vx 100 series

Multi-modal anterior segment analysis to empower your practice

VISIONIX

INNOVATION TO UNLOCK YOUR POTENTIAL

Adopting a multi-diagnostic approach to assessing anterior segment

Multi-diagnostic 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 and integrated solutions. With our range of multimodal devices, you can assess the anterior segment more efficiently.

The VX 100 series is composed of 4 different devices

vx 110

vx 120+

vx 120+
Dry eye

vx 130+

Identification of pathologies

Succeed in all your diagnostics: Glaucoma and keratoconus detection, cataract and refractive surgeries, specialty lens fittings, and more. The VX 100 series combines state-of-the-art technologies and efficiency for optimal patient care.

KERATOCONUS

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

- 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

# Identification of lens pathologies

CATARACT

- Visualization of crystalline opacities
- Analysis of wavefront aberrations, with the ability to separate 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 separation between corneal and lenticular/internal aberrations
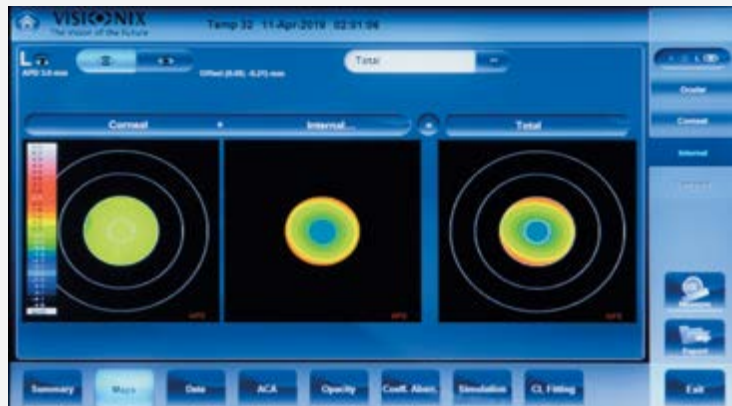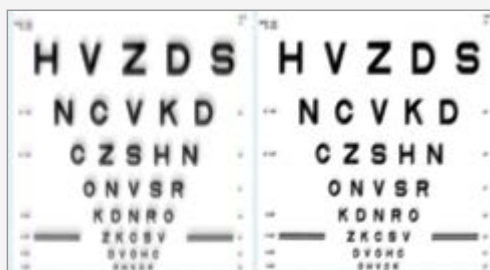
Wavefront abberometry

The VX 100 series offers fully automatic testing that adds a significant amount of visual diagnostic data for your refraction without slowing down patient flow.
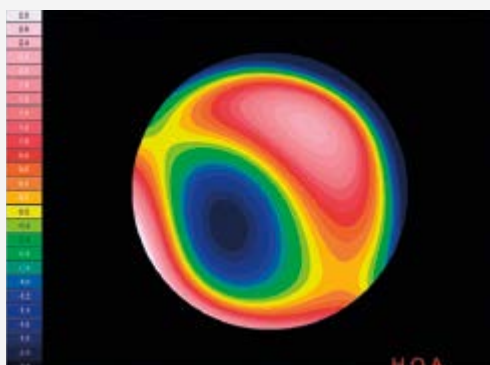
Main screen


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
- Access visual acuity and quality of vision on pupils as small as 1.2 mm
- MTF curve

SHACK-HARTMANN WAVEFRONT TECHNOLOGY
The gold standard in refraction.
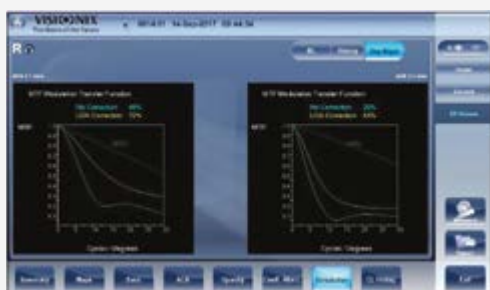
Objective day and night refraction measurements.
Analysis of aberrations with Zernike coefficients

Detect and manage dry eye syndrome

The VX 120+ dry eye builds upon the robust features of VX 120+ by adding a dry eye screening module that performs multiple tests to give you a comprehensive analysis of of the anterior segment and comprehensive dry eye screening.

POSSIBLE CAUSES FOR DRY EYE

• Decreased tear production: The lacrimal gland does not produce sufficient tears, Aqueous Deficient Dry Eye (ADDE)
• Excessive evaporation: Not enough lipids from meibomian gland secretions, Evaporative Dry Eye (EDE)
• Decreased tear production and excessive evaporation: mixed dry eye (MDE) is a combination of ADDE and EDE
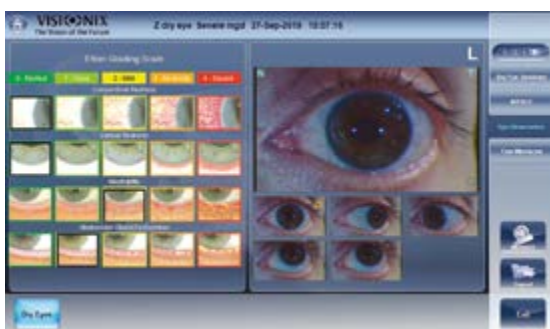
HOW DOES THE VX 120+ DETECT DRY EYE?
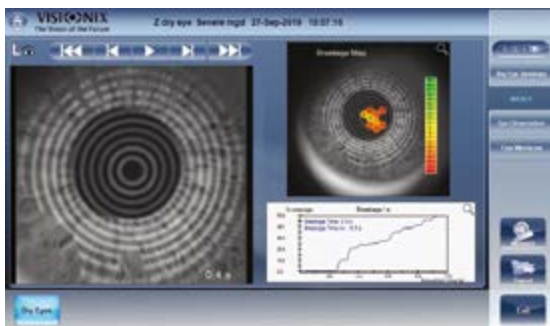
Analysis of tear film and break up time without using fluorescein

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 color camera allows you to create a photo gallery and focus on the meibomian glands.

Measurement of tear meniscus height

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

(1) 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 maychoose to use as part of your patient evaluations. These materials are not intended as, and do not constitute medical or optometric advice.

Detect and manage corneal pathologies

Some improvements have been introduced in the Scheimpflug photography system included in the VX 120+ system, allowing the characterization of the posterior corneal topographic profile.

TOPOGRAPHY OF THE ANTERIOR AND POSTERIOR SURFACES OF THE CORNEA

Complete analysis of the cornea
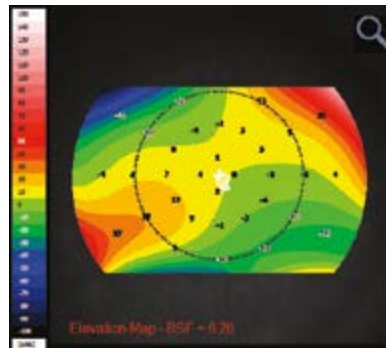
• Corneal thickness map
• Elevation maps
• Anterior and posterior axial, tangential, 3D maps
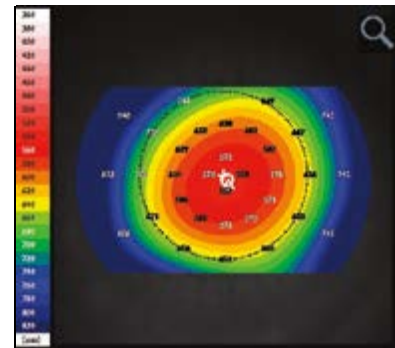• Anterior and posterior keratometry, eccentricity
• Kappa angle

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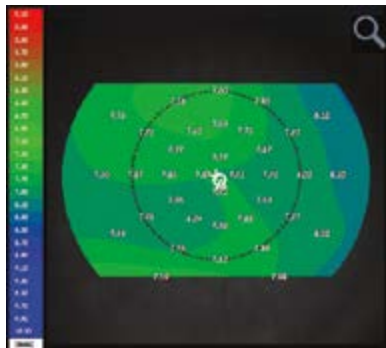
Axial elevation map

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

MODEL FEATURE COMPARISON	vx 650	vx 130+	vx 120+ Dry Eye	vx 120+	vx 110	Nexy	vx 90
Autorefraction / Keratometry	•	•	•	•	•		•
Shack-Hartmann Wavefront Technology	•	•	•	•	•		
Fully Automatic Measurement	•	•	•	•	•	•	
Placido Ring Corneal Topography	•	•	•	•	•		
Corneal Aberrometry	•	•	•	•	•		
Ocular Aberrometry	•	•	•	•	•		
Retro-Illumination	•	•	•	•	•		
Anterior Chamber Analysis	•	•	•	•			
Pachymetry	•	•	•	•			
Scheimpflug Imaging	•	•	•	•			
Non-Contact Tonometry	•	•	•	•			
Anterior / Posterior Corneal Tomography	•	•					
Dry Eye Anterior Imaging Module			•				
Retinal Imaging Module	•					•	

General	
Alignment	XYZ automatic
Display	• 10.1" (1 024 x 600) TFT screen • Multi-touch screen
Observation area	ø 14 mm
Medical device directive	EC MDD 93/42/EC modified by directive 2007/47/EC
Output	RS232 / USB / VGA / LAN

Power mapping and refraction	
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

Pachymetry, IC (iridocorneal) angle and pupillometry	
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

Retroillumination	

Corneal topography by specular reflection	
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

TONOMETER	
Measurement range	7 mmHg to 44 mmHg

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