AXIalis®

PRECISION AT YOUR FINGERTIPS

LUMIBIRD® MEDICAL

Biometry and pachymetry

AXIalis®

The next-generation integrated biometer and pachymeter*

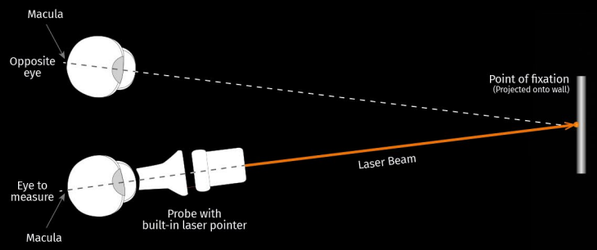
from **Quantel Medical**, a brand of **Lumibird Medical**, the **world leader** in **ophthalmic ultrasound**

BIOMETRY AND IOL CALCULATION

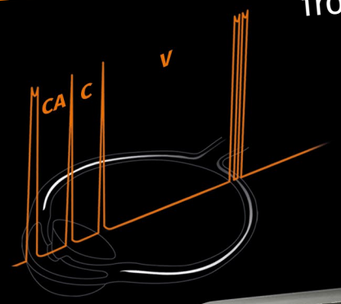
Ultrasound biometry is the only technology suitable for axial measurement of all eye types, regardless of cataract density. Ultrasound axial length measurement offers similar levels of precision to optical measurement (0.03 mm with immersion technique)[1].

The IOL calculation function can compare different types of IOLs and formulas. A total of 12 calculation formulas are available, including formulas for post-refractive surgery patients. IOL calculation can be performed to 0.25 D.

ProBeam™ biometry probe*



ProBeam™ is exclusive to Quantel Medical. The probe generates a laser beam that creates a focal point for the patient to look at: this facilitates measurement while increasing the precision of the probe[2].



ERGONOMICS AND PERFORMANCE

- The AXIalis® is suitable for all types of clinical settings, thanks to its compact, integrated design (no PC required), without compromising comfort of use.
- An intuitive, matt-finish 8” touchscreen for improved and simplified usability.
- A user-friendly interface enabling easy navigation across all system functions and calculations. The measurement process has been simplified to save time.

CONNECTED

- **DICOM:** import (Worklist function) and export (Storage function) images and patient reports to and from PACS. Reports and images can be printed using a **DICOM printer** or **local WiFi printer**.
- **EMR:** connection to multiple data transfer and storage software.

PACHYMETRY*

Pachymetry is essential for glaucoma diagnosis. The AXIalis® has several measurement modes, offering a precision of ± 5 microns and a measurement range of 200 to 999 microns.

IOP measurements can be corrected using integrated tables of correlations between IOP and corneal thickness, including Ehlers, Doughty and Dresdner.

(*) Option

TECHNICAL **SPECIFICATIONS**

BIOMETRY

Adjustable gain:	20 to 110 dB
Time Gain Control (TGC):	0 to 30 dB

11 MHz probe

Transducer frequency:	11 MHz
Tip diameter:	7 mm (0.28")
Electronic resolution:	0.03 mm (0.0012")
Depth:	60 mm (2.4") for 1,536 points

Contact and immersion techniques compatible

Aiming beam:	LED or laser pointer Probeam™*

Axial length measurements

Ultrasound propagation velocity adjustable per segment (anterior chamber, lens, vitreous) and IOL and vitreous material

Built-in pattern recognition:	phakic, aphakic, PMMA, acrylic and silicone for pseudophakic eyes

Automatic calculation of standard deviation and average total length (series of 10 measurements)

Acquisition modes:	automatic, auto + save, manual

Automatic detection of scleral spike

IOL calculation

SRK-T, SRK-II, HOLLADAY, BINKHORST-II, HOFFER-Q, HAIGIS
Post-op refractive calculation:
- Pre-op and post-op refraction, pre-op and post-op keratometry
- 6 Different methods for keratometry correction and implant calculation: history derived, refraction derived, contact lens method, Rosa regression, Shammas regression, Double K/SRK-T (Dr Aramberri formula)

9 values bracketed for desired ametropia for each IOL (IOL increment steps: 0.25 D or 0.50 D)
Simultaneous display of 4 different IOL calculations

DATA MANAGEMENT

Built-in physician and patient database
Exportation of still images
Customisable digital and printed reports
DICOM compatible (Worklist, Storage, Print)*
EMR compatible
Compatible with PC and USB video printers

PACHYMETRY*

Transducer frequency:	20 MHz
Tip diameter:	1.2 mm (0.05")
Method:	contact
Convergence:	0.5 mm (0.02") from tip
Angle:	45°

Corneal thickness measurements

Measurement range:	200 to 999 microns
Number of measurements:	1 to 10
Precision:	± 5 microns
Velocity:	adjustable
Methods:	central measurement or cartographic map (automatic, continuous, scanning)
Cartographic map:	user–9C8L– 9C4L– 5C8L –5C4L– 9C –5C–8L–4L

IOP correlation tables

Tables correlating for intraocular pressure and corneal thickness:
Ehlers + Doughty + Dresdner + unlimited number of user-defined tables

Specifications

Bias correction:	up to 120%

GENERAL INFORMATION

8" Back-lit LCD colour touch screen (resolution 1024 x 768 px)

Electrical requirements

Power supply:	100 – 240 VAC ± 10% single-phase + earth
Frequency:	50 – 60 Hz
Power:	60 W max.

Features

Overall dimensions:	W: 22.6 cm (8.9 in) D: 15.8 cm (6.23 in) H: 22.9 cm (9.02 in)
Touch screen dimensions:	8.0" (16.2 cm x 12.1 cm) (6.4"x 4.8")
Weight:	2.5 kg (5.51 lbs)
Ports:	3 USB, 1 Ethernet, 1 HDMI

Peripherals and accessories included with the basic model

Footswitch
Bluetooth mouse

Peripherals and accessories in option*

External PC printer Windows Operating System compatible (USB or Wifi)
Video printer with USB connection

(*) Option

BIBLIOGRAPHY

1. Comparison of immersion ultrasound biometry and partial coherence interferometry for intraocular lens calculation according to Haigis – W. Haigis et al. – Graefes Arch Clin Exp Ophthalmol. 2000 Sep
2. New laser fixation device for ultrasound biometry – M. Charles – Oftalmol. Clin. Exp. 2007

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