



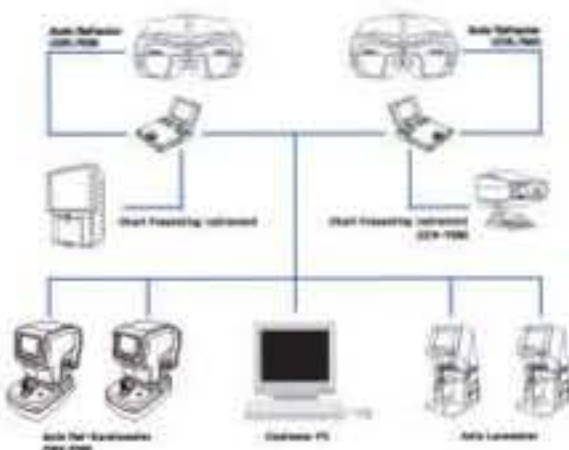
# Digital Refractor CDR-7000



CHAROPS Digital Refractor, CDR-7000 provides precise and variable data adopting highly advanced digital technologies. The most reliable service satisfies both the user and customers with exact and easy method. CDR-7000 ensures correct visual acuity tests and also allows the user to perform the sophisticated tests such as the binocular visual function tests, the presbyopia (near vision) tests and etc.

CDR-7000 enables you to perform precise examination & prescriptions.

### SYSTEM NETWORKING



## CDR-7000

### SPECIFICATION

#### MEASUREMENT RANGE

Spherical Lens	-29.00~+26.75D (Regular) -19.00~+16.75D (Cross Cylinder or Prism test) (0.12D / 0.25D / 0.50 / 1.00 / 2.00 / 3.00 / 4.00 increments)
Cylinder Lens	0.00~±8.75D (0.25D / 0.50 / 1.0 / 2.0 / 3.0 increments)
Cylinder Axis	0°~180° (1° / 5° / 15° increments)
PD	48~80mm (0.5 / 1mm increments) Near working distance : 35~70cm
Rotary Prism	0 ~ 20 Δ (0.1 Δ / 0.2 Δ / 0.5 Δ / 1 Δ / 2 Δ increments)
Cross Cylinder	±0.25D, ±0.50D, ±0.25D Dual Cross Cylinder (Split prism lens)
Heteroscope	+1.5D, +2.0D (Measurement Distance 67cm, 50cm)

#### AUXILIARY LENS

Pin Hole Lens	φ 1mm
Maddox Rod	Right Eye(Red, Horizontal), Left Eye(Red, Vertical)
Red / Green Filter	Right Eye(Red), Left Eye(Green)
Polarizing Filter	Right Eye : (135°, 45°) Left Eye : (45°, 135°)
Split Prism	Right Eye (5Δ BI) Left Eye (10Δ BI : up to 5Δ complement)
Fixed Cross Cylinder	(±0.50D, Fixed with the axis set at 90°)
Visual Angle	32° (Diameter 32mm)

#### DIMENSION

Refractor	445 (W) x 255 (D) x 133 (H) mm 6.9kg
Controller	220 (W) x 256 (D) x 188 (H) mm 1.3kg (including Built-in Printer)
Junction Box	350 (W) x 240 (D) x 70 (H) mm 2.2kg
Power supply	AC 100-120V / AC 220-240V 50 / 60Hz
Power consumption	110VA

Designs and details can be changed without prior notice for the purposes of improvement.

**HUVITZ**

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CHAROPS



Is your optometry service satisfying your customers?



**Comfortable & perfect vision test!**  
Come through CDR-7000's distinguished test functions.

**Powerful cross cylinder lens**

- The dual cross cylinder lens makes fast & convenient examinations.
- Automatic occluding function prevents examinee's eye from accommodation, while the lens is rotating over 45 degree, for precise and comfortable examination.



**Vertex distance check and cornea illumination**

Accurate tests are guaranteed by positioning the examinee's eyes correctly before tests.



**Easy and flexible PD control**

From any mode, you can adjust the PD easily and conveniently. When the test mode is changing between far and near, the PD is automatically calculated and set.



**Support perfect convergence**

During the presbyopia and near vision test, CDR-7000 provides perfect convergence function. This function makes the examinee's eyes aligned with the center of lenses for precise measurements.

- Near PD : 45-75mm
- Near working distance : 35-70cm

**Accurate rotary prism**

Precise data can be obtained by measuring up to 20 Δ by 0.1 Δ step. Automatic occluding function option helps to perform precise and comfortable examinations while the prisms are changing directions.

**Adjustable LCD display**

Operator always can see the clear screen by adjusting the LCD from 0 to 90 degree.

**Easy examination with graphic guide function**  
Guiding you to fast & convenient test.

**Real-time guide**

Real time guide guides you to make easy & fast refraction showing the information you need on the LCD display by graphics.



**Displaying the result data in tables and graphics**

Well-organized result data in tables and graphics help you to understand the results at first glance.



**Operation panel with a built-in high-speed printer**

Easy and fast to combine with any kinds of refraction units without installing additional printer. The powerful 32-bit CPU loaded printer provides quick data printing. You will also be satisfied with the easy way to replace printing paper.



**Advanced refracting system for professionals-**  
The highest numbers of methods are your benefits when you are using CDR-7000.

**CDR-7000 supplies the most various examination methods compared with other refractors.**

- 18 visual acuity tests
- 26 monocular and binocular (correction) tests
- 35 user-defined tests can be stored and edited.

**Powerful program function**

- Up to 10 user-defined programs can be stored.
- In a user-defined program, any of single tests, auxiliary lenses, fogging, chart masking, and other options can be all stored.
- Renaming the user-defined programs is also possible for the user's convenience.

**Worldwide chart & various vision test methods-**  
The only available in CDR-7000.

**Various chart**

Controller Type A (OP-1A)



Controller Type B (OP-1B)



Controller Type C (OP-1C)



Controller Type D (OP-1D)



**Sharp design & intelligent near vision chart**

- The near point card rotates freely in all directions, 360 degree horizontally and 180 degree back and forth.
- Complete chart combination for near vision test



**Easy installation & powerful networking-**  
You are able to set up the next generation optometry system.

**Simple automated eyes examination system**

- Convenient system installation thru junction box
- Single cable connection among the instruments

**Perfect networking & data management**

- Useful data-link among mirror chart, projector, refractor & lensmeter. (Supports the connection of chart presentation devices by both serial and IR interface)
- Automatic data transmission & integrated management of customer's data

**Economic & efficient system**

- Built-in printer in the Operation Panel
- It is not necessary additional connection devices & installation procedure for system extension. (Refractometer's data and lensmeter's data can be shared in multiple CDR systems.)