Assisted hatching and embryo biopsy is not recommended for routine use in all IVF patients. Caution: Federal law restricts this device to sale by or on the order of a physician or practitioner trained and certified in its use.

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LYKOS® CLINICAL

The LYKOS® includes laser objective (40x) combination, 3 turret adapters, video camera, c-mount adapter, proprietary laser drilling software, desktop or laptop computer and accessories. Microscope is not included.

Dimensions	**H**	**W**	**D**	
	in. (mm)	**in. (mm)**	**in. (mm)**	**lb. (kg)**
LYKOS.:	1.65 (42)	1.26 (32)	1.26 (32)	0.28 (0.13)
Controller:	3.8 (95)	2.5 (63.5)	1.8 (46)	1.0 (0.45)
MiniTower:	14.2 (360)	6.9 (175)	16.4 (417)	20.7 (9.4)
Monitor:	20.2 (513.5)	21.9 (556)	7.1 (180.3)	10.1 (4.6)
Laptop:	0.9 (23.45)	14.8 (376.9)	10.1 (255.2)	4.71 (2.14)

Electrical	**MiniTower**	**Monitor**	**Laptop**
Input Voltage:	110-240 VAC	110-240 VAC	110-240 VAC
Power:	250 watt (max)	72 watt (max)	90 watt (max)
Line Frequency:	50/60 Hz	50/60 Hz	50/60 Hz

Laser

Type:	1460 nm, Infrared Solid State Diode
Maximum Power:	@ Focus = 300 mW (Class I)
Laser Modes:	Clinical, Validation, Multipulse
Clinical:	3 user-definable pulse lengths [default 200, 400, 600 µs], Power 100% (fixed)
Validation:	Pulse length adjustable 1 - 3000 µs Power adjustable 1 - 100%
Multipulse:	Pulse length : 1 - 3000 µs Power adjustable : 1 - 100% Repetition rate per sec: 1 - 1000 Mean power maximum: 10 mW
Firing:	By mouse (Optional: Foot switch firing) (15 second firing limit in Clinical Mode)
Target Marker:	Circle or arrow, adjustable "Blink Time" after firing. Isotherm Rings, showing peak temps and hole size. Select which rings to display.
Crosshairs:	Activation, size and color set by user (used for positioning embryo)
Laser Alignment:	Aligned and locked at factory. No on-site physical laser alignment required
Target:	Adjust target alignment on-screen

RED-i Target Locator

Source:	Red LED built into laser module
Alignment:	X-Y mechanical adjustment to center of laser beam using Isotherm Rings as guide
Intensity:	On-screen intensity adjustment

Objective

Standard:	40x, 0.60 N.A., I.R. (High transmission in the UV [>350 nm], visible and near-infrared, long working distance)
Correction:	Infinity corrected for 1 mm thick polystyrene Petri Dish, on 500 µm glass heater plate A nose cap corrector is available if use without the glass heater plate is required.
Working Distance:	1.7 mm to glass heater plate
Parfocality:	< 40 µm
Scale Calibration:	Performed interactively on-screen Calibrate and save multiple objectives
Scale Bar:	Scale bar graphic overlay automatically adjusts based on calibrated objective. May be saved with images/video.
Compatibility:	3 RMS thread adapters permit installation on all major microscope models

Video

Camera:	Standard: High resolution digital color *Optional*: Analog black & white
Image Area:	Digital: 1360 x 1024 pixels *Optional NTSC*: 640 x 480 pixels
Zoom:	2x, 4x, and 8x with user defined image panning
Illumination:	Microscope, image on screen

Laser Safety

Class I Laser:	Laser pulse and energy cannot exceed Class I limits.
Timer:	Laser must be discharged within 15 seconds of activation while in Clinical mode; within 60 seconds in Multipulse mode.

Image Capture and Storage Utility

Capture and store unlimited images. Images stored in user-selected JPG, BMP, or TIF format. Capture unlimited thumbnail images and select which to save. Automatic image capture on laser fire. Manual or automatic file naming. Images may be saved with graphic overlay.

Image Annotation Tools

Unlimited automatic image labels may be stored and enabled. Freehand text, circles, rectangles, lines, and image measures may be added to captured images.

Video Capture

Capture and store real time and time lapse video in .avi format. Ability to set maximum recording length. Manual and automatic naming options. Open and play saved videos within program.

Measurement Toolbox

Tools allow measurement of various embryo parameters on captured images. Each measure visible as graphic overlay, including length in micron
Zona: 5 zona thickness measurements; Mean & Standard Deviation
Embryo: 2 diameter measurements; Mean & Standard Deviation; Blastomere count
Pronuclei: 2 diameter measurements for two separate pronuclei; Mean for each pronuclei
Drill: 5 hole size measurements; Mean & Standard Deviation
Ruler: 5 user-defined measurements; Mean & Standard Deviation

Reports and Output

Data Input:	Data from keyboard Data from measurements ASCII Import critical fields
Report:	Ova/embryo information, procedure/protocol information, choice of 2 images plus evaluation data or 4 images
Output:	Printout of report Report stored in JPG format ASCII output of all numerical and alphanumeric fields in TXT & MER formats

LYKOS Computer (subject to change)

Type:	MiniTower Model	Laptop Model
OS:	Windows 8.1 Pro	Windows 8.1 Pro
CPU:	Intel Core i7	Intel Core i7
Memory:	4 GB DDR 3	4 GB DDR 3
Drives:	500 GB HD 8x DVD+/-RW	500 GB HD 8x DVD+/-RW
Display:	24" Flat Panel Widescreen	15.6" HD Anti-glare
Ports:	Serial, HDMI, USB 2.0 PS/2	Parallel, USB 3.0 VGA, 1394, HDMI Memory card reader
Network:	10/100/1000 Ethernet	10/100 Mps Ethernet Intel WiFi

Specifications subject to change without notice.