

i-Optik

Better vision, Better life

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VX105
*Multi-function
Auto Eye Testing Instrument*
Shack-Hartmann Technology Inside



VX105

New generation powerful Refraction device

VX105 adopts the established high-precision Shack-hartmann and Placido technology. It is integrated with multiple functions such as refraction and keratometry measurement and topography. It can be used to diagnose cornea astigmatism and precisely analyze cornea shape to help customer understand their cornea status from different angle. In the meanwhile the VX105 device can be used to evaluate the fitting of cornea contact lens too. It is a munti-functional automatic refraction diagnose device.



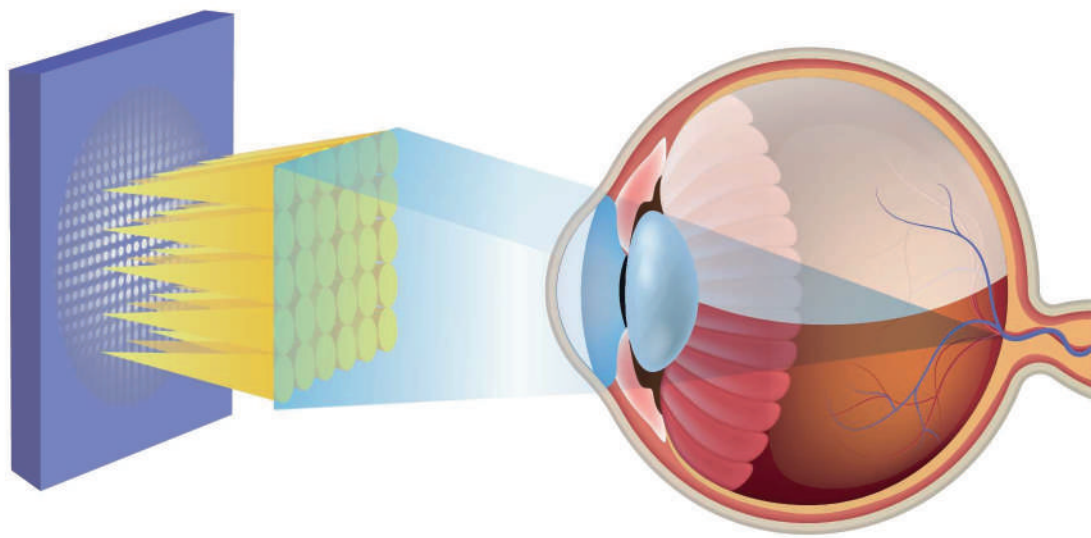
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Shack-Hartmann Measurement Technology

The lens set with tight-arranged dot matrix can capture the refracted light from the human eye more completely, to achieve maximum use rate of the light energy to get an areolar measuring surface with measuring point up to 1,500. Such wide measuring coverage and dense measuring point could help get more comprehensive analysis of the human eye and ensure higher accuracy and stability measurement compared to traditional Auto Ref/keratometer.



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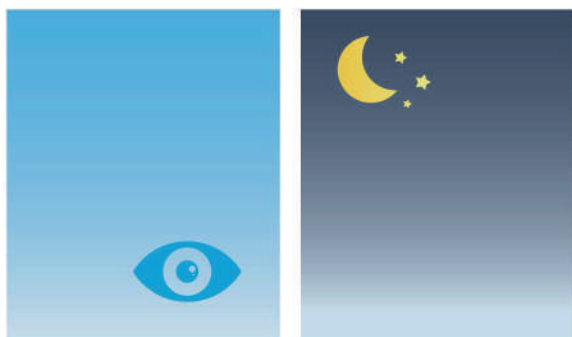
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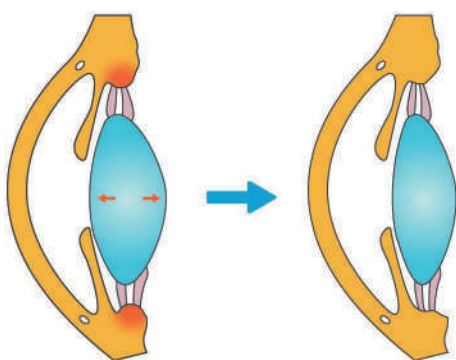
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Day and night vision

VX105 is capable of measuring wide range refraction of 7mm pupil diameter, and can show different refraction at day (small pupil) and night (large pupil) for direct comparison of day and night refractive difference.



Effectively reduce human eye accommodation

There is fogging process before measurement to make sure patient eye is fully relaxed, reducing the influence of vision adjust from the eye to ensure more accurate measurement.



Real-time notification during measuring process

During measure process, the device will give message notification for patient posture and eye position instruction at different measuring phase, to guide patient and avoid measurement error.



Visualized measure result

VX105 software can automatically analyze and calculate measuring result. There will be enough data to mark the maps with quantifiable data or different color, making the result easy to understand and refraction process worry free.

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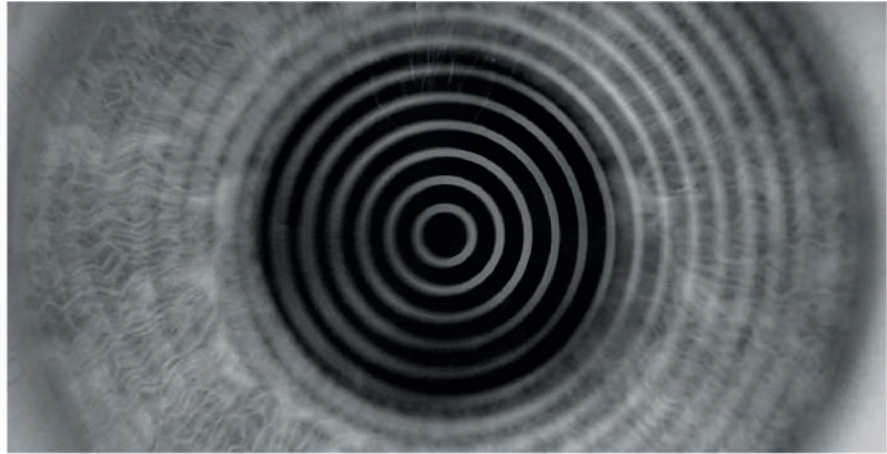
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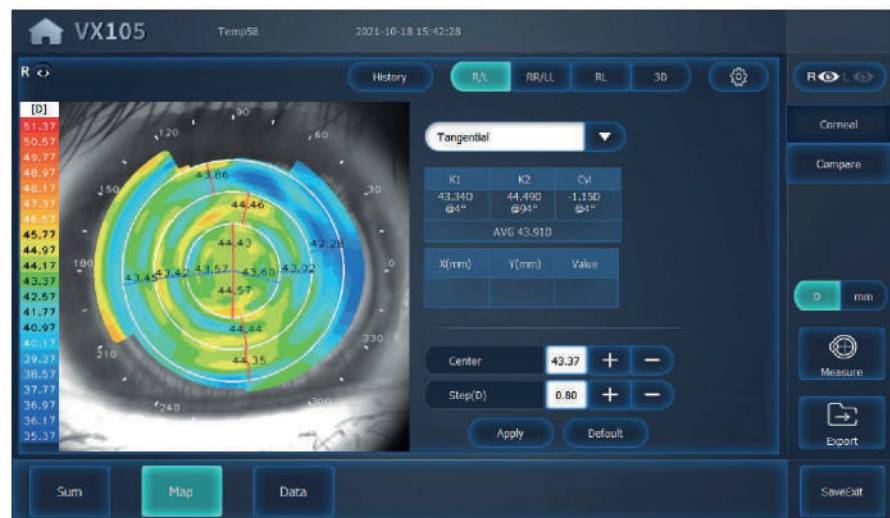
Placido measurement principle

6144 measurement points

Capturing more than 100000 points



- Use Placido system to measure keratometry and cornea topography for systematic, objective and precise analysis of the cornea anterior surface shape and change of keratometry.
- Measurement points up to 6,144, more than 1,000,000 software analyze points for more comprehensive data.
- Keratometry result more accurate compared to common Auto Ref/keratometer.

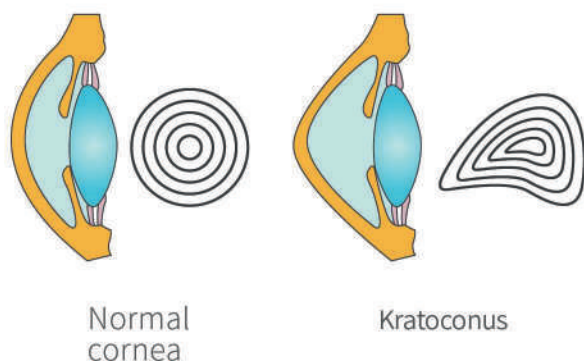


Through data collection and analysis, VX105 can generate different kinds of maps to support evaluation of cornea health such as bi-focal axial map, tangential map, refractive map, elevation map etc.

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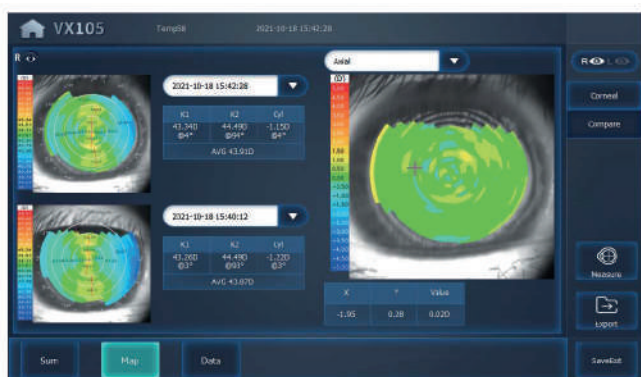
Keratoconus screening

VX105 can generate cornea topography according to the anterior corneal surface data captured by the placido technique. With built-in software to analyze data and get the KPI value to help directly and intuitively screen for keratoconus.



Corneal contact lens prescription evaluate

VX105 can calculate anterior corneal surface eccentricity ratio (P and E value) and cornea parameter at 3 different positions (3mm/5mm/7mm) to provide reference datum for cornea contact lens prescription.



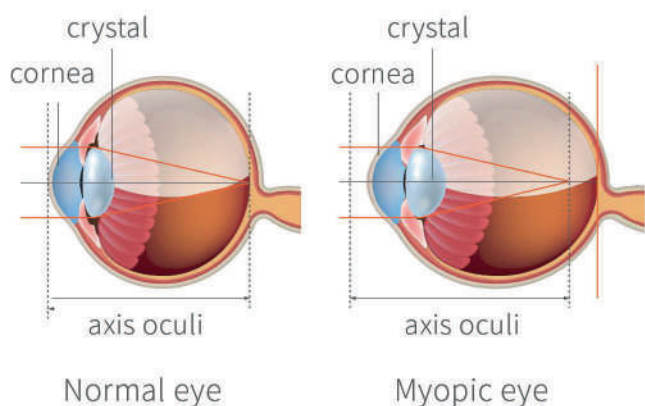
Corneal contact lens fitting evaluate

By comparing patient keratometry map change (such as conicity and cornea curvature change) to evaluate fitting of the lens (lens tightness, off position etc.)

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Refractive error type diagnose

By use of topography maps, the type of patient's refractive error can be analyzed. It can also support to diagnose if the cause is the cornea, and help patient analyze factors causing the vision problem is a good way to show your professionalism and build patient's trust.



Post corneal refractive surgery follow-up

By comparing the cornea map before and after the surgery to graphically analyze the surgery effect and cornea healing process.



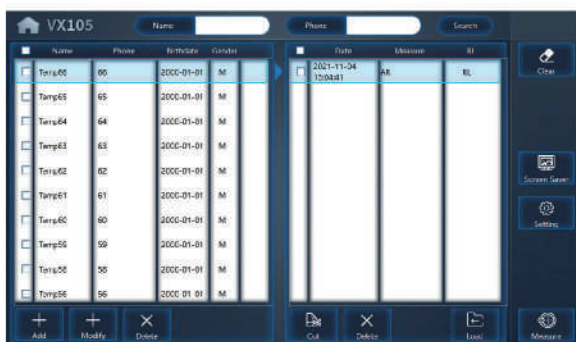
Frame lens prescription guidance

By analyzing the cornea maps, optometrist can accurately distinguish astigmatism(regular or irregular), value and axis for the patient and give most suitable lens prescription guidance accordingly.

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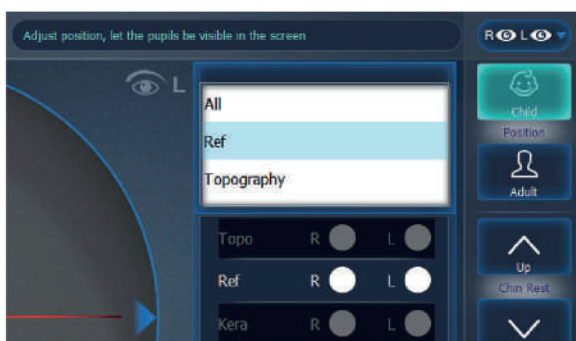
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Customer file

Customer data management for more convenient customer maintenance, can also help analyze customer vision status through comparing history data.



For patient of all ages

VX105 has child and adult measure mode, measure mode can be adjusted accordingly beforehand to get more accurate data for patient of all ages.



Auto measurement

Bi-focal 3D auto tracing for focusing and measurement, the process can be finished without professionals, and refractive, keratometry and topography results can also be obtained with one measurement.



10.1-inch touch screen

Tiltable color LCD touch screen making measurement easier whether the operator is standing or sitting.

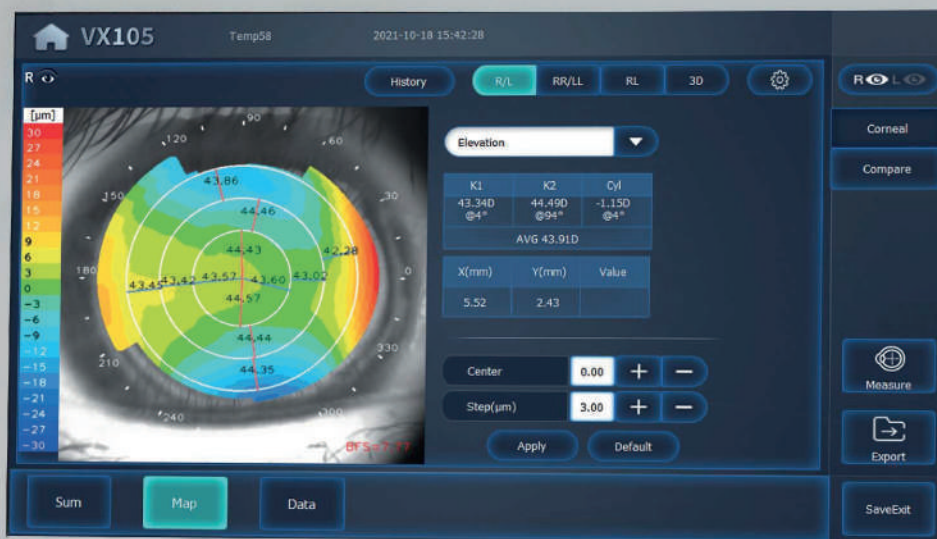
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Cross screen interact& Customized report

VX105 can easily realize multi-screen linkage to synchronize measuring process and result to external screen. By connecting to A4 printer, the measure data can be customized to form a professional report for personalized data export.



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Specifications

Refraction	Sphere	-20.00D ~ +20.00D (increment: 0.01D/0.12D/0.25D, VD=12mm)
	Cylinder	-8.00D ~ +8.00D (increment: 0.01D/0.12D/0.25D)
	Axis	0° ~ 180° (increment: 1°)
	VD	0mm/12mm/13.5mm/ 13.75mm/15mm (optional)
	PD	10 ~ 85mm (increment: 1mm)
Topography	Refractive measurement range	33.80D ~ 61.4D (n=1.3375)
	Cornea coverage	0.75mm ~ 10mm
	Measuring method	Placido ring
	Number of placido rings	24
	Number of measuring dots	6,144
Device specification	Number of pixels	more than 100,000
	Printer	Thermal printer
	Measurement method	3D auto tracking
	Screen	10.1-inch color LCD touch screen
	Working distance	≈ 94mm
	Chin rest bearing limit	around 2.5kg
	Auto tracking moving range	102mmx20mmx51mm (XYZ)
	Chin rest moving range	≈ 62mm
	Size	496mmx320mmx490mm
	Weight	20KG
	Power	100-240v ~ 50/60Hz 150VA