrest for additional stability and control Three lock positions for patient loading, suction ring placement and treatment
Disposable ***Liquid Optics*** Interface	Suction ring that attaches to conjunctiva with 13.5 mm clear aperture Disposable lens and fluid catchment that attach to the system
User Controls	
Docking	Vacuum footswitch and docking keypad
User interface	61 cm 24 inch, high definition touchscreen monitor
Patient chair	Joystick for x,y, height adjustment
Laser	Foot pedal
Operating Conditions	
Relative humidity	0 to 80% at 32ºC (90°F) non-condensing
Altitude	< 2,150 m (7000 ft) above sea level
Temperature	15°C (59°F) to 32°C (90°F) - Temperature-controlled environment
Electrical	200-240 V AC, 15 A, 2.5 m cord length, single phase
Weight	System 340 kg (750 lbs); Patient chair: 172 kg (380 lbs)
Space required	10' (3.04 m) x 11' (3.35 m) minimum space required including system, integrated rotating patient chair, service access. System fits through 34" (86.36 cm) doorway.

References

1. Friedman et al. Femtosecond laser capsulotomy. J Cataract Refract Surg 2011; 37:1189–1198. J Cataract Refract Surg 2011; 37:1189–1198
2. Schultz T, Conrad-Hengerer I, Hengerer FH, et al. Intraocular pressure variation during femtosecond laser-assisted cataract surgery using a fluid-filled interface. J Cataract Refract Surg. 2013;39(1):22-27.
3. Kerr NM, Abell RG, Vote BJ, et al. Intraocular pressure during femtosecond laser pretreatment of cataract. J Cataract Refract Surg. 2013;39(3):339-342.
4. Dick HB, Schultz T. Limiting IOP rise in laser cataract procedures. Ophthalmology Times Europe. 2013;9(3):1-3.

For more information, contact an AMO representative or visit:
www.abbottlasers.com

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