

**OPTIKON™**  
Man and Technology



CLEARLY SEEN SOLUTIONS.

**HiScan***touch*

# HiScan touch

New design and style with 17" HD Touchscreen technology.  
Latest IOL calculation formulas and high definition B-SCAN and UBM images.  
The complete diagnostic workstation.

## Main features:

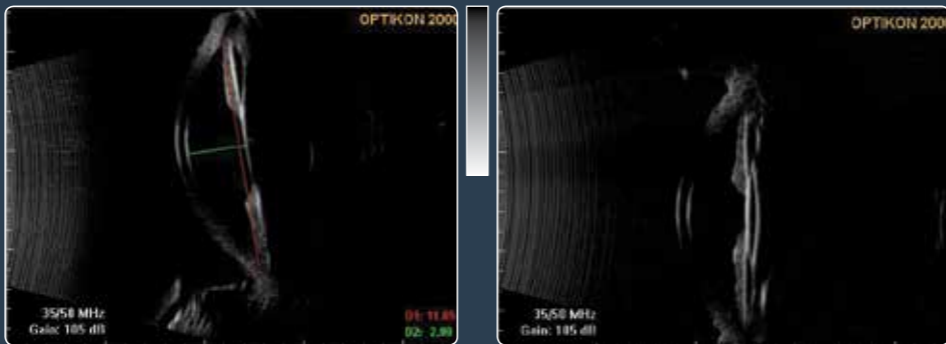
- B-Scan / UBM;
- Biometry;
- Pachymetry;
- Diagnostic A-Scan;
- A-Scan on B-Scan;
- IOL calculation (post-refractive formula);
- 3D reconstruction;
- 17" HD Touchscreen;
- All-in-one.

17" HD TOUCHSCREEN

COMPLETE RANGE OF PROBES

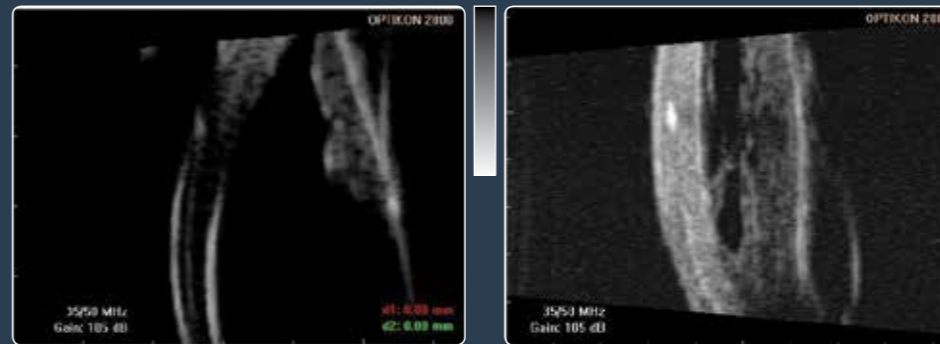
ERGONOMIC AND  
EASY-TO-MANEUVER  
HEALTHCARE CART





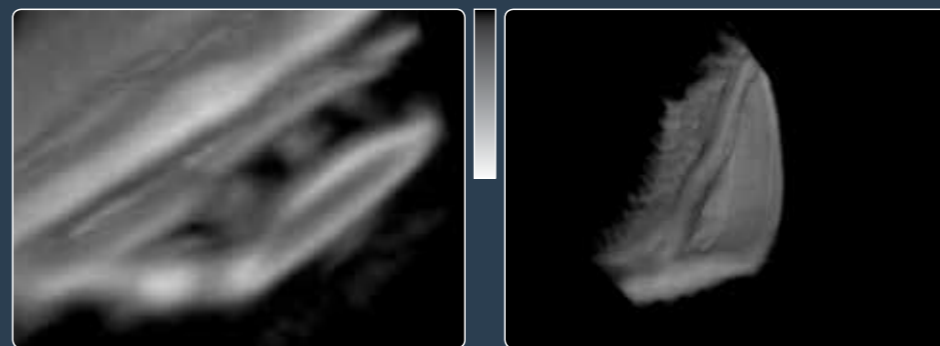
**35 MHz and 50 MHz probes**

The 35 MHz and 50 MHz probes enable the entire anterior segment to be viewed without requiring image processing software.



**35 MHz and 50 MHz probes**

The remarkable detail of the image enables viewing of a LASIK flap (on the left) and a choroidal trauma (on the right).

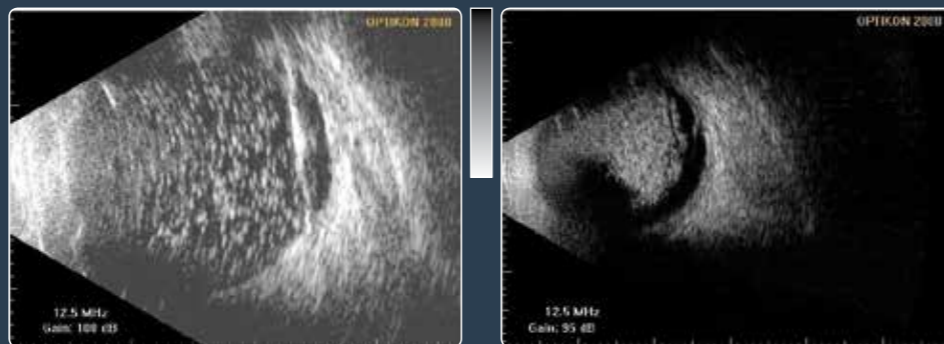


**3D images with 35 MHz and 50 MHz probes**

3D viewing allows dynamic observation from every angle and navigation through acquired images. An IOL (on the left) and ciliary bodies (on the right).

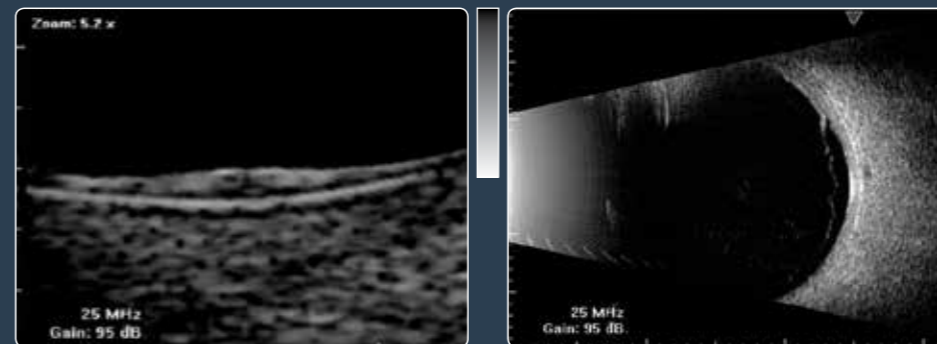
# Anterior

IMMERSION AND CONTACT SCANNING FOR HIGH RESOLUTION IMAGES.



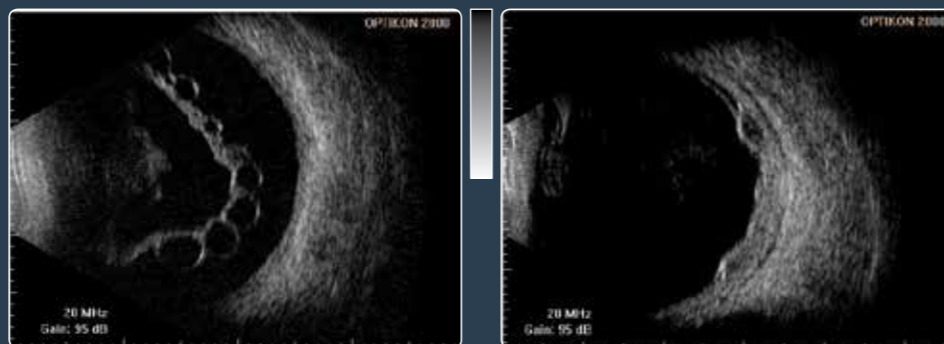
#### 12 MHz probe

High gain mode enables extremely detailed analysis of the vitreal heterogeneity and corpuscles.



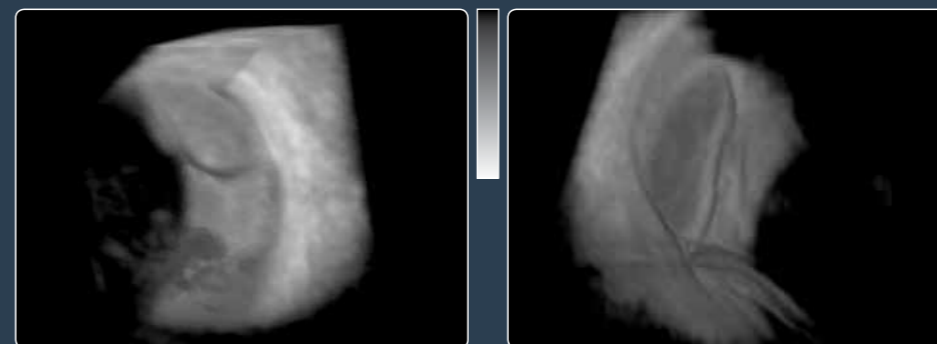
#### 25 MHz probes

Designed to get the best image of the retinal tissues and ocular fundus. A macular hole (on the left). Retinal tear caused by posterior vitreous detachment (on the right).



#### 20 MHz probe

The high resolution of this probe allows to accurately study cysts in the posterior segment (on the left) and a choroidal melanoma (on the right).



#### 3D images with 12 MHz, 20 MHz and 25 MHz probes

3D ultrasonography of the posterior segment shows the actual dimensions of a pathological shape. Melanoma of the choroid with bleeding (on the left), melanoma of the choroid (on the right).

#### Image management

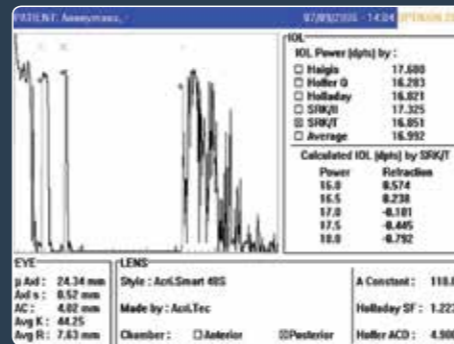
Measures of distances, surfaces and angles on images. Video recording. Unlimited possibilities of storing B-Scan, UBM, biometry, A-Scan and pachymetry images directly in the patient folder.

# Posterior

DETAILED AND PERFECT DIAGNOSTIC IMAGES.



High accuracy Pachymetry with 50 MHz probe and ΔIOP indication.

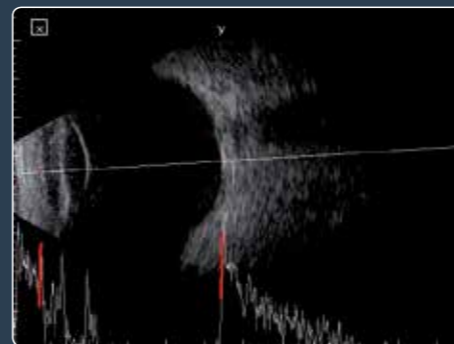


10 MHz probe

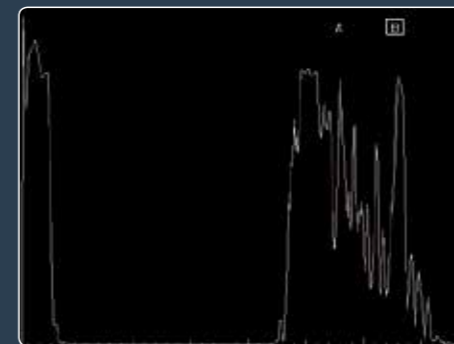
Complete printout of biometric data and IOL calculation.



IOL calculation with post-refractive formula.



Biometric measurements and IOL calculation on two-dimensional images.



8 MHz probe

Unfocused with "S"-shaped amplification curve to measure and diagnose injuries.

# Measurement

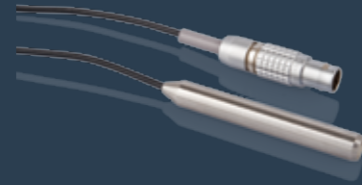
LATEST GENERATION PACHYMETRY, BIOMETRY AND DIAGNOSTIC A-SCAN.



143200 12 MHz B-Scan probe  
143300 20 MHz B-Scan probe



143600 35 MHz B-Scan probe  
143500 50 MHz B-Scan probe



143011 8 MHz diagnostic A-Scan probe



149016 25 MHz transducer for B-Scan probe  
149014 35 MHz transducer for B-Scan probe  
149015 50 MHz transducer for B-Scan probe



143016 Connecting cable for B-Scan probe



05V3180111 HiScan ergonomic cart  
144001 HiScan standard cart  
142006 Insulating transformer 0.5 KW



149006 Cup for immersion biometry Ø 14 mm  
149008 Cup for immersion biometry Ø 18 mm



149001 Biometry tester

# Accessories

## Technical specifications *HiScanTouch*

PARAMETER	SPECIFICATION
Model	A/B-Scan HiScan Touch Echograph
Regulatory conformity	93/42/EEC concerning medical devices
Technical standards	EN 60601-1; EN 60601-1-1; EN 60601-1-2
<b>ENVIRONMENTAL SPECIFICATIONS</b>	
Storage	temperature range: from -10°C to +70°C, Humidity 10 - 100% (non condensing)
Operating	temperature range: from +10°C to +35°C, Humidity 30 - 75%
<b>ELECTRICAL SPECIFICATIONS</b>	
Input voltage	100 V~ - 240 V~
Frequency	50/60 Hz
Maximum load	100 VA
Fuses	T1.5 AH
<b>B-MODE</b>	
Gain	variable, from 0 to 115 dB
TGC	software, from 0 to -30 dB
Signal dynamics on "frozen" image	from 10 to 80 dB
Contact probes	12 MHz (+/- 2 MHz) 20 MHz (+/- 3 MHz)
Immersion probes	35 MHz (+/- 5 MHz) (only full version) 50 MHz (+/- 5 MHz) (only full version)
Transducers for immersion probes	25 MHz (+/- 5 MHz) (only full version) 35 MHz (+/- 5 MHz) (only full version) 50 MHz (+/- 5 MHz) (only full version)
Focal distance (probes for posterior segment)	19 - 24 mm
Focal distance (probes for anterior segment)	9 - 14 mm
Scanning angle	30° - 60°
Image definition (not interpolated)	256 lines x 2048 pixels
Image definition (interpolated)	1024 lines x 2048 pixels
Field of view	from 20 to 60 mm (1x zoom)
Grey levels	256
Echographies	black and white, colour
Axial resolution (12 MHz probe)	80 micron
Lateral resolution (12 MHz probe)	200 micron
Axial resolution (50 MHz probe)	35 micron
Lateral resolution (50 MHz probe)	50 micron
Electric resolution	up to 8 micron
Database size	500 kByte / exam
Measurement capacity	distance 1 and distance 2, Angle, Area
Audible signal	yes
Movie recording	yes
Image and movie export formats	JPG, Dicom, AVI
Standard zoom	x1 ÷ x5
Zoom on window	x1 ÷ x100

### BIOMETRY

Probe	piezoelectric with fixing light, designed to be mounted on tonometric slide
Frequency	approx. 10 MHz
Gain	adjustable
Depth of measurement	from 1 to 60 mm
Electric resolution	up to 15 micron
Operating modes	phakic, cataract, aphakic, pseudophakic, manual
Type of lens	PMMA, acrylic, silicone, "user def."
Speed	preset for each segment or modified by user
Other settings	eye with silicone oil
Measurements	average of 5 measurements and standard deviation
Measuring methods	automatic and manual
Calculation formulas	SRKII, Haigis, Holladay, Hoffer Q, SRK/T, Post-refractive (Camellin-Colossi)

### PACHYMETRY

Gain	up to 130 dB
Probe	50 MHz
Measurement range	from 100 µm up to 1700 µm
Resolution	approx. 0.5 µm
Clinical accuracy	±5 µm
Maps	10 default + 8 custom
Points per map	from 1 to 49
Operating mode	auto and manual
Other functions	ΔIOP indication

### STANDARD DIAGNOSTIC A-SCAN

Probe	piezoelectric, unfocused
Frequency	8 MHz approx.
Amplification curve	"S" curve
Standardization	test and calibration performed on tissue-like ultrasound phantom

### DEVICES AND CONNECTIVITY

HiScan Touch is a PC-based standalone device with Windows operating system. It is compatible with all the devices that can be connected to state-of-the-art PCs.

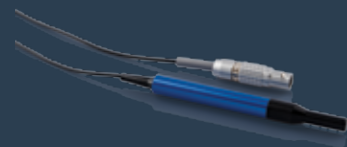
### CLASSIFICATION OF THE DEVICE ACCORDING TO IEC 60601-1

Type of protection against electric shocks	class I
Class of protection against electric shocks	B
Level of safety of the application in the presence of a mixture of inflammable anaesthetics	not suitable

WEIGHT:  
8 Kg

L x W x H:  
190 x 510 x 370 mm





143001 10 MHz Biometry probe



153005 50 MHz Straight pachymetry probe



149013 B-Scan probe holder arm



149009 B-Scan cups kit for immersion  
19/21/22 mm



149005 Gel tube, 250 ml (2 pcs)



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**OPTIKON™**  
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**OPTIKON 2000 S.p.A.**  
Via del Casale di Settebagni, 13  
00138 Rome - Italy  
www.optikon.com

**CUSTOMER SERVICE**

**Rome office - Italy**  
Via del Casale di Settebagni, 13 - 00138 Rome  
ph. +39 06 8888355 - fax +39 06 8888440  
e-mail: sales@optikon.com



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