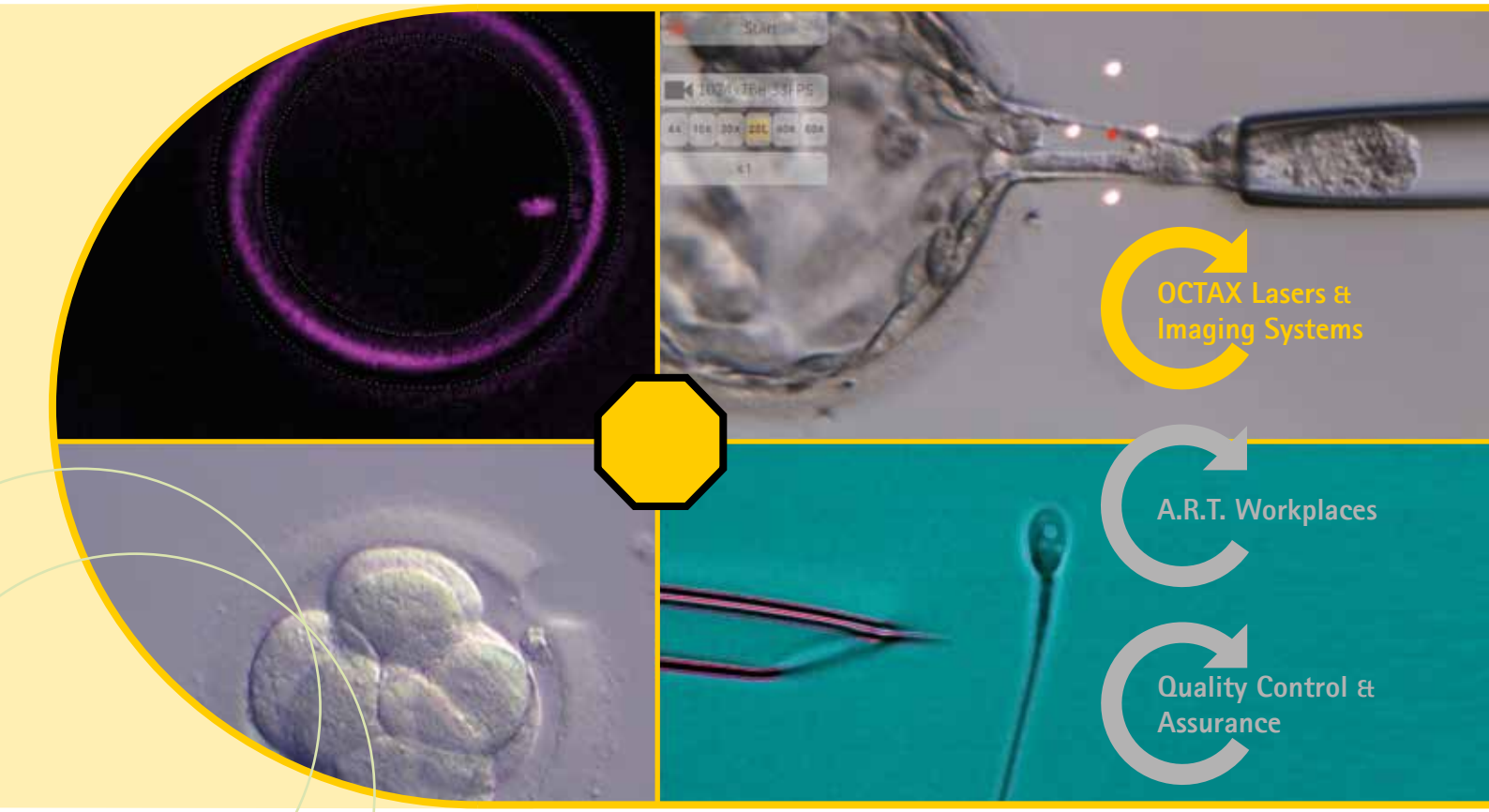
MTG technology for life



OCTAX Lasers & Imaging Systems

A.R.T. Workplaces

Quality Control & Assurance

OCTAX LASERS & IMAGING SYSTEMS

Andrology & Cryopreservation

Consumables

Turn Key Projects, Service & Maintenance

Solutions for Assisted Reproduction

OCTAX LASERS & IMAGING SYSTEMS

Since the inception of human reproductive medicine, analytical and manipulative methodologies have been perfected to ensure maximum treatment success. Advanced computing and imaging technology has found its way into the modern reproductive biology laboratory and contributed to the development of innovative opto-analytical systems. Laser technology has revolutionized treatment procedures for advanced therapy in the clinical setting.

Offering a variety of innovative tools OCTAX lasers and imaging systems have enriched, complemented and driven the process of A.R.T.

"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, Washington, USA

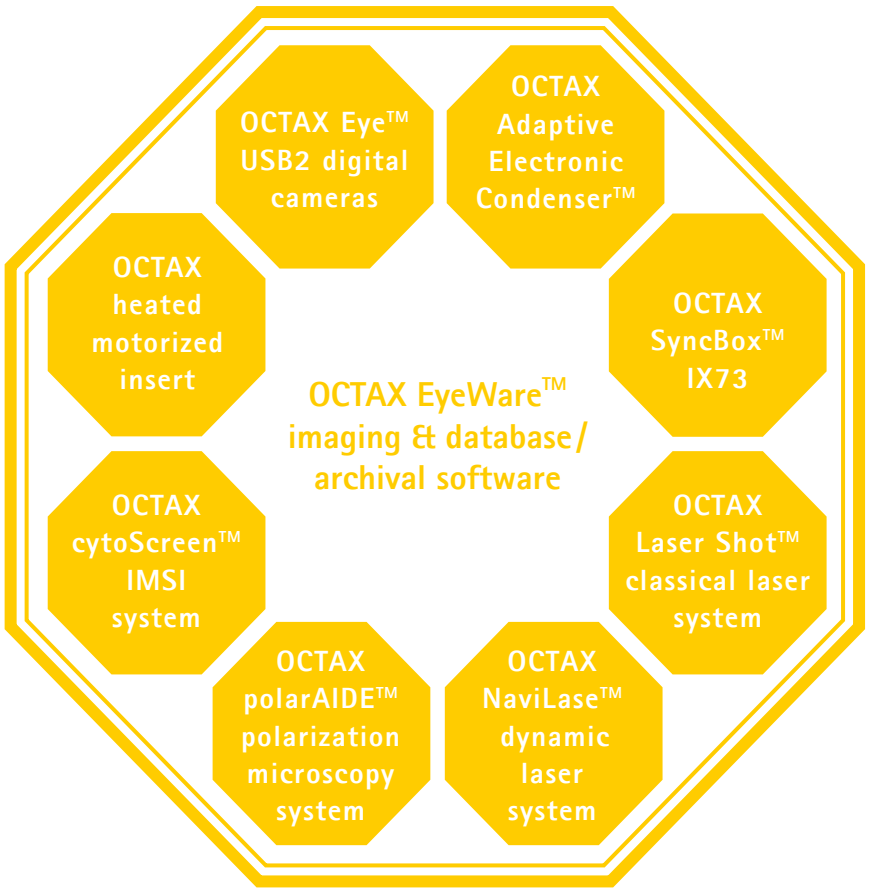
CONTENTS

"The OCTAX Laser Shot system proves its excellent performance as our work-horse for embryo biopsy. Due to its intuitive operation it also unveiled itself to be an ideal teaching tool for our embryology students."

Alpesh Doshi, London, UK

01 The OCTAX suite concept

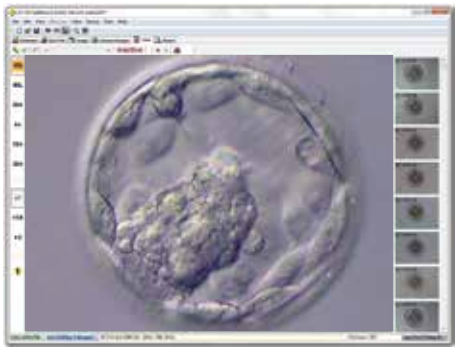
The modular concept of the OCTAX suite combines sophisticated hard- and software tools with maximized functionality and ease of use. OCTAX imaging, analysis and manipulation elements have become synonyms for efficient workflow, highest safety and outstanding reliability accompanying the embryologist within the process of A.R.T.



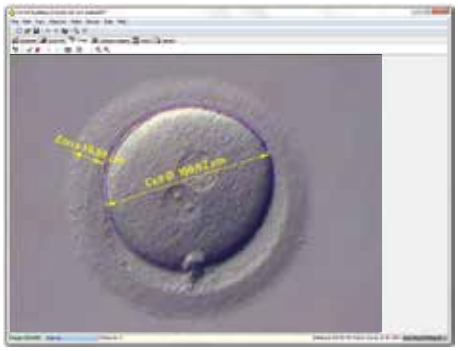
Our OCTAX EyeWare™ imaging and archival software represents the core element of the OCTAX suite. In combination with an OCTAX Eye™ USB2 high-resolution camera OCTAX EyeWare™ constitutes a universal platform for the OCTAX suite modular concept. OCTAX EyeWare™ has been designed for the seamless integration of different operational units, like OCTAX Laser Shot™ & OCTAX NaviLase™ microsurgical laser systems, OCTAX Adaptive Electronic Condenser™ and OCTAX SyncBox™ IX73 optical elements, OCTAX cytoScreen™ and OCTAX polarAIDE™ bio-analytical modules, and the OCTAX heated motorized insert.
The single camera & platform software principle is the basis to control and run a multitude of applications. The OCTAX concept is unique in terms of integration and economization of A.R.T. related processes.

02 OCTAX EyeWare™ imaging and archival software

OCTAX EyeWare™ is a SQL server based multi-purpose imaging and archival software. The application field of OCTAX EyeWare™ ranges from a stand-alone imaging station to a multi-operational multi-user networked system. Offering specific adaptations for each user demand and application need, OCTAX EyeWare™ is an ideal solution for clinics where image quality and authentic documentation are imperative.



OCTAX EyeWare™ live video display



OCTAX EyeWare™ biometric measurements

OCTAX EyeWare™ database page

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 the modules of the OCTAX family: OCTAX Laser Shot™, OCTAX NaviLase™, OCTAX Adaptive Electronic Condenser™, OCTAX SyncBox™ IX73, OCTAX cytoScreen™, OCTAX polarAIDE™, OCTAX heated motorized insert
- SQL server database for powerful administration of images, video files and patient data
- Multi-user/multi-station networking capability for data management and live video broadcasting
- Data interface to lab information systems (e.g. MedITEX)
- Compatible with PCs running Windows Vista, Windows 7, Windows 8, and Windows 8.1

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
- Unique modular concept offering maximum flexibility
- High degree of integration and interactive control of OCTAX application modules
- Intra-clinic networking capability for multi-user support and instant access to all relevant data

 # 19310/3148

OCTAX EyeWare™ imaging and archival software

Includes SQL database, video capture function and supports up to 2 OCTAX Eye™ digital USB2 cameras.

 # 19310/3149

OCTAX EyeWare™ Tech Package

Extends the OCTAX EyeWare™ imaging and archival software (# 19310/3148) for the following functions: server integration of 1 and more OCTAX EyeWare™ workplace(s), centralized server-based data management, support of 3 and more OCTAX Eye™ USB2 cameras connected to OCTAX EyeWare™ workplaces, video broadcasting

03 OCTAX Eye™ digital USB2 video cameras

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 with special features 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.
- Due to the electronic sensor control, the OCTAX Eye™ 3.2 Mpix and 5.0 Mpix digital USB2 cameras have got an integrated hardware zoom which allows magnifying details without any loss of resolution and information. This feature plays a particularly important role in the OCTAX cytoScreen™ system for intracytoplasmic morphologically selected sperm injection (IMSI).

 # 19310/5149
OCTAX Eye™ digital USB2 video camera 1.3 Mpix
Standard camera for most OCTAX applications.
1280 x 1024 pixels, true color, up to 30 fps depending on resolution. Complete with space saving 90 degree connector USB cable and device driver

 # 19310/5151
OCTAX Eye™ digital USB2 video camera 1.3 Mpix b/w
Maintains excellent image quality under limiting illumination conditions.
1280 x 1024 pixels, black & white, up to 30 fps depending on resolution. Complete with space saving 90 degree connector USB cable and device driver

 # 19310/5150
OCTAX Eye™ digital USB2 video camera 3.2 Mpix
High resolution camera with integrated hardware zoom function.
2048 x 1536 pixels, true color, up to 30 fps depending on resolution. Complete with space saving 90 degree connector USB cable and device driver

 # 19310/5152
OCTAX Eye™ digital USB2 video camera 5.0 Mpix b/w
High resolution, high-speed camera with integrated hardware zoom function.
2592 x 1944 pixels, black & white, up to 43 fps depending on resolution. Complete with space saving 90 degree connector USB cable and device driver

04 OCTAX Laser Shot™ & NaviLase™ laser systems

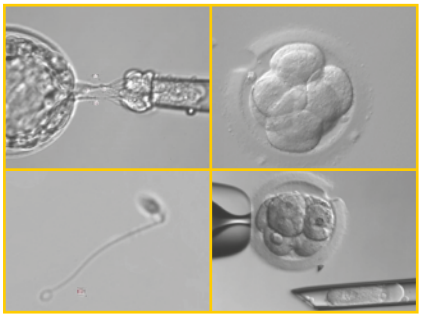
Since its launch dating more than 15 years back OCTAX Laser Shot™ is setting the standards for assisted hatching, biopsies, and other laser-related techniques. Its outstanding features have been the solid ground for the world´s most used laser system in human ART, also reflected by more than 90 peer-reviewed publications.
Evolving from the classical Laser Shot™ system the new dynamic OCTAX NaviLase™ is now available for increased demands in terms of speed and automation.

OCTAX Laser Shot™

Microsurgical laser system for A.R.T.

The OCTAX Laser Shot™ infrared laser system can be adapted to all recent inverted microscopes used for ICSI. Its operation is very easy and all features have been optimized for convenient routine use.

OCTAX Laser Shot™ installed to Nikon Ti-S



OCTAX Laser Shot™ is based on the multi-purpose imaging and archival software OCTAX EyeWare™ and includes the OCTAX high resolution Eye™ USB2 camera. Upgrades with other OCTAX platform components are easily possible.
OCTAX Laser Shot™ is compatible with Olympus IX 50/70, IX 51/71/81, IX 53/73/83; Nikon Diaphot 200/300, TE200/300/2000, Ti; Zeiss Axiovert 100/135/200, AxioObserver; Leica DMIRB, DMIL, DMI 3000B/4000/6000.

Advantages
- Easy, intuitive use
- Safety proven in several clinical studies
- Highest image quality
- Highest reliability
- Optical versatility: 25x or 40x laser lenses

Applications
- Assisted hatching
- Polar body biopsy
- Blastomere biopsy
- Trophectoderm biopsy on blastocysts
- Sperm viability testing
- Blastocyst collapsing

 # 19310/0148
OCTAX Laser Shot™
Including: OCTAX Laser Shot™ infrared laser module, microscope adaptor, mirror block, laser lens, OCTAX Eye™ USB2 digital camera, OCTAX EyeWare™ imaging and archival software, manual.
FDA 510(k) cleared.

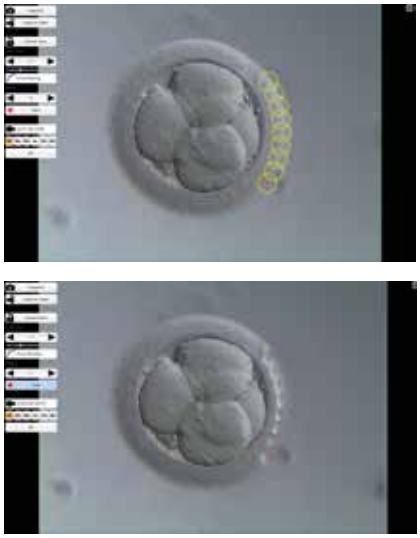
 # 19310/0148 M
OCTAX Laser Shot™ M
Complying with the European Medical Device Directive 93/42/EEC.

05 OCTAX Laser Shot™ & NaviLase™ laser systems

OCTAX NaviLase™

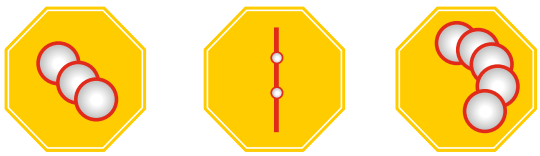
Dynamic multi-purpose laser system for A.R.T.

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.



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 highest 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 graphical user interface refines and complements the functionality of OCTAX EyeWare™, the multi-purpose imaging & archival software platform which controls OCTAX NaviLase™.
Providing a selection of different operational modes OCTAX NaviLase™ can be appropriately used for any major laser-based application.

Dynamic application modes



zona drilling/biopsy | TE biopsy | zona thinning

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™
- Optical versatility: 25x and 40x laser lenses
- Compatible with Olympus IX 50/70, IX 51/71, IX 53/73; Nikon TE2000, Ti; Zeiss Axiovert 200, AxioObserver

 # 19310/0146
OCTAX NaviLase™
Complete with: calibration-free and moveable infrared laser module including motion elements, motion controller, microscope adaptors and mirror block, OCTAX 3.2 Mpix, Eye™ USB2 digital camera, OCTAX EyeWare™ imaging & archival software, manual

06 OCTAX Laser Shot™ & NaviLase™ laser systems

OCTAX Laser Shot™ & NaviLase™ system specifications

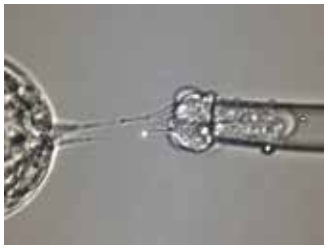
	OCTAX Laser Shot™	OCTAX NaviLase™
Laser power: 100 – 150 mW, pulse length: 0.1 ms – 10 ms	●	●
Laser objective: 25 x or 40 x, HMC/RC/MC compatible	●	●
Laser unit dimensions: 90 x 90 x 100 mm (WxDxH)	●	●
Laser module supply power via USB2	●	●
High resolution 3.2 Mpix. USB2 camera	○	●
Maximum hole size per pulse: >20 µm	●	●
Interactive hole size indication	●	●
Target pointer upgrade available	●	●
Different dynamic laser modes available: zona drilling, zona thinning, trophectoderm biopsy	–	●
Multi-pulse capability	–	●
No realignment required after installation	●	●
Video recording & playback	●	●
Biometric measurement functions	●	●
Integrated SQL server based patient and image database	●	●
Customized report formats	○	○
Seamless integrating option for: polarization microscopy, IMSI system, and electronic condenser	●	●
Networking of multiple lasers/imaging stations	○	○
Compatible with common modern inverted microscopes	●	●
Operating systems: Windows 8.1, Windows 8, Windows 7, Windows Vista	●	●
Recommended computer specifications: Intel Core i3, Intel Chipset, 2 GB RAM minimum, 250 GB hard drive minimum, CD-RW drive, ATI or nVidia video adapter, 512 MB RAM, 6x USB2.0 minimum	●	●

● standard ○ cost option

07 OCTAX Laser Shot™ & NaviLase™ laser systems

OCTAX Laser Shot™ & NaviLase™ available upgrades and accessories


 # 19310/0147
OCTAX NaviLase™ upgrade for existing OCTAX Laser Shot™ systems installed to modern inverted microscopes
Includes NaviLase™ motion module, Eye™ 3.2 Mpix USB2 camera, and software update to current EyeWare™ version

 # 19310/4150
OCTAX Target Pointer upgrade for OCTAX Laser Shot™ and OCTAX NaviLase™ systems
Optional add-on for trophectoderm biopsy, indicates laser target through microscope eyepieces. For Olympus IX 50/70, IX 51/71/81, IX 53/73; Nikon TE2000 & Ti; Leica DMIRB, DMI 3000; Zeiss Axiovert 200 & Axio Observer

 # 19310/0141
Breadboard
For installing OCTAX Laser Shot™ or OCTAX NaviLase™ to Olympus IX 53/IX73

 # 19310/1148
OCTAX foot switch
For releasing the laser

 # 19310/1149
OCTAX foot switch
For taking snapshots to the EyeWare™ imaging & archival software

 # 19310/4149
OCTAX Biopsy Objective, 25x
HMC/RC/MC compatible

 # 19311/0148
OCTAX Biopsy Objective, 40x
HMC/RC/MC compatible

#19310/0001
Professional series PC with 22" full HD monitor

08 OCTAX Adaptive Electronic Condenser™

Intelligent light for demanding microscopy

Adjusting conventional condensers to different applications as well as aligning the inserts of those condensers can be cumbersome. In search of making A.R.T. microscopy most user-friendly, OCTAX has developed the Adaptive Electronic Condenser™.

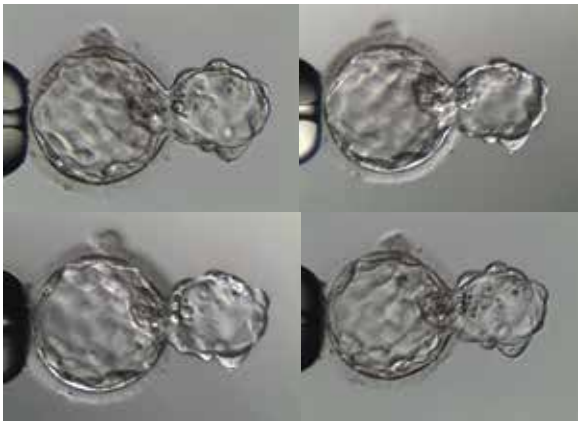
Features

- Long working distance (40 mm)
- High numeric aperture (NA 0.6) for optimum optical resolution
- 66 mm front lens diameter
- Integrated circular polarizer
- Integrated high efficiency infrared blocking filter for improved image quality and protection of embryos
- Touch keys for pattern selection
- Head up display
- Input power 5V via USB computer connection or via AC adaptor

Advantages

- Suitable for Hoffman modulation contrast, relief contrast and phase contrast objectives
- Easy change between contrast patterns via touch keys
- Head-up display shows active aperture pattern in clear text
- Dynamic interaction with OCTAX EyeWare™, OCTAX polarAIDE™, OCTAX cytoScreen™ for unmatched ease of use
- No moving parts
- Working distance and lens diameter allow for convenient operation of micromanipulation tools
- Works either PC independent or as an integral part of the OCTAX EyeWare™ platform via PC
- Easy, software-based alignment

OCTAX marks the peak of A.R.T. imaging



OCTAX Adaptive Electronic Condenser™ selected relief contrast patterns

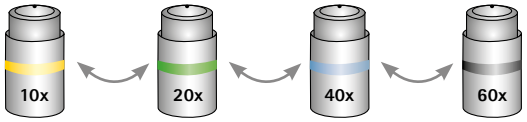
 # 19360/0001
OCTAX Adaptive Electronic Condenser™
For Olympus IX 50/70, IX 51/71, IX 53/73, NIKON TE, Ti, Zeiss Axiovert 200, AxioObserver
Suitable for Hoffman Modulation Contrast, relief contrast, phase contrast, dark field and bright field, complete with device driver and manual

09 OCTAX SyncBox™ IX73

Fully synchronized IVF microscopy and image processing: smart – quick – easy

Achieving optimum resolution and contrast on conventional ICSI stations means turning the condenser wheel whenever the lens/magnification is changed.

Manually changing the microscope lenses...



....triggers the OCTAX SyncBox™ IX73 to:

adjust the OCTAX Electronic Condenser™ contrast

10x	Relief	20x	Relief	40x	Relief	60x	cyto

adjust OCTAX EyeWare™ lens calibration

10x 20x 40x 60x

switch the EyeWare™ to customized mode

The OCTAX SyncBox™ IX73 is a useful accessory converting your Olympus IX73 microscope combined with the OCTAX Adaptive Electronic Condenser™ into the first affordable, non-motorized but fully automatic IVF microscope: when the lens is changed manually, the OCTAX Adaptive Electronic Condenser™ will automatically provide the optimum contrast and the EyeWare™ software platform will adapt the calibration needed to perform biometric measurements.

Requirements
OCTAX SyncBox™ IX73 has been designed for an Olympus IX73 inverted microscope equipped with the OCTAX Adaptive Electronic Condenser™ connected to a PC. OCTAX EyeWare™ imaging and archival software, OCTAX Eye™ USB2 camera, OCTAX NaviLase™, OCTAX Laser Shot™, OCTAX cytoScreen™ or OCTAX polarAIDE™ are additional components which can easily be integrated into this fully synchronized environment.

 # 19311/2001
OCTAX SyncBox™ IX73 "lenses"
links the IX73 objectives to the OCTAX Adaptive Electronic Condenser™ and OCTAX EyeWare™ imaging and archival software

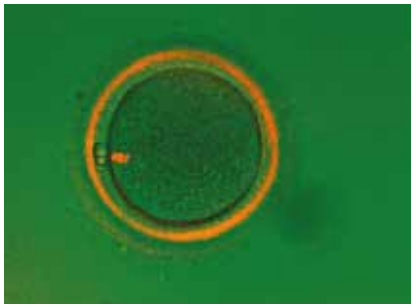
 # 19311/2002
OCTAX SyncBox™ IX73 "intermediate"
links the IX73 intermediate magnification (1.6x, 2x) to the OCTAX EyeWare™ imaging and archival software

10 OCTAX polarAIDE™

First-class spindle and zona imaging

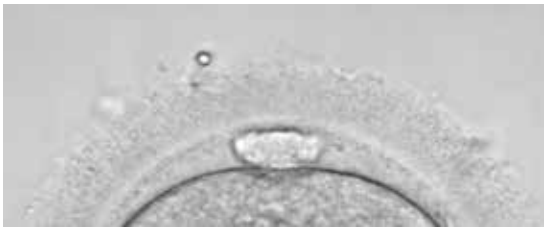
OCTAX polarAIDE™ is the solution for routine spindle and zona analysis. Oocyte quality is evaluated by polarAIDE™'s unique "automatic zona scoring" which detects the oocyte's zona pellucida and measures its birefringence properties, automatically and user independent. Use our cutting edge technology to identify the most promising oocytes developing to the best embryos for transfer.

polarAIDE™ bright field mode

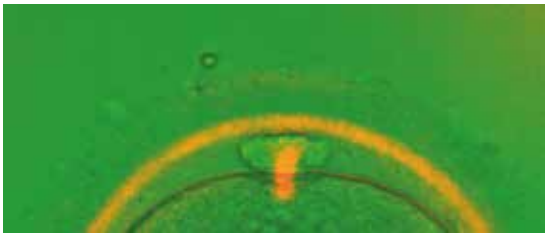


polarAIDE™ overlay mode

polarAIDE™ automatic zona scoring mode



Relief contrast: metaphase II?



polarAIDE™: immature oocyte at telophase I!

 # GWST-5040
WillCo Glass bottom dishes, 50 mm
Individual blister packs, box of 20 PCS, MEA tested, sterile

Features
- Real-time spindle and zona imaging under normal light intensity
- Simultaneous view of oocyte morphology and spindle
- Fully automatic zona pellucida detection and analysis
- Self-calibrating, no active calibration required
- Can easily be upgraded with other OCTAX components

Applications
- Spindle imaging for oocyte stageing to verify metaphase II
- Spindle imaging for checking post-thaw oocyte viability
- Spindle imaging for QC purposes (proper temperature / pH)
- Automatic & objective oocyte zona scoring for assessment of the developmental potential of the resulting embryos

 # 19330/0011
OCTAX polarAIDE™ stand-alone system
Including: OCTAX polarAIDE™ software, GIF filter, circular polarizer, USB2 liquid crystal analysis slider, OCTAX high resolution USB2 camera, OCTAX EyeWare™ imaging software, manual

 # 19330/0013
OCTAX polarAIDE™ upgrade
when OCTAX EyeWare™ and USB2 camera are already in place
Including: OCTAX polarAIDE™ software, GIF filter, circular polarizer, USB2 liquid crystal analysis slider, manual

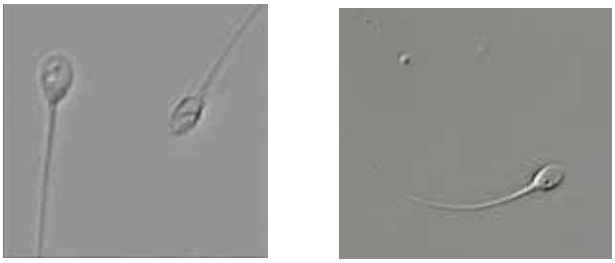
 # FD5040-100
WPI Fluorodish, glass bottom, 50 mm
Individual blister packs, box of 100 PCS, MEA tested, sterile

OCTAX polarAIDE™ is currently not available in the U.S.

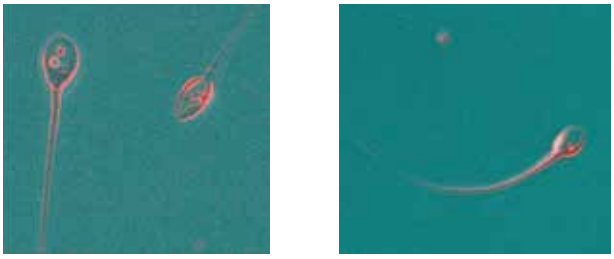
11 OCTAX cytoScreen™

High resolution dry system for intracytoplasmic morphologically selected sperm injection (IMSI)

Analyzing sperm ultra-morphology prior to microinjection is considered to improve treatment results in critical cases: selecting against sperm showing vacuoles and/or abnormal head shape has been reported to increase pregnancy rates and reduce miscarriage rates in well-defined patient groups. OCTAX cytoScreen™ combines high quality optical components and intelligent software for dry IMSI.



OCTAX cytoScreen™ electronic relief contrast mode



OCTAX cytoScreen™ edge enhancement mode

OCTAX cytoScreen flex™ provides optimum image quality with / without heated glass stage, with glass bottom dishes (recommended) or with standard plastic dishes, depending on the total working distance.
OCTAX cytoScreen HD™ optimizes image quality without a heated glass stage and with glass bottom dishes to be used.

Features & Advantages

- For existing ICSI microscopes with / without heated glass stage
- Hardware zoom for highest optical resolution
- Electronic relief contrast & edge enhancement
- No DIC, no oil immersion required
- Based on the OCTAX EyeWare™ platform
- Supported microscopes: Olympus IX50/70, IX51/71, IX53/73; NIKON TE, Ti; Zeiss Axiovert 100/200, AxioObserver. Leica DMIRB, DMI (CytoScreen HD only).

	#19340/0112 OCTAX cytoScreen™ IMSI flex, stand-alone	#19340/0122 OCTAX cytoScreen™ IMSI flex, upgrade	#19340/0012 OCTAX cytoScreen™ IMSI HD, stand-alone	#19340/0022 OCTAX cytoScreen™ IMSI HD, upgrade
OCTAX EyeWare™ imaging software	●	–	●	–
OCTAX cytoScreen™ software	flex	flex	HD	HD
OCTAX Adaptive Electronic Condenser™	●	●	○	○
OCTAX Eye™ 3.2 Mpix USB 2.0 camera	●	○	●	●
OCTAX 60x high resolution objective	LWD	LWD	SWD	SWD
box of glass bottom dishes	●	●	●	●
manual	●	●	●	●

● standard ○ cost option

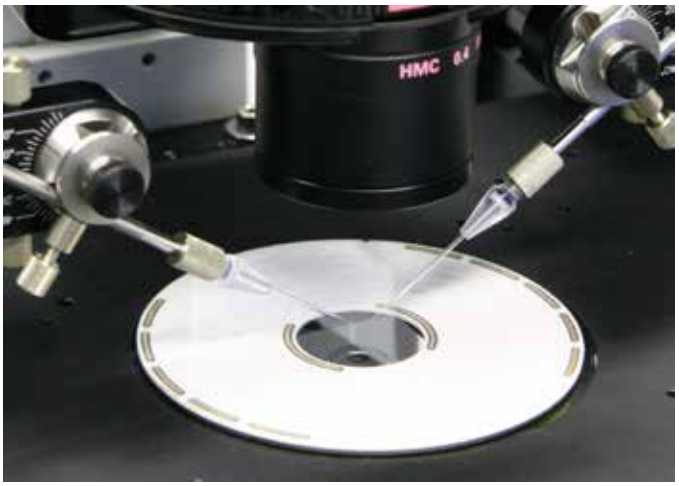
 # 19340/0067
Twin dish holder
For safe transfer of the selected sperm from glass bottom the ICSI dish

 # GWST-5040
WillCo Glass bottom dishes, 50 mm
Individual blister packs, box of 20 PCS, MEA tested, sterile

 # FD5040-100
WPI Fluorodish, glass bottom, 50 mm
Individual blister packs, box of 100 PCS, MEA tested, sterile

12 OCTAX heated motorized insert

Featuring precise movement of your specimen and perfect temperature control



The heated motorized insert replaces any existing microscope stage insert such as a thermo plate as well as any simple metal plate. It combines the convenient use of any manual X/Y stage with the precision of a motorized stage moving in micron steps. The moving insert plate is equipped with a heating system and a passively heated cover glass plate.

Features

- Integrates with existing X/Y stages on Olympus and Nikon inverted microscopes
- Combines ultra-fine movements with manual operation
- Motorized positioning with high resolution, min. step width < 0.2µm
- Computer controlled via OCTAX EyeWare™, maintains temperature even if PC is switched off
- Temperature control range for insert stage: 25°C ~ 45°C, accuracy < ±0.5°C
- USB2 connectivity, control by mouse, keyboard or OCTAX keypad controller
- External connectors: connection to computer via USB cable, and 12 V power supply
- Supply voltage: 100 - 240 V AC, 50 or 60 Hz, 15 VA

Advantages

- Get two in one: temperature and motion are software controlled
- Move the stage in micron steps by a simple mouse click on your screen
- Adjust speed and directions dynamically by mouse action while the stage is moving
- Suitable for assisted hatching and ICSI

 # 19320/0002
OCTAX heated motorized insert plate
Complete with keypad, control unit, power supply and USB cable

 # 19310/5148KC
OCTAX keypad controller
For motorized heating stages

MTG Medical Technology
Vertriebs-GmbH
Dr.-Pauling-Str. 9
D-84079 Bruckberg / Germany

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