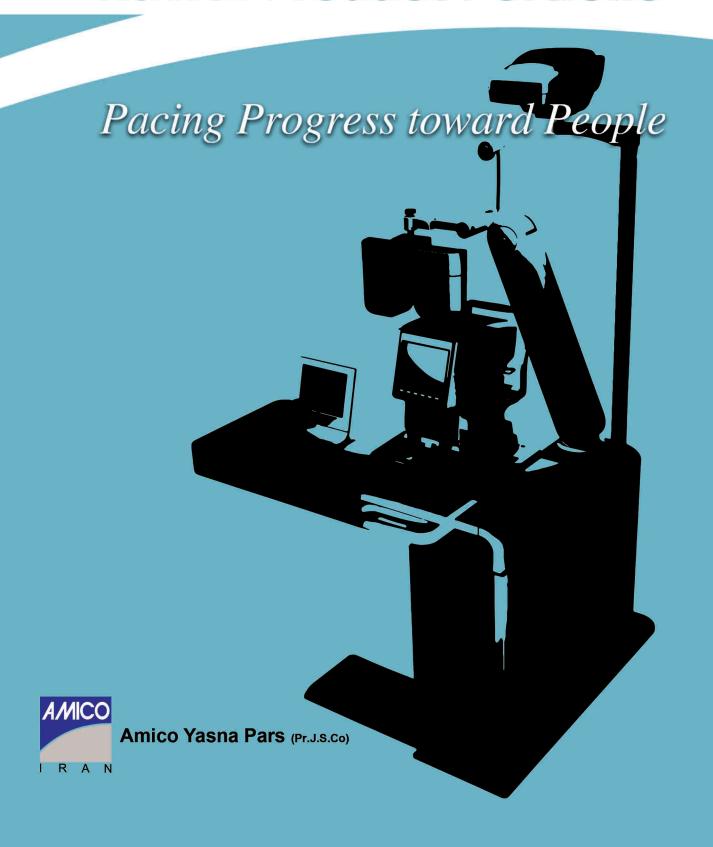
# 

# **Huvitz Product Portfolio**





Auto Ref-Keratometer (HRK-8000A)
Measuring the refracting power & keratometery of eyes.
Auto Ref-Keratometer (HRK-7000 /HRK-7000A)
Slit lamp (HS-7000/ HS-7500/ HS-5000/ HS-5500)
Imaging System (HIS-5000)
Applanation Tonometer (HT-5000)
Non-Contact Tonometer (HNT-7000)
Advanced Refraction Table (HRT-7000)
Digital Refractor (HDR-7000)
Digital Lensmeter (HLM-7000)
Digital Chart (HDC-9000 N/PF)
Chart Projector (HCP-7000)
Amico Yasna Pars Introduction

# Pacing Progress toward People



### HRK-8000A AUTO REF-KERATOMETER



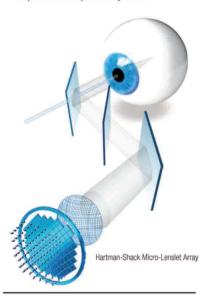




High Order Aberrometry Data Output Opens Possibilities for High Market Trended Customized Lens Applications!

The World's First Contact Fitting Guides and Recommendations!

### **Optimized Optical System**



Wavefront Technology measures the wavefront of light reflected from the retina and the refractive power with various sensors divided by sectors and analyzes them with extreme precision.

### Micro Lens Array

Huvitz' own developed Micro Lens Array creates a number of separated focal spots, of which the pattern provides valuable information of the customer's ocular system.

### **Customized Lens Manufacturing**

High order aberration and Zernike map data output function allow premium custom spectacle or contact lens manufacturers to improves vision accuracy and power.

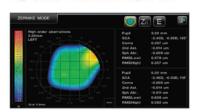
### More Data on Aberration Measurement



High order aberration data such as Coma, Trefoil, Spherical Aberration, Secondary Astigmatism, and Tetrafoil, which was only available in wavefront aberrometers, now is available in Huvitz HRK-8000A!

Clinical usage of this data is all in your hands!

### High Order Aberration Map is on!



Besides the conventional data such as Spherical, Cylinder and Axis, the high order aberration data is displayed in a graphical Zernike refraction map for better understanding of patient's eyes and superior clinical decision making.

### **PSF & Image Simulation**



Point Spread Function (PSF) and chart simulation of retinal display can make patients understood in a much better way of their clinical status of eyes and customized lens benefits.

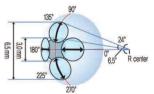
### Color View Mode!



The Full Color CCD camera and white LED light source in the auto refkeratometer enable you to see eyes and contact lens fitting status which was previously only possible with slit lamps.

### Peripheral Keratometry Measurement





HRK-8000A provides peripheral keratometry measurement data that can be greatly useful for fitting contact lenses.

### Ultra High Precision KER Data

Mire ring and LED sources enable highly reliable keratometry data of the corneal base curve to be obtained.

## Unmatched Performance & Speed Provides Comfortable User Environment.



### Contact Lens Fitting Assistance Guide



The World's First contact lens fitting function in an auto ref-keratometer enables you to see fluorescein liquid with blue illumination.

The HRK-8000A also analyzes and simulates the lens fitting status with automatic calculation and recommendation.

### Contact Lens Prescription Guide

Image capture and contrast regulation is possible.

The HRK-8000A gives you the best On-K fitting guide based on the base curve and KER value measured!

Touch & Tilting Color Display Screen



High brightness and contrast VGA 7" wide color TFT LCD screen provides with high resolution video images.

Smooth and free tilting function also offers you a comfortable and clear view at any angle.

### **Auto Tracking**

The cutting edge auto sensor and 3 dimensional movement mechanism enables you to track down a measuring focus of an eye automatically and complete the measurement perfectly even with an inexperienced user.

### **Animated Guide**



In case a measuring point is out of auto tracking range, the animated guide on the screen suggests how to operate the joystick in the easiest and most intuitive way.

### Vision Comparison Function

The internal chart provides a vision comparison function of current vision and corrected vision.

### Motorized Chin Rest



Just by pressing the Up & Down buttons, users can set the height of the measuring point comfortably and quickly

### Faster Measurement Speed

Faster measurement speed than any other competitors' equipment!

### Comfortable One Touch Lock

The upper moving stage can be locked easily with the one touch button, making locking smooth and easy.

### Quiet & Speedy Auto Cutting Printer



Automatic paper cutting and one touch paper roll change functions are new advantages of the HRK-8000A.

### Ext. Monitor & Network Connectivity

Full HD video output through the HDMI port provides a differentiated explanation base for clinical consulting with your patients.

HRK-8000A supports network connectivity with Huvitz Digital Refraction System enabling easy and fast refraction in networking.

### **SPECIFICATIONS**

### MEASUREMENT MODE

K/R Mode	Continuous Keratometry & Refractometry	
REF Mode	Refractometry	
KER Mode	Keratometry	
CLBC Mode	Contact Lens Base Curve Measurement	
KER P Mode	Peripheral Keratometry	
Color View Mode	Color View & Contact Lens Fitting Assistance (White & Blue LED Light)	

### REFRACTOMETRY

Vertex Distanc(VD)	0.0, 12.0, 13.5, 15.0	
Sphere(SPH)	-30.00~+25.00 (VD=12mm) (Increments:0.01, 0.12, 0.25D)	
Cylinder(CYL)	0.00±12.00D (Increments 0.01, 0.12, 0.25E	
CLBC Mode	1~180° (Increments:1°)	
Cylinder Form -, +, ±		
Pupil Distance	10~85mm	
Minimum Pupil Diameter	ø2.0mm	

### KERATOMETRY

5.0~13.0mm (Increments: 0.01mm)	
25.96~67.50D (When corneal equivalent refractive index is 1.3375)	
(Increments: 0.05, 0.12, 0.25D) 0.00~-15.00D (Increments: 0.05, 0.12, 0.25D)	
0~180° (Increments:1°)	
2.0~14.0mm (Increments:0.1mm)	
10 measurements for each eye	

### MOVEMENT RANGE

Up-Down	±15mm
Left-Right	±5mm ±2mm
Forward-Backward	±5mm ±2mm

### **OTHERS**

Display	7 inch Wide Color TFT LCD, Touch panel with Tilting function
Internal Printer Thermal Line Printer with Auto Cuttin	
Power Saving	Automatic switch-off(5min)
Power Supply AC100-240V, 50/60Hz(Free Voltage), 6	
Dimension/Weight 262(W) x 518(D) x 441(H)mm / 20.9kg	

Desings and details can be changed without prior notice for improvements.



Image showing the Huvitz HRK-8000A connected to an external monitor(optional)



### Huvitz Pacing Progress toward People

# 工厂大人

Huvitz Auto Ref/Keratometer with Smart Assembly Moving Control Tech







The technology behind may not be seen, but the results are clearly visible. HRK-1

Professionals also admire HRK-1's commitment to its fundamental foundation as a quality Auto Ref / Keratometer, now featuring Smart Assembly Moving Control Technology, and high-performance light source.

As eye-diseases and ophthalmologic disorders are increasing, Huvitz is devoting its efforts to think more deeply about the essence of its technology offerings. Equipped with advanced technologies such as a high-performance light source, an intuitive interface and Smart Assembly Moving Control Technology (SAMC Tech), for a faster and more accurate movement in accordance with the refractive error of the patient, and ultimately providing highly accurate and stable measurements.

The advanced REF optical system provides accurate measurements.



Newly designed, Huvitz continues to lead in product development combining innovation with value and performance

# Huvitz's Smart Assembly Moving Control Technology

The invisible technology behind Huvitz's REF optical system can be seen in the accuracy and stability of the measurement results.

Considering the refractive error of the patient, the measurement ring is projected on the retina, and is adjusted automatically by Smart Assembly Moving to secure a stable signal.

HRK improves the effect of uneven light reflection in normal and cataract eyes with the results being more accurate refractive power REF data.



The Aiming Dot quickly guides you to easily find the patient's visual apex from any position for fast alignment.

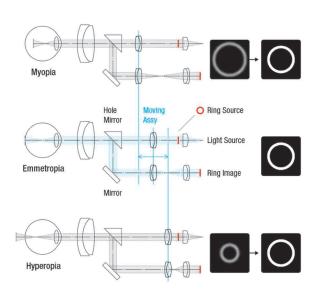
Reliable refractive power REF data is then automatically obtained.

### Simple up & down Auto Tracking

The Auto Tracking automatically tracks the eye of the patient making it easier to measure by manipulating the joystick back and forth without having to rotate the joystick.

### Familiar User Friendly Interface

Featuring an icon-based intuitive operating system, the interface is simple for all users.



Smart Assembly Moving Control (SAMC) Tech



Aiming Dot



Chinrest Adjustment



Measurements, prescriptions and fittings are even more accurate with more vivid detail.



### Intuitive Iris, measurement of pupil size

With the image capture function, iris and pupil diameter can be measured up to 14mm, and REF measurement with a pupil diameter as small as 2mm.

### Immediate Color View Mode

Full color camera and white LED light is used for color display, overall condition monitoring, contact lens fitting and prescription.

### Clear Retro-Illumination Mode

You can observe the eye health & condition, such as lens opacity or corneal damage.

SPH, CYL and AXIS measurement data required for eyeglass and contact lens prescriptions are made at the same time.

### Contact Lens fitting Assistance Guide

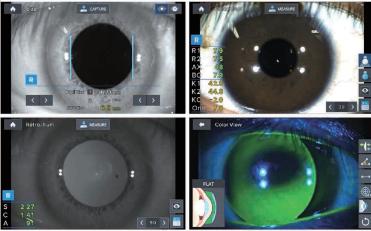
Image processing, using a fluorescence solution and yellow filter, automatically determines the fitting state.

### Convenience for Prescribing Contact Lenses

Adjusting and capturing the contrast of the image being observed, HRK-1 automatically calculates and displays the Base Curve value of the lens by the On-K fitting used when prescribing the contact lens from measured KERATO Data (RGP lens only).

Iris and Pupil Diameter Measurement

Color View Mode



Retro-Illumination Mode

Contact Lens fitting Assistance Guide



# Usability & efficiency, designed by our Users' experiences



### Touch-enabled 7-inch color display

Adopting a wide color TFT LCD that provides high quality imaging with real-time processing chip design. It also has a buttonless touch screen that is as familiar and convenient as a smartphone. The magnified optical magnification allows you to observe and measure the eye of the subject in detail with a sharper and larger size.

### Friendly external monitor display

By connecting the measurement results to an external monitor, you can easily and accurately communicate and understand the diagnostic results.

### Secure Delete Confirm Dialog

Delete Confirm Dialog function prevents the data from being deleted immediately after measurement, to aid in further analysis.

### Easy One-Touch Lock

For convenience, the upper moving stage can be easily locked down.

### High-speed printer and convenient paper change

The HRK-1 can now print 10 measurement results quickly & quietly in less than 3 seconds. It also has an easy and simple printer paper changing function.

### Lensmeter printer features

It can directly connect to our automatic lensmeter (HLM-1) using optional Y-cable for printing HLM-1's measurement result.

Delete Confirm Dialog







Internal Printer





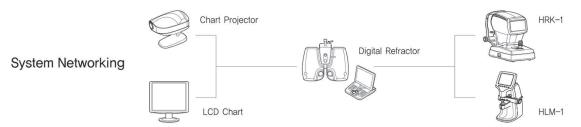


# Huvitz Auto Ref/Keratometer with Smart Assembly Moving Control Tech

### Specifications

	K/R Mode	Continuous Keratometry & Refractometry	
Measurement Mode	REF Mode	Refractometry	
	KER Mode	Keratometry	
	Color View Mode	Color View & Contact Lens Fitting Assitance (White & Blue LED Light)	
	Vertex Distance (VD)	0.0, 12.0, 13.75, 15.0	
	Sphere (SPH)	-30.00~+25.00D (VD=12mm) (Increments: 0.01, 0.12, 0.25D)	
	Cylinder (CYL)	0.00~±12,00D (Increments: 0.01, 0.12, 0.25D)	
Refractometry	Axis (AX)	0~180°(1°unit)	
	Astigmatism Indication	-, +,± (Mixed)	
	Pupil Distance (PD)	10~85mm	
	Minimum Pupil Diameter	Ø2.0mm	
	Radius of Curvature	5.0~13.0mm (Increments: 0.01mm)	
Keratometry	Cornea Power	25.96D~67.50D (Increments: 0.05, 0.12, 0.25D) (When cornea equivalent refractive index is 1.3375)	
	Cornea Astigmatism	0.00~-15.00D (Increments: 0.05, 0.12, 0.25D)	
	Axis	0~180° (Increments: 1°)	
	Pupil, Iris Diameter	2.0~14.0mm (Increments : 0.1mm)	
	Memory of Data	10 measurements for each eye	
Auto Tracking Distance	Up and down	±15mm	
	Display	7 inch Wide Color TFT LCD Resistive Touch Panel	
Others	Interface	RS-232C	
	Internal Printer	Thermal Line Printer	
	Power Supply	100-240VAC, 1.0-0.6A, 50/60Hz	
	Dimensions / Weight	261(W) X 513(D) X 433(H)mm / 16kg	

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







HS-7000 / HS-7500 HS-5000 / HS-5500 SLIT LAMP



### **MICROSCOPE**

With the global standard Galilean converging binocular type optic system, the Huvitz high end slit lamp series offers a wider angle, live image and increased accuracy. In conclusion, this slit lamp series offers a better and more successful diagnosis.

We invite you to compare our slit lamp series with the competitors analyzing color aberration; view angle and image color clarity.

- 12.5x eye pieces / 6x:38.5mm,10x:22.2mm, 16x:15.2mm, 25x:10.5mm, 40x:6.7mm
- 10x eye pieces(Optional) / 5x:38.5mm, 8x:24mm 12x:15mm, 20x:9mm, 32x:6mm



### **ILLUMINATION**

The 12-volt, 30-watt high luminance halogen lamp provides incredible clarity for both image and video.



### **DESIGN**

The slit lamps are offered in the Tower Illumination type (HS-7000) and the Integrated Illumination type (HS-7500) slit lamp models.

Both types are designed in the industry standard type models used for their proven accuracy and reliability.

### MAGNIFICATION CONTROL SYSTEM

The five-position drum-style magnification changer provides a wide range of magnification from 6x to 40x easily accessible by rotating the drum.

The design of this system and the uniquely designed Huvitz optic system allows you to offer a more accurate diagnosis and observation to patients without any image distortion in any magnification level.

### YELLOW FILTER

A yellow filter is conveniently located near the ocular for effortless insertion of the fluorescein pattern. With a control lever, any filters are easily inserted. (Options include cobalt blue, red free, heat absorption, grey, and yellow.)



### INTEGRATED CONTROL

The integrated omni style joystick is simple to control. A trigger button is conveniently mounted on the joystick for easy image and video capture.

Images and videos can be stored simultaneously if the slit lamp is connected to image devices.







### HIS-5000 IMAGING SYSTEM



From diagnosis and patient data management to presentation and image processing: The complete kit of user-friendly image management system

### PATIENT INFORMATION MANAGEMENT

MS Access Database system allows you to search symptoms, diagnosed information, and related contents. You can also easily manage data and history of patients.



### INTUITIVE USER INTERFACE

Intuitive tree-structured user interface allows easy access to and updates of patient information without any complicated clicking.



### **DIGITAL CAMERA**

The IEEE 1394 interface in the Huvitz camera system offers you a high mega pixel resolution images with increased speed and a more stable data transmission than a conventional USB port transmission.



### QUICK IMAGE & VIDEO SAVING

High performance progressive scan CCD camera provides quick image capture of diagnosed images and videos in real time with a simple click on joystick button.



### POWERFUL IMAGE PROCESSING

With Live Tool graphic library, all the images such as JPG, TIFF, RAW and many more formats can be adjusted for brightness, contrast, color channel, saturation, inversion, sharpness, red-free, etc.

### IMAGE MANIPULATION FOR THE BEST DIAGNOSIS

Compare / The selected images can be magnified, reduced and rotated with various graphic effects for accurate comparison and diagnosis.

Overlay / Correlative animation of images captured in different time frames allows you to identify metastasis of symptoms.

Slide Show / All selected images can be shown in a slide show, which can be used for presentations.

Reference / Images of same symptoms can be registered or searched for further reference.

Report Generation / Automatic patients report export function in MS Word format.

Print / Easy single-click printing of current images.



### **SPECIFICATION**

		HS-7500	HS-7000	HS-5500	HS-5000	
	Slit length(mm)	0.3~14	0.3~12	0.3~14	0.3~12	
	Slit width(mm)	0~14continuous	0~12 continuous	0~14 continuous	0~12 continuous	
SLIT	Slit projection	1.167x	1x	1.167x	1x	
LLUMINATION	Aperture diaphragms	HS-	5000, HS-7000 : 0.3/1/3/5	6/9/12, HS-5500, HS-7500	: 0.3/2.5/3.5/7/10/14	
	Filters	Cobalt blue, Red-free, Grey, Heat absorption and Yellow				
	Slit rotation		0°~1	80° continuous		
PATIENT'S EYE	Angle of incidence	0°~20° continuous	0°, 5°, 10°, 15°, 20°	0°~20° continuous	0°, 5°, 10°, 15°, 20°	
PRISM	Surface working distance	66m	80mm	66mm	80mm	
	Туре	Galilean converging binocular				
	Magnification	5 position rotating drum			5 position rotating drum [HS-5000] 3 position rotating drum [HS-5000(X3)] 2 position rotating drum [HS-5000(X2)]	
	Eyepieces	12.5x(10x	)		12.5x	
	Total magnifications	6x, 10x, 16x, 25x, 40x			6x, 10x, 16x, 25x, 40x [HS-5000] 10x,16x, 25x [HS-5000(X3)] 10x,16x [HS-5000(X2)]	
	Real fields of view (mm)	38.5, 24,	5, 9, 6	38.5, 22.2, 15.2, 10.5, 6.1	38.5, 22.5, 15.2, 10.5, 6.1[HS-5000] 22.2, 15.2, 10.5 [HS-5000(X3)] 22.2, 15.2 [HS-5000(X2)]	
	Interpupilary adjustment	55mm~80mm				
	Vertical movement			28mm		
	Longitudinal movement	78mm				
	Lateral movement	98mm				
	Fine base	10mm				
BASE	Voltage frequency	50 / 60Hz				
DAGE	Power consumption	70VA				
	Instrument voltage	12V DC				
	Halogen bulb	12V 30W				
	Fixation point bulb	3.4V 20mA				
			HDC 1.4C		HDC 2.0C	
	Image sensor	1/2" interline CCD			1/1.8" interline CCD	
	Image size	up to 1,388 x 1,036 pixels			up to 1,600 x 1,200 pixels	
	Cell size	4.65 <sub>µ</sub> m x 4.65 <sub>µ</sub> m			4.40μm x 4.40μm	
	Resolution depth	8bit or 12bit Raw RGB, YUV 4:2:2			8,12,16 and 24bit digital data	
	Transmit method	IEEE 1394A (6pin)			IEEE 1394B (9pin)	
DIGITAL	Transmit speed	400Mbps			up tp 800Mbps	
AMERA IIS-5000	Frame rate	15	fps, 7.5fps, 3.75fps		Maximum 30fps	
113-3000	Lens mount		C-Mount		C-Mount	
	Photographing	External trigger or Software trigger		External trigger or Software trigger		
	Dimension	44mm (W) x 29mm (H) x 63mm (D)			44mm (W) x 29mm (H) x 58mm (D)	
	Power consumption	3W (12V DC, from IEEE 1394 cable)			3.4W	
	CDU			Dontium IV 0011		
	CPU	Pentium IV, 3GHz or Higher				
RECOMMENDED	Memory	512 MB (over 1GB recommended)				
OMPUTER	Video card	ATI Radeon 9200 (128MB) or similar				
SYSTEM	System	Microsoft Windows XP (with servicepack 3), Windows Vista, Windows 7 (32bit, 64bit)				
_	Camera Interface card	Standard IEEE 1394A or 1394B interface Firewire port OHCl 1.1 compatible  LCD or CRT (minimum resolution 1,280 x 1,024 pixels, over 1,600 x 1,200 pixels recommended)				

OPTION : PC, Table Designs and details can be changed without prior notice for the purposes of improvement.



# Pacing Progress toward People



### HT-5000 APPLANATION TONOMETER







- · The world standard Goldmann applanation tonometer
- The digital display makes it easy to read even in a dark room.
- The wide grip comfortable knob for easier adjustment of measuring prism
- Optimized algorithm realizes the fast process of IOP calculation.
- The power supply by the most commonly used AAA batteries guarantees easy installation and maintenance.
- The slanted display matches to the angle of a user's view for more comfortable observation.

### **SPECIFICATIONS**

Measuring force generated by leverage weight		
Installation	Mountable on peg on microscope.	
Measuring range	3-75mm Hg	
Measurement divergence of the force Impingement on the measu over a measuring range from 0-58.84 r		
Standard divergence	0.49  mN  = /< 3  s = /< 1.5 %  of rated value	
Reverse span =/< 0.49 mN		
Power Consumption	DC6V (AAA/900mAh Batteryx4ea)	
Net weight	0.500kg (without accessories, with batteries.)	

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







### HNT-1/1P NON-CONTACT TONOMETER



# Smoothness and Perfection HNT-1/1P

Soft & Smart Puffing, Corneal Thickness Compensation, Combined with Great Economical Value – A New Standard in Intraocular Pressure Measurement

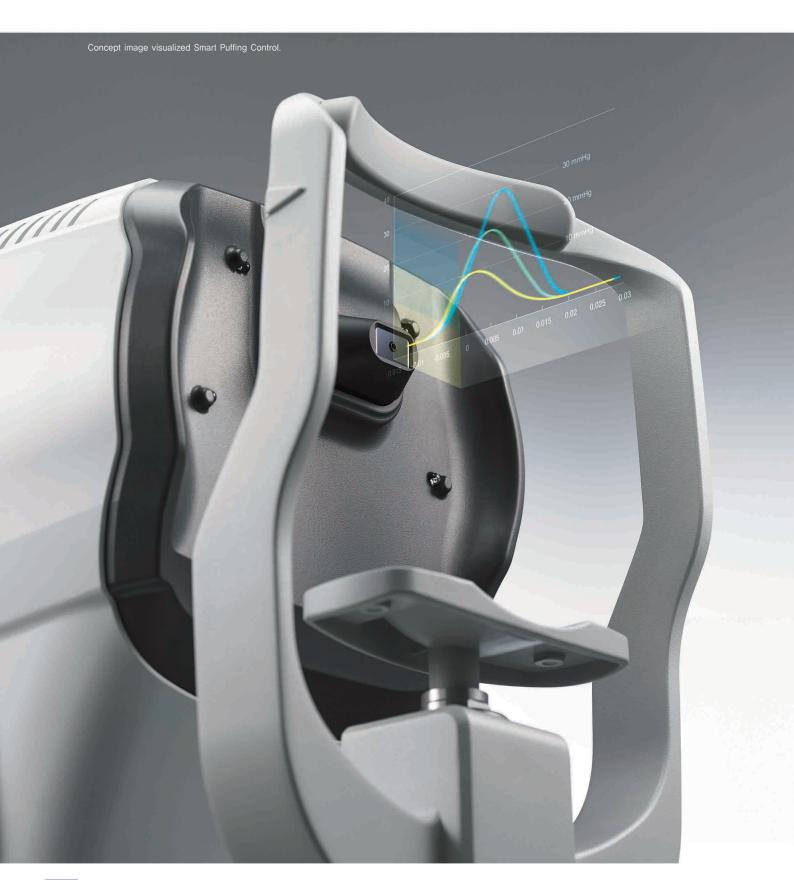
The new tonometer HNT-1/1P measures customized intraocular pressure with smart function auto-adjustable puffing intensity.

Intuitive interface based on corneal thickness to compensate for IOP value, produces accurate measuring data immediately and effortlessly.





# Soft and Smart Puffing – with Your Patient's Comfort in Mind.





### Newly designed, Huvitz continues to lead in product development combining innovation with value and performance

### Auto-adjustable Smart Puffing Control for Intraocular Pressure

Its smart function is possible with customized intraocular pressure as it adjusts the puffing pressure level based on the patient's own intraocular pressure.

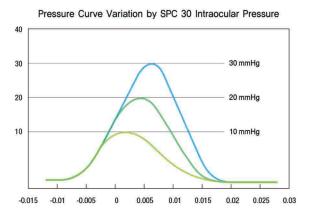
The moment the proper intraocular pressure signal is acquired, air pressure delivery stops, reducing the discomfort caused to the patient by unilateral high-pressure puffing.

### Auto Tracking Guide Display

Automatic 3D tracking and focusing.
User-friendly animated feedback for User, when outside of normal auto-tracking range, to help guide with the required joystick and chin rest adjustments needed.

### User Friendly Interface

Anyone can easily use thanks to the user-friendly icon-based intuitive interface.





Auto Tracking Guide / User Friendly Interface



3D Driving Mechanism for Auto Focusing

### IOP Measurement Taking into Account Corneal Thickness – Producing Comprehensive Data



### Accurate Corneal Thickness Compensation

To measure accurate intraocular pressure, simply input patient's corneal thickness on the HNT-1 to print-out compensated IOP value. (HNT-1)

When using the built-in pachymeter, available on the HNT-1P, it immediately shows compensated IOP value. (HNT-1P)

### CCT(Central Cornea Thickness) Measurement

Enables accurate measuring corneal thickness by utilizing the scheimpflug method. (HNT-1P)

### Visualization for Corneal Thickness Measurement

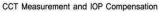
Bilateral corneal thickness by visualizing crosssection image of measured corneal thickness. (HNT-1P)

### ACA(Anterior Chamber Angle) Capture

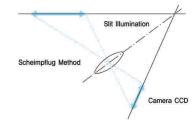
ACA cross-section capturing function helps to support the diagnosis of angle-closure which is one of the main causes of glaucoma. (HNT-1P)

### Angle Measurement Function by Touch Screen

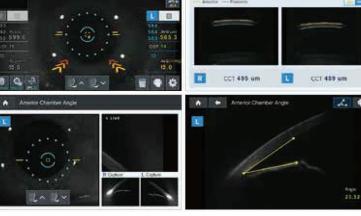
Utilize the ACA cross-section touch-screen, and the angle shows in graphic and numerical display with easy measurement. (HNT-1P)



Visualization for Corneal Thickness



CCT(Central Cornea Thickness) Measurement Concept



ACA Shooting

**ACA Measurement** 







# Intuitive Gesture and Easy to Use

### High Resolution 7"Color Touch-Screen

By adopting a wide color TFT LCD, it produces a vivid, high resolution (with no afterimage) image with real-time processing chip.

User-friendly and easy to use touch-screen.

### More Accurate Safety Stopper Function

When pushing the safety button, it prevents contacting air nozzle to patient's eye by means of adopting auto-sensor which initializes the position of the air nozzle.

### Motorized Chin Rest

User-friendly and easy to use motorized chin rest,

### High Speed Internal Printer

Built-in printer, conveniently and quickly prints measured data.

### Network Data Transfer Function

Send measured data to external computer by RS-232C interface cable. (EMR compatible)

### Power Saving Sleep Mode Function

Automatic sleep mode when not in use.







Internal Printer







# Huvitz Tonometer with Smart Puffing Control Tech

### Specification

		HNT-1	HNT-1P
	Measurement Mode	AT3D(X, Y, Z), AT2D(X, Y), MT(Manual)	
Intraocular Pressure Measurement Mode	Measurable Range	0~60mmHg, SPC30/60mmHg	
	Measurement Value	1mmHg step (Average:0.1mmHg step)	
	Pachymetry Measurement		AT3D(X,Y,Z), AT2D(X,Y), MT(Manual)
Cornea Thickness Measurement Mode	Measurable Range		150~1300µm
weasarement wode	Measurement Value		1µm step
Data Memory		Measured value of ten(10) times amount for each left/right eye.	
Hardware	Built-in Printer	Thermal Line Printer	
	Power Saving Function	As stopping to measure for about 1/3/5minutes, the main power is shut, it returns as pushing button.	
	Monitor	TFT LCD Color IPS Touch Panel of 7" (800x480)	
	Electrical Power / Current	AC100~240V, 50/60Hz, 1A	
	External I/O	RS-232C (in/out)	
	Dimensions / Weight	514(W) x 262(D) x 435(H)mm / 18.5(17.5)kg	

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



### HRT-7000 ADVANCED REFRACTION TABLE



# HRT-7000

ADVANCED REFRACTION TABLE

Another frontier step in refraction table system with unique handle mechanism: more comfortable and convenient HRT-7000



### HANDLE DESIGN

Ergonomic design with unique handle mechanism to facilitate the movement of upper table with extreme ease



### **POWER ARM**

45 degree soft movement and up & down multi sequence adjustment will enable to accommodate any patient comfortably.



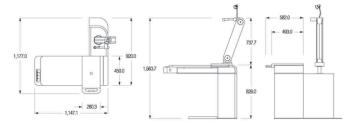
### **UP & DOWN FUNCTION**

Up & Down feature is added in order to provide convenience for measuring position of patient's eyes.



### **KEYPAD**

Visible location of keypads enables you to control the power arm and chair precisely with ease.



Designs and details are subject to change without prior notice for their improvements.

### **SPECIFICATIONS**

Dimensions	1,147(W) x 1,177(D) x 1,564(H)mm
Table Size	1,147(W) x 450(D) x 30(T)mm
Table Rotating Angle	90°
Head Stroke	400mm(R-L)
Power Arm Up-Down Range	$\pm 100$ mm
Chair Up-Down Range	150mm
Lamp	LED Lamp 3W
Power Supply	AC 110/220V, 50/60Hz
Power Consumption	420W (Max)







### HDR-7000 DIGITAL REFRACTOR



Slim design with wide viewing angle makes precision even more attainable. Huvitz's state-of-the-art technology presents sensitive design to attract everyone.



### Dual cross cylinder lens

Dual cross cylinder lens supports fast and convenient astigmatic test.

### **Automatic occlusion**

Automatic occlusion function assists precise and comfortable astigmatic test by preventing accommodation while the lens is rotating over 45 degree or test mode is changing.



### Automatic convergence

During presbyopic test or near vision acuity test, automatic convergence function makes an examinee to gaze near vision charts toward the center of refractor lenses assuring precise test.

Working distance : 35~70cmAvailable Near PD : 50~74mm



Near vision test can be performed better with variously provided near vision charts.



### LED Near Sight Illumination and Detachable Near Chart Rod

Built-in LED illumination for the near sight chart automatically recognizes the near or far sight test and turns the lighting on or off to create the best lighting needed for the test environment. Easy installation and removal of the near chart rod with a magnetic joint give you more comfort.

### Accurate rotary prism

Precise prism data can be obtained by fine increment (up to  $20\, \varDelta$ , minimum  $0.1\, \varDelta$  increment) and automatic occlusion function is working while the prism is changing directions to assist correct test.

### Various muscle balance test methods

HDR-7000 provides various muscle balance test methods such as Von Graefe Test, Schober Test, Maddox Rod Test, Polar Cross Test, etc.



Т

Friendly guides shown on the display panel provide easier processes to perform more sophisticated vision tests such as relative accommodation test or relative convergence test, etc.



### Monocular PD adjustment

Many customers have slightly varied monocular PD.

HDR-7000 provides independent PD for right and left eyes.



### Forehead rest indicator

A sensor inside of the forehead rest notifies by showing on & off of LED indicator whether an examinee's forehead is rested on the forehead rest to assure the most precise vertex distance.



Faster lens loading helps to minimize accommodational interference and fatigue of examinees' eyes.

Silent operation offers more comfort during the exam process.



### Illuminated vertex distance check window

More accurate test is guaranteed by positioning examinees' eyes in the correct vertex distance through the illuminated vertex distance check window.



### Easy cleanup

The detachable design of the frequently contaminated parts (Forehead Rests, Face Shields, and Lens Windows) helps easier and faster cleanup.



Fast response and accurate exams exams ensure the utmost reliablility in test results. Enhance exams with various advanced test methods and powerful networking.

## • •

## Various charts and tests

18 visual acuity test charts, 26 vision test charts, and up to 35 user defined unit test charts support the most advanced eye test process.

## Tilting & swivel LCD panel

Tilting & swivel LCD panel makes it possible to share the displayed information in any direction or angle.

## **Touch Screen**

Touch screen interface offers intuitive guide with great convenience for operation.



Controller Type C

## Global standard chart types

Test process programming

fogging, chart masking, etc.

HDR-7000 offers worldwide global standard chart types.

Maximum 10 customized test processes can be programmed and saved with

the detailed setting of unit test charts

conversion, auxiliary lens inserting,



## Multi-function Jog Dial

Multi-function Jog Dial assists fast and convenient lens loading and execution of programs.



## Tact switch

Elegant tact switches are well-organized functionally, and also offer satisfying feeling of touch.



Controller Type D

## User-defined test

Maximum 35 user-defined tests can be edited and stored.



## Built-in printer

Built-in printer on the operation panel makes accessing the printer more convenient and replacing paper at one-step process.





## Real time guide

Graphical representation displayed on screen guides test process easier & faster in real time.



## Easy installation of various interfaces

Various chart devices (Projector CCP-3100, Dream Chart CDC-4000 & LCD Chart) can be connected in wire/wireless. PC communication connecting interface can be attached to support customer data management. (Option)

Efficient multiple connection of

The connection of Auto Ref / Keratometer and Auto Lensmeter is supported.

Especially, only one set of connection

of Auto Ref/Keratometer and Auto

Lensmeter can be shared to multiple

Huvitz Digital Refractor systems, thus

Simultaneous data sharing with the

connected systems makes it possible

to organize and manage refraction

test environment efficiently.

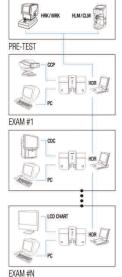
allowing maximum cost efficiency.

systems



## Displaying the result in tables and graphics

Test results are shown in tables and graphics help to understand easier and faster.



## Various image clips

Color blindness test, Amsler's Grid, and many other kinds of near vision charts are provided for more perfect test. Various image clips including progressive lens guide, diagram of an eye & refraction, etc. support better











understanding for customers.

# REFRACT

## **SPECIFICATION**

## MEASUREMENT RANGE

Spherical Lense	-29.00~+26.75D (Regular) -19.00~+16.75D (Cross Cylinder or Prism Test)
	(0.12D / 0.25D / 0.5D / 1.0D / 2.0D / 3.0D / 4.0D Increments)
Cylinder Lense	$0.00{\sim}\pm8.75$ D (0.25D / 0.5D / 1D / 2D / 3D Increments)
Cylinder Axis	0°~180° (1° / 5° / 15° Increments)
PD	48~80mm(0.5 / 1mm Increments)
ru.	Near PD 50~74mm (Near Working Distance: 35~70cm)
Rotary Prism	$0\sim20$ $\triangle$ (0.1 $\triangle$ / 0.2 $\triangle$ / 0.5 $\triangle$ / 1 $\triangle$ / 2 $\triangle$ Increments)
Cross Cylinder	$\pm 0.25$ D / $\pm 0.50$ D / $\pm 0.25$ D Dual Cross Cylinder (Split Prism Lens)
Retinoscope	+1.5D, +2.0D (Measurement Distance 67cm, 50cm)

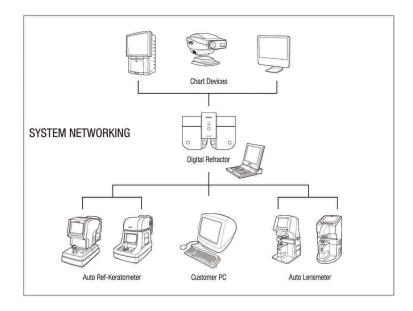
## AUXILIARY LENSE

Pin Hole Lense	Ø 2mm
Madox 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 : 6 $\triangle$ BU / Left Eye : 10 $\triangle$ BI (up to 5 $\triangle$ Complement)
Fixed Cross Cylinder	$\pm 0.50D$ (Fixed with the axis set at $90^{\circ}$ )

## DIMENSIONS

Horopter	361(W)x 108(D)x 280(H)mm / 4.74kg
Controller	216(W)x 246(D)x 225(H)mm / 1.89kg (Printer Inclusion)
Junction Box	251(W)x 240(D)x 71(H)mm / 1.88kg
Power Supply	AC 100-120V / AC 200-240V 50 / 60Hz
Power Consumption	145VA

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









## HLM-7000 DIGITAL LENSMETER



HLM-7000 realizes supreme precision with cutting-edge digital technology.

Ghraphical User Interface leads the most satisfying operation providing intuitive guide. Enjoy the confidence with is beautiful design. Newly designed user interface and algorithm provide guick and accurate measurements.



## Progressive Measurement Now More Efficient

The advanced algorithm helps to automatically measure the far and near sight addition with improved accuracy and speed.



## **Adjustable Tilting LCD Monitor**

The LCD monitor has a tilting capability of -5° to 60° offering unparalleled visual and operational comfort whether sitting or standing.



## **Wide Measurement Range**

The extensive diopter measurement range of +25D to -25D gives you the ability to measure wide range of lenses.

## **User-friendly Graphical Interface**

The Graphical User Interface suggests immediate guidance for easy operation. The well recognizable icons assure rapid response to everyone.

## **Additional Prism Display Mode**

Now with an additional prism mode, you have a choice of Five or Ten Prism Display. For high prism, you may choose the Ten prism mode to get the status of a wide area and for normal and low prism, you may use the Five prism display mode.

## TFT LCD, The Best in Image Quality

TFT LCD images provide higher clarity and increased brightness for an even more efficient operation.



You can measure dark sunglasses better by using Dark Sunglasses Mode.

## **Contact Lens Table**

Now enjoy more freedom with the compact lens table.

Smaller sized glasses or children's glasses can be measured without interfering with the temples of the glasses.



The built-in PD sensor enables to measure PD of frames easily.

At the same time, the power of lens can be captured simultaneously.

## MgM

## Newly Designed PD Bar and Measurement Nose

The newly designed PD Bar and Measurement Nose can measure small, progressive, or multi-focal glasses. In addition, the operator can still use the

In addition, the operator can still use the measurement nose when measuring the near sight addition.



Few lensmeters provide UV assessments with the exact numerical value. Feel the difference and provide patients with the exact UV protection figure.



## Slim & Compact Design

**Built-in Thermal Printer** 

The newly designed HLM-7000 with its compact size (190 x 377 x 237 mm) offers more space and freedom on limited table space.

## **Contact Lens Measurement**

HLM-7000 offers fast and accurate measurement date of hard / soft contact lenses.

Uniquely designed Soft Contact lens Measurement Jig\* enormously imporves stability and comfort when measuring soft contact lenses.

t lens porves ng soft Print paper can easily be changed with one-touch lever.

Illustration of Axis & PD helps customers to understand the data better.

## (\*Contact lens Measurement Jig is optional accessory.)

## Pen type marking

Pen type marking assembly guarantees clean and precise marking.







# LENSMETER

## **SPECIFICATION**

## MEASUREMENT MODE

Cylinder	-, +, <u>+</u>
Prism	Rectangular / Polar / Displacement
Sampling Speed	0.016 sec
LED Wavelength	630 nm
Measurable Lens Diameter	15~115mm
Contact Lenses	Hard and Soft
ABBE Values	30~60 (1Step)
Wavelength	e-Line : 546.07nm / d-Line : 587.56nm

## MEASUREMENT RANGE

Sphere Power	0 ~ ± 25.00D	
Cylinder Power	0 ~ ± 10.00D	
Cylindet Axis	0°~ 180°(1°)	
Add Power	0 ~ 10D	
Prism Power	0 ~ 10⊿	

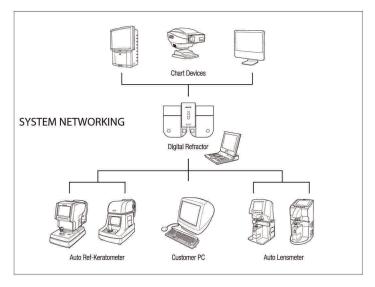
## **INCREMENTS**

Diopter	0.01 / 0.125 / 0.25D
Prism	0.01 / 0.125 / 0.254

## **DIMENSIONS**

Dimension	190(W) x 237(D) x 377(H)mm / 5.5kg
Power Supply	AC 100-120V / AC 220-240V 50 / 60Hz
Display	TFT LCD Display (320 x 240 LED Backlight)
Baud Rate	9,600/19,200/38,400/57,600/115,200bps
Data Output	RS-232C

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





# Pacing Progress toward People



## HDC-9000 N/PF DIGITAL CHART



A great variety of charts and vision test prodedures bring you the most accurate perception! The most complete variety of Huvitz LCD Charts and Optotypes System, HDC-9000N/PF,now in Full HD technology.

High Resolution Polarized LCD Visual Acuity System HDC-9000N/PF



## High Resolution 24" LCD Chart

This high resolution (1,920x1,080 pixels) 24" Color TFT-LCD with polarized panel supports more precise visual acuity testing.

The white background with a brightness of 300cd/m<sup>2</sup> will help carry out even more precise and efficient visual acuity testing.

## Polarized Charts and Stereoscopic Vision Test

Several types of visual acuity and function tests are provided including the binocular balance test, stereoscopic vision test and heterophoria / heterotropia tests by the use of this state of the art technology with the polarized LCD panel.

## Comprehensive Test Range

High resolution LCD allows you to see the smallest size charts and optotypes without distortion and provides a comprehensive test range with the visual acuity charts.

## Selectable Working Distance

Working distance can be adjusted according to the testing environment at the user's convenience. Working Distance:1.5m~6m (It can be set at a scale of 10cm)

## Easy to Upgrade

HDC-9000/PF can be upgraded automatically simply by uploading the new software to the USB memory and plugging it into the USB slot.

## System Integration

HDC-9000N/PF can be synchronized and integrated with the HUVITZ Digital Refractor HDR-7000 for a more convenient, faster visual acuity test. All the functions of the HDC-9000N/PF chart can also be operated from the control panel of the HDR-7000.

A wireless interface IR connection option is offered at your convenience to make the installation easy

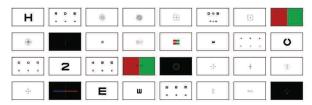
## Convenient User Menu

The HDC-9000N/PF features a user-friendly menu structure and special visual functions testing.

## Most Powerful Visual Acuity System Supporting a Variety of Charts

## Various Types of Standard Visual Acuity Charts

The more than 100 various charts for the HDC-9000N/PF support all manners of tests for the visual acuity and visual function. Standard charts include tests such as Letter, Number, Landolt C, Snellen E, Children chart and other specialty charts as well.



## Polarized Charts and Functional Charts

HDC-9000N/PF provides a variety of polarized charts that can be applied to many types of tests using the Cross Cylinder, Red/Green, Polarization and other special lenses such as the Binocular Vision Test, Stereoscopic Vision Test, Heterophoria / Heterotropia Test, Binocular Balance Test, Fusion and Suppression Test, Aniseikonia Test and more.

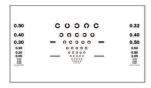
## **Smart Display Function**

The HDC-9000N/PF provides single letter and horizontal / vertical line masking with the image always displayed in the center of the screen.

This function prevents test errors caused by memorizing the position of characters in advance by patients.

## Standardized ETDRS

HDC-9000N/PF offers the ETDRS acuity at various test distances and a wide variety of ETDRS LogMAR tests are also available. (ETDRS acuity testing has become the worldwide standard for visual acuity testing replacing the Snellen and Sloan acuity tests.)





## Color Vision Test

HDC-9000N/PF presents 12 charts for testing Color Blindness and 9 charts for classifying the level of visual inability





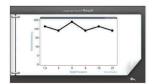
## Vergence Test

The improved effect for the visual function can be expected by measuring the convergence and divergence power as it helps the eye move through the vergence chart.

## **Contrast Sensitivity Test**

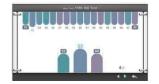
The HDC-9000N/PF also has a function to measure contrast sensitivity at various levels using letter charts and the bar. The results of tests are analyzed and displayed providing the patient with more details and a professional and analytical diagnosis.





## **Hue Test**

For the color blindness test, the HDC-9000N/PF supports the professional test consisting of 85 color charts diversified by wavelength and the simple test of 15 color charts.





## **Dynamic Visual Acuity Test**

HDC-9000N/PF supports the high quality dynamic visual acuity testing with ocular pursuit training and saccadic eye movement training.





## Stereoscopic Vision Test

Various types of Stereoscopic vision testing charts provide standards for deficiency diagnosis.





## **Amsler Grid Test**

The macular degeneration can be checked by the amsler grid on the HDC-9000N/PF.

## Playing Video and Image Slide Function

The HDC-9000N/PF shows patients the examples that can explain diversified refractive errors such as myopia, hyperopia, and astigmatism.

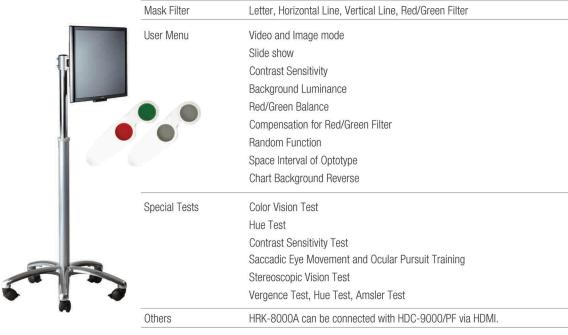
It is also possible to play video or display images stored to the USB memory at user preference. This can be used to advertise the optical shop during the screen saver mode.



## HDC-9000N/PF Huvit Digital Chart

## **SPECIFICATIONS**

LCD Type	24-inch Color TFT-LCD (Only HDC-9000/PF supports the polarized panel)
Resolution	1920 x 1080 pixels
White Luminance	300 cd/m <sup>2</sup>
Chart Window Size	531.4mm(H) x 298.9mm(V)
Power Supply	Input: AC100-240V, 50/60Hz Output: +DC12V, 7.08A
Power Consumption	80VA
Dimensions	568mm(W) x 346mm(H) x 80mm(D) / 6.1kg
Remote Controller Size	64mm(W) x 195mm(H) x 21mm(D) / 160g
Working Distance	1.5m~6m (0.1m step)
Connections	Audio, USB, HDMI, CAN, RGB
Communication	Wire (CAN) – HDR-7000 can be integrated. / CDR-3100 can be integrated. Wireless (IR) – Remote controller and HDR-7000 can be integrated.
Mount Type	Wall mount type
Optional Accessories	Desk Stand, Floor Stand, RG glasses, Polarized glasses
Charts	Landolt C, Letter, Number, Snellen E, Children, Russian, Hiragana Functional charts (Red/Green, Cross Cylinder, Binocular Balance, Fusion and Suppression, Heterophoria, Aniseikonia, Stereoscopic Vision Test, etc.)
Mask Filter	Letter, Horizontal Line, Vertical Line, Red/Green Filter
User Menu	Video and Image mode Slide show Contrast Sensitivity



Designs and details can be changed without prior notice for improvements.







## HCP-7000 CHART PROJECTOR





## HCP-7000 CHART PROJECTOR

- · Semi-permanent lifetime LED light source
- $\cdot$  Brighter and clearer than conventional bulb light
- · Attractive Streamlined Shape and Blue Indicator
- · RC-R Type (Russian Chart) added

## **SPECIFICATIONS**

Chart	41 charts 34 masks, Red/Green & Polarization Filters
Projection Distance	2.5~8m
Chart Rotation Speed	Average 0.15 sec
Projection Magnificiation	30x at 5m
Power Saving	Automatic Switch off (10 min)
Program	2 programs with a maximum of 30 charts each
Tilt Angle	15°
Power Supply	100-120V 50Hz : 0.6A, 200-240V 60Hz : 0.3A
Lamp	LED 4W
Dimension	270(W) x 182(D) x 230(H)mm
Weight	3.44kg

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

# Pacing Progress toward People

## معرفي شركت

## AMICO YASNA PARS

شرکت آمیکو یسنا پارس عضو گروه بین المللی آمیکو، شرکت پیشتاز در زمینه لوازم و تجهیزات پزشکی در منطقه خاورمیانه و آفریقا به شمار می رود. اگر چه گستره فعالیت این گروه طیف وسیعی از تجهیزات پزشکی را در بر می گیرد، اما فعالیت اصلی آن لوازم و تجیهزات چشم پزشکی، اپتیک، لیزرهای پیشرفته پوست، لوازم جراحی گوش و حلق و بینی، ستون فقرات و نیز تصویر برداری پزشکی را شامل می شود. ۳۲ سال دانش و تجربه، تبحر، پشتوانه علمی و نیز حضور حمایتی در جامعه پزشکی آمیکو را به شرکت برتر منطقه تبدیل ساخته است به نحوی که بسیاری از برندهای معتبر در عرصه لوازم و تجهیزات پزشکی همکاری با این شرکت را فرصتی ارزشمند برای خود به شمار می آورند.

در سال ۱۳۸۱ به همت سهام داران ایرانی و تلاش پیگیر آن ها، شرکت آمیکو یسنا پارس به عنوان زیر مجموعه گروه آمیکو در ایران فعالیت خود را آغاز نمود و دیری نپایید که با کسب نمایندگی کمپانی های معتبر و عرضه محصولات برتر به ویژه در زمینه های چشم و پوست به جایگاه ارزشمندی در کشور دست یافت.

در حیطه محصولات اپتیک و مراقبت های بینایی بی تردید می توان آمیکو را شرکت پیشتاز به شمار آورد. از دوران کمپانی CIBAVISION گرفته که استاندارد طلایی کیفیت در لنزهای تماسی نرم به شمار می رفت تا بعدها که کمپانی بزرگ Alcon کمپانی نامبرده را به تملک درآورد و بر گستره کیفی و کمی آن افزورد، آمیکو همواره نمایندگی انحصاری این برندها را بر عهده داشته و بهترین محصولات را در این زمینه در اختیار مردم عزیزمان قرار داده است.

در سایر عرصه های پزشکی از قبیل چشم پزشکی، تصویر برداری پزشکی، ابزار و لوازم جراحی، ستون فقرات و ارتوپدی نیز می توان به همکاری ،Optos ،Johnson and Johnson Vision ،Abbott Medical Optics ، Alcon Vision Care انحصاری این شرکت با کمپانی های عظیم Samsung-Neurologica و Samsung-Neurologica اشاره نمود.

در حیطه لیزرهای پوست و زیبائی بی تردید شرکت آمیکو یسنا پارس با عرضه انحصاری محصولات کمپانی های آمریکایی Cynosure و کمپانی فرانسوی Cosmosoft حرف نخست را می زند. این کمپانی ها نام آوران بی رقیب کیفیت در عرصه پوست و مو، جوان سازی و پیکر تراشی به شمار می روند. حضور در بیش از ۱۶۵ کلینیک معتبر پوست، مو و زیبائی گواهی بر این مدعا است.

## کیفیت برتر در خدمات بعد از فروش:

در شرکت آمیکو یسنا پارس، فروش تنها مرحله نخست از ایجاد ارتباطی دراز مدت مبتنی بر اعتماد و ارائه خدمات همه جانبه به مشتریان است. با این دیدگاه و به منظور حمایت گسترده، شرکت، استاندارد Zero Down Time را برای عرضه بهترین خدمات به مشتریا ن پیاده سازی نموده است. براساس این استاندارد در کنار تیمی کارآزموده و با تجربه از کارشناسان فنی و مهندسان، سرمایه گذاری در سطحی کلان برای تأمین قطعات صورت گرفته تا مشتریان در هیچ برهه زمانی برای دریافت خدمات کامل در انتظار نمانند. فراتر آنکه چنانچه علیرغم تمامی این تدابیر سرویس یک دستگاه نیاز به زمان بیشتری داشته باشد ارائه دستگاه پشتیبان گام دیگری خواهد بود برای جلوگیری از بروز هر گونه اختلال در مراکز درمانی در جهت پاسخگوئی به بیماران و مراجعین.

## واحد آموزش كلينيكال

و این همه راه نیست. از آنجا که داشتن دانش کافی در استفاده از یک محصول از اهمیت بسیاری برخوردار است، بخسش آموزش شرکت آمیکو یسننا پارس با آموزش های تخصصی در قالب مفاهیم تئوری و عملی به صورت مداوم در کنار متخصصین و کاربران دستگاه ها و تجهیزات در مراکز حضور یافته و کلیه نکات کلیدی و لازم را به طور کامل در قالب جلسات ادواری آموزش می دهند.









2<sup>nd</sup> Floor, No.1698, Shariati Ave., Tehran, Iran