

Chronos

Automated Binocular Refraction System



The All-In-One,
Automated Binocular
Refraction System
with SightPilot Guided
Refraction Algorithm.

Reinvent Refraction.

 **TOPCON** Healthcare

SEEING EYE HEALTH DIFFERENTLY

Chronos

Topcon Chronos is a complete digital refraction solution

Topcon Chronos combines autorefraction, keratometry and subjective refraction in a single device that takes up less than 4 feet of space.

The fully automated system, which features SightPilot® guided refraction software, can be easily operated by anyone in the practice, and binocular testing means refractions take just 3.5 minutes, allowing you to see more patients and grow your practice.*

Chronos can be controlled from a tablet, laptop or desktop PC, allowing operation from a safe distance or another room.

*Refraction time can vary by patient.





Chronos

Features and Benefits



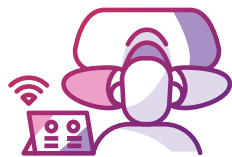
SAVE TIME

Binocular testing and a highly accurate autorefractor starting point allows a complete refraction in approximately 3.5 minutes.*



SAVE SPACE

Chronos combines a keratometer, phoropter and acuity testing into a single instrument with a compact footprint.



DELEGATE

Fully automated system requires just one touch operation to align and capture both the objective measurement and subjective refraction.

SightPilot software guides the operator through the entire process enabling anyone in the practice to quickly and confidently complete the subjective refraction.



GROW

Perform more refractions without adding exam lanes or trained technicians.



ACCOMMODATE PATIENTS

Chronos is ADA compliant and easy to adjust.

Multi-function capabilities allow patients to complete the exam without moving to multiple instruments.

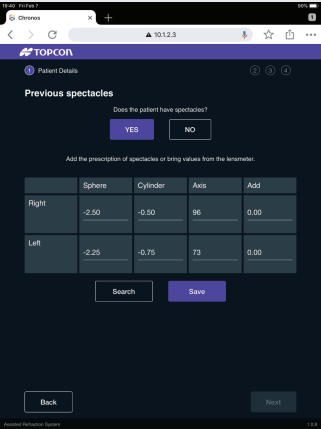
*Refraction time can vary by patient.

Simplify refraction

SightPilot software guides operators through the refraction process with a simple user interface and on-screen prompts.

Questions for the patient are given to the operator at each step, and the patient’s response prompts the next step in the guided refraction process.

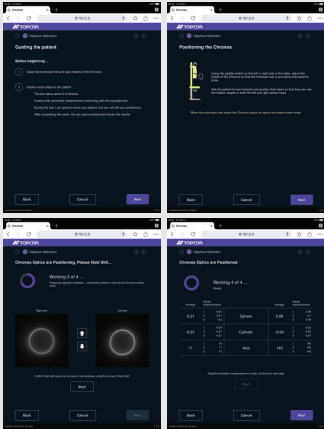
1



Patient Details

Enter the patient information including previous spectacle prescription to begin the refraction.

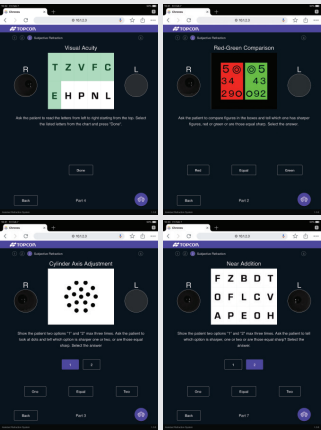
2



Objective Refraction

Chronos provides step-by-step instructions to guide and position the patient for the objective refraction and then automatically aligns the optics to complete the objective refraction.

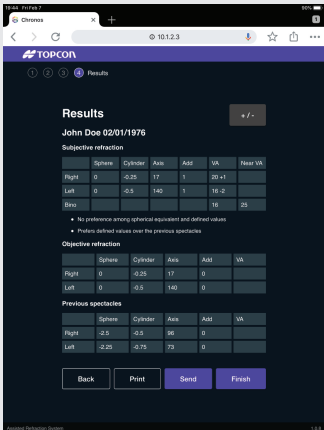
3



Subjective Refraction

Chronos walks the operator through a variety of subjective refractions tests including visual acuity charts, red-green comparison, cylinder axis adjustment, binocular balancing and near addition charts. On-screen prompts enable quick input of patient response to advance to the next step in the process.

4



Results

When the refraction is complete, the results are displayed on screen and may be printed or sent to the patient’s EHR file.

Specifications

Objective Refraction		
Refraction Measurement Range	Spherical Refractive Power Cylindrical Refractive Power Cylinder Axial Angle	-25D to +22D 0D to +/-10.00D 1° to 180°
Minimum Measurement Unit	Spherical/Cylindrical Refractive Power Cylinder Axial Angle	0.12D 1°
Corneal Curvature Measurement Range	Corneal Curvature Radius Corneal Refractive Power	5.00mm to 10.00mm 67.50D to 33.75D
Minimum Measurement Unit	Corneal Curvature Radius Corneal Refractive Power	0.01mm 0.12D
Minimum Measurable Pupil Diameter	ø 2.0mm	
PD Measurement Range	50mm – 80mm in 0.5mm steps	

Subjective Refraction		
Spherical Power	Measuring Range Measuring Step	-18D to +18D 0.25D
Cylinder Power	Measuring Range Measuring Step	0D to +/-8.00D 1° to 180° 0.25D 1°
Prism	Horizontal Prism One Eye Movable Range Vertical Prism One Eye Movable Range Prism Refractive Power	±15.0Δ ±5.0Δ 0.1Δ
Minimum Measurement Unit	Corneal Curvature Radius Corneal Refractive Power	0.01mm 0.12D
Minimum Measurable Pupil Diameter	ø 2.0mm	
PD Measurement Range	50mm – 80mm in 0.5mm steps	
Test Distance	Far-/Near-point test distance can be set between 10in and 20ft	

Dimensions & Weight	
Main Unit	Dimensions 20.7in (H) x 28.4in (W) x 10.9in (D) Weight 68.8 pounds
Power Supply Unit	Dimensions 10.9in (H) x 4.6in (W) x 7.8in (D) Weight 7.7 pounds

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

Not available for sale in all countries. Please check with your local distributor for availability in your country.

©2020 Topcon Healthcare MCA# XXXX XXXXXX



Topcon Healthcare | 111 Bauer Drive, Oakland, NJ 07436 | [topconhealthcare.com](https://www.topconhealthcare.com)