

# Aladdin

Combination optical biometer and corneal topographer



# Mastering IOL Selection: Expert Tools, Informed Decisions

The Aladdin is an easy-to-use, combination optical biometer and corneal topographer. 9-in-1 features include optical coherence biometry, Placido topography, wavefront analysis of the cornea, IOL calculation suite, pupillometry, DICOM connectivity and the RX/AL Trends Module.



## Aladdin Features

### Overview



**Keratometry,  
Topography**



**Keratoconus  
Screening\***



**Aberrometry  
Analysis (Zernike)**



**White to White  
Measurement**



**Axial length  
measurement**



**Dynamic  
pupillometry**



**IOL & Toric IOL  
Calculation**



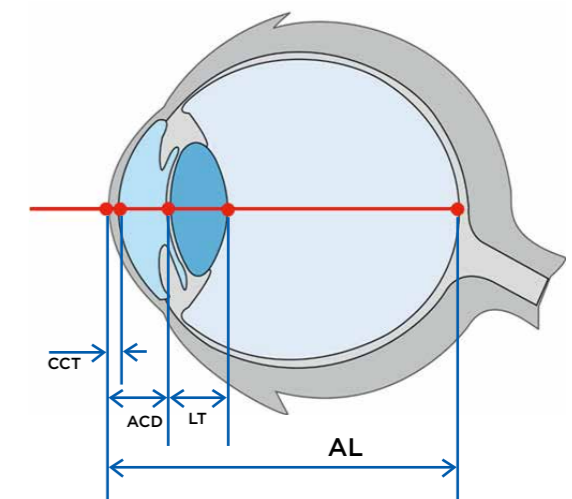
**Comprehensive  
Reports**



**RX/AL Trends  
Module**

### Posterior & Anterior interferometry

Biometry results are complemented with anterior topography, Zernike analysis and pupillometry in one fast, accurate and easy acquisition. The Interferometer of ALADDIN also provides anterior measurements such as the Central Corneal Thickness (CCT), Anterior Chamber Depth (ACD) and Lens Thickness. You get the complete picture for your cataract surgeries. Whether you are performing standard cataract surgery or premium IOL implantation, you will be screening for corneal aberrations, keratoconus\* and previous corneal refractive surgery procedures all at once. The ALADDIN only requires just one acquisition.

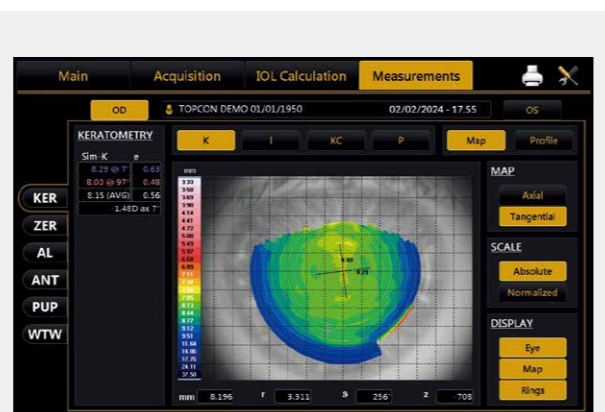


\* Not available in the US.

## Keratometry / Topography

Corneal topography provides much more information than just K-values. Not only the power, but also the shape of the corneal astigmatism can be easily detected with topography maps, facilitating your decision on toric IOL implantation. The keratometry provided by the placido rings of ALADDIN is extremely accurate due to simultaneous use of the interferometer.

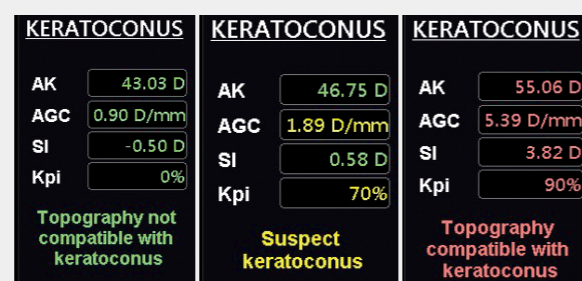
- Axial and tangential map
- Absolute and normalized scale
- Millimeters or diopters
- Grid, rings, and 3, 5 and 7 mm zones



## Keratoconus screening\*

The Aladdin is capable of screening the anterior corneal surface for keratoconus. The Keratoconus Probability Index is shown in percentage as well as in colour codes. This information assist surgeons in deciding the best IOL type for the patient.

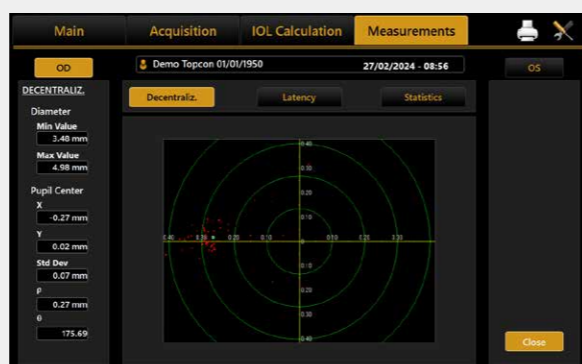
- Green Not compatible with Keratoconus
- Yellow Suspected Keratoconus
- Red Compatible with Keratoconus



## Dynamic Pupillometry

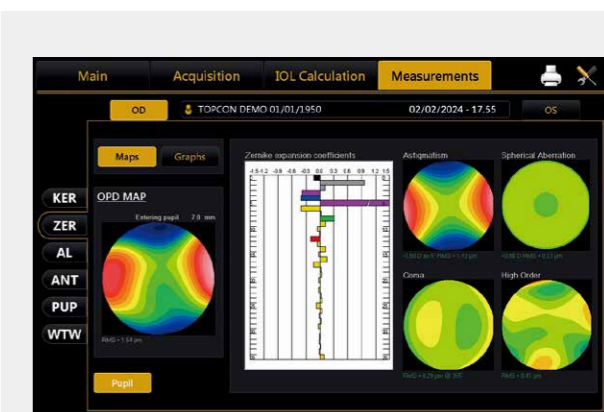
Aladdin provides different light conditions to measure the pupil size during dynamic pupillometry. This information is very important while evaluating candidates for multifocal IOLs or refractive surgery. For any refractive procedure, it is vitally important to diagnose the pupil very carefully in different light conditions, and exclude cases of extreme small or decentered pupils.

- Dynamic
- Photopic
- Mesopic



## Aberrometry analysis (Zernike)

Zernike analysis of the topographic data provides the Optical Path Difference (OPD) and information on astigmatism, spherical aberrations, higher order aberrations and Coma for pupil sizes of 2.5mm to 7.0mm



## Axial length

Using a low-coherence interferometry system with a superluminescent diode of 830 nm and signal processing, the ALADDIN achieves Axial length measurement with high signal-to-noise ratio. Axial length measurements can be done on phakic eyes as well as on aphakic, pseudoaphakic and silicone oil-filled eyes.



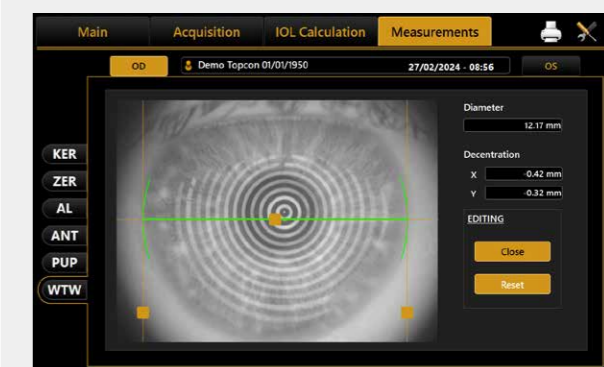
## Anterior biometry

Anterior biometry with the ALADDIN allows measuring the Central Corneal Thickness, Anterior Chamber Depth and the crystalline Lens Thickness. The resulting interferometry measurements are presented graphically for clear visualization.

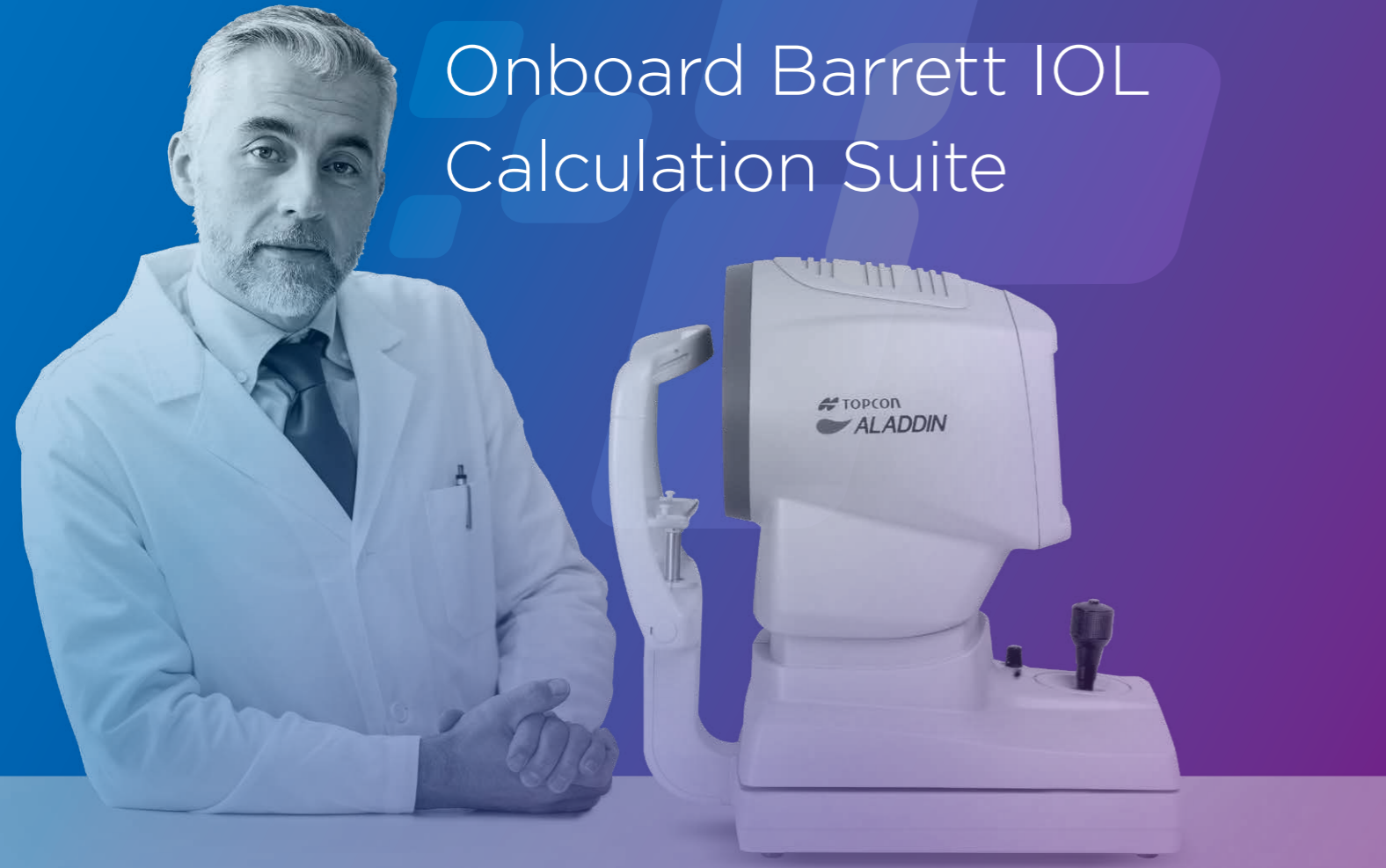


## White to white

ALADDIN automatically calculates the white-to-white measurement, which can be edited manually if necessary. This precise measurement is particularly valuable for the placement of anterior chamber intraocular lenses and sulcus fixated posterior chamber intraocular lenses, especially in highly myopic eyes, ensuring reliable outcomes.



# Onboard Barrett IOL Calculation Suite

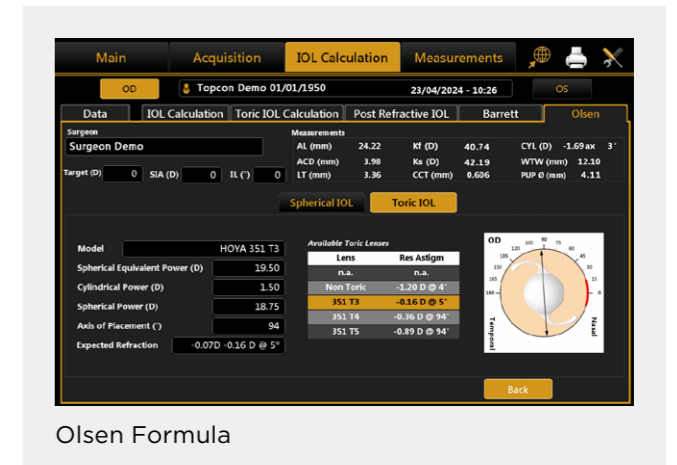


## Onboard Olsen Formula

The Aladdin features the Olsen IOL calculation formula. It utilizes the C-constant, together with many biometric measurements of the eye to predict the effective lens position.

## Abulafia-Koch astigmatism cylinder correction for Toric IOL calculations incorporated

The Abulafia-Koch correction formula calculates the estimated total corneal astigmatism based on standard keratometry measurements.



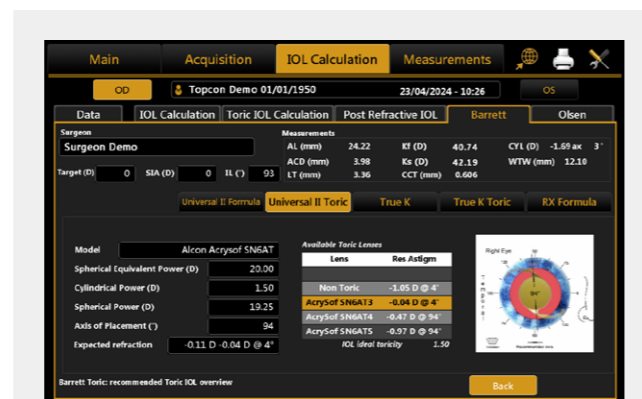
Olsen Formula

## On-board calculation formulas

<b>IOL formulas</b>	Haigis, Hoffer Q, Holladay 1, SRK®II, SRK®T, Barrett Universal II, Olsen
<b>Post-refractive Surgery IOL formulas</b>	Camellin Calossi and Shammas No History, Barrett True K, Barrett Rx

## Onboard Barrett IOL Calculation Suite

Dr. Graham D. Barrett developed his own formula in 2013. The Barrett Universal II formula is unique, as it predicts the posterior corneal curve without the need of actually measuring it.



The Aladdin's Barrett IOL Calculation Suite includes:

- Barrett Universal II
- Barrett Toric
- Barrett True K
- Barrett Rx





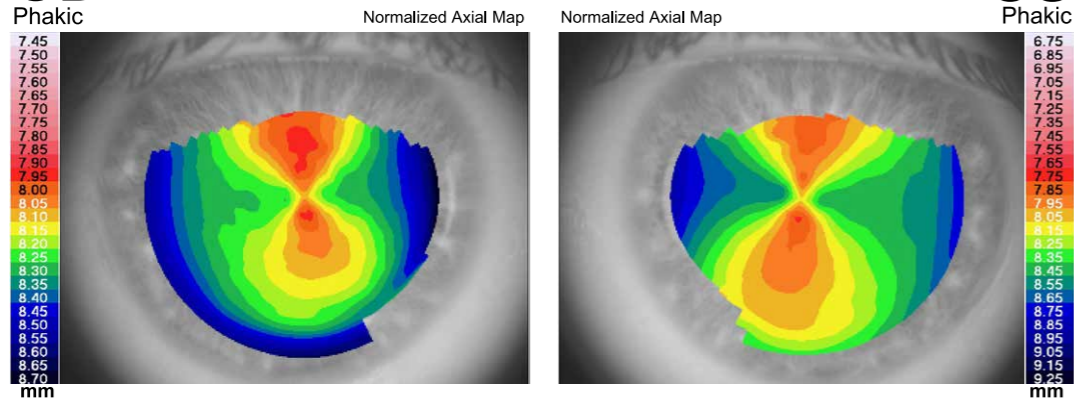
Topcon Europe Medical bv

Patient : TOPCON DEMO  
 Patient ID :  
 Date Of Birth : 01/01/1950  
(mm/dd/yyyy)

Surgeon : Surgeon Generic  
 Exam Date : 03/12/2024 - 16:35  
(mm/dd/yyyy)

**OD**

**OS**

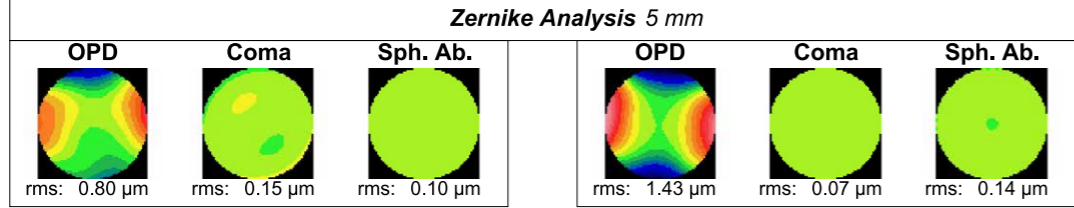


Measurement Summary			
AL	23.73 mm	K1	8.28 mm@ 8°
ACD	3.14 mm	K2	8.00 mm@ 98°
LT	4.04 mm	CCT	0.544 mm
WtoW	11.70 mm	Dec	(-0.22, -0.29)

Keratometric Indices			
CYL 3 mm	-1.44 D	Ax:	7°
CYL 5 mm	-1.46 D	Ax:	8°
SD	0.36 D	SAI	0.47 D
e	0.49	Kc	41.61

Keratoconus Screening			
AK	43.03 D	AGC	0.90 D/mm
SI	-0.50 D	p	0%

Pupil Data			
Photo: Diam	3.95 mm	Dec	0.35 mm; 168°
Meso: Diam	4.11 mm	Dec	0.32 mm; 187°



Topcon Europe Medical bv

Patient : TOPCON DEMO  
 Patient ID : Demo  
 Date Of Birth : 01/01/1950  
(dd/mm/yyyy)

Surgeon : SURGEON GENERIC  
 Exam Date : 27/02/2024 - 10:23  
(dd/mm/yyyy)

**OD**

**OS**

Data Measurements				n
Aladdin Optical				
AL	23.73 mm	K1	40.74 D	@ 8°
ACD	3.14 mm	K2	42.19 D	@ 98°
LT	4.04 mm	CYL	-1.45 D	ax 8°
CCT	0.544 mm	AvgK	41.47 D	
WTW	11.69 mm			

Target Refraction: 0

Teleon AN6V	Haigis	Teleon LS-313 MF15	Hoffer Q
IOL(D)	REF(D)	IOL(D)	REF(D)
23.00	0.58	21.50	0.62
23.50	0.23	22.00	0.27
<b>24.00</b>	<b>-0.12</b>	<b>22.50</b>	<b>-0.08</b>
24.50	-0.48	23.00	-0.44
25.00	-0.84	23.50	-0.80

Teleon LS-313 MF20	Holladay I	Teleon LS-313 MF20	Barrett Universal II
IOL(D)	REF(D)	IOL(D)	REF(D)
21.50	0.71	21.50	0.62
22.00	0.36	22.00	0.25
<b>22.50</b>	<b>0.01</b>	<b>22.50</b>	<b>-0.13</b>
23.00	-0.35	23.00	-0.50
23.50	-0.71	23.50	-0.89

Teleon LS-313 MF20	SRK/T
IOL(D)	REF(D)
21.50	0.59
22.00	0.23
<b>22.50</b>	<b>-0.13</b>
23.00	-0.49
23.50	-0.86



# IOL & Toric IOL Calculation

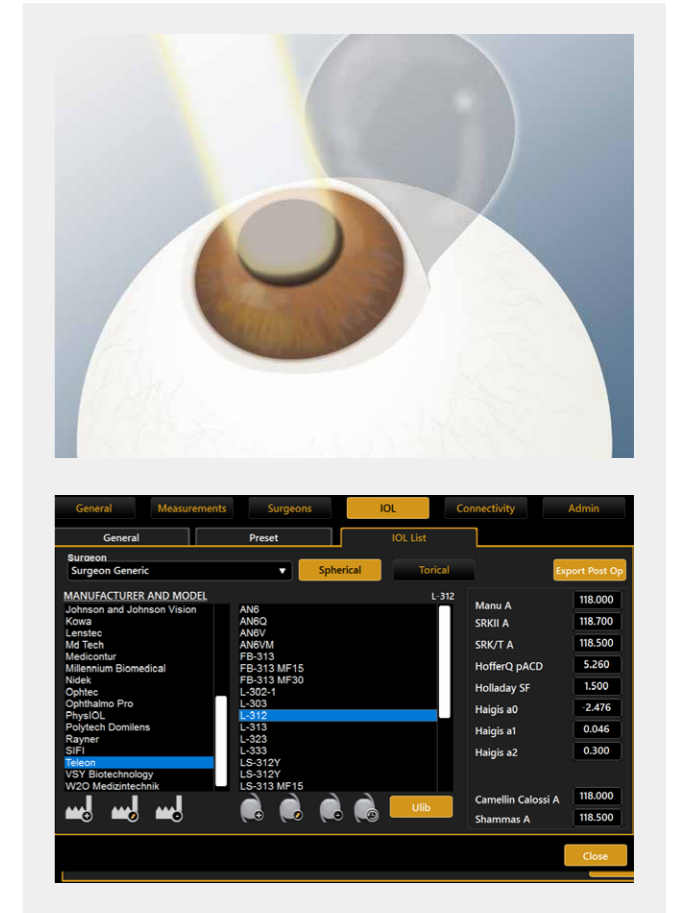
The ALADDIN guides you through the choice of the right IOL for each patient. A combination of IOL brand, type and formulae can be viewed and compared in order to obtain the best post-operative visual acuity result for the patient.



# IOL & Toric IOL Calculation

## Post-refractive IOL

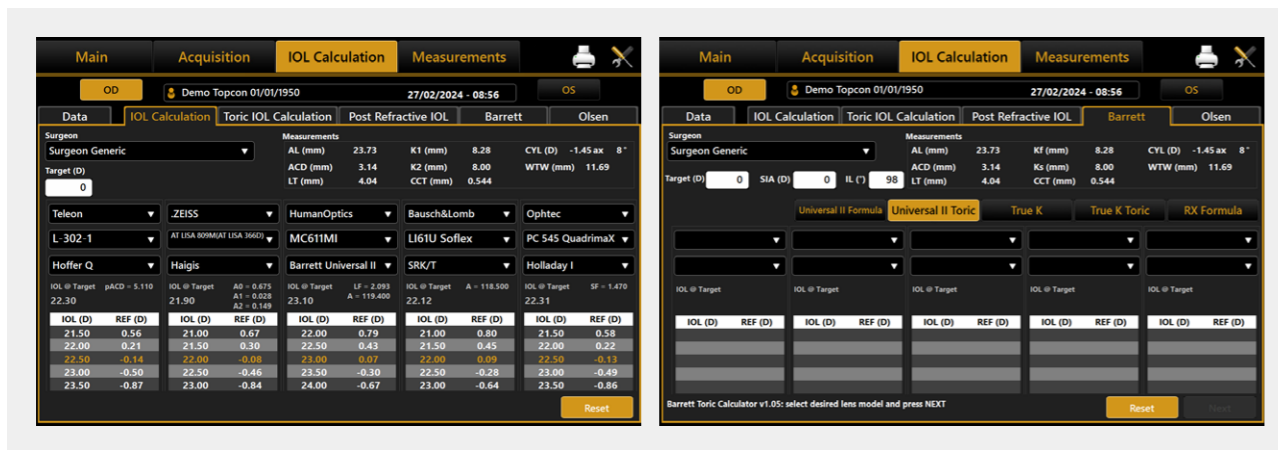
In eyes that have previously undergone refractive surgery such as LASIK and PRK, spherical aberrations are often outside the standard values. Aladdin's on board Barrett True-K, True-K Toric, Camellin-Calossi and Shammas No-history formulae provide the tools for post-refractive IOL calculations.





## Customisable IOL database

The ALADDIN provides a IOL database which can be upgraded and customised. You can manually customize the A- constant for each IOL to obtain even a higher accuracy every time you perform cataract surgery. Your favourite IOLs can be pre-defined and programmed for each individual surgeon, simplifying and personalising IOL selection.

A pre-defined IOL selection can be programmed for each surgeon. When implanting a toric IOL, specific software assists you in calculating the best option. This integrated toric IOL calculator saves you time and avoids unnecessary mistakes when manually entering data online. IOL Toric Rotation Simulation Software calculates the induced spherical and cylindrical power for every five degrees toric IOL rotation.



---

Patient Information

Patient <b>TOPCON DEMO</b>	Surgeon <b>SURGEON GENERIC</b>	<b>OS</b>
Patient ID	Clinic <b>Topcon Europe Medical bv</b>	
Date of Birth <b>01/01/1950</b> <small>dd/mm/yyyy</small>	Exam Date <b>03/10/2023 - 14:25</b> <small>dd/mm/yyyy</small>	

---

Biometry Data

AL (mm)	<b>23.93</b>	LT (mm)	<b>4.00</b>	K1 (mm)	<b>8.51</b>	CYL (D)	<b>-3.06@173°</b>
ACD (mm)	<b>3.21</b>	CCT (mm)	<b>0.556</b>	K2 (mm)	<b>7.90</b>	n	<b>1.3375</b>

---

Surgical Pre Op Data

SEQ (D)	<b>23.00</b>	SIA (D)	<b>0</b>
Formula	<b>Holladay I</b>	IL (°)	<b>83</b>

Expected Post Op Cornea

K1 Post (mm)	<b>8.51</b>	K2 Post (mm)	<b>7.90</b>
CYL Post (D)	<b>-3.06 @ 173°</b>		

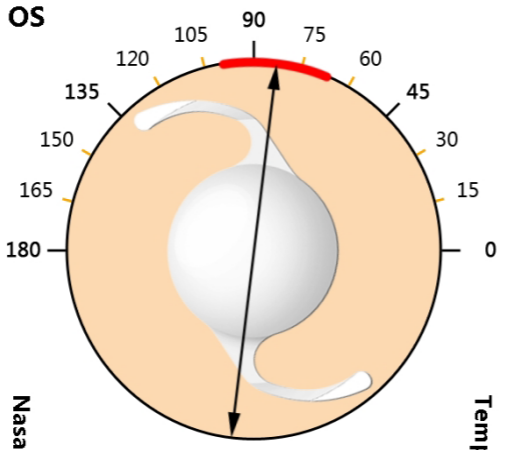
---

Toric IOL

Lens Model <b>Alcon AcrySof SN6AT6</b>	
Spherical Power <b>21.50 D</b>	Cylindrical Power <b>3.75 D</b>
Sph. Equiv. Power <b>23.38 D</b>	Axis Of Placement <b>83°</b>
Expected Refraction <b>-0.02D -0.44 D @ 173°</b>	

Lens	Residual Astigmatism
AcrySof SN6AT4 (22.00D 2.25C)	-1.48 D @ 173°
AcrySof SN6AT5 (21.50D 3.00C)	-0.96 D @ 173°
AcrySof SN6AT6 (21.50D 3.75C)	-0.44 D @ 173°
AcrySof SN6AT7 (21.00D 4.50C)	-0.08 D @ 83°
AcrySof SN6AT8 (20.50D 5.25C)	-0.60 D @ 83°

Toric IOL Placement




Quantity **1**

---

Notes

1.0.0



**Topcon Europe Medical bv**

Patient : TOPCON DEMO

Patient ID :

Date Of Birth : 01/01/1950  
(mm/dd/yyyy)

Surgeon : Surgeon Generic

Exam Date : 03/16/2024 - 10:45  
(mm/dd/yyyy)

### Dynamic Pupillography

#### OD

Diameter (mm)

Min	Max
3.48	4.98

Center (mm)

Mean	Std Dev
x= -0.27	0.07
y= 0.02	

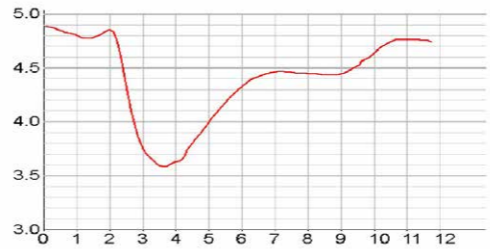

#### OS

Diameter (mm)

Min	Max
3.27	4.78

Center (mm)

Mean	Std Dev
x= 0.25	0.08
y= -0.04	

### Static Pupillography

Diameter (mm)

Mean	Mesopic	Photopic
	4.57	3.80
Std Dev	0.09	0.09

Center (mm)

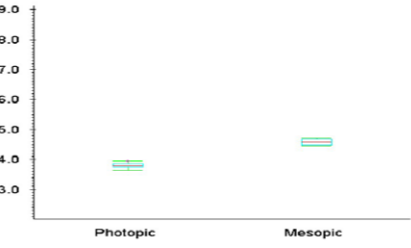
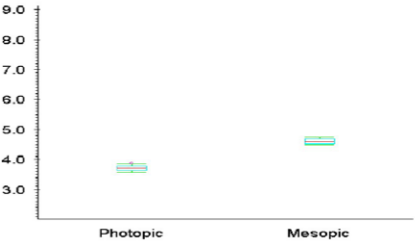
X	Mesopic	Photopic
	-0.33	-0.27
Y	0.04	-0.01

Diameter (mm)


Mean	Mesopic	Photopic
	4.60	3.71
Std Dev	0.09	0.10

Center (mm)

X	Mesopic	Photopic
	0.25	0.21
Y	-0.15	-0.09

Pupillometry (V. 1.3.4)



# Report Samples

# Topcon's Cataract Workstation

<b>TOPCON</b>		<b>Topcon Europe Medical bv</b>	
<b>Patient</b>	: TOPCON DEMO	<b>Surgeon</b>	: Surgeon Generic
<b>Patient ID</b>	:	<b>Exam Date</b> <small>(mm/dd/yyyy)</small>	: 03/22/2024 - 10:35
<b>Date Of Birth</b> <small>(mm/dd/yyyy)</small>	: 01/01/1950		
<b>OD</b>		<b>OS</b>	
Phakic		Phakic	
<b>Axial length values</b>			
<b>Comp. AL: 23.73 mm</b>		<b>Comp. AL: 23.93 mm</b>	
<b>AL</b>	<b>AL</b>	<b>AL</b>	<b>AL</b>
23.79 mm		23.95 mm	
23.77 mm		23.91 mm	
23.72 mm		23.85 mm	
23.73 mm		23.93 mm	
23.73 mm		23.96 mm	
23.72 mm		23.94 mm	
<b>Value Corneal Curvature</b>			
<b>KER: 8.28/8.00 mm CYL: -1.45 D Ax 8°</b>		<b>KER: 8.51/7.90 mm CYL: -3.06 D Ax 173°</b>	
K1: 8.28 mm @ 8°	40.74 D	K1: 8.51 mm @ 173°	39.64 D
K2: 8.00 mm @ 98°	42.19 D	K2: 7.90 mm @ 83°	42.71 D
CYL: -1.45 D ax 8°		CYL: -3.06 D ax 173°	
<b>ACD value</b>			
<b>ACD: 3.14 mm</b>		<b>ACD: 3.21 mm</b>	
3.14 mm		3.21 mm	
<b>LT value</b>			
<b>LT: 4.04 mm</b>		<b>LT: 4.00 mm</b>	
4.04 mm		4.00 mm	
<b>CCT value</b>			
<b>CCT: 0.544 mm</b>		<b>CCT: 0.556 mm</b>	
<b>White to White</b>			
<b>WTW 11.70 mm Dec (-0.22 mm, -0.29 mm)</b>		<b>WTW 11.92 mm Dec (0.40 mm, -0.07 mm)</b>	

Overview Biometer Measurements (V. 1.3.4)



## Cataract surgery quality control

Visual acuity (VA) is the best parameter to measure refractive success after cataract surgery. Topcon's KR-800S Auto Kerato- Refractometer can measure VA in a standardized and systematic way, both pre- and post-surgery. With unique features "Glare" and "Contrast" tests, KR-800S also assists you evaluating the progression of cataract, as well as distinct nuclear from cortical cataract.

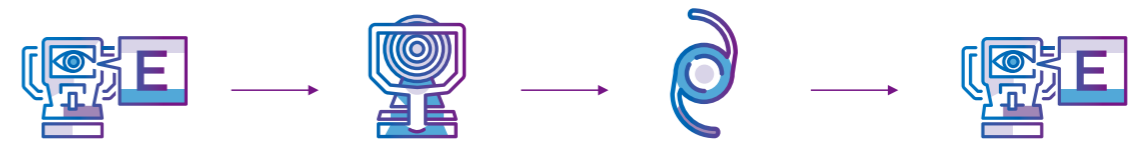
## VA Simulation Premium IOL

KR-800S offers a Spherical Equivalent mode which can simulate the benefits of a premium

(toric) IOL, to educate the patient on the advantages of a better post-operative VA. The subjective VA test for near will assist the patient in considering a Multifocal IOL.

## Cataract workstation

The KR-800S completes the screening workflow of cataract surgery. All necessary cataract pre-op information can be obtained by KR-800S and ALADDIN, while the KR-800S assist you post-op in Visual Acuity evaluation and the success of the cataract surgery. ALADDIN and KR-800S are the perfect combination for your cataract practice.



**KR-800S**  
PRE-OPERATIVE  
Subjective Refraction  
and Pre-OP-diagnostics

**Aladdin**  
Pupillometry  
Topography  
Biometry inkl. K1 & K2  
IOL Calculation

**Cataract Surgery**

**KR-800S**  
POST-OPERATIVE  
Subjective Refraction  
and Post-OP-diagnostics



**Aladdin**  
Optical Biometry & Topography System



**KR-800S**  
Auto kerato refractometer with subjective function

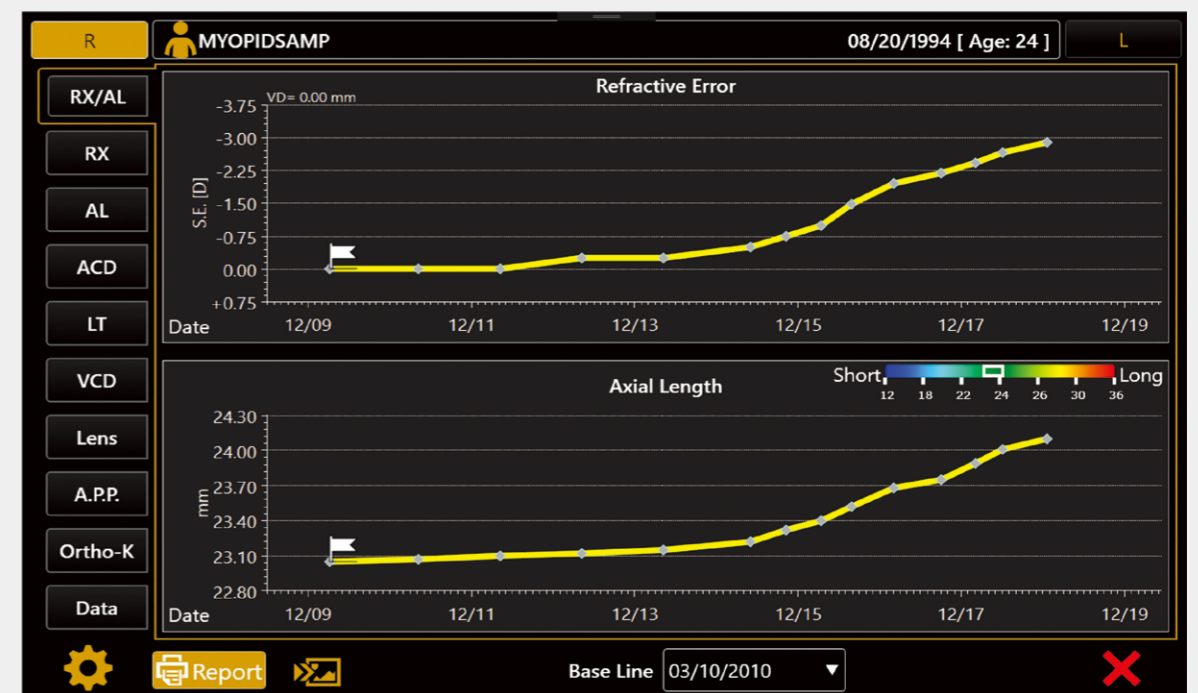


# Are you focusing on refractive changes?

Experience the Aladdin RX/AL Trends Module:  
The precise tool to monitor longitudinal changes in the eye.

## RX/AL Trends Module

- Measures and displays trends in AL changes
- Allows you to monitor change progression
- Charts and tracks refractive variations
- Provides comprehensive printouts



### Trend Monitoring

By combining manually entered refractive information with biometric data obtained by low-coherence interferometry, the Aladdin provides a quantitative report of the progression of changes in the eye's refractive power.

After the refraction values are entered, the Aladdin provides a numerical analysis of the trends of the

eye parameters related to changes in the axial length, corneal curvature, anterior corneal wave front analysis and other dimensional variations. Changes can be followed in periods of 3, 6 and 12 months providing a trend that can be used to track the progression of certain eye conditions.



# Specifications of Aladdin

<b>Measurement range for IOL</b>	
Axial Length (Interferometry)	Super luminescent diode 830nm, 15mm - 38mm
Corneal Radii	5.00mm - 12.00mm / 28.00D - 67.50D
ACD measurement	Interferometer 1.5mm - 6.5mm
WTW measurement	8.0mm- 14.0mm
Pupillometry	Dynamic, Photopic & Mesopic, pupil size 0.5mm - 10mm
Lens Thickness (interferometry)	0.5mm - 6.5mm
CCT measurement (interferometry)	0.300mm - 0.800mm
<b>On-board calculation formulas</b>	
IOL formulas	Haigis, Hoffer Q, Holladay 1, SRK*II, SRK*T, Barrett Universal II, Olsen
Post-refractive Surgery IOL formulas	Camellin Calossi and Shammas No History, Barrett True K, Barrett Rx
<b>Placido Topography specifications</b>	
Keratoscopic Cone (topographic map)	24 rings on a 43D sphere, working distance 80mm
Points analysed	Over 100,000
Points measured	Over 6,000
Cornea coverage	up to Ø 9,8mm (on a 8mm sphere) 42.2D with N=1.3375
Guided focus system	Yes
<b>Apex Keratometry</b>	
Apical Curvature	Yes
Apical Gradient of Curvature	Yes
Symmetry index	Yes
Kpi (Keratoconus probability index)	Yes*
<b>Software features</b>	
Toric IOL calculator	Generic Toric IOL, Teleon Toric IOL
Zernike analysis	Pupil size 2.5mm - 7.5mm
Print to	USB printer, Network printer, PDF to shared network folder & PDF to USB drive
<b>Instrument Specifications</b>	
Display	10.1" touch screen
Storage	At least 500GB
Operating system	WINDOWS Embedded
Processor	Intel*
Internal memory	At least 4GB RAM
Power input	AC 100-240V 50/60Hz
Dimensions	320mm (W) x 490mm (H) x 470mm (L)
Weight	18kg
Connections	1 x LAN, 2 x USB
Supports	USB Barcode scanner, External USB keyboard / mouse
Marking	CE, ETL
<b>Reports</b>	
Aladdin report	Yes
Measurement overview	Yes
Pupillometry	Yes
IOL	Yes
Generic Toric IOL	Yes
Teleon Toric IOL	Yes

\* Not available in the US.

**TOPCON CORPORATION**

75-1 Hasunuma-cho, Itabashi-ku, Tokyo 174-8580, JAPAN.  
Phone: +81-(0)3-3558-2522/2502 Fax: +81-(0)3-3965-6898  
www.topconhealthcare.jp

**TOPCON HEALTHCARE SOLUTIONS EMEA OY**

Saaristonkatu 9, 90100 Oulu, FINLAND  
Phone: +358-20-734-8190  
E-mail: thsemea.sales@topcon.com  
www.topconhealthcare.eu

**TOPCON EUROPE MEDICAL B.V.**

Essebaan 11, 2908 LJ Capelle a/d IJssel  
THE NETHERLANDS  
Phone: +31-(0)10-4585077  
Fax: +31-(0)10-4585045  
E-mail: medical@topcon.com  
www.topconhealthcare.eu

**TOPCON DANMARK**

Praestemarksvej 25, 4000 Roskilde  
DANMARK  
Phone: +45-46-327500  
Fax: +45-46-327555  
E-mail: info.todk@topcon.com  
www.topconhealthcare.eu/dk\_DK

**TOPCON SCANDINAVIA**

Neogatan 2, P.O.Box 25, 43151 Mölndal  
SWEDEN  
Phone: +46-(0)31-7109200  
Fax: +46-(0)31-7109249  
E-mail: info.hcs.se@topcon.com  
www.topconhealthcare.eu/sv\_SE

**TOPCON ESPAÑA**

Oficina Principal en España  
Frederic Mompou, 4,  
08960 Sant Just Desvern, Barcelona, SPAIN  
Phone: +34-93-4734057  
Fax: +34-93-4733932  
E-mail: medica@topcon.com  
www.topconhealthcare.eu/es\_ES

**TOPCON ITALY**

Viale dell' Industria 60,  
20037 Paderno Dugnano, (MI) ITALY  
Phone: +39-02-9186671  
E-mail: info\_tit@topcon.com  
www.topconhealthcare.eu/it\_IT

**VISIA IMAGING S.R.L.**

Via Martiri della Libertà 95/e, 52027 San Giovanni Valdarno (AR), ITALY

**TOPCON FRANCE MEDICAL**

1 rue des Vergers, Parc Swen,  
Bâtiment 2, 69760 Limonest, FRANCE  
Phone: +33-(0)4-37 58 19 40  
Fax: +33-(0)4-72 23 86 60  
E-mail: topconfrance@topcon.com  
www.topconhealthcare.eu/fr\_FR

**TOPCON DEUTSCHLAND MEDICAL**

Hanns-Martin-Schleyer Strasse 41,  
D-47877 Willich, GERMANY  
Phone: (+49)2154-885-0  
Fax: (+49)2154-885-177  
E-mail: info@topcon-medical.de  
www.topconhealthcare.eu/de\_DE

**TOPCON POLSKA SP. Z. O. O.**

ul. Warszawska 23, 42-470 Siewierz  
POLAND  
Phone: +48-(0)32-670-50-45  
Fax: +48-(0)32-671-34-05  
E-mail: info.tpl@topcon.com  
www.topconhealthcare.eu/pl\_PL

**TOPCON GREAT BRITAIN MEDICAL**

Topcon House, Kennet Side, Bone Lane,  
Newbury, Berkshire RG14 5PX  
UNITED KINGDOM  
Phone: +44-(0)1635-551120  
Fax: +44-(0)1635-551170  
E-mail: medical.tgbm@topcon.com  
www.topconhealthcare.eu/en\_UK

**TOPCON IRELAND MEDICAL**

Unit 292, Block G, Blanchardstown,  
Corporate Park 2 Ballycoolin  
Dublin 15, D15 DX58, IRELAND  
Phone: +353-12233280  
E-mail: medical.ie@topcon.com  
www.topconhealthcare.eu/en\_IE

**IMPORTANT** In order to obtain the best results with this instrument, please be sure to review all user instructions prior to operation.

Not all products, services or offers are approved or offered in every market, and products vary from one country to another.  
Contact your local distributor for country-specific information and availability.