

Auto Kerato-Refractometer

KR-1



FUNCTION & AESTHETICS COMBINE IN THE NEW KR-1



The next generation of refractive care

The KR-1 is a revolutionary auto Kerato- Refractometer. The tiltable and rotatable touch screen will change the way of working for ever.

The operator can use the KR-1 from various angles, ensuring the best interaction with the patient. The Topcon KR-1 can be used in several set-ups, which use a minimum of working space.

4 unique features

- » Fully automated operation with touch screen
- » Flexible & space saving lay out
- » Reliable & fast measurements
- » Compact ergonomic design



4 UNIQUE FEATURES OF THE KR-1

FEATURE 1 KR-1 Fully automated with touch screen

The KR-1 is fully operated through a 8.5" wide touch screen. Simply touch the center of the pupil on the LCD screen to start measuring both eyes. The KR-1 automatically obtains objective refraction data of the right and left eye.

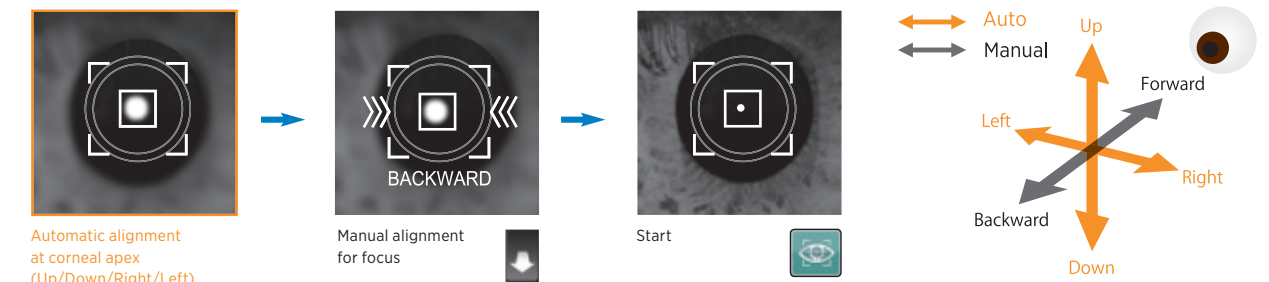


Fully automated! Just touch the center of the pupil

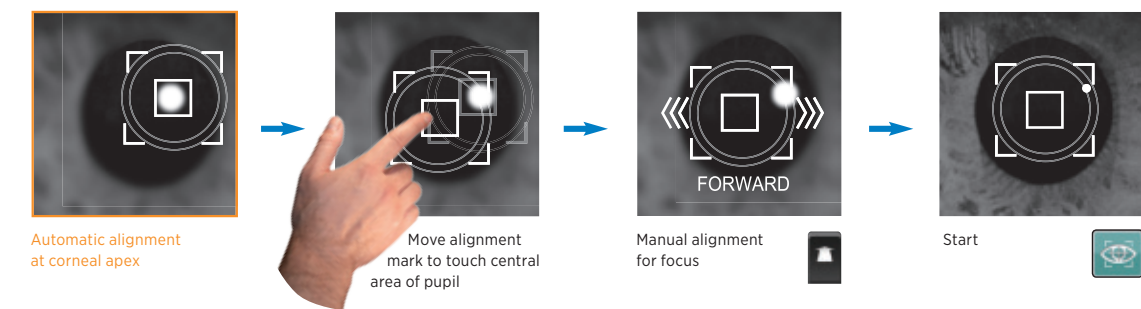
The KR-1 can detect automatically abnormal conditions of an eye, i.e. cataract. The instrument changes to "cataract mode" and continues the measurement. The KR-1 incorporates a button for cataract, in case you would like to start measurements in the cataract mode from the start.

Manual mode

If required, the KR-1 can be set in manual mode as well. The manual mode is used for focusing only. The up/down and left/right movement will remain automated.



The difference between the pupil center and the corneal apex, allows the KR-1 to easily take measurements.



Easy to use colour touch screen control panel

All operating procedures can be performed with the touch screen. The buttons on the screen are clear and easy to understand.



The screenshot shows the following elements:

- Top Bar:** ID (2011030100001), KR-1-OPERATOR1, Settings button.
- Right Eye Section:** R 03/03, S -1.25, C -0.50, A 180, K 03/03, R1 7.80, B2 7.75, A1 180, PR1 7.80, PR2 7.75, 01 mm, PA1 180, S -1.25 C -0.50 A 180.
- Left Eye Section:** L 03/03, S -1.25, C -0.50, A 180, K 03/03, R1 7.80, B2 7.75, A1 180, PR1 7.80, PR2 7.75, 180, PA1 13.75, VD.
- Central Display:** AUTO mode, alignment target.
- Control Buttons:** Chinrest Up/Down, Position Reset, Measuring Mode (R/K, HIGH, Target Image, Print, All Clear, Corneal Diameter), Left Eye (L), Move Head Forward, Move Head Backward, Start, Auto/Manual (A).

FEATURE 2 Flexible & space saving lay-out

The adjustable touch screen control panel enables the operator to be positioned anywhere around the patient because the control panel can be faced in a number of different directions. The KR-1 can be positioned in a conventional set-up, against a wall, or even in a corner of a room.

The compact body enables the operator to support the patient easily from many different positions during measurement even when the patient's eye lid needs to be opened. These unique aspects will contribute to space saving and flexible layout in your eye examination room.



wall set up / behind patient



classic / conventional set up



corner set-up

Conventional position (Seated)



Front position (Seated)

NEW Style (Standing)



Ergonomic operation in standing position

NEW Style corner position



Side position

NEW Style wall position



Rear position

FEATURE 3 Reliable & fast measurement

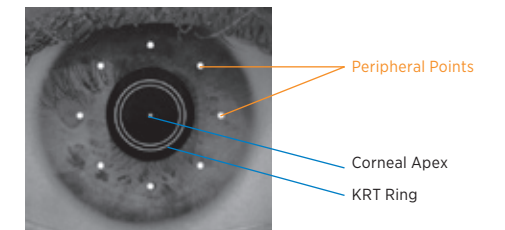
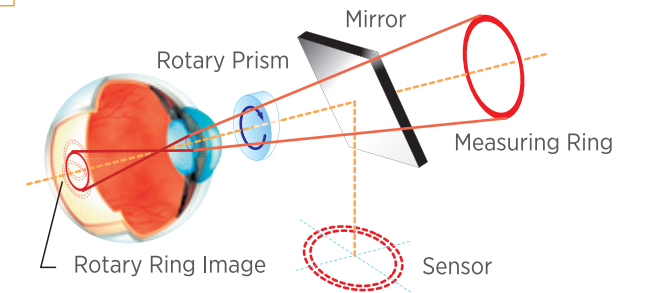
Rotary prism measuring system

With Topcon's exclusive Rotary Prism Technology, the KR-1 provides unmatched accuracy and reliability. This technology ensures reproducible results. The objective measurement of both eyes is done in a fast and comfortable way for the patient.

Peripheral KRT

The KR-1 allows the operator to take peripheral KRT measurements of the corneal curvature radius, in addition to inner KRT ring measurements, which is useful in corneal evaluation of contact lens fitting.

The KR-1 can measure patients with a pupil as small as Ø2mm.



Measuring Screen (Anterior image)

FEATURE 4 Compact ergonomic design

The KR-1's new ergonomic design provides a more comfortable position for the patient with a 5° inclination of the patient's head, and optical head of the KR-1. The compact body of KR-1 and improved chin rest design enables easier access to patients. The operator will have better interaction with the patient.

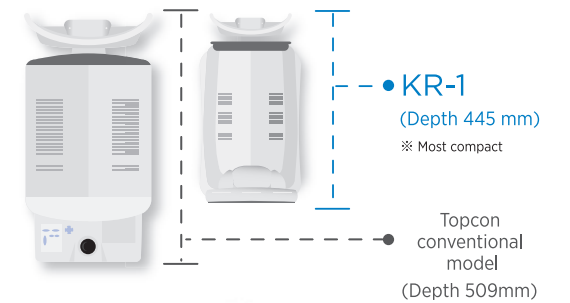
Ergonomic Optical Head and Headrest Design



conventional model

KR-1

Compact Body



Connectivity

The KR-1 can be connected directly to other instruments such as the Topcon CV-5000 automated phoropter. The KR-1 can be integrated into the Topcon Imaging and database software: IMAGeNet i-base. This software enables easy and fast access to patient data and is a useful tool to maintain customer contacts.



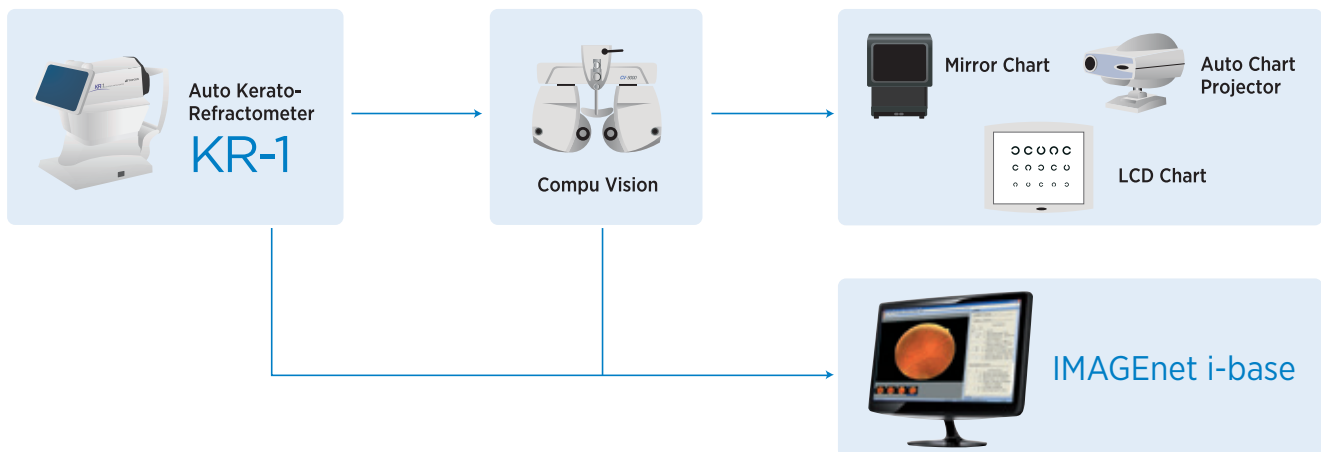
Topcon Imaging and database software: IMAGeNet i-base

Specifications

Refractive power measurement	Spherical refractive power: -25 to +22D (0.12D/0.25D steps)* Cylindrical refractive power: 0D to ±10D (0.12/0.25D steps)* Astigmatic axial angle: 0° - 180° (1°/5° steps) Minimal measurable pupil diameter Ø 2.0 mm
Corneal curvature measurement	Corneal curvature radius: 5.00 mm - 10.00 mm (0.01 mm step) Corneal refractive power: 67.50D - 33.75D (0.12/0.25D steps) (corneal refractive index = 1.3375) Corneal astigmatic refractive power: 0D - ± 10D (0.12D/0.25D steps) Corneal astigmatic axial angle: 0° - 180° (1°/5° steps)
PD measurement range	20 - 85 mm (1 mm step)
Data transport terminal	USB (import), RS-232C (export), LAN (export)
Dimensions	286 - 326 mm (W) x 445 - 526 mm (D) x 466 - 615 mm (H)
Weight	19 kg
Power supply	100-240V AC, 50-60Hz, 75VA

* -25D ≤ spherical refractive power + cylindrical refractive power or spherical refractive power + cylindrical refractive power ≤ +22D

System Chart



* Contact Topcon subsidiaries or dealers for system configuration.



IMPORTANT

Subject to change in design and/or specifications without advanced notice.

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

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