

# Auto Ref/Keratometer

## HRK-9800



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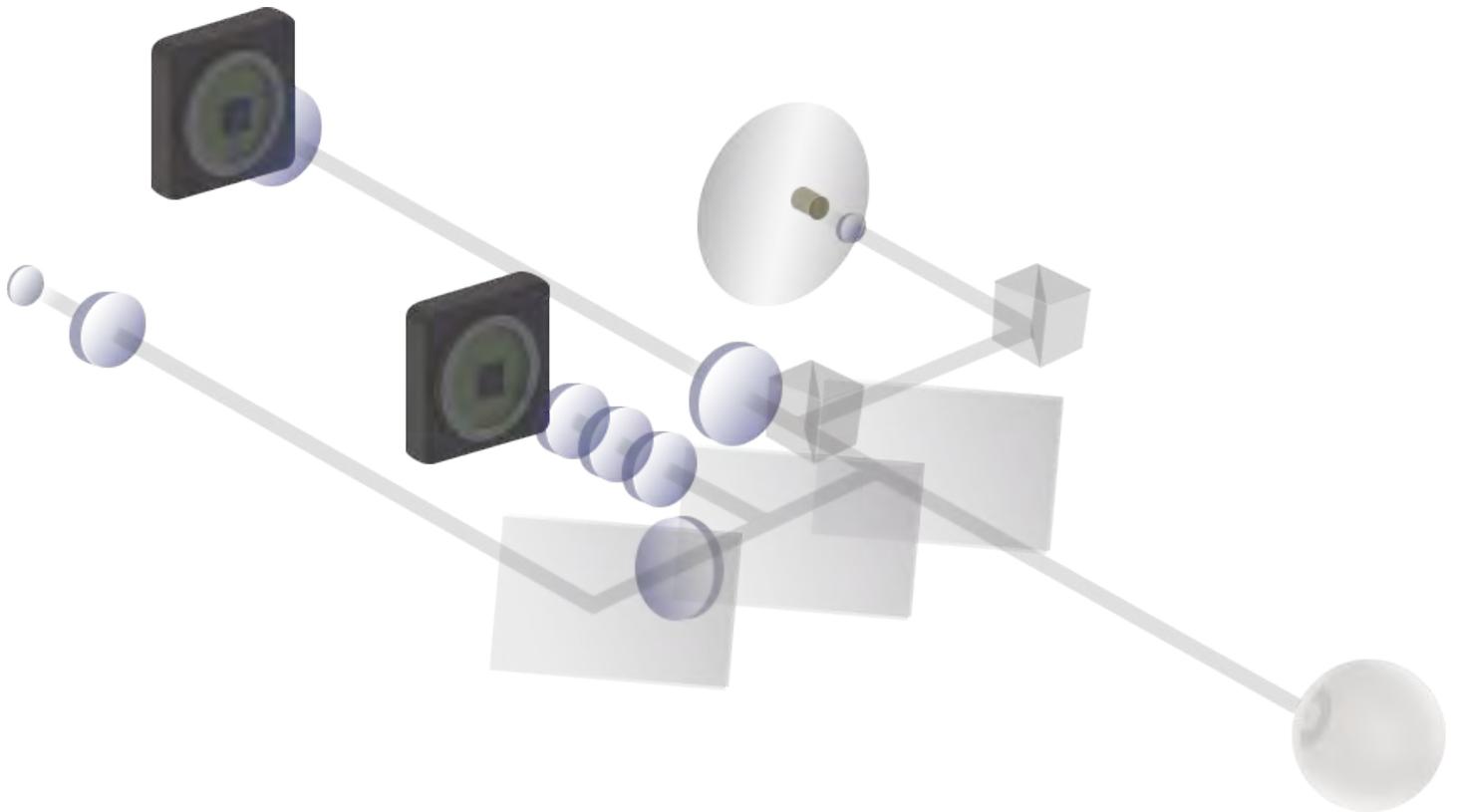
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# Fast Examination | Wavefront Technology

## Guarantee Accurate Measurement

The HRK9800 auto Ref/Keratometer applied advanced wavefront technology to measure patient's refraction status. With Hartmann-Shack sensor and uniquely designed optical system, HRK9800 can give quick examination and deliver accurate measuring result to the optician and ophthalmologists based on aberration analysis.





## Uniquely Designed Optical System

The special optical system and algorithm incorporated in the HRK9800 enable it to measure high myopia eyes (up to -30.00D), mild to medium cataract eyes and patients wearing IOL. Unlike the mire technology used in traditional auto refractometer, the light from HRK9800 can penetrate the cloudy lens and reaches the retina making the measurement possible.



## Manual Focus Operation Guide

When the pupil is out of focus during manual operation, the screen will show arrows to guide the operator to move the joystick to reach focus status.

## Auto Tracking in Vertical Direction

When the focusing mark is moved to the middle of the pupil, HRK9800 will move up and down automatically to track the pupil center. When it locates the pupil center, it will measure automatically in auto measuring mode.





## Two-dot Alignment Focusing with Auto Measuring

HRK9800 adopt two-dot alignment technology which is an objective focusing method. When the two dots are aligned horizontally, it indicates that the measurement is in focus. This increases the focusing accuracy in comparison with subjective observation by the operator's eyes. When in focus, the device will measure automatically in auto mode.



## Quick Measuring Mode

For children patient and patients have nystagmus whose eye balls moves quickly and hard to fix for a short time, HRK9800 offers a quick measuring mode which can capture the refraction information in very short time.

### Motorized Chin Rest

The own developed motor used to control the chin rest up and down generates very low noise. That makes the chin rest move smoothly and offer great comfort to the patient.



### Data Record

There is 3 groups of data stored in each measurement. The maximum number is 10 groups to be stored at one time.

DATA RECORD							
R	SPH	CYL	AX	L	SPH	CYL	AX
1	-0.50	-1.50	95	1	-0.50	-1.25	99
2	-0.50	-1.50	95	2	-0.50	-1.25	99
3	-0.50	-1.50	95	3	-0.50	-1.25	99
4				4			
5				5			
6				6			
7				7			
8				8			
9				9			
10				10			
AVG -0.50 -1.50 95				AVG -0.50 -1.25 99			

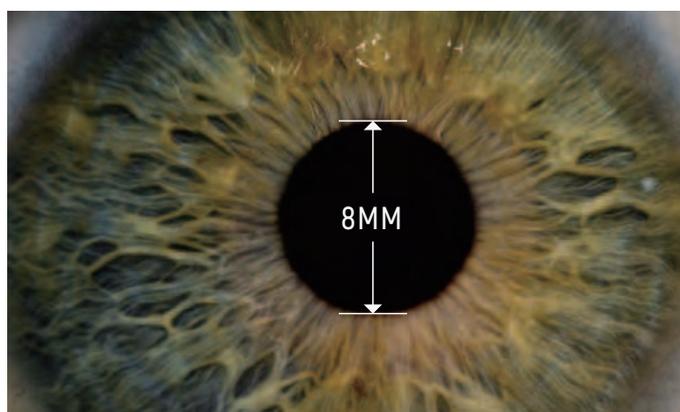
### Touch and Tiltable Screen

HRK9800 offers a high resolution 7" touch tiltable screen to make the operation being user friendly. The operator can tilt the screen up to 20 degrees for easy review.



### Pupil Diameter Measurement

HRK9800 can measure the pupil diameter from 2mm to 8mm.



# Specification

## MEASUREMENT MODE

Measurement Method	Hartmann-Shack wavefront sensor
K/R Mode	Continuous keratometry & refractometry
REF Mode	Refractometry
KER Mode	Keratometry
CLBC Mode	Contact lens base curve measurement
Pupil Tracking	Auto/Manual
Measuring Type	Auto/Manual

## REFRACTOMETRY

Vertex Distance(VD)	0.0, 12.0, 13.75, 15.0
Sphere(SPH)	-30.00D ~ +25.00D (When VD=12mm) (0.01D / 0.06D / 0.12D / 0.25D step)
Cylinder(CYL)	0.00D ~ ±10.00D (0.06D / 0.12D / 0.25D step)
CLBC Mode	1° ~ 180° (1° step)
Cylinder Mode	+, +/-, -
Pupil Distance(PD)	10 ~ 86mm
Minimum Pupil Diameter	2.0mm

## KERATOMETRY

Radius of Curvature	5.0 ~ 10.0mm (0.01mm step)
Corneal Power	33.00D ~ 67.00D (When corneal equivalent refractive index is 1.3375)
Corneal Astigmatism	0.00D ~ 15.00D (0.06D / 0.12D / 0.25D step)
Axis	1 ~ 180° ( 1° step)
Pupil Diameter	2.0 ~ 8.0mm (0.1mm step)
Memory of Data	10 measurements for each eye

## OTHERS

Display	Tiltable 7" touch color TFT LCD
Interface	RS-232 port, USB port
Internal Printer	Thermal line printer
Chart	Auto fog
Power Saving	Automatic switch-off (5min / 10min / 30min / 60min)
Measuring Light Energy	<30μw
Input Voltage	AC 100~240V, 50/60Hz
Power Consumption	40VA
Dimension	650 x 400 x 620 (mm) (L/W/H)
Weight	19.5 Kgs