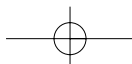


Huvitz

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<http://www.huvitz.co.kr>

Distributed by

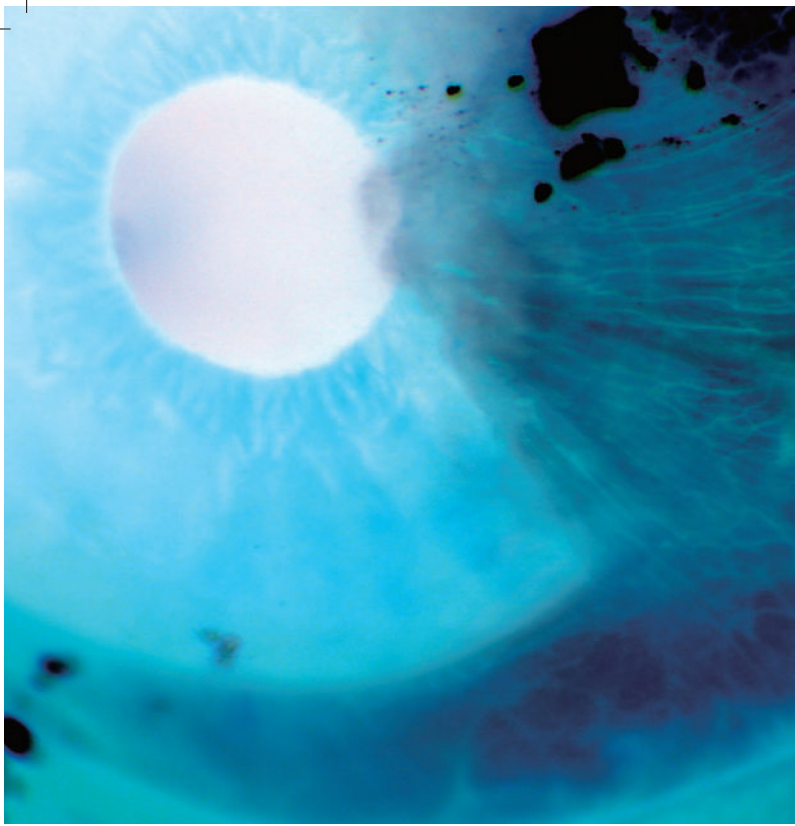




CREATED by HUVITZ

Diagnostic
Refraction System
Lens Processing





DIAGNOSTIC

- 03 | Optical Coherence Tomography
- 04 | Tonometer
- 05 | Slit Lamp
- 07 | Digital Imaging System

Optical Coherence Tomography

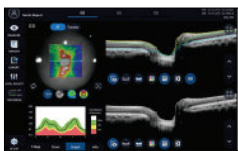


HOCT-1/1F

Huvitz All-in-One OCT : 3D OCT, Fundus Camera, Built-in PC

High-Speed and High-Quality

Incredible speed of 68,000 A-scan/sec.:More Realistic and Clearer image in high resolution. Provides High-speed Scan, High-quality Image by using Huvitz's outstanding optical technology and innovative image software. Shows extensive information, such as 3D structure of Retina, Macula's thickness and separation, in a vivid image.



Vividly Visualized Retinal Layers

Visualizing with precise B scans and smooth 3D images at faster scan speeds makes it easier to observe pathological shapes and status in stratified Retinal Layers.

It is also useful to further elucidate the pathological rheobase of Macula and Optic Disc, including factors that impair Photoreceptor Function, Retinal & Choroidal Vasculature (vascular system) in a slice image for Retinal Layer consists of 7 pieces.

Web Browsing System to view data anytime, anywhere

Patient's test data can be analyzed anywhere on the Internet. You can check and analyze all data of HOCT through Web Browser such as Internet Explorer, Safari, Chrome without installing special software separately.

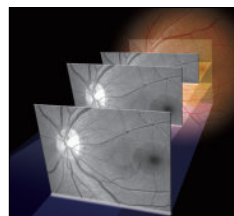


Wide Area Scan(12mm x 9mm) for efficient diagnosis

A quick scan covers Macula and Optic Disc areas extensively. By scanning around Optic Disc or Macula for patient's pathological status, you can check the Thickness Maps between RNFL(Retinal Nerve Fiber Layer), GCL(Ganglion Cell Layer) and RPE Layers.

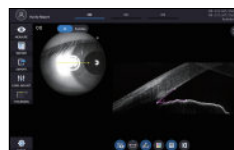
Smart Scan Technology with motion detection technology

Image analyzer with Huvitz's unique Smart Scan Technology(SST) obtains a complete and perfect C-scan image by detecting any motion of eye flicker or movement that would prevent disappearance of scan line and image collection during measurement.



Anterior Measurement

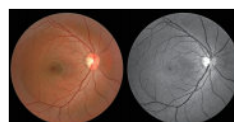
Anterior Segment Module allows measurement and analysis of cornea thickness, angle and 3D image. It helps users work more efficiently by acquiring both anterior and posterior in one place.



Full Color Fundus Camera(HOCT-1F)

Color Retinal Images optimized with high-resolution and contrast are very useful in analysis and clinical diagnosis. Best images are provided by Low intensity of flash, fast capture speed, quiet operation, small pupil mode and automatic flicker detection.

- High resolution 12 Megapixel Camera
- Auto-Detection of Pupil Size and Auto Flash Level Function
- Panorama function for wide range of peripherals
- Fixation Target for flexible configuration





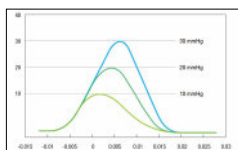
HNT-1/1P

Huvitz Tonometer with Smart Puffing Control Tech

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.



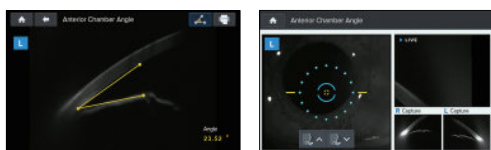
Auto Tracking Guide Display

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.



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)

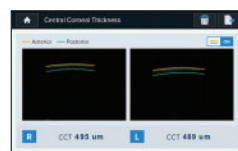


Accurate Corneal Thickness Compensation

To measure accurate intraocular pressure, simply input patient's corneal thickness on the HNT-1 to print-out compensated IOP value(HNT-1P) When using the built-in pachymeter, available on the HNT-1P, it immediately shows compensated IOP value.

CCT(Central Cornea Thickness) Measurement

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



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.



HT-5000

Applanation Tonometer with Optimized Calculation Algorithm

Excellent Reliability and Efficiency

- The world standard Goldmann applanation tonometer.
- The digital display guarantees easy reading even in a dark room.
- The wide grip and comfortable knob for easier adjustment of measuring prism.
- Optimized calculation algorithm realizes the fast process of IOP calculation.
- The slanted display matches to user's viewing angle.



HS-7000 / HS-7500

Ultra High end Optic System Chosen by the Most Experienced Professionals in the Industry

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: 24mm, 16x: 15mm, 25x: 9mm, 40x: 6mm
- 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.



Magnification Control System

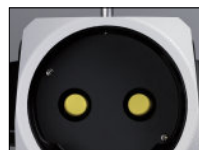
The five-position drum-style magnification changer provides a wide range of magnification from 6x to 40x easily accessible by rotating the drum.

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.

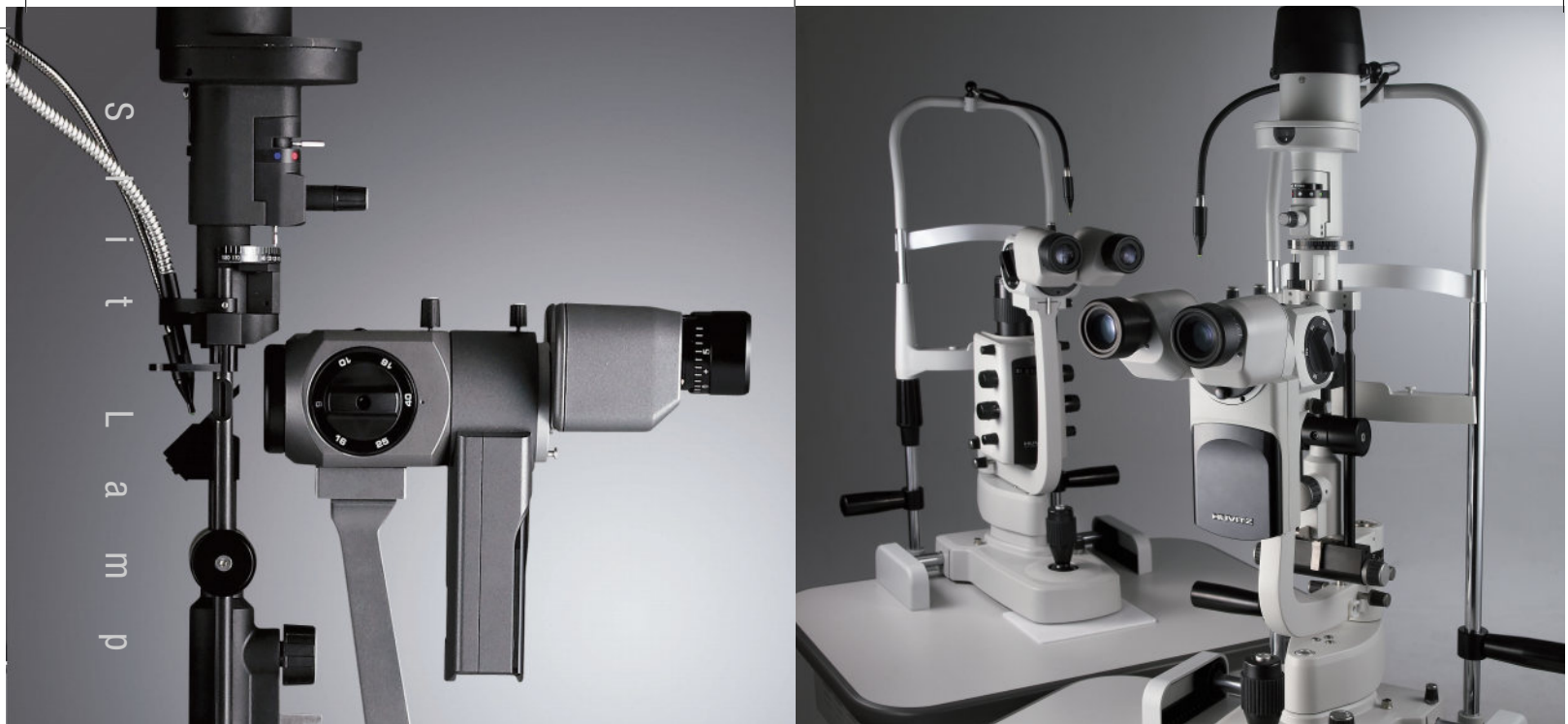
A trigger button is conveniently mounted on the joystick for easy image and video capture.

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



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.



HS-5000 / HS-5500

See the Difference by Looking Through the Huvitz Slit Lamp Chosen by Opinion Leaders in the Industry

Illumination

The light source is a 12-volt, 30-watt high luminance halogen lamp that provides incredible clarity in both the Tower Illumination and Integrated Illumination type slit lamps.



Microscope

HS-5000 and HS-5500 deliver crisp images and a wide field of view with the global standard Galilean Converging Binocular optical system.

6x:38.5mm, 10x:22.2mm, 16x:15.2mm, 25x:10.5mm, 40x:6.1mm



Yellow Filter

A yellow filter is conveniently located near the ocular for effortless insertion of the fluorescein pattern.

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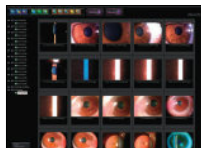
Digital Imaging System

HIS-5000 / HIS-7000

From Diagnosis and Patient Data Management to Presentation and Image Processing

Patient 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.



DIGITAL CAMERA

- Upgraded 10M Pixel Camera – improved implementation of high – resolution images.
- USB Port – HD image processing by easy connecting.
- Easy fine-tune of the focus adjustment control.(Focusing)
- New S/W Upgrade – more precise measurements (length, width, etc.)
- The Compact and modern design.

Classifications	HIS-5000U(10.0M)
Image sensor	1/2" CMOS
Image size(pixels)	up to 3,840x2,748
Cell size	1.67μm x 1.67μm
Transmit speed	480Mbps
Frame rate	Maximum 30fps
Lens mount	C-Mount
Power consumption	2.5W

Image Processing

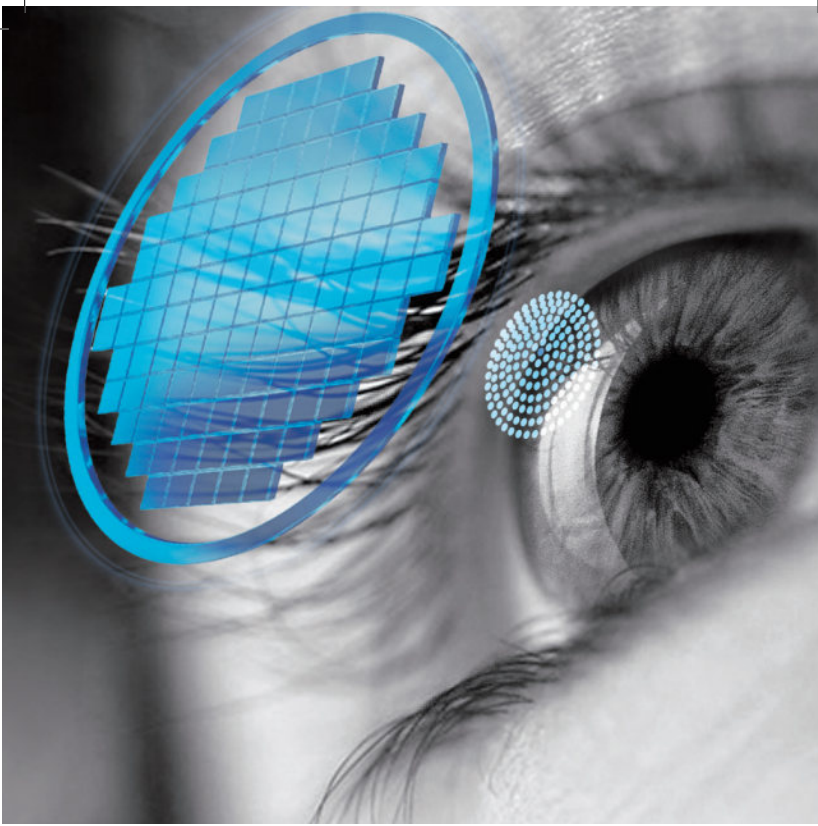
With Live Tool graphic library, all the images such as JPG, TIFF, RAW and many more formats can be adjusted for brightness, contrast, color channel, saturation, inversion, sharpness, Red-free, etc.

Image Manipulation

- 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.

DSLR ADAPTER

- 18M~22M pixel of high-resolution images. (Only Canon available)
- Binocular field of view can be switched.
- Easy fine-tune of the focus adjustment control.(Focusing)
- New S/W Upgrade – more precise measurements. (length, width, etc.)
- Duplex image transmissions between DSLR & PC.
- More details : supporting Canon EF& EOS(Flange back : 44mm) EOS 600D, 650D, 60D, 5D & etc. (Supporting the latest Canon camera models soon)



REFRACTION SYSTEM

- 09 | Auto Ref / Keratometer
- 13 | Digital Refractor
- 15 | Lensmeter
- 18 | Digital Chart
- 19 | Refraction Table

Auto Ref / Keratometer



HRK-9000A

Combining Everything into One – Remove Barrier Between Examiner & Examinee

Wavefront Technology

Huvitz' wavefront analysis algorithm goes beyond general refraction to conclude highly accurate and reliable cornea refractive power and index.

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.

More Accurate Data

Accuracy of KER data is improved by setting optimal zone diameter on measuring spot and also REF data by standardization of quantity of light of fogging chart and fogging lens position along with complete block of accommodation.

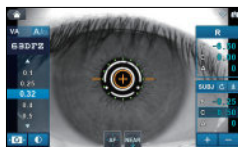
Color View Mode

Full color CCD camera and white LED light source in auto ref / keratometer enable you to see eyes and contact lens fitting status which was previously only possible with slit lamps.

Subjective VA Test

Comparison between subjective and objective VA tests yields more reliable and accurate data.

Subjective VA test is useful in deciding necessity of progressive lenses because it checks visual acuity based on patients' responses.



Contrast Sensitivity and Glare Test

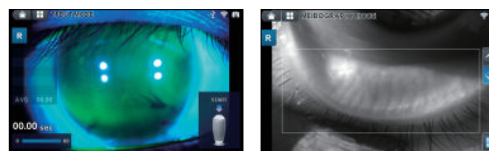
Highly reliable night visual acuity is examinable with low contrast sensitivity test and glare test which perfectly reproduces halo effect.

Progress after refractive or cataract surgery can be monitored effectively.

TFBUT Measurement and Meibography

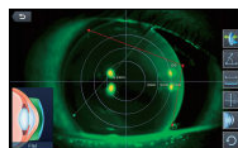
Conditions of tear film and dry eye can be collected by TFBUT(Tears Film Break-Up Time) are readable for thorough understanding of visual acuity.

Degeneration of meibomian gland can be also monitored with enough light source and image enhancement function.



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.



Efficient Contact Lens Prescription

Image capture and contrast regulation are possible.

HRK-9000A gives you the best On-K fitting guide based on the base curve and KER value.

Touch and Tilting 7" Color Display

Wide color TFT LCD supports high-resolution images and real-time image processing to realize afterimage-less image quality.

Moreover, swiveling and tilting touch display is readable from any direction for smooth communication between examiners and examinees.

Auto Cutting Printer

Embedded printer allows to print 10 measurement data within 3 seconds without noise at all.

Replacement of paper roll is in one-touch action.

Auto Ref / Keratometer



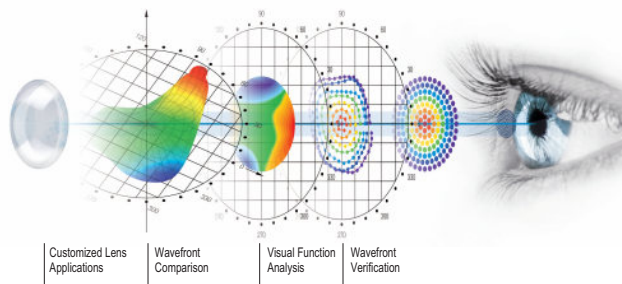
HRK-8000A

Advanced Wavefront technology which analyzes focal spots of a light wavefront more in depth

Wavefront Technology

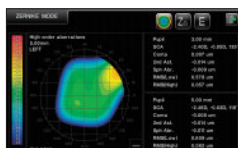
Huvitz' own developed micro lens array creates a number of separated focal spots, of which the pattern provides valuable information of the customer's ocular system.

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



High Order Aberration Map

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.



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.

Customized Lens Manufacturing

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

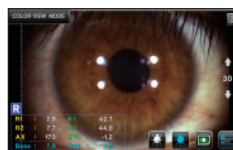
PSF & Image Simulation

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 ref-keratometer enable you to see eyes and contact lens fitting status which was previously only possible with slit lamps.



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.



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 Ref / Keratometer



HRK-7000A

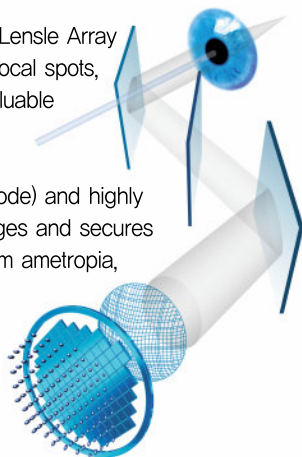
To Measure a Human Eye With Precision, Huvitz's Wavefront Technology Can Be The Right Answer.

Wavefront Technology

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

And SLD (Super Luminescent Diode) and highly sensitive CCD offers clearer images and secures accurate measurement result from ametropia, cataract and IOL.

Micro Lens Array



Graphical Display of Refraction Map

The graphical display of refraction errors enhances customers' understanding and reliability.

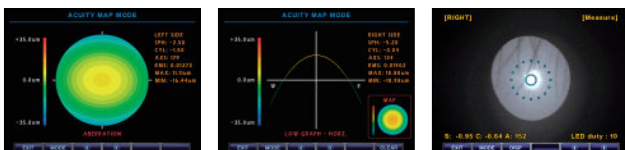


Retro-Illumination Mode

You can see abnormal crystalline lenses, cataracts, and scratches of corneas helping you to determine how healthy the customers' eyes are. With increased REF power, you also can check Sph, Cyl, and Axis that cannot be measured in the normal mode.

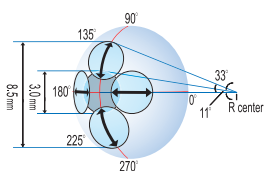


Wavefront Analyzer



Peripheral Keratometry Measurement

HRK-7000A provides peripheral keratometry measurement data that can be greatly useful for fitting contact lenses.



Reliable Keratometry Measurement

HRK-7000A offers reliable keratometry data using 2 mire rings, and 2 LEDs.

Auto Tracking / Auto Tracking Guide

- The cutting edge auto sensing and 3 dimensional movement mechanism enable to track down a measuring focus of an eye automatically and complete the measurement.
- If a measuring focus is out of auto tracking range, the animated guide on the screen suggests how to operate the joystick in the easiest way.



Motorized Chin Rest

Just by pressing Up / Down buttons, users can set the height of measuring point comfortably.

Vision Comparison Function

The internal chart provides the vision comparison of current vision and corrected vision.

Auto Ref / Keratometer

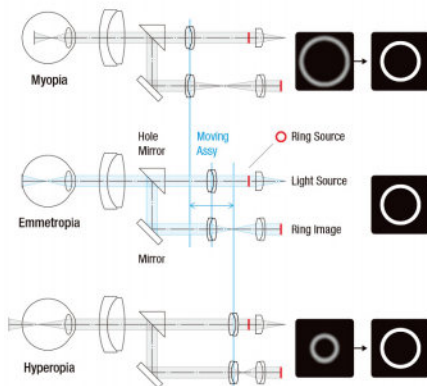


HRK-1

Auto Ref/Keratometer with Smart Assembly Moving Control Tech

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.



Quick Virtual Aiming Dot Function

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.

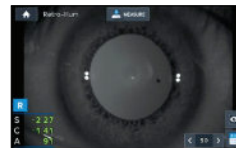


Simple up & down Auto Tracking

The Auto Tracking automatically tracks the eye of patient to measure by manipulating the joystick back and forth.

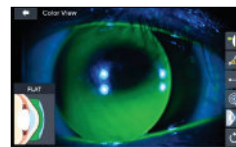
Clear Retro-Illumination Mode

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.

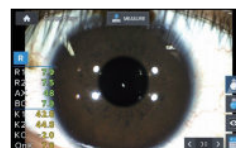


Touch-enabled 7-inch color display

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.

Immediate Color View Mode

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



Digital Refractor



HDR-9000

The More Exam Options You Have, The More You See – Digital Refractor

Tiltable Body

Highly advanced near vision exam is enabled with tiltable body from 0° to 45° delivering feeling of reading a book.



Fast and Silent Lens Loading

Fast lens loading helps to minimize accommodational interference and fatigue of examinees' eyes. Silent operation offers more comfort during exam.

Slimmer Design

Slimmer design even prevents minimum mechanical interference during exam and enables easy monitoring over patients.

21 Point Exam

21 Point Exam removes complex knowledge or experience and now everyone can perform refraction easily.

No more headache—explanation is needed, but all results appear on display for easy reading for both examiners and patients.

Guidance with prism, addition power prescription and visual function test in accordance with exam.



Monocular Height Adjustment

Customized exam is available for those who have different monocular heights within adjustment $\pm 3\text{mm}$.



Various Charts and Contents

Diversification of near vision exam is realized through highly reliable near vision test charts, visual function test and various refraction charts along with vision therapy-related contents.



Easy Explanatory Images

Various near vision charts for incomplete color blindness test, amsler grid and many other tests such as anatomy image, refractive power readings and progressive lens guidance help patients understand results easily.



Tablet PC Control (Optional)

Exam can be carried out with not only basic OP panel, but also Tablet and PC for examiners' preferences.

Tilting and Swiveling Display

Regardless of examinees' positions, information on display is recognized easily by tilting and swiveling display.



Wireless Communication

Wireless Communication with HRK-9000A and HLM-9000 via Wi-Fi allows perfect data transmission regardless of working environment. Classic communication via RS-232 cable is available for data transmission with previous models.

Digital Refractor



HDR-7000

Fast, But Quiet Digital Refractor to Improve a Class of Refraction

Dual Cross Cylinder Lens

- Dual cross cylinder lens supports fast and convenient astigmatic test.
- 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

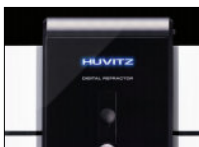
Automatic occlusion function assists precise and comfortable astigmatic test by preventing accommodation while the lens is rotating over 45 degree or test mode is changing. Near vision test can be performed better with variously provided near vision charts.

- Working distance : 35~70cm
- Available Near PD : 50~74mm
- Near Vision Convergence Angle : 0~6.1*



Forehead Support Sensor

Sensor recognizes contact of patient's forehead and turns on front light to ensure that patient is in right position.



Fast and Silent Lens Loading

Faster lens loading helps to minimize accommodational interference and fatigue of examinees' eyes. Silent operation offers more comfort during the exam process.

Real Time Guide

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



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.

Built-in Printer

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





HLM-9000

Change in Core Technology, Different Way of Measurement – Another Jump in Accuracy, Wavefront Tech

Improved Accuracy with Green Light Beam

Green light beam(545nm), which is nearly same as Fraunhofer e-line(546.1nm) of ISO standards, speaks higher accuracy in measurement than general infrared light.

Auto Lens Recognition

Single vision, progressive and other lenses are recognized automatically and turns into corresponding measurement mode.

Contact Lens Measuring Kit

Hard and soft contact lenses are measurable.
(Soft Contact Lens Jig : Optional)



Hartmann Sensor Wavefront Analysis Tech

Implementation of Hartmann Sensor Wavefront Analysis Technology with more measuring spots maximizes accuracy in measurement even for multi-focal and high curved lenses.



UV Measurement

Easy operation and easy display of UV transmittance allow easy understanding of UV transmittance level from single vision lenses and sunglasses.

Blue Light Hazard Measurement

As usage of smart phones, LCD monitors and many electric devices increases, blue light hazard emitted from LED displays is recognized as one of noxious rays.

HLM-9000 measures blue light transmittance of blue light blocking lens.



7" Color LCD Display

Wide display with unlimited viewing angle (178°) minimizes work fatigue and maximizes work efficiency.

Intuitive Prism Direction

Moving directions of both actual lens and lens on display are in same direction to avoid any confusion during measurement.

Wireless Communication

Wireless communication via Wi-Fi allows perfect data transmission with HRK-9000A and HDR-9000 regardless of working environment. Classic communication via RS-232 cable is available for data transmission with previous models.

Auto Cutting Printer

Fast and quiet printer with automatic cutting function shows all data to customers quickly.

Replacement of paper roll is in one touch action.



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HLM-7000P

Classified as Class B, Medical Equipment Certificate to Protect Your Safety

Wavefront Analysis Technology with the Hartmann Sensor

Providing more accuracy in the measured values utilizing the Hartmann Sensor Wavefront Analysis Technology with more measurement points than our previous generations.



Class B, Medical Equipment Certificate

HLM-7000P meets or exceeds this standard IEC60601-1(4th Edition) Class B.

Expanded Prism Measurement Range

Prism measurement range has been expanded up to 20', measuring from all directions of : BU, BD, BI, BO.

Wide Range for Measuring Small or Large (Blank) Lenses

It is easy to measure all lens diameters from Ø15mm to Ø120mm.

Easily Measures Sunglasses

While measuring the refractive power of darkly-tinted or mirrored sunglasses, the device will calculate the refractive power of the lens by automatically amplifying the amount of light without requiring any additional key strokes, the same way it measures normal lenses.

Incomparable UV Measurement Level Assessments

Few lensmeters provide UV assessments with the exact numerical value.

Feel the difference and provide patients with the exact UV protection figure.



Built-in Thermal Printer

Print paper can easily be changed with one-touch lever. Illustration of Axis & PD helps customers to understand the data better.

5.7" Color & High-Resolution IPS Panel(LCD)

The HLM-7000P screen also features an anti-glare coating giving you a sharp image, and also has a hardened coating to protect the screen from scratches.

Adjustable brightness function, for comfortable use in all room light conditions.



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HLM-1

Lensmeter with Wavefront Analysis Tech

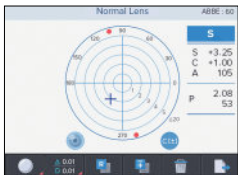
Wavefront Analysis Technology with the Hartmann Sensor

Providing more accuracy in the measured values utilizing the Hartmann Sensor Wavefront Analysis Technology with more measurement points than our previous generations.



Expanded Prism Measurement Range

Prism measurement range has been expanded up to 20Δ, measuring from all directions of:BU, BD, BI, BO.



Wide Range for Measuring Small or Large (Blank) Lenses

It is easy to measure all lens diameters from 0/ 15mm to 0/ 120mm.

Easily Measures Sunglasses

While measuring the refractive power of darkly-tinted or mirrored sunglasses, the HLM-1 will calculate the refractive power of the lens by automatically amplifying the amount of light without requiring any additional key strokes, the same way it measures normal lenses.



Class B, Medical Equipment Certificate

HLM-1 meets or exceeds this standard *IEC60601-1(4th Edition) Class B

Improved Progressive (Multifocal) Lens Measurement

Measurement is fast and easy by simply moving the target and following the guides on the screen.



Auto Lens Recognition

Single Vision, Progressive and other lenses are recognized and the HLM-1 automatically enters the appropriate measurement mode.

5.7" Color & High-Resolution IPS Panel(LCD)

Performance has been improved with processing information, enabling high speed data flow and response time.

The HLM-1 screen also features an anti-glare coating giving you a sharp image, and also has a hardened coating to protect the screen from scratches.

Adjustable brightness function, for comfortable use in all room light conditions.



HDC-9000N / HDC-9000PF

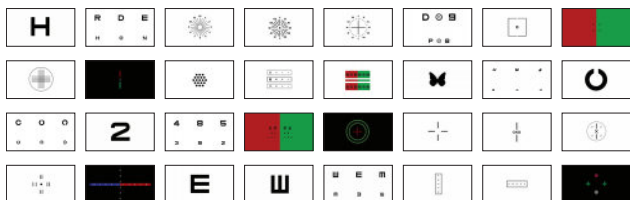
Lcd Chart System With Full HD Technology

High Resolution 24" LCD Chart

This high resolution (1,920 x 1,080 pixels) 24" Color TFT-LCD with polarized panel supports more precise visual acuity testing. The white background with a brightness of 300cd/m² will help carry out even more precise and efficient visual acuity testing.

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 & 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.

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.

Efficient Customization

User-friendly interface leads to convenient customization of refraction for user preference.

HCP-7000

Chart Projector of LED Light Source

Bright & Clear Images. with LED Light Source

Semi-permanent lifetime LED light source support brighter and clearer images.

Continuous Updates

Reflecting market demand through continuous updates of chart such as RC-R Type (Russian Chart) and so on.

Fast Chart Change

Chart change happens in 0.15 sec and examiner can guarantee efficient and time-saving refraction to examinees.

Different Control Method

Besides convenient remote controller, full operation is possible through Huvitz digital refractor, HDR-7000 operation panel.

Attractive Design

Attractive streamlined shape and blue indicator make HCP even more elegant. Standard, standing and wall-mounting positioning is possible for user's preference.

Refracti
on
Table



HRT-7000(Black & White Color)



HRT-7000S(Silver & White Color)

HRT-7000

Advanced Refraction Table

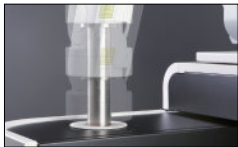
Power Arm

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.



Refraction Chair

Ergonomic design guarantees the best comfort of examinees with embedded sensor to avoid the contact between examinee and table during height adjustment.

CIT-4000

Easy Height Adjustment by Simple Operation

Pedal Control

Pedal control supports easy height adjustment and wheels guarantees free movement.





LENS PROCESSING

- 21 KAIZER X
- 25 HPE-810
- 26 NEW EXCELON

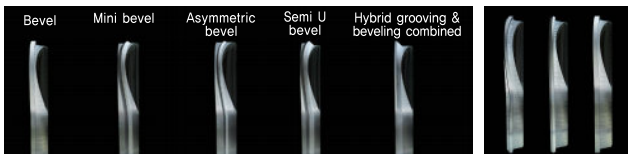


KAIZER HPE-8000X

Premium Edger with High-End Digital Technology and Precision that Guarantees Faster Speed and More Convenience that Ever Before, with the Easy-to-Follow Menu Screens

Expand the possibility with Step Bevel functionality

- Step Bevel Function: Process High Curve sports goggles and RS lenses for sunglasses
- Semi-U Beveling & Adjustable asymmetric bevel that separately positions side to side ledge geometry
- Functionality to prevent axis distortion by adopting a powerful revolving motor and Adaptive Clamp chuck
- OMA compliancy facilitates processing lenses without wasting time



Mode advanced features for perfect fit

- High Curve function in order to process sports goggles and sunglasses Step Bevel function
- Maximum lens curve 6.00, maximum depth 6mm)
- Adjustable asymmetric bevel which raises the level of consistency between the frame curve and processed edge of lenses Semi-U process function
- Adaptive Clamp Chuck prevents axis slippage, shape distortion and delamination of polarized lenses.

Feature packed and highly detailed custom bevel

- Mini Bevel adjusts the height of the bevel apex eliminating unsightly bevel reflection on frames with a shallow eyewire (Min. 0.1mm~Max. 0.8mm)
- Partial grooving function makes it possible to place a desired size groove in a designated section of the lens
- Hybrid Grooving offers the ability to place different finishes from section to section on a lens such as cutting a groove and a bevel

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Faster Processing

- Bidirectional feelers of improved configuration are more durable and simultaneous feeling of front and back sides reduces lens thickness recognition time by maximum 50%
- High-end motor and platform reduces the process time at an average of 20% compared to other models
- Servomotor with more than 1 horsepower offers speedy lens processing
- 1GHz High Performance CPU controlling the next process

Unparalleled expandability and functionality

- Scan & Cut function makes it possible to scan and cut a designated image (HAB-8000, HDM-8000 Combination)
- OMA compliancy eliminates without wasted time
- Processes even concave shape on lenses within a range of wheel curvature
- Easy Click(Chemestrie Clips) function for processing detachable magnetic overlays for plano fashion sunglass lenses or custom prescription applications.
- Customizing Bevel/Grooving
- Variable Asymmetric Bevel / Scan & Cut
- Adaptive Clamp Chuck
- OMA Compliant
- Easy Click Process



KAIZER HAB-8000X

Full Automation by Simply Pressing the Start Button

All in One

Frame reading, lens centering and blocking are performed automatically by placing the lens.

Digital Scan & Hole Detection

- By simply placing the lens in the blocking center, the lens is displayed on screen by 1:1 ratio in real-time and size.
- Tracing and hole editing time can be saved dramatically by real-time simulated lens and hole detection function!
- Traced frame data, FPD, frame diameter and other key changes are transmitted to the edger in real-time.



Automatic Recognition of Lens Center for all Kinds of Lenses

- Automatic lens type recognition: single vision, bi-focal, progressive, etc.
- Accurate reading of SPH, CYL, AXIS by integrated high performance lensmeter.
- No lens needs to be marked.



Expert's Handiness

The File Converter in the Digital Scan function extracts not only frame shape but also drilling information and step beveling lines. It recognizes popular image formats such as JPG, PNG, BMP, and etc. And now it even recognizes CAD files(DXF format). Eye Care Professionals can enjoy this to bring out the creativeness in them for their own designs.

Expert's Gadget

Digital Pattern function also provides enhanced way of modifying frame shapes. New algorithm called 'Linear Partial Edit,' enables angular shape modification and it creates more customer-favored frame design in the easiest way.

Extreme Freedom of Modifying Size, Axis, and Shape of Lens

- The 'Digital Pattern Layout' of Huvitz KAIZER system allows users to modify lens frames with extreme ease.
- Easy rimless/semi-rimless hole editing through large and sensitive touch-screen and intuitive graphical interface menu.



GUI / Touch Screen / Tilting

- Maximize the efficiency by advanced digital and optical technology and user-friendly Interface.
- High-end digital technology and precision that guarantees faster speed and more convenience than ever before, with the easy-to-follow menu screens.
- High resolution with tilting LCD offers you a better, more efficient working environment.



Variety of Supplementary Features for User Convenience.

- Storage drawer for lenses and blocking pads.
- Sliding dust cover for frame reader to ensure durability and precision.



KAIZER SERIES



KAIZER HDM-8000

Effective Multi-Tasked Edging and Drilling

Simultaneous Lens Cutting and Drilling is Possible by Smart Job Manager!

Significantly reduces the processing time by systematic data profiling algorithms.



Safety is the Most Important, All the Time

- Safe Automatic Door Control by movement detection sensor.
- Door will never move down, if your hands are in movement for lens loading and unloading..



Keep Your Working Environment Clean

Removable waste collector drawer keeps the driller clean at all times.



KAIZER HFR-8000X

Immaculate 3D Scan of the Frame Reader

Dynamic Speed and Precision in Your Business

Fast and adaptable tracing for all frame materials, plus demo lens tracing, makes for increased accuracy and efficiency.

High-Resolution Scanning and Digital Filtering Technology

- Precise scanning of all metal and plastic frames.
- Binocular and monocular tracing are both available to meet users' accuracy and efficiency needs.

Perfect Process of Stereoscopic Scan Feature.

- Accurate tracing of high-curve frames with unique HUVITZ mechatronic technology.



Now Special Frames are not Challenging

Accurate scanning for concave shape, sharp edge, and narrow frame is very easy.



Slide Cover that Prevents Dust Accumulation

- Keeping out dust will ensure durability and precision.

More Robust Design

- The mechanism of the tracer gets stronger in the stylus mechanism with anti-tilt lock and faster responding hardware.

K A I Z E R S e r i e s



KAIZER HMB-8000

The Simplicity is Another Advantage: Energy-Saving and Auto-Sensing Feature will Surprise You

Compact and Sleek Design with Luxurious Feel

Simple, and it makes your work environment look great.

Adjustable LED Intensity

- Lifetime durability LED lamp.
- Easy to mark and block even with dark-tinted lenses by brightness control function.



Auto Power-Saving Mode

Automatic power off and sleep mode after preset time.

Effective Blocking

You can block all types of lens including bi-focal lens.

KAIZER CONFIGURATION

The Best and Most-Suitable Combination of Functionality with Your Budget in Mind
The Whole KAIZER System Combination



Type A



Type B



Type C



Type D



Type E



Type F

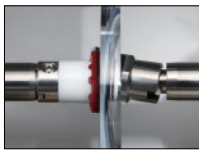


HPE-810

Change Provides You Beautifully Crafted Perfection – Be a Perfectionism

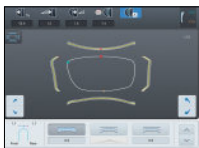
Adaptive Clamp Chuck of Joint Configuration

High curved lenses are exposed to flawed results due to axis twisting during processing. HPE-810 leads to a new era of adaptive clamp chuck of joint configuration which minimizes axis twisting and any potential damages to lenses.



Auto / Manual 3D Simulation

3D simulation supports easier bevel / groove positioning. Auto positioning function reads frame and lens curve automatically and concludes the best position of bevel / groove. Additionally, manual positioning function allows opticians to manually position bevel / groove for the best result.



Powerful Drill

High power motor makes HPE-810 more powerful and leads to 40% reduction in processing time from previous model (HPE-7000).

Easy hole editing management and high power motor makes a great synergy effect for rimless glasses.



Design Your Imagination – Scan & Cut (Optional)

As designs of glasses are diversifying, a demand for edger capable of processing all designs becomes is increasing.

Scan & Cut function of HPE-810 supports processing all designs without any restrictions. Scan your design and fit it in your frame with HPE-810.



Bidirectional Feeling – Processing Time Reduction

Bidirectional feelers of improved configuration are more durable and simultaneous feeling of front and back sides reduces lens thickness recognition time by maximum 50%.

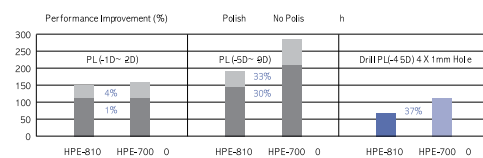
Larger Wheels – Processing Time Reduction

Larger wheels reduce processing time by 30% from previous model.



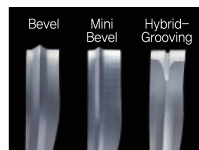
Faster Processing

HPE-810 supports faster edging by 30% and drilling by 40% from previous model.



Partial & Hybrid Grooving

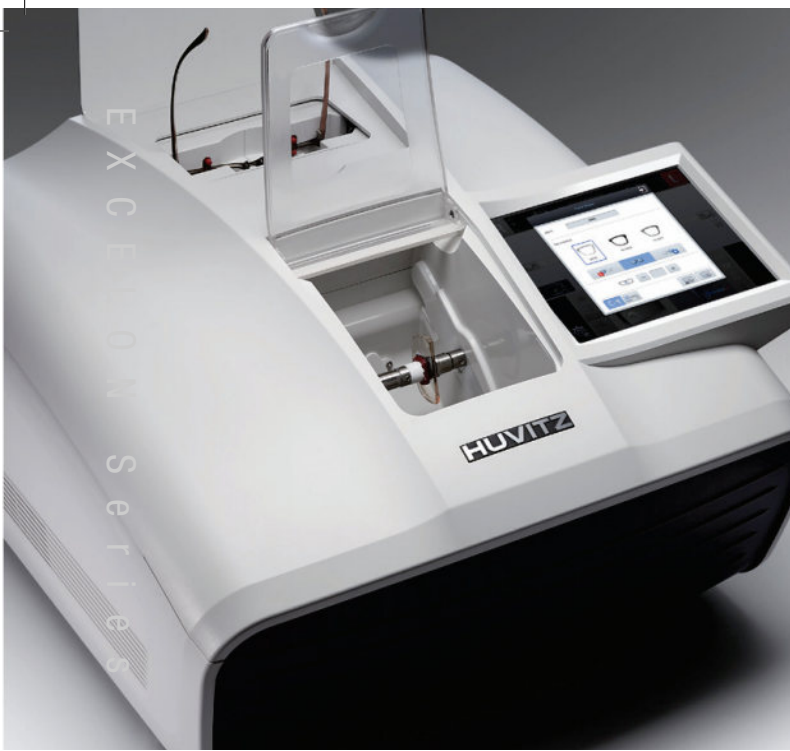
A Combination of sectional grooving and beveling – Partial & Hybrid Grooving Function – supports processing of more variety of frames.



Easy Click Editing (for Chemistrie Clip Frames)

Chemistrie clip editing function allows far and near sight glasses and even sunglasses to be used on a single frame. Entire process can be easily done at a single click with user-friendly UI.



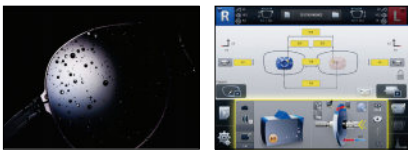


NEW EXCELON(HPE-410)

The Excellent 3D Edger with New Concept

3 Roughing Methods for Stability in Edging

Can choose the roughing method (Normal, Spiral, Axial) based on the type of lens material and the amount of coating. Roughing proceeds more steadily if adding lens diameter directly in Normal or Spiral Roughing mode.



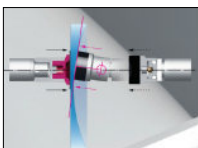
Easier Hydrophobic Mode

With ultra-water-repellent coated lenses that are susceptible to slipping and deflection, processing options such as roughing method, safety mode, pressure control of the adaptive clamp chuck, and rotation speed of the lens can be adjusted and operated at the same time.

Adaptive Clamp Chuck to prevent lens deformation

Minimizes axis twist which prevents lens & coating damage when processing High-curved Lenses.

*Automatic adjustment for 3-step pressure (high, medium, low)
/ Manual input adjustment (from 50 to 150%)



Customizing Bevel and Grooving Function

Beveled and grooved area simulation function before processing to determine their exact positions.



4 Retouch Options

After completing a set of processes you can easily modify the size, polishing, grooving and safety beveling. A list of the latest 3 jobs.

High responsive 9.7" Color Display

Intuitive GUI interface with Huvitz's simple yet sophisticated design. Touch method which can be easily started even if machine operation is not familiar.

Built-in Tracer reading more precisely with three-dimensional measurements

Auto or Semi-Auto or Concave mode can be selected. The stylus can be manually placed in the narrow groove of challenging frames in the Semi-Auto mode and the concave shape of the demo lens is recognized in the Concave mode. Tracing frames and at the same time edging lenses gains efficiency and dramatically cuts-down overall job time.



Direct DCS (OMA) Import without File Conversion

Allowing users to save the full information, for future use, such as frame shapes, FPD, edging types, lens materials into SD card memory without the hassle of converting DCS (OMA) job files.

• Providing most of the ready-made job data in DCS format, collected from websites of leading frame makers.

Maintaining folder-based DCS files to avoid duplicate file names within a folder. Job data imports from external devices such as DCS host, external tracer / Auto blocker or HERA Intraworks (PC)



EXCELON Series



HBK-7000

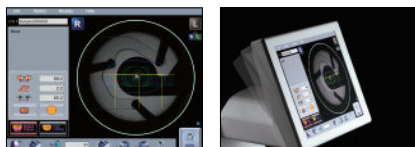
Intuitive and Easy Blocker Using Graphic Icons

Easy Graphic Interface

3D icons and a simple touch screen allow users to understand the menu with ease.

Touch Screen / Tilting

- Lens shapes, hole / notch positions and sizes can be easily modified with a simple touch of the screen.
- High resolution LCD screen with 20 degrees of tilting angle offers you a better, more efficient working environment.



Lens Leveling Holder / SD Card Memory

For the most accurate blocking, the HBK-7000 has a lens leveling holder which is adaptive for any kind of lens. All data can be shared and stored into an SD card.

LED Lamp

Bright LED lamp has Lifetime durability and makes for easy work.

CBK-4000

Blocker with Faithful to the Basic Functions.

Effective Blocking

- With the bright and clear lighting system, it makes more easier to layout.
- It is possible to blocking with every types of lens including the progressive lens.



CFR-4000

Immaculate 3D Scan of The Frame Reader

High Resoution Digital Filtering

- Frame reader capable of reading 16,000 points and digital filtering assure the maximum accuracy.
- Binocular and monocular tracings are both available for increased accuracy and efficiency.



3D Tracing

Fast and adaptable tracing for all frame materials, plus demo lens tracing, makes for increased accuracy and efficiency.



Precise Stylus

Tracer stylus is automatically located on the right position on frame and optimistic pressure and speed are calculated to produce the precise frame data.

Data Transfer of FPD to Edger / Data Storage

- Automatic data transfer of FPD to edger.
- Save up to 300 frames, and barcode recognition information is also available.