

DRY  
EYES

VISION  
ANALYSIS

DIAGNOSIS  
OF THE  
ANTERIOR  
CHAMBER

NEW

HIGH-END  
REFRACTION



**VX120+**  
Diagnostic

Take care of your client's visual health

**MAKE A DIFFERENCE AND  
DEMONSTRATE YOUR SKILLS**

**VISIONIX**  
The Vision of the Future



# NEW SCREEN AND MONITOR DRY EYE SYNDROME (DES)



## DRY EYE - POSSIBLE REASONS

- Decreased tearing : 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

## WITH THE VX120+ DETERMINE THE SPECIFIC DRY EYE SYNDROME USING 3 TYPES OF MEASUREMENTS

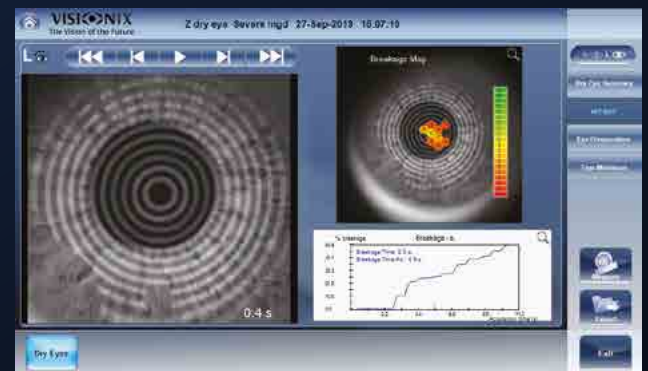


### Non-invasive analysis of the tear film and evaluation of tear film Break-up time

A test that processes the movement of the Placido 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 Placido ring movement
3. Graph with a timeline versus the percentage of break up



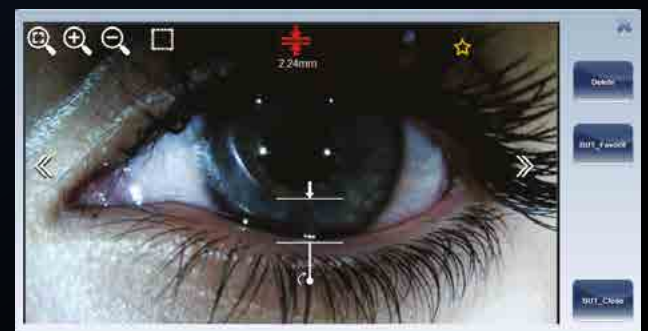
### Displaying a colour image of Meibomian glands <sup>(1)</sup>

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



### Measurement of tear meniscus height

Using the manual zoom of the colour camera, you can measure the height of the tear meniscus to complete the test.



<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 Contact Lens 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.

# VX120+

UNIQUE DIAGNOSTIC DEVICE FOR VISUAL SCREENING, VISION ANALYSIS AND GLAUCOMA

## REFRACTION

Make a difference thanks to a VX120+, complete and fully automatic diagnostic screening device. Complete refraction, differentiate between day and night vision needs, glaucoma, cataract, keratoconus identification and monitoring, fitting of specialist contact lenses.

### COMPLETE REFRACTION DIFFERENTIATE BETWEEN DAY AND NIGHT VISION NEEDS

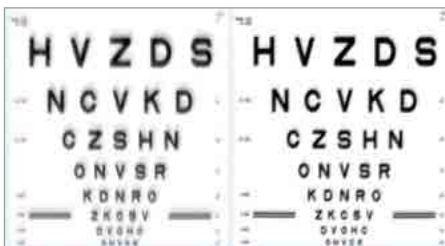
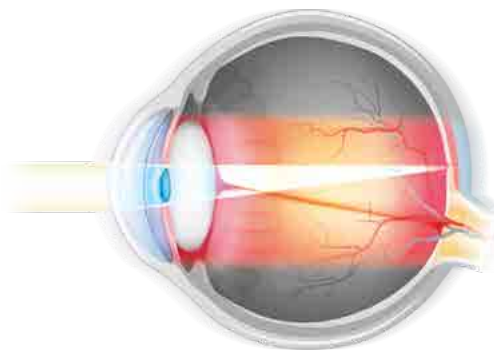
- > Objective day and night refraction measurements
- > 1300 points analysed for a 7-mm diameter pupil
- > Objective refraction under mesopic and photopic conditions
- > Measures lower-order and higher-order aberrations
- > Access visual acuity and quality of vision on a pupil as small as 1.2 mm
- > MTF curve

### Technology

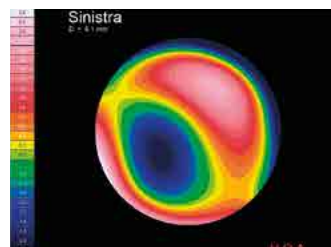
Shack-Hartmann wavefront analysis



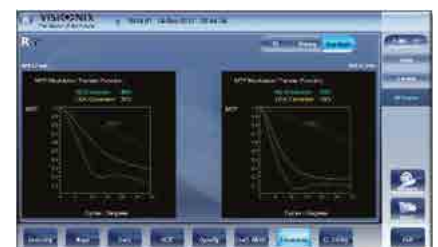
Main screen



Simulations of visual acuity



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



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

### ADDITIONAL CUSTOMER BENEFITS

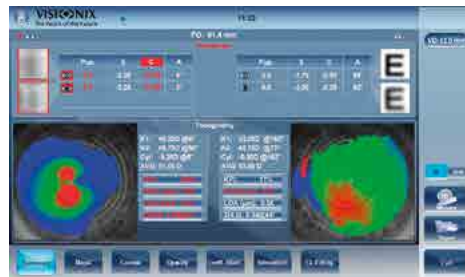
- Fully automatic 3D and R/L eye alignments
- 7 types of automatic simultaneous measurements
- Operator independent measurements
- High reproducibility of measurements
- Automatic alignment and measurement
- High reliability for measurements
- Significant time savings
- Optimal comfort based on ergonomic design
- Quick detection of refraction, higher order aberrations, and warning indications for measurements outside of normal parameters
- Easily transfer patient measurements to the doctor for exam
- A refined and highly accurate refraction due to advanced technology and added features
- Delegation of tasks
- As part of examinations of refraction and detection of high-order aberrations, possible suspicion of pathologies



# PATHOLOGIES



Main screen



Topography Maps : Keratoconus probability



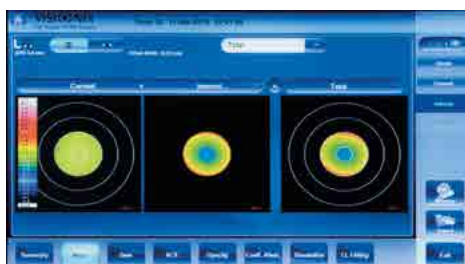
Main screen



Anterior chamber analysis



Visualization of crystalline opacities and LOCS scales



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

## SCREEN, EVALUATE AND MONITOR KERATOCONUS

### Topography maps

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

### Technology

Wavefront analysis with Shack-Hartmann technology, Placido rings, Scheimpflug imaging

## SCREEN, EVALUATE AND MONITOR GLAUCOMA RISK

- > 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

### Technology

Scheimpflug imaging and non contact tonometer with soft air puff.

## SCREEN, EVALUATE AND MONITOR CATARACTS

- > 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)

### Technology

Scheimpflug imaging, Retroillumination, Shack-Hartmann, Placido rings

# VX120+ READY FOR COMMUNICATION

The VX 120 + can be set up in a network to integrate with your patient management software and provide a variety of communication options to optimize your work flow.

- > Review results from any supported device (tablet, smartphone, etc.)
- > Print directly from your local or network printer
- > Customize your reports
- > Synchronize data, graphs, and maps for any examination
- > Communication enabled with other instruments

## VX REFRACTION LINE



**VX 22**  
Chart Display



## CUSTOMIZABLE REPORTS



**VX BOX II**  
VSXlink



**VX 120+**  
Diagnostic

## PATIENT MANAGEMENT SOFTWARE



EHR/EMR



**VX 40**  
Lensmeter



## WEBSERVICE



**VX 55**  
Phoropter





# VX120+ Diagnostic

<b>Height</b>	570 mm
<b>Width</b>	312 mm
<b>Depth</b>	530 mm
<b>Weight</b>	25 kg
<b>Voltage</b>	100-240 VAC, 50/60 Hz, 300 W
<b>Ref.</b>	30200000-05

## TECHNICAL SPECIFICATIONS

GENERAL	
<b>Alignment</b>	XYZ automatic
<b>Display</b>	10.1" (1 024 x 600) TFT screen Multi-touch screen
<b>Observation area</b>	ø 14 mm
<b>Medical device directive</b>	EC MDD 93/42/EC modified by directive 2007/47/EC
<b>Output</b>	RS232 / USB / VGA / LAN
POWER MAPPING AND REFRACTION	
<b>Spherical power range</b>	-20D to +20D
<b>Cylinder power range</b>	0D to + 8D
<b>Axis</b>	0 to 180°
<b>Measuring area</b>	Min. ø 2 mm - Max. 7 mm (3 zones)
<b>Number of measuring points</b>	1,300 points
<b>Acquisition time</b>	0.2 sec
<b>Method</b>	Shack-Hartmann

PACHYMETRY, IC (IRIDOCORNEAL) ANGLE AND PUPILLOMETRY	
<b>Method</b>	Continuous horizontal scan with the Scheimpflug camera
<b>Pachymeter measuring range</b>	150-1300 µm
<b>Pachymeter resolution</b>	+/- 10 microns
<b>IC angle measuring range</b>	0°-60°
<b>IC resolution</b>	0.1°
<b>Pupil illumination</b>	Blue light 455 nm
RETROILLUMINATION	
CORNEAL TOPOGRAPHY BY SPECULAR REFLECTION	
<b>Number of rings</b>	24
<b>Number of measuring points</b>	6,144
<b>Number of points analyzed</b>	More than 100,000
<b>Diameter of covered corneal area at 43D</b>	From 0.75 mm to more than 10 mm
<b>Measurement range</b>	From 37.5 D to 56 D
<b>Repeatability</b>	0.02 D
<b>Method</b>	Placido rings
TONOMETER	
<b>Measurement range</b>	7 mmHg to 44 mmHg

	VISIONIX						
	VX100	VX110	VX118	VX220	VX120+	VX120+	VX130+
<b>AR-K based WF</b>							
AR-K	✓	✓	✓	✗	✓	✓	✓
Occular Aberro.	✗	✓	✓	✓	✓	✓	✓
Retro	✓	✓	✓	✓	✓	✓	✓
Corneal Topograph	✓	✓	✓	✓	✓	✓	✓
Non Contact Tonometer	✗	✗	✗	✓	✓	✓	✓
<b>Scheimpflug Camera</b>							
Pachymetry	✗	✗	✓	✓	✓	✓	✓
Full Eye Tracking	✓	✓	✓	✓	✓	✓	✓
Remote Acces	✓	✓	✓	✓	✓	✓	✓
Offline/Webservice	✓	✓	✓	✓	✓	✓	✓
Colour camera	✗	✗	✗	✗	✗	✓	✗



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