Superb Operability

Smart & Slim

The head unit incorporates all required optical functions as well as enabling a smart, slim and compact design. Smooth and comfortable measurement is possible without exposing patients to any feeling of pressure.

FULL SPEC MODEL

· **Largest lens measurement range**
· **21-Point Eye Exam measurable**
· **Auto cross cylinder**

Near-point Chart

A near-point chart for presbyopic eyes can be attached to DR-900.
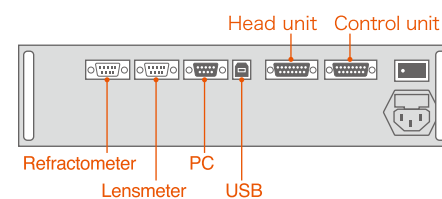
LED Illumination

The DR-900 incorporates LED illumination in the head unit, which illuminates the near-point chart and allows measurement in dark places.

Connective Relay BOX

Transformers to connect the head unit, control unit and power supply are integrated in a compact box. Cables are neatly fitted by placing connectors on the same side, even when the refractor is used with a refractometer and a lensmeter.

Head unit   Control unit

Refractometer   PC
Lensmeter   USB

Human-Interface Design
Digital Ref-Ractor   DR-900

SPECIFICATION
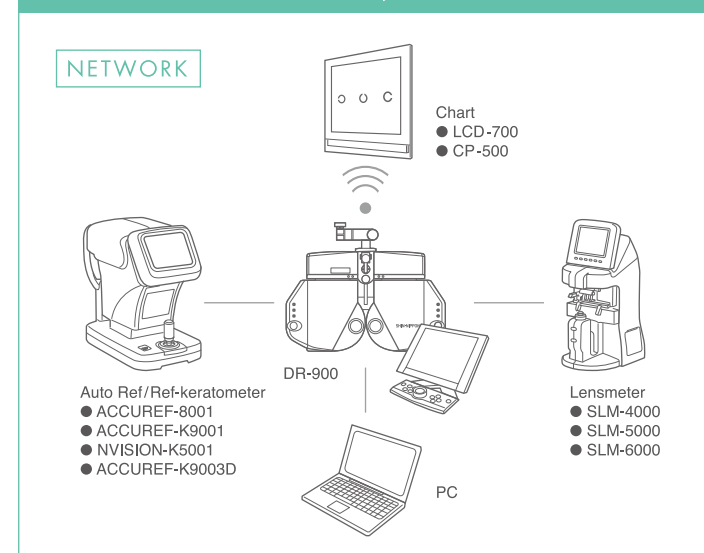
SPHERICAL POWER	Measurement range	-28.75D to +27.25D
	Measurement unit	0.12D, 0.25D, 0.50D, 1.00D
CYLINDRICAL POWER	Measurement range	0D to ±6.00D
	Measurement unit	0.25D, 1.00D
AXIS	Measurement range	0° to 180°
	Measurement unit	1°, 5°
INTERPUPILLARY DISTANCE	Measurement range	48.0mm to 80.0mm
	Measurement unit	0.5mm, 1mm
PRISM DEGREE	Measurement range	0Δ to 20Δ
	Measurement unit	0.1Δ, 0.5Δ, 1Δ
PRISM ANGLE	Measurement range	0° to 360°
	Measurement unit	1°, 5°
VERTEX DISTANCE	12, 13.75, 16, 18mm	
CROSS CYLINDER	Auto cross cylinder（±0.25D）±0.25D cross cylinder, ±0.50D cross cylinder	
AUXILIARY LENS	P.D, occluder, foraminous board（φ1mm）, polarization filter（45°/135°）, Red Maddox（right eye : horizon, left eye : vertical）, R/G filter（right eye : red filter, left eye : green filter）, dispersing prism（right eye : 6ΔBU, left eye : 10ΔBI）, lenses for retinoscope（+1.50D/+2.00D）	
PRINTER	Thermal line printer with an automatic cutter	
MONITOR	10.4 inch LCD monitor	
EXTERNAL DIMENSIONS	Head	385 to 417mm（W）× 112mm（D）× 308mm（H）
	Controller	272mm（W）× 272mm（D）× 204mm（H）
	Relay box	326mm（W）× 119mm（D）× 83mm（H）
WEIGHT	Head	Approximately 5.3kg
	Controller	Approximately 2.5kg
	Relay box	Approximately 2.4kg
RATED SUPPLY	AC100 to 240V, 50/60Hz	
POWER CONSUMPTION	90VA	

A total optometry system is available by combining a Auto Ref / Ref-keratometer, a lensmeter and a chart.

NETWORK

Chart
● LCD-700
● CP-500

DR-900

Auto Ref/Ref-keratometer
● ACCUREF-8001
● ACCUREF-K9001
● NVISION-K5001
● ACCUREF-K9003D

Lensmeter
● SLM-4000
● SLM-5000
● SLM-6000

PC

Design and specifications are subject to change without notice.

STANDARD ACCESSORIES

■ Communication cable
■ Power cord
■ Printer paper
■ Fuse
■ Near point chart
■ Near point holder
■ Near point chart bar
■ Dust cover
■ Operation manual

SHIN-NIPPON
by Rexxam

A Human-Interface Design pursuing Ultimate Operability

Human-Interface Design
## Digital Ref-Ractor
DR-900

An Interface Design Realizing Smooth Communication and Superb Operability

Speedy,Smooth & Silent

High quality and ultra-reliable optical parts allow faster, smoother and quieter measurement through the high-precision mechanism design, featuring a sequential-control lens rotating unit.
This refractor is based on a human-interface design, prioritizing user-friendliness e.g. by focusing on operation "noise".

Equipped with an IR unit.
Can also interface with charts via infrared communication.

High-speed Silent Head

With a high-precision optical mechanism installed in the head unit. Achieving unrivalled speed and smooth and noiseless motion, lets you measure patients instantly without tiring them out.

DR-900
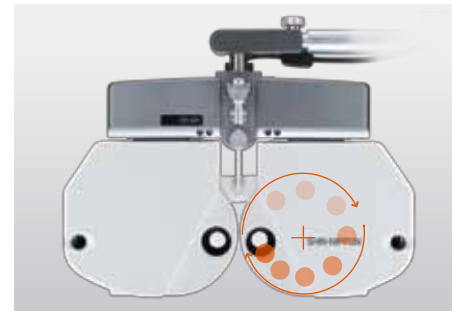
Wide Field of View

The head unit was designed to be as slim as possible, based on the layout and tuning of the lens unit and retaining the lens diameter. This achieves a brighter and wider field of view (40°).

40°
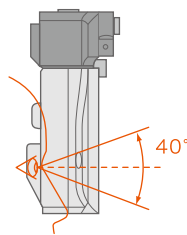
"New Generation" SHIN-NIPPON DESIGN & STYLE

Sophisticated detail and quality. A stylish form and color that match various spaces. Classy two-tone metallic & pearl coating, combined with a sharp design, which also features smooth curves, reflects its high quality and reliability for users.

New DESIGN& STYLE
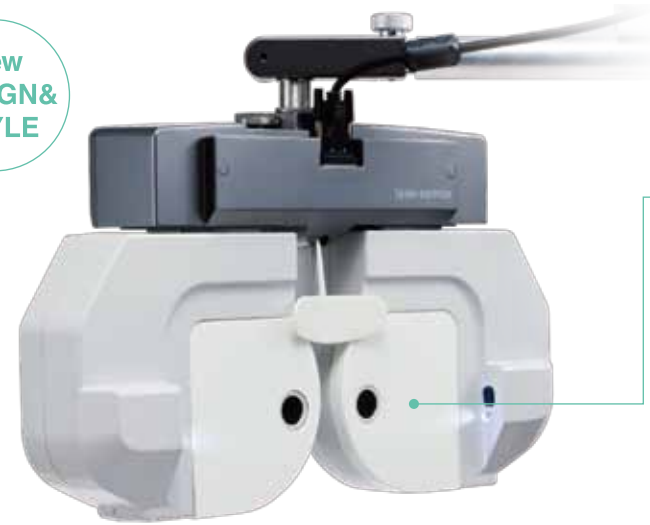
Detachable Face Panel

Soft and light materials and shapes are used for the parts exposed to patients' forehead and cheeks. These are also easily detachable and the head unit can be kept clean.

Simple & Easy Operation

To facilitate "intuitive" use for the operator and offer various measurement methods, the touch panel input and jog dial/button (keyboard) input are divided.
Flexible and free operation via parallel input is also available.
A large touch panel with good visibility and simple, easily selectable touch buttons allow easy and "intuitive" operation without a manual by adding operating "sounds".

Touch panel
10.4 inch large LCD color display

Easy and "Intuitive" Operation!

Keyboard panel
Jog dial & Operation buttons

SHIN-NIPPON

Wide and easily-operable touch buttons

A jog dial & buttons allow centered operation.

Jog Dial/Operation Buttons

A jog dial integrating a dial and Enter key allows the direct selection of "Select", "Adjust" and "Enter" functions. The jog dial/buttons have shapes and touch that enable touch typing and focus on the operational feeling in every detail.

PUSH

Free measurement position

The touch panel can be tilted up to 80 degrees. You can measure comfortably whether standing or sitting. The keyboard panel is designed to be slim to avoid interfering with operation.

20° to 80°

Compact Body / Printer with an automatic cutter

The printer is placed on a rear surface to enable a compact and space-saving design. Paper is easily replaced by inserting new rolls into the printer.
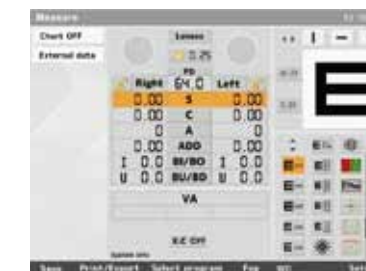
Multi Interface Design

The operation screen of the LCD touch panel has a user-friendly layout and color plan and designed to divide the screen into three display areas to organize information. A series of operations from "Setup" → "Measure" → "Display" check can be implemented "intuitively" and "sensuously".

Title Information **Measurement Information** **Chart Information**
Basic Operation Screen

Chart Display Status
Displays the chart currently selected.

Chart Selection Screen
A chart screen that is easily viewable and selectable during measurement.

Menu Information

DR-900TC   SHIN-NIPPON

Basic Display

The part currently selected is displayed in orange.
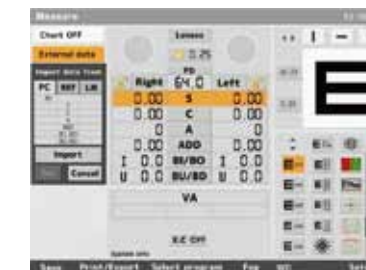
Screen Input

Number input is available by displaying the numeric panel on screen, which facilitates changing large numbers.

Interface Display

This information is displayed on the left side when the device is interfaced with a PC, refractometer, and lensmeter.

Memory Function

A memory function capable of saving several types of measurement data. This is useful when measuring patients who use multiple pairs of glasses.