

vx 100 serie

Multi-modal anterior  
segment analysis to  
empower your practice





# Adopting a multidagnostic approach to characterising anterior segment

Multidiagnostic platforms allow the clinician to obtain different anatomical dimensions of anterior segment structures, which are crucial for ocular pathology screening and for comprehensive monitoring of ocular diseases.

Visionix is committed to providing eye care professionals with the most innovative, integrated solutions. With our range of multimodal devices, you can propose a unique panel of services and reinforce your position as a vision expert.

The VX 100 serie is composed with 4 different devices



vx 110



vx 120+



vx 120+ *Dry eye*



vx 130+

# Pathologies identification

Succeed in all your diagnostics: Glaucoma and keratoconus detection, identification of patients for cataract surgery with premium and/or toric implants, identification of patients for refractive surgery. The VX 100 serie combines state-of-the-art technologies and provides essential data for optimal patient eye care.

## KERATOCONUS ASSISTANCE

### TOPOGRAPHY MAPS

- Axial, tangential elevation and refraction maps
- Keratoconus probability index (KPI)
- Keratoconus monitoring
- Internal astigmatism measurement
- Eccentricity and meridian tables
- Corneal aberrometry



Main screen



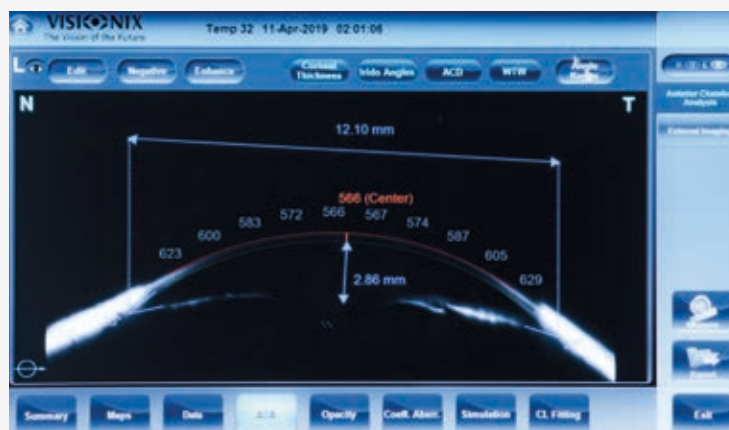
Topography Maps : Keratoconus probability

## GLAUCOMA ASSISTANCE

- Anterior chamber analysis
- Automatic measurement of iridocorneal angles
- Measurement of anterior chamber volume
- Measurement of anterior chamber depth
- Measurement of IOP (intraocular pressure)
- Measurement of corneal thickness
- Corrected IOP as a function of corneal thickness



Main screen



Anterior chamber analysis

# Pathologies identification

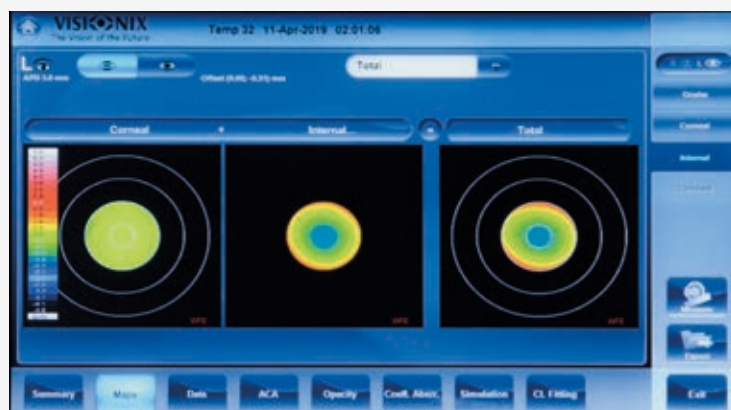
## CATARACT VISUALIZATION

- Visualization of crystalline opacities
- Analysis of wavefront aberrations, with the ability to separate corneal and lenticular/internal aberrations
- Internal astigmatism measurement
- Kappa angle for IOL centering
- Z.4.0 value for aspheric implant
- Lens opacity classification (LOCS II and III scales)

Visualization of crystalline opacities and LOCS scales



Analysis of wavefront aberrations, with the separation between corneal and lenticular/internal aberrations





# Complete refraction

The VX 100 serie has a fully automatic testing regimen that adds a significant amount of visual diagnostic data to your refraction, without slowing down your patient flow.

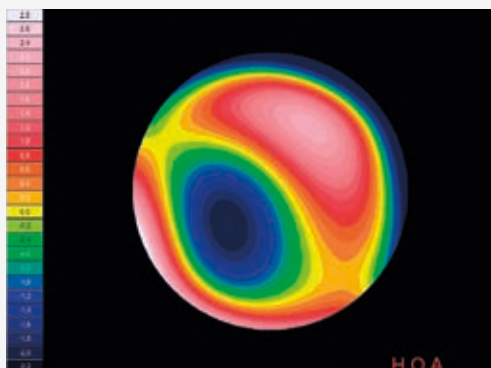
## COMPLETE REFRACTION DATA, DAY OR NIGHT

		Refraction									
		Pup.	S	C	A						
E	☞	3.0	-2.52	-1.14	18°	E	☞	3.0	-2.02	-1.05	163°
	☜	4.6	-2.75	-0.99	22°		☜	5.0	-2.35	-0.72	160°

Main screen



Simulations of visual acuity

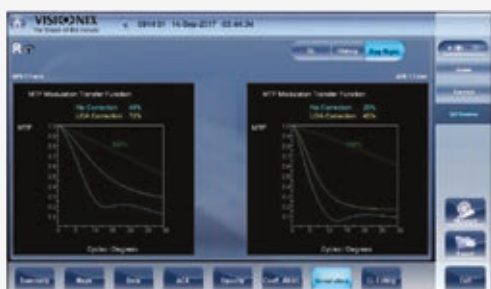


Shack-Hartmann wavefront maps measure lower-order and higher-order aberrations.

- Objective day and night refraction measurements determine whether a prescription for night driving is needed
- 1300 point Shack-Hartmann wavefront analysis can accurately measure up to a 7mm pupil
- Versatile measurement system can work with pupil sizes as small as 1.2mm
- Access visual acuity and quality of vision on a pupil as small as 1.2 mm
- MTF curve

### SHACK-HARTMANN WAVEFRONT TECHNOLOGY

The gold standard in refraction.



Objective day and night refraction measurements. Analysis of aberrations with Zernike coefficients

With the help of VX 120+ Dry Eye only

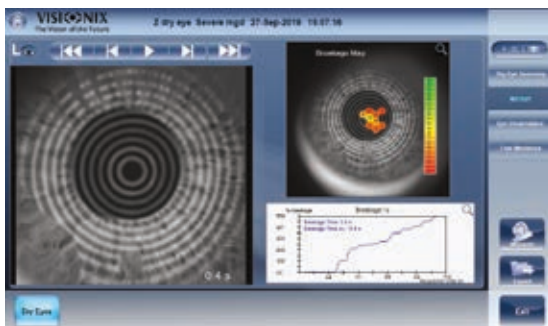
# Detect and manage dry eyes syndrome

VX 120+ Dry Eye builds upon the robust features of VX 120+ by adding a dry eye Screening Module that can perform a battery of tests to give you comprehensive analysis of patient's visual health.

## POSSIBLE CAUSES FOR DRY EYE

- Decreased tear : The lacrimal gland does not produce sufficient tears > Aqueous Deficient (ADDE) Dry Eye
- Excessive evaporation : Not enough Lipids "meibomian gland secretions" Evaporative (EDE) Dry Eye

## HOW DOES THE VX 120+ DETECT DRY EYE?

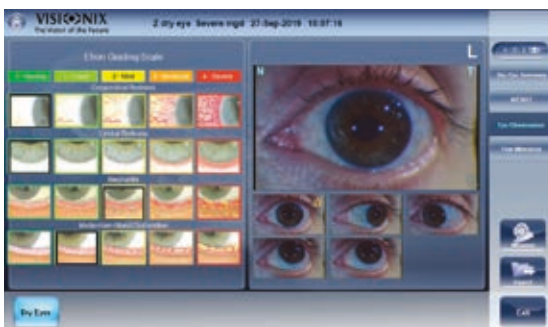


### Analysis of tear film and break up time without using fluorescein

A test that processes the movement of the rings on the eye and gives the speed of tear film breakup between two blinks.

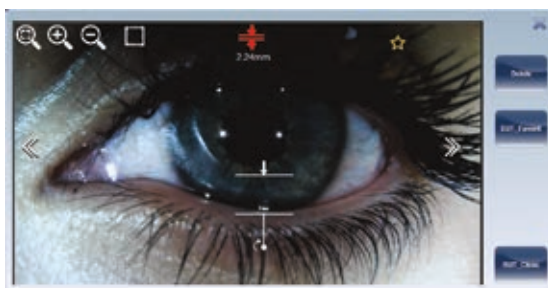
We present the information In 3 ways:

1. Image of the break time
2. Video of the ring movement
3. Graph with a timeline VS percentage of break



### HD color imaging of Meibomian glands

The colour camera allows you to make a photo gallery of the parts of the eye and to focus on the meibomian glands area. This allows the optician to follow-up and provide an explanation of the state of the eye to the customer.



### Measurement of tear meniscus height

Measure the tear meniscus height using the zoom tool of the HD camera.

<sup>(1)</sup> IMPORTANT NOTE: These grading scales were derived from those developed by Professor Nathan Efron with permission. Adapted from Supplement to the book ContactLens Practice, 2nd edition, by Nathan Efron, published by Butterworth-Heinemann, 2010, ISBN 978-0-7506-8869-7. This is offered as an educational tool that you may choose to use as part of your patient evaluations. These materials are not intended as, and do not constitute medical or optometric advice.



With the help of VX 130+ only

# Identification of patients for cataract surgery

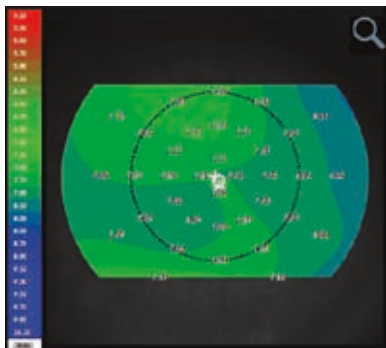
Some improvements have been introduced in the Scheimpflug photography system included in the VX 120+ system, allowing the characterisation of the posterior corneal topographic profile and the generation of corneal pachymetric maps, which has given rise to the VX 130+ system.

## TOPOGRAPHY OF THE ANTERIOR AND POSTERIOR SURFACES OF THE CORNEA

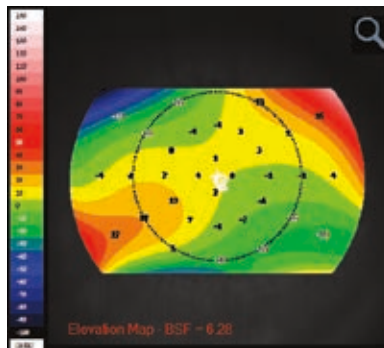
### Complete analysis of the cornea

- Corneal thickness map
- Elevation maps
- Anterior and posterior axial, tangential, 3D maps
- Anterior and posterior keratometry, eccentricity
- Kappa angle

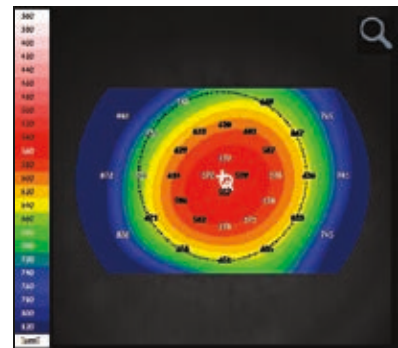
Combination of Scheimpflug imaging and corneal topography technologies used to generate thickness and elevation maps over a large corneal surface.



Axial elevation map



Posterior elevation map



Total refraction elevation map

# Technical specifications

## DIMENSIONS :

WIDTH	312 mm (11.28 in.)
DEPTH	530 mm (20.87 in.)
HEIGHT	570 mm (22.44 in.)
WEIGHT	25 kg (55.12 lbs)
VOLTAGE	100 V - 240 V 50 Hz - 60 Hz, 300 W

## PRODUCT SELECTION GUIDELINES

	VX 110	VX 120+	VX 120+ Dry Eye	VX 130+
<b>AR-K based WF</b>				
AR-K	•	•	•	•
Ocular Aberro.	•	•	•	•
Retro	•	•	•	•
Corneal Topograph	•	•	•	•
Non Contact Tonometer		•	•	•
<b>Scheimpflug Camera</b>				
Pachymetry		•	•	•
Full Eye Tracking	•	•	•	•
Back surface of the cornea				•
Remote Acces	•	•	•	•
Offline/Webservice	•	•	•	•
Colour camera			•	
<b>Dry eye</b>				
NBUT			•	
Efron classification			•	
Tear meniscus value			•	

<b>General</b>	
Alignment	XYZ automatic
Display	<ul style="list-style-type: none"> <li>• 10.1" (1 024 x 600) TFT screen</li> <li>• Multi-touch screen</li> </ul>
Observation area	ø 14 mm
Medical device directive	EC MDD 93/42/EC modified by directive 2007/47/EC
Output	RS232 / USB / VGA / LAN
<b>Power mapping and refraction</b>	
Spherical power range	-20D to +20D
Cylinder power range	0D to + 8D
Axis	0 to 180°
Measuring area	Min. ø 2 mm - Max. 7 mm (3 zones)
Number of measuring points	1,300 points
Acquisition time	0.2 sec
Method	Shack-Hartmann
<b>Pachymetry, IC (iridocorneal) angle and pupillometry</b>	
Method	Continuous horizontal scan with the Scheimpflug camera
Pachymeter measuring range	150-1300 Qm
Pachymeter resolution	+/- 10 microns
IC angle measuring range	0°-60°
IC resolution	0.1°
Pupil illumination	Blue light 455 nm
<b>Retroillumination</b>	
<b>Corneal topography by specular reflection</b>	
Number of rings	24
Number of measuring points	6,144
Number of points analyzed	More than 100,000
Diameter of covered corneal area at 43D	From 0.75 mm to more than 10 mm
Measurement range	From 37.5 D to 56 D
Repeatability	0.02 D
Method	Placido rings
<b>TONOMETER</b>	
Measurement range	7 mmHg to 44 mmHg



INNOVATION TO UNLOCK YOUR POTENTIAL

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