Keratron™

a brand of FE-GROUP

THE SHARPEST VISION

Designed and manufactured in Italy

Keratron™ Nova

The most recent evolution of the family of Keratron™ topographers, Keratron™ Nova represents a standard of excellence in corneal topography.

The only portable topographer, able to capture, process images and maps on board, thanks to an internal database that can be exported via Wi-Fi, LAN or USB.

MAIN FUNCTIONS:

- Wide Range Corneal Topography and Fast Acquisition
- Non-invasive pupillomery in visible light and Infrared
- Real time control of Eye position on screen
- Autoacquisition

Keratron™ Nova is equipped with an easy and intuitive software and a colour touch screen display which allows quick access to the image processing system, ensuring highly repeatable and reliable results even in the most complex cases.
The simplicity of the capturing system and the “mires cone”, with dual functionality Near/Far, offer the advantages of a superior corneal coverage and an easier/faster capturing, ensuring a better efficiency and a lower number of repeated attempts.

The accuracy of the data helps to optimise testing of contact lenses, helping the specialist in difficult and particular conditions. The colour screen gives instant visualization of the topographic maps, pupillometry in visible light and infrared, Sim-K and E-values.

The transfer of data is fast and direct to external PC for archiving and processing.

5.7” Touch Screen

Enhanced
Live Image

Automatic
Acquisition Mode

On-board database
and map processing

Bivalent cone for wide
corneal coverage
and fast acquisition

Wi-Fi/USB/LAN
connectivity

Keratron™ Nova Technical Specifications

PARAMETER	SPECIFICATION
Model	Keratron™ Nova
Ref.	161601
Dimensions/weight	L x W x H: 270 x 155 x 285 mm / 1.8 Kg
VIDEOKERATOSCOPE	
Configuration	Mountable on the most popular slit lamps
Area of Analysis	10 mm x 14 mm (visible on the monitor)
Keratoscope Cone	28 border mires equally spaced on a 43D sphere. Bivalent cone with Near/Far selection by touch screen
Analysed Points	Over 80,000
Measured Points	7,168
Corneal Coverage	From 0.33 mm (minimum diameter on a 43D sphere) up to 11 mm on a normal eye
Measured Area	90% of the corneal surface (normal eyes) with near cone selection. 75% of the corneal surface (normal eyes) with far cone seletion
Dioptric Power Range	From 1D to over 120D
Resolution	±0,01D - 1 micron
Focusing Device	Eye Positioning Control System (EPCS patented) and automatic acquisition with decentration correction
Videocamera	Global shutter & full HD digital camera
Monitor	5.7'' TFT display with touch screen
Other Features	Processing on videokeratoscope of rings, axial, curvatures, spherical offset and Gaussian maps, TBUT, Sim-K, E-values, pupil data. Internal patients database. Repeatability check and contact lens simulator
Accessories Included	Calibration sphere, touch pen, USB memory stick, Keratron™ software, power supply
Capturing Images	By button to activate full automatic mode
Communication External PC and VK	Via Ethernet cable direct external PC (not supplied) or via a LAN Network (cable not supplied), exams export to USB stick. Wi-Fi ready
Power Supply	100-240VAC, 50/60Hz, with medical power supply provided
COMPUTER (Recommended Minimal Requirements)	
Operating system	Windows 10/11 (or higher)
Processor/Memory	i5/8GB
Disk	250GB (HDD/SSD)
Monitor	17" 1920x1080
Printer	Color inkjet
Ports	LAN/USB (Type A)

KERATRON™ PLATFORM	SPECIFICATION
Dioptric Scale	Absolute, normalised, adjustable
Keratometric Values and Indices	K-readings, meridians, hemi-meridians, Maloney indices, eccentricity, CLMI keratoconus indices, keratoconus follow-up
Pupil	Definition of the edge, diameter and decentering (angle K)
Zone and Grids	Indication of the diameters 3, 5 and 7 mm, Cartesian axes, and millimeter grid
Maps	Local curvature, axial curvature, wavefront OPD or wavefront error (WFE) refraction and height map with 3D insert
Axis Moving	Position of the axis selectable as corneal vertex, pupil center on any other choice
Print	Print screen with header of the institution or personalized print templates
Special Functions	Profiles, difference, repeatability check, maps comparison caliber, refraction calculator, follow-up, TBUT
Image Acquisition and Videos	Enabled with TV camera mounted on slit lamp and any video capture board (not included)
Contact Lenses	Fluorescein pattern simulation of most international contact lenses manufacturer geometries. Tilting to simulate lid pressure. Lens displacement in any position. Eccentricity measure at 6 and 8 mm, over refraction calculator. Personalised auto-fit for customised lenses. Ortho-K custom fitting. Adjustable clearance scale. Link to third party software.
Internet Connection	Maps can be sent as attachments to e-mails
Local Network and Database	Management of one or more independent databases shareable in a network
OPTIONALS	
163204	Base with joystick and left/right sensor
CONFORMITY	
CE MARK	Medical Device Regulation 2017/745 (MDR) FDA Approved

Keratron™ Piccolo

Keratron™ Piccolo combines excellent performance with transportability and easy handling.

Thanks to its limited size it guarantees maximum compatibility with any slit lamp, ensuring the same precision, performance, repeatability and corneal range of the other instruments of the Keratron™ family.

The exclusive design of the “mires cone” with EPCS (Eye Position Control System) makes Keratron™ Piccolo fully adaptable to the most complex cases, ensuring the best efficiency and a lower number of repeated attempts.

MAIN FUNCTIONS:

- Wide Range Corneal Topography
- Pupillometry in visible light and Infrared
- Non-invasive Break-up Time

EPCS alignment system
with reclinable and
interchangeable mires cone

Quick plugin for
the slit lamp

Support base
with integrated
power supply and USB

Keratron™ Piccolo Technical Specifications

PARAMETER	SPECIFICATION
Model	Keratron™ Piccolo
Ref.	161301
Dimensions/weight	L x W x H: 110 x 160 x 250 mm / 1 Kg
VIDEOKERATOSCOPE	
Configuration	Portable easily mounted on any slit lamp
Area of Analysis	10 mm x 14 mm (visible on the monitor)
Keratoscope Cone	28 border mires, equally spaced on a 43D sphere
Analyzed Points	Over 80,000
Measured Points	7,168
Corneal Coverage	From 0.33 mm (minimum diameter) on a 43D sphere up to 11 mm on a normal eye
Measured Area	90% of the corneal surface (normal eyes)
Dioptric Power Range	From 1D to over 120D
Resolution	+/- 0.01D - 1 micron
Focusing Device	Eye Positioning Control System (EPCS patented) and automatic acquisition, with decentration correction
Camera	Global shutter & full HD digital camera
Other Features	Tiltable mires cone (0°-10°)
Accessories Included	Calibration kit, Keratron™ software
COMPUTER (Recommended Minimal Requirements)	
Operating system	Windows 10/11 (or higher)
Processor/Memory	i5/8GB
Disk	250GB (HDD/SSD)
Monitor	17" 1920x1080
Printer	Color inkjet
Ports	LAN/USB (Type A)

KERATRON™ PLATFORM	SPECIFICATION
Dioptric Scale	Absolute, normalised, adjustable
Keratometric Values and Indices	K-readings, meridians, hemi-meridians, Maloney indices, eccentricity, CLMI keratoconus indices, keratoconus follow-up
Pupil	Definition of the edge, diameter and decentering (angle K)
Zone and Grids	Indication of the diameters 3, 5 and 7 mm, Cartesian axes and millimeter grid
Maps	Local curvature, axial curvature, wavefront OPD or wavefront error (WFE) and refraction, height map with 3D insert
Axis Moving	Position of the axis selectable as corneal vertex, pupil center on any other choice
Print	Print screen with header of the institution or personalized print templates
Special Functions	Profiles, difference, repeatability check, maps comparison, caliber, refraction calculator, follow-up, TBUT
Image Acquisition and Videos	Enabled with TV camera mounted on slit lamp and any video capture board (not included)
Contact Lenses	Fluorescein pattern simulation of most international contact lenses manufacturer geometries. Tilting to simulate lid pressure. Lens displacement in any position. Eccentricity measure at 6 and 8 mm, over refraction calculator. Personalised auto-fit for customised lenses. Ortho-K custom fitting. Adjustable clearance scale. Link to third party software
Internet Connection	Maps can be sent as attachments to e-mails
Local Network and Database	Management of one or more independent databases shareable in a network
OPTIONALS	
163206	Bivalent cone 28 border mires equally spaced on a 43D sphere Bivalent cone with Near/Far selection
163204	Base with joystick and left/right sensor
CONFORMITY	
CE MARK	Medical Device Regulation 2017/745 (MDR) FDA Approved

Keratron™ Platform

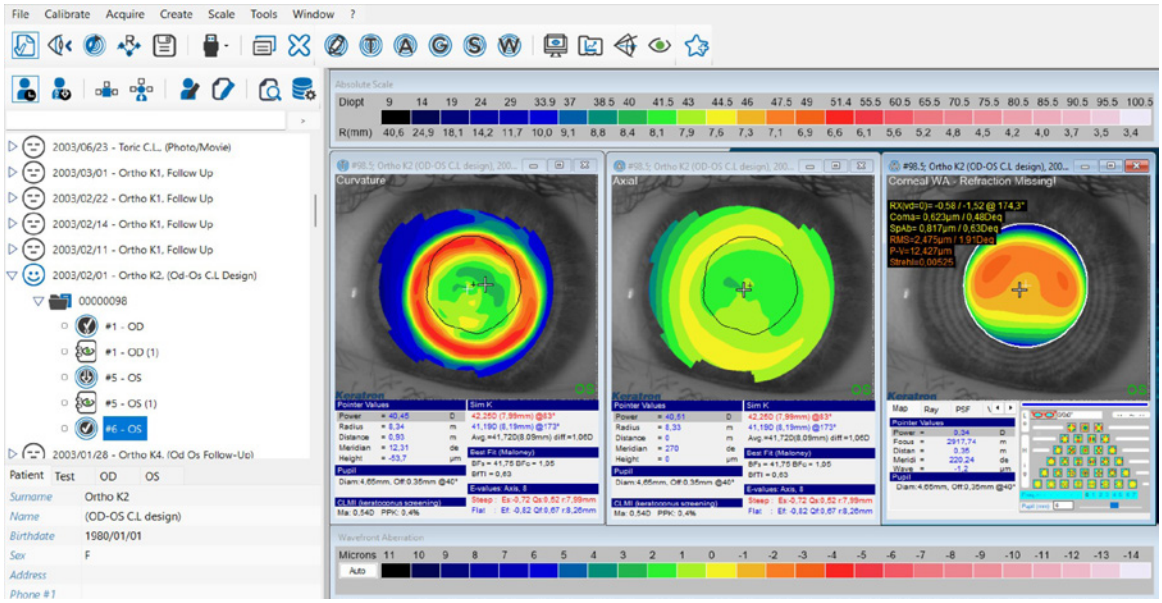
PLATFORM: NEW INTERFACE, ENHANCED PERFORMANCE

The new software platform of the Keratron™ topographer has been completely redesigned with a modern, intuitive, and efficient graphical interface.

This interface preserves the quality of data and all existing functions while simplifying the workflow for professionals and optimizing every stage of the examination analysis.

- Automatic and FREE software upgrades to the latest available version
- Smart navigation with intuitive icons and a user-friendly interface
- On-line Help: detailed on line multi language for all functions

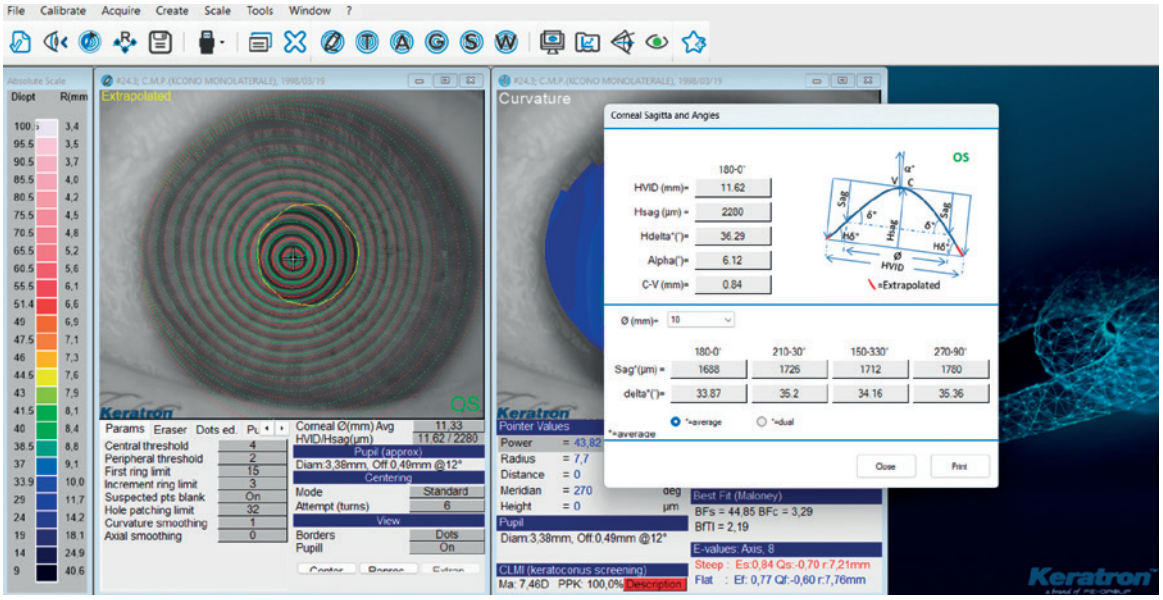
Corneal Topography Maps



KERATOKONUS LOCAL, AXIAL MAP AND SPHERICAL OFF-SET MAP

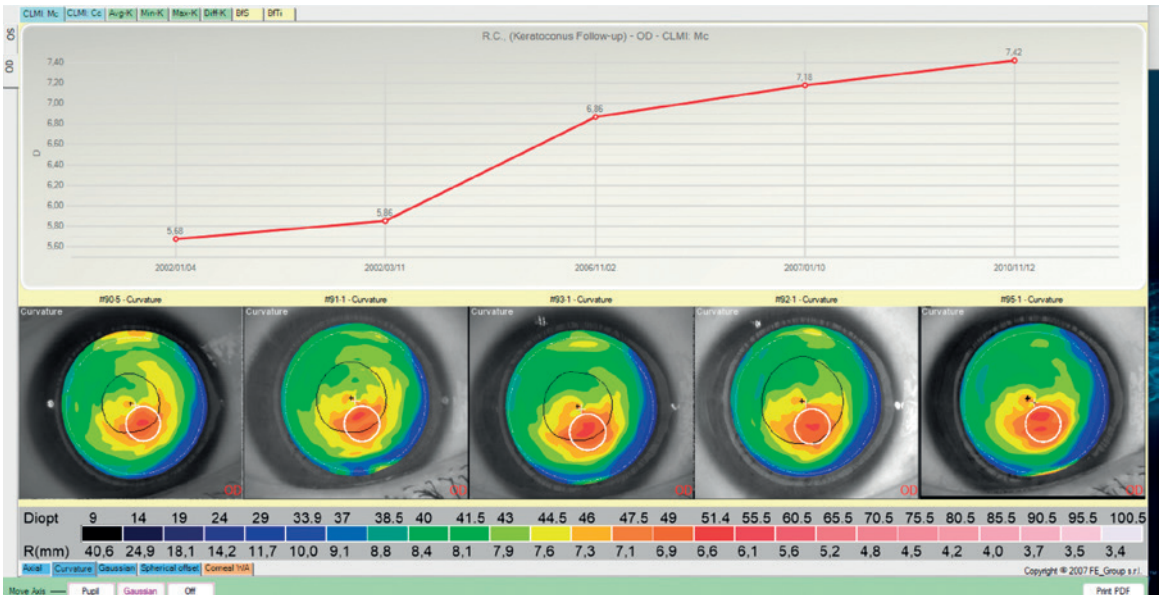
The map of the local curvatures, contrary to that of the axial maps, highlight even the smallest details, enabling a certain diagnosis in the presence of peripheral phenomena or ones of very small entity.

The altimetries of all the corneal points are representable with respect to a sphere of reference that can be positioned at will.



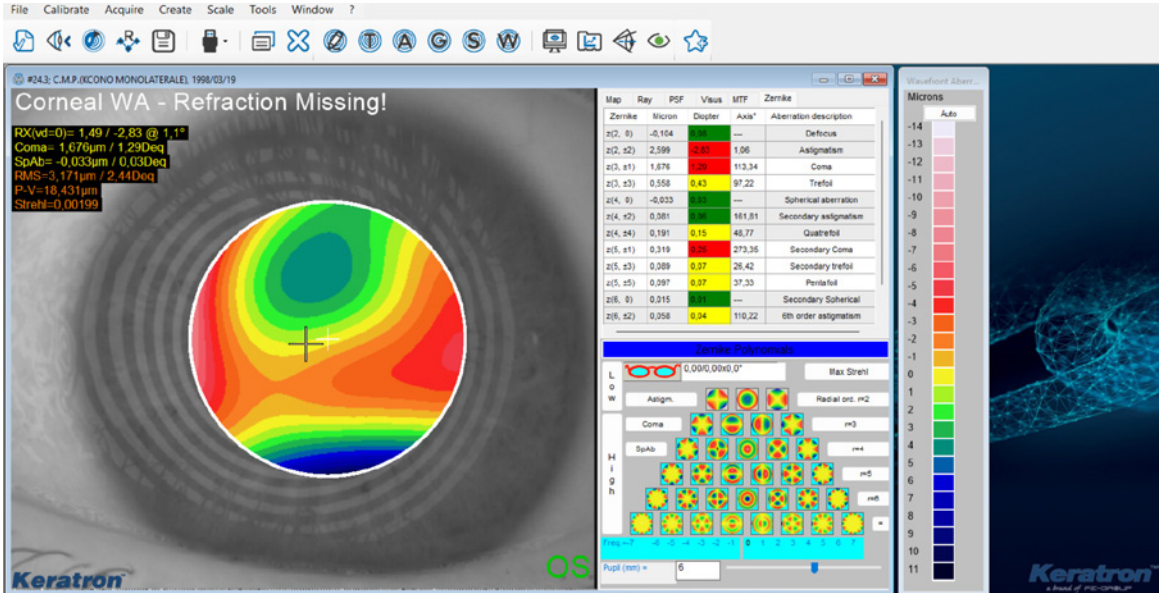
SAGITTAL HEIGHT CALCULATION

Possibility to evaluate the corneal sagittal height based on the selected reference corneal diameter.



FOLLOW-UP

The evolution in time of the topography of the eye can be represented on any kind of map, together with the chart of a chosen parameter among the CLMI, Sim-K, Best Fit indices or quantity of RMS of the main corneal aberrations.



CORNEAL ABERROMETRY

The cornea is examined to measure its contribution to the wavefront, or more precisely, to perform corneal aberrometry by identifying the various components of the Zernike polynomials.

Contact Lenses

A sophisticated software enables the perfectly realistic simulation of the fluorescenic patterns of any RGP contact lens according to the following:

- Custom lenses (Visavy, Simulens, CALCO, Wave, Paragon CRT, etc.)
- Choice of lens of production
- Use of personal automatic protocol
- Automatic choice recommended by the producer

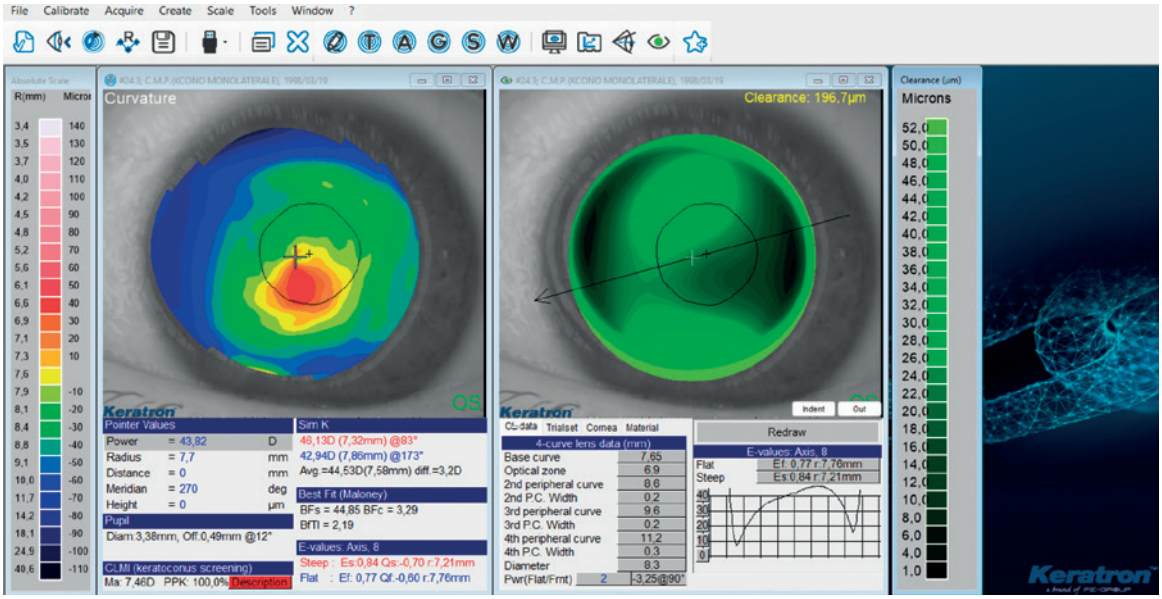
The geometries of the main RGP contact lenses producers are available.

The user can easily create new trial sets.

Some laboratories have provided protocols for automatic selection of the best lens which, when put in practice, have recognised to be the best choice in 90% of cases.

Personalised autofit methods enable to standardise one's own application choice with lenses that have an optimal fit on the cornea at all times. In this way custom-made lenses of any geometry may be made, including inverse geometry lenses for orthokeratology or cases of post refractive surgery.

The possibility to connect the topographic data to a computer for the production of personalised geometry special lenses enables the production of the "Custom Cornea" lenses.



SIMULATION OF CONTACT LENSES FITTING

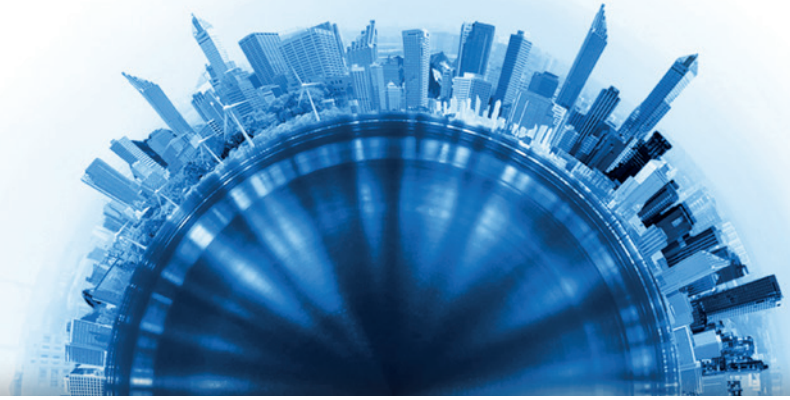
The photograph of the lens with the Placido rings reflected from the topographer gives an idea of the quality level on the regularity of the surfaces and the presence of deposits. The map gives curvature measurements of each surface point and detects the geometry of the lens.

Accessories

163204
Base with joystick
for Keratron™

163206
Bivalent Cone only
for Keratron™ Piccolo

KERATRON ENG V1 | 07-25



Keratron™
a brand of FE-GROUP

CE 0051

MADE IN ITALY

FE-Group s.r.l
Via IV Novembre, 118
21058 Solbiate Olona (VA) - Italy

T +39 0331 342008
keratron@fe-group.it
fe-group.it • keratron.com

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