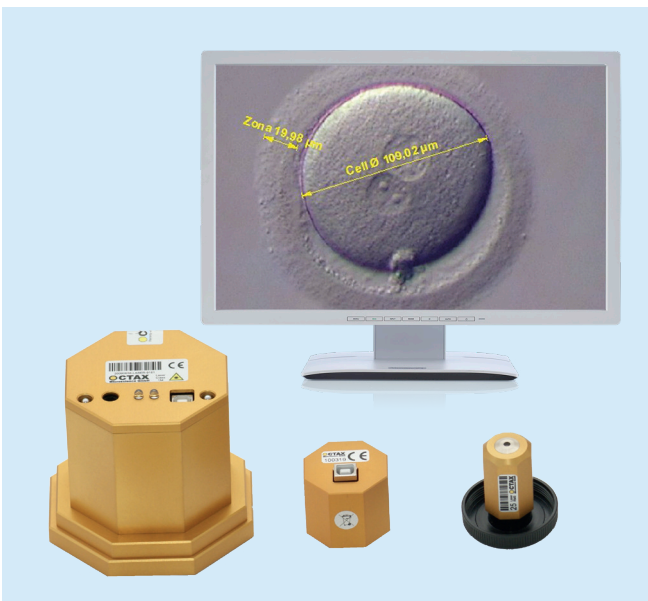# Octax Laser and Imaging Systems

Increase safety, efficiency and ease of use in all IVF laser applications.

Made to work together. Without compromise.

Octax is the most comprehensive and synchronised system available, giving you everything you need for optimal IVF imaging. All components are designed to work smoothly and easily together, making it possible to increase productivity and streamline workflows. Smart design and precision engineering ensure optimal performance in all IVF laser applications.

Safe, efficient and easy to use

Modular and supremely easy to use, Octax laser and imaging systems combine sophisticated hardware and software tools with advanced functionality to meet the needs of today's IVF clinics. For more than 20 years, they have been trusted by IVF-professionals worldwide to deliver outstanding image quality in combination with safety, reliability and efficiency.

Get the edge with Octax

- **Minimise the risk of harm to embryos and gametes**
- **Work with ease and confidence**
- **Save time and increase productivity**
- **Minimise time outside the incubator**
- **Maximise standardisation of procedures**
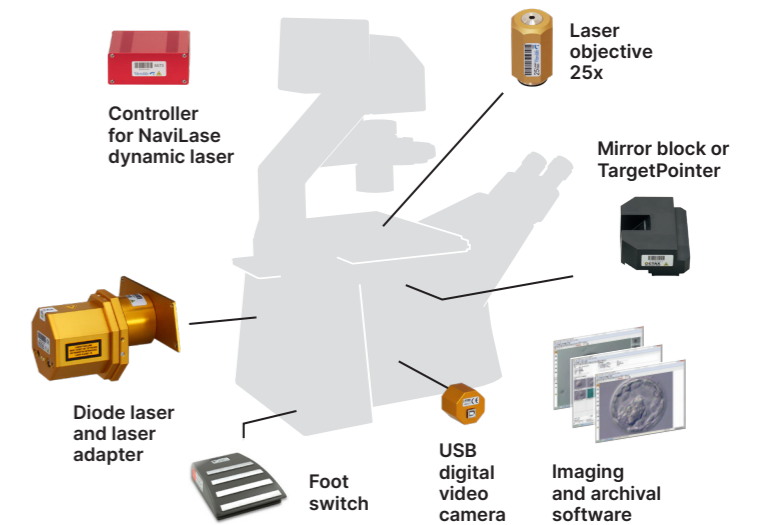- **Benefit from advanced imaging technology**

Everything you need

- Complete package – no hidden costs
- Fully compatible with all micro-manipulators
- Recognised for outstanding service and support

Modular system for all IVF applications

Octax is more than just a laser; it is a multipurpose platform for digital imaging and image analysis in assisted reproduction. Being flexible, it adapts to your specific needs and preferences. The hardware and software components combine seamlessly to give you unsurpassed image quality and ease of use. Octax lasers can be used for all IVF applications, including assisted hatching; polar body, blastomere, and trophectoderm biopsy or blastocyst collapsing prior to vitrification and sperm viability testing.

Controller for NaviLase dynamic laser

Laser objective 25x

Mirror block or TargetPointer

Diode laser and laser adapter

Foot switch

USB digital video camera

Imaging and archival software

Laser and imaging components

Static or moveable laser unit, USB camera, laser lens 25x, mirror block, footswitch, EyeWare imaging software.

Optional accessories

TargetPointer (visualises laser target in the microscopic image),

Proven in more than 100 scientific publications

Octax laser technology has been tried and tested in over 100 pre-clinical and clinical publications, which have shown zero adverse effects on oocytes, embryos or the children born after laser treatment.

No alterations of the cytoplasm
Histology on mouse oocytes after laser treatment. (Germond et al., 1995)

No thermal damage observed
SEM analysis of the zona pellucida after laser treatmentof mouse zygotes. (Rink et al., 1996)

No genetic, histological or anatomical effects
Transfer of mouse zygotes into foster mothers after laser treatment, immunohistochemical/anatomical analysis of the offspring, breeding for another two generations. (Germond et al., 1996)

No increase in chromosomal aberrations and congenital malformations
Follow-up study on 134 one-year-old children after laser-assisted hatching (LAH) as compared to controls without LAH. (Kanyo & Konc, 2003)

For a comprehensive list of publications, please visit www.vitrolife.com

Smooth and efficient workflows

Octax combines proven laser technology with a robust system, pinpoint accuracy, outstanding image quality and easy-to-use software, enabling you to work with ease and confidence.

Software known for its user friendliness

The EyeWare multipurpose imaging and archiving software is designed to be highly intuitive, making it easy to learn and use. The navigation is logical and menus are clear and straightforward. All functions are easy to access, saving time and increasing safety. EyeWare is all you need to operate the laser, perform imaging and manage images and videos.

Zona 19.98 µm
Cell Ø 109.02 µm
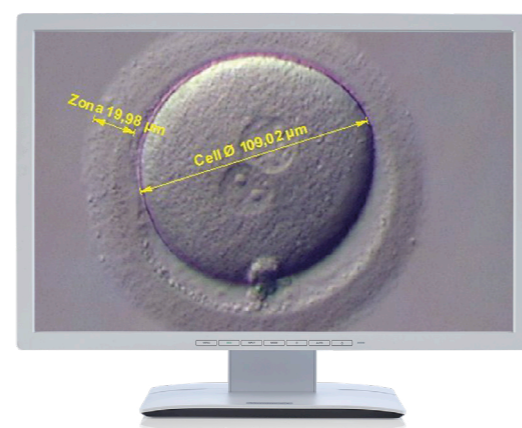
Outstanding ease of use

Unparalleled image quality helps make your daily work both simpler and safer, with less fatigue during demanding tasks. The NaviLase moveable laser is highly flexible, making it easy to achieve the setup you want for each process.

Time-saving workflow

Enjoy higher productivity with a streamlined workflow. In addition to easy-to-use software, Octax gives you the convenience of a calibration-free laser and an additional TargetPointer, enabling one person to perform procedures with ease.

Maximise standardisation of procedures

Octax requires no daily calibration. All laser components are firmly attached to non-moving parts of the microscope, mechanically adjusted and locked, ensuring long-term consistency of laser alignment. For assisted hatching/zona thinning, Octax enables standardized opening of the zona pellucida over a defined area with the NaviLase. There is no need to manually move the target, which can introduce inconsistency between operators. Trophectoderm mode lets you apply a series of pre-defined laser shots on the stretched trophectoderm cells, facilitating the biopsy procedure.

Superior image quality

Renowned for its image quality, Octax lets you work with ease and confidence, while saving time and improving safety. We manufacture the cameras ourselves, so we have full control over every detail. Stability, accuracy and precision are excellent, and video is transferred uncompressed from the camera to the software, giving you full image resolution.

> "The unique Octax EyeWare software suite combines brilliant image quality, various opto-analytical features and compelling data management. It offers us the flexibility we need for our research and in our daily clinical routine."
>
> *Jacques Cohen, Laboratory Director*
> *ART Institute of Washington, USA*

Boost your skills

We offer comprehensive start-up training, making it easy to get up and running with your new system. If desired, we offer further training to expert level. We run trophectoderm biopsy workshops on a regular basis.

Work hands-free with the foot pedal

Allows you to trigger the laser with the footswitch. Both hands are free to manipulate.
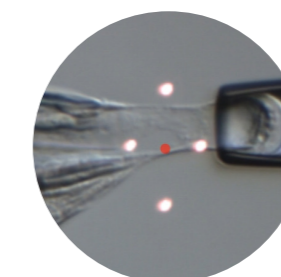
Target pointer makes work easier and faster for embryo biopsy

The TargetPointer makes it fast and easy for one person to perform an embryo biopsy. It indicates the laser target area through the eyepieces of the microscope so there is no need to look at the monitor to operate the laser.

High flexibility with NaviLase movable laser

The NaviLase movable laser lets you keep the embryo in place while the laser is directed to the chosen target site, and you can make several shots along a straight or curved line. Laser control is fast and intuitive, with several operational modes available.

Octax EyeWare imaging software

EyeWare is a SQL server based multi-purpose imaging and archival software. The application field of EyeWare ranges from a stand-alone imaging station to a multi-user networked system. EyeWare is an ideal solution for clinics where image quality and authentic documentation are imperative.

Features

- High-resolution live video display
- Unlimited image snapshot gallery
- Instant access to objective calibrations
- Image & video capture and storage function
- Multi-camera support
- Biometric measurement tools
- Multilingual GUI
- Comparison option for up to 4 images at a time
- Image zoom function
- Integrated control interface for operating: Octax LaserShot M, Octax NaviLase.
- SQL server database for powerful administration of images, video files and patient data
- Data interface to lab information systems (e.g. MedITEX)
- Compatible with PCs running Windows 10
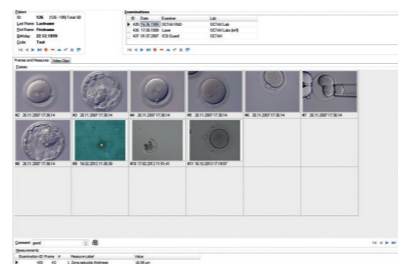
Advantages

- Space and cost-saving all-in-one camera & software concept
- Easy to use software interface for intuitive operation
- Brilliant, unmatched image quality revealing smallest details

EyeWare live video display

EyeWare biometric measurements

EyeWare database page

Octax Eye digital USB2 video camera

Excellent image quality revealing important details of the sperm, oocyte or embryo is a key factor contributing to successful treatment. Based on our longstanding expertise we have developed high resolution Octax digital USB2 cameras providing superior image quality.

Features

- The intelligent light management of the Octax Eye digital USB2 camera based on integrated automatic gain control and auto-white balance maintains constant image quality even at changing illumination conditions, e.g. when switching between objective magnifications.

3.2 Mpix

Octax LaserShot M
& NaviLase laser systems

Since its launch dating more than 20 years back Octax Laser Shot is setting the standards for assisted hatching, biopsies, and other laser-related techniques. Its outstanding features have been the solid ground for the world´s most used laser system in human ART, also reflected by more than 90 peer-reviewed publications. Evolving from the classical LaserShot system, the dynamic Octax NaviLase is available for increased demands in terms of speed, precision and automation.

Octax LaserShot M
Microsurgical laser system for A.R.T.

The Octax LaserShot infrared laser system can be adapted to the majority of inverted microscope models used for ICSI. Its operation is very easy and all features have been optimized for convenient routine use.

Octax LaserShot is based on the imaging and archival software Octax EyeWare and includes the Octax high resolution Eye USB2 camera.

Octax LaserShot is compatible with Olympus IX 50/70, IX 51/71/81, IX 53/73/83; Nikon TE200/300/2000, Ti, Ti2; Zeiss Axiovert 200, AxioObserver 3, 5, 7, A1, D1, Z1; Leica DMIRB, DMI 3000B/4000/6000, DMI 8.

Advantages

- Easy, intuitive use
- Safety proven in several clinical studies
- Highest image quality
- Highest reliability
- Large working area: 25x objective

Applications*

- Assisted hatching
- Polar body biopsy
- Blastomere biopsy
- Trophectoderm biopsy on blastocysts
- Sperm viability testing
- Blastocyst collapsing prior to vitrification

*The applications are subject to country specific regulatory requirements

Octax NaviLase
### Dynamic multi-purpose laser system for A.R.T.

Octax NaviLase combines innovative laser motion technology with proven safety. NaviLase operates in your mode of choice, either statically or dynamically without any need for recalibration.

- Moving the electronic laser target: just navigate the mouse cursor to any place within the working area on the monitor – NaviLase will take its action: fast, accurate and reproducible.

- For high safety and user convenience the expected ablation size of the zona pellucida is indicated by an electronic target which allows interactive adjustment.

- A newly designed full screen user interface complements the functionality of Octax EyeWare and allows for intuitive and time-efficient laser control

- Providing a selection of different operational modes Octax NaviLase can be appropriately used for any major laser-based application.

Features & Advantages

- Moveable single-/multi-pulse modes for all relevant applications
- Calibration-free
- Stand-alone or upgrade to existing Octax Laser Shot systems
- Supported by the Octax EyeWare platform
- Based on the proven safety concept of Octax Laser Shot
- Compatible with Olympus IX50/IX70, IX 51/71, IX 53/73/83; Nikon TE2000, Ti, Ti2; Zeiss Axiovert 200, AxioObserver 3, 5, 7, A1, D1, Z1; Leica DMI3000, 4000, 6000, Dmi8.
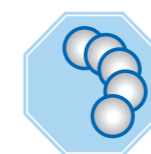

Octax Laser Shot installed to Nikon Ti-S
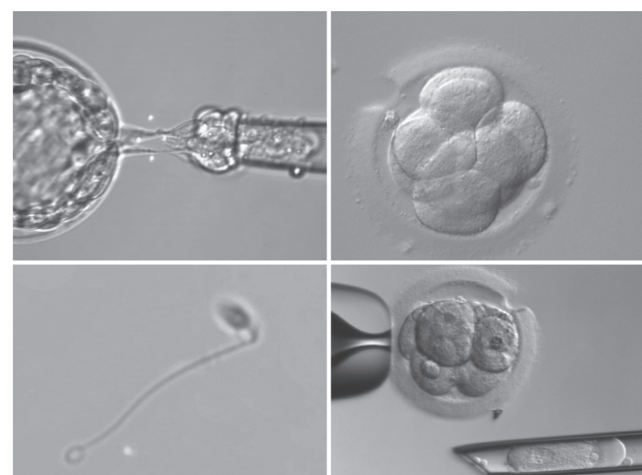
Dynamic application modes
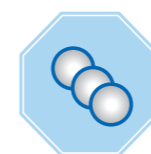
Zona drilling/biopsy   TE biopsy   Zona thinning

System specifications, Octax Laser Shot & NaviLase

● Standard　○ Option

	Octax LaserShot	Octax NaviLase
Laser power: 100 – 250mW, pulse length: 0.1 ms – 10 ms	●	●
25x Laser objective, HMC/RC/MC compatible	●	●
Laser unit dimensions: 90 × 90 × 100 mm (WxDxH)	●	●
Laser module supply power via USB2	●	●
High resolution 3.2 Mpix. USB2 camera	●	●
Interactive hole size indication	●	●
Target pointer	○	○
Different dynamic laser modes available: zona drilling, zona thinning, trophectoderm biopsy	–	●
Multi-pulse capability	–	●
No calibration required after installation	●	●
Video recording & playback	●	●
Biometric measurement functions	●	●
Integrated SQL server based patient and image database	●	●
Compatible with common modern inverted microscopes	●	●
Operating system Windows 10	●	●

Octax Laser Systems (Octax LaserShot M and Octax NaviLase) received 510(K) clearance. Please refer to the US version of the Octax laser brochure.

Available upgrades and accessories Octax LaserShot & NaviLase

Product	REF	Description
Imaging and archival software		
Octax EyeWare™	19310/3148	SQL based software for imaging, video recording and documentation
Video cameras		
Octax Eye™ 3.2 Mpix	19310/5150	Resolution up to 2048 × 1536 pixel, colour
Laser systems		
Octax LaserShot™ M	19310/0148 M	Octax LaserShot™ microsurgical laser system comes with infrared laser module, microscope adaptor, mirror block, laser lens 25x, Octax USB2 digital camera 1.3 Mpix, EyeWare software, single footswitch, manual. MDR 2017/745 compliant for CE-marked inverted microscopes
Octax NaviLase™	19310/0146	Octax NaviLase dynamic multipurpose laser system for ART comes with calibration free and moveable infrared laser module incl. motion elements, microscope adaptor, mirror block, laser lens 25x, Octax USB2 digital camera 3.2 Mpix, EyeWare software, single footswitch, manual; MDR 2017/745 compliant for CE-marked inverted microscopes
Upgrades and accessories		
Octax NaviLase upgrade	19310/0147	Octax NaviLase upgrade for existing Octax Laser Shot systems comes with optic and electronic upgrade of the laser module, motion elements, microscope adaptor, OctaxUSB2 digital camera 3.2 Mpix, EyeWare software update to current version, manual Only available for recent microscope models; MDR 2017/745 compliant for CE-marked inverted microscopes
Octax Target Pointer	19310/4150	Upgrade for Octax LaserShot™ and Octax NaviLase™ systems
Adaptor board	19310/0141	For installing Octax LaserShot™ or Octax NaviLase™ for Olympus IX 53/73/83 microscopes
Octax single foot switch	19310/1148US	For releasing the laser
Octax Biopsy Objective	19310/4149	25x LWD, HMC/RC/MC compatible
DELL Optiplex PC	19310/0001	PC suitable for Octax laser systems, incl. 22" full HD

Depending on regional approval, the package contents for Octax lasers may vary.

Together. All the way™

Orders & customer support

Contact your local sales representative for prices and availability. Orders can be placed through our website at www.vitrolife.com. You can also contact us by email and phone:

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