



**W**hen Seymour Marco, OD founded the company in 1967, he could not have imagined the amazing proliferation in vision-diagnostic technology we are all familiar with today. We are proud that Marco has helped pioneer this evolution across five decades. As The Leader in Vision Diagnostics®, we are committed to offering the finest in both classical and automated diagnostic instruments, for the complete practice. Our products are higher

quality, more ergonomically designed, and deliver greater functionality—for the life of your office. Further, with 'Marco Connect', we make all Marco automated instruments integrate to meet your EMR/EHR requirements. As you consider your next capital investment remember the critical importance of proper training and staff support. 'The Difference is Marco™' is not just a marketing statement, but

a mission statement we strive to deliver every time you purchase Marco equipment, call our office, send an email, or meet with your Area Manager. No matter where you are in the life of your practice, Marco is available when you need assistance, consultation, or are looking to take the next step in implementing the latest technology. Let us know how we may be of service in realizing your practice growth potential.

The Difference is Marco™

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Jacksonville, FL 32224



## MARCO PRODUCTS

MANUAL & DIGITAL REFRACTORS

ARK SYSTEMS

LENSMETERS

XFRACTION<sup>SM</sup>

REFRACTIVE WORKSTATIONS

AUTOMATED FUNDUS CAMERA

EXAM CHAIRS

INSTRUMENT STANDS

SLIT LAMPS

ACUITY SYSTEMS

ADDITIONAL PRODUCTS



# Manual & Digital Refractors

From Traditional to Digital Instruments, Marco's commitment to redefining the art of refraction continues to inspire and drive both our company's and industry's direction. The RT-700 LED Illuminated Refractor incorporates all of the classic elements and features that practitioners demand from a traditional Refractor.

Marco's Digital Refraction Systems allow the practitioner to reduce chair time and comfortably control the entire refraction process from a small keyboard. With automated integration and electronic EMR connection with 'Marco Connect' software, data is directly transferred to the patient's file without transcription errors. More efficient testing allows the practitioner more time to educate patients, explain treatment options, and see more patients each day.



## RT-700 Illuminated Refractor

- Classic industry design that primary eye-care practitioners demand from a traditional refractor
- Continuously adjustable LED illumination for sphere, cylinder, and axis measurements
- White prism, accessory, and cross-cylinder scales provide easier recognition in dim lighting conditions
- Fully-synchronized axis/cross-cylinder system
- Functional 'wing-grip' design provides easier maneuverability
- Standard 5-year warranty



## TRS-3100 Digital Refractor

- Digital accuracy
- 3 computer programs
- Instantly compares old/new Rx
- Measurable range -19D to +16.75D
- Cyl 0:00D to  $\pm 6D$
- Portable control pad
- 5.7 inch color LCD touch screen
- Minimizes repetitive stress injuries



## TRS-5100 Digital Refractor

- Digital accuracy
- Split prism Jackson Cross cylinder
- Instantly compares old/new Rx
- 5 computer programs
- Measurable range -29D to 26.75D
- Cyl 0:00D to  $\pm 8.75D$
- Portable control pad
- 8.4 inch color LCD touch screen
- Tiltable for patient viewing
- Minimizes repetitive stress injuries





# ARK Systems

The Marco Automated ARK Series are multi-modality autorefractors/autokeratometers at their core. The M3<sup>®</sup> instrument adds Tonometry capability. All table top ARK models have enhanced features including Super Luminescent Diodes (SLD), Rotary Prism and automatic target fogging for the most accurate, reliable, and repeatable data – making it possible to measure patients with cataracts, IOLs, and post LASIK procedures. The M3, ARK-1a, and ARK-1s have automatic X, Y, Z eye tracking for the most rapid and accurate testing. All table-top ARKs also have Double Ring Technology, Confidence Index indicator, and large, tiltable LCD screens for ease of viewing angle and optional test positions for the operator. The OPD-Scan III adds wavefront aberrometry and corneal analysis.



## Palm-ARK (ARK-30)

- Automatic, portable, and hand-held
- Patient can be sitting or supine
- Minimum pupil size 2.6mm
- Measurement range -20D to  $\pm 12D$
- Cyl 0.00D to  $\pm 12D$
- 'Quick-mode' allows rapid measurement of challenging patients
- Measurement data is clearly displayed on viewing screen
- Complete with docking/charging cradle/printer



## ARK-1, ARK-1a, & ARK-1s

### ARK-Series includes:

- SLD technology
- Double ring technology
- Confidence index indicator
- Automatic pupil (2mm min.) and cornea size
- Sphere measurement range -30D to +25D
- Cyl 0.00D to  $\pm 12D$
- Auto X, Y, Z eye tracking (ARK-1s/ARK-1a)
- Auto Y eye tracking (ARK-1)
- Glare Testing (ARK-1s)
- Low Contrast Testing (ARK-1s)
- Visual acuity chart – unaided/aided/glasses/near (ARK-1s)
- Subjective sphere refinement (ARK-1s)
- Accommodation (ARK-1s/ARK-1a)
- Retro-illumination (ARK-1s/ARK-1a)



## M3<sup>®</sup>

- All standard ARK capabilities
- Non-contact tonometer (gentle NCT air puff)
- Auto X, Y, Z eye tracking
- Vision Comparison
- Confidence index indicator
- Pupil size (2mm minimum)
- Sphere measurement range -30D to +25D
- Cyl 0.00D to  $\pm 12D$



## OPD-Scan III

- 20+ diagnostics in 10 seconds per eye (including: angle kappa, HOAs, average pupil power, RMS value, point spread function)
- Autorefractor/keratometer
- Wavefront aberrometry (with 2,520 light vector data points)
- Corneal topography (with 11,880 data point mapping)
- Pupillometry (photopic/mesopic/up to 9.5mm pupil)
- Retro-illumination
- Day/Night Rx
- Auto X, Y, Z eye tracking
- Discerns AR vs. WF patients and their starting refraction point
- Sphere measurement -20D to +22D. Cyl 0.00D to  $\pm 12D$
- Large, tilt LCD screen for superior viewing angle and operational position options

# Lensmeters

Setting the standard almost fifty years ago, the Marco LM-101 Lensmeter effectively launched an instrument company, and continues to be the 'industry standard' of classical Lensmeters today, while automated technology has helped us expand this superior line of Lens measuring devices.

Marco Automated Lensmeters offer unparalleled functionality, performance, and versatility - making them some of the most advanced instruments available. All data is electronically transferred between other automated Marco equipment and integrates with most EMR programs.

## LM-101 Lensmeter

- New LED illumination provides efficient, consistent, illumination levels
- Powered by AC adapter, or standard D-cell battery
- A Classic design with solid brass and stainless steel components
- Full 90-degree adjustable inclination to accommodate measurement of contact lenses
- A discriminating optical system and American style cross-line target produces clear, crisp images
- Standard prism compensating device measures high degrees of prism
- Power wheels located on both sides to accommodate any user
- Standard lens stop accommodates both hard & soft contact lenses as well as conventional lenses with a 30-90mm diameter
- Easy to read external power and axis measurements
- Self-inking marketing pins
- Acceptable for everyday or heavy laboratory use



## LM-600 Series

- Hartmann-Shack wavefront technology
- Green Sensor for high index lenses
- Automatic lens detection
- UV transmittance
- Sphere -25D to +25D, Cyl OD to  $\pm 10D$ , Prism  $20\Delta$
- 4.7" fixed color LCD screen
- 'Smart' IC card for data transfer
- Printer option in 600P and PD models with auto feed and cut
- PD measurement in 600PD model



## LM-1800 Series

- Hartmann-Shack wavefront technology
- Green Sensor for high index lenses
- Automatic lens detection
- UV transmittance
- Sphere -25D to +25D, Cyl OD to  $\pm 10D$ , Prism  $20\Delta$
- 5.7" tilt LCD monitor with enhanced viewing angle
- Touch panel display
- 'Smart' IC card and Ethernet interface for data transfer
- Printer option in 1800P and PD models with auto feed and cut
- PD measurement in 1800PD model
- Frame bridge alignment guide



# XFRACTION<sup>SM</sup>

## Optical Path Diagnostix & Wavefront Optimized Refraxis

## Because it's Time for Better

The Marco XFRACTION process combines OPD-Scan III wavefront and TRS-5100 digital refraction for Optical Path Diagnostix and Wavefront Optimized Refraxis – for complete understanding of each patients' total optical pathway.

This new process delivers superior diagnostic discernment, enhanced practice efficiencies, and optimized patient outcomes.

The XFRACTION process can be implemented in the traditional lane or at the EPIC refractive workstation.



### OPD-Scan III

**Autorefractor/Keratometer, Corneal Topographer, Pupilometer and Wavefront Aberrometer**

- 20+ diagnostics in 10 seconds per eye (including: angle kappa, HOAs, average pupil power, RMS value, point spread function)
- Pupilometry (photopic/mesopic/up to 9.5mm pupil)
- Retro-illumination
- Day/Night Rx
- Auto X, Y, Z eye tracking
- Discerns AR vs. WF patients and their starting refraction point
- Sphere measurement -20D to +22D. Cyl 0.00D to  $\pm 12D$
- Large, tilt LCD screen for superior viewing angle and operational position options



### TRS-5100

**Digital Refractor and Control Console**

- Cuts refraction time by 25-50%
- Replaces a standard refractor
- Programmable refraction
- Digital accuracy
- Split prism Jackson Cross cylinder
- Instantly compare old/new Rx
- 5 computer programs
- Measurable range -29D to 26.75D
- Cyl 0:00D to  $\pm 8.75D$
- Portable control pad
- 8.4 inch color LCD
- Tilttable for patient viewing

### DIAGNOSTIC DISCERNMENT

The OPD-Scan III wavefront aberrometer/corneal analyzer projects over 2500 light vectors through the widest optical pathway, creating the most concentrated density of real data points available, to map out the complete visual system. Minimal extrapolation translates into more real, accurate, and usable information – unique to each patient. In 10 seconds, over 20 diagnostic measures are determined. In less than a minute, the OPD allows rapid discernment between patients who will require minimal refinement or a full refraction to achieve 20/20. Equally important, this instrument can determine which patients cannot correct to 20/20...and why not.

**[KNOWLEDGE]**

### PRACTICE EFFICIENCIES

The OPD-Scan III determines the starting refraction point. That data is automatically transferred to the TRS-5100 digital refractor – where either minor refinements or full automated refractions are completed. The TRS system provides unparalleled accuracy, repeatability, speed, and efficiency in completing any refraction, in the hands of any operator. Patient verification and validation remains an integral part of the examination process. Immediate comparison of old vs. new Rx assures patients of the value of the prescribed change. Time saved in waiting and testing is reinvested in quality time utilization, enhanced patient experience, and practice profitability.

**[SPEED]**

### OPTIMIZED OUTCOMES

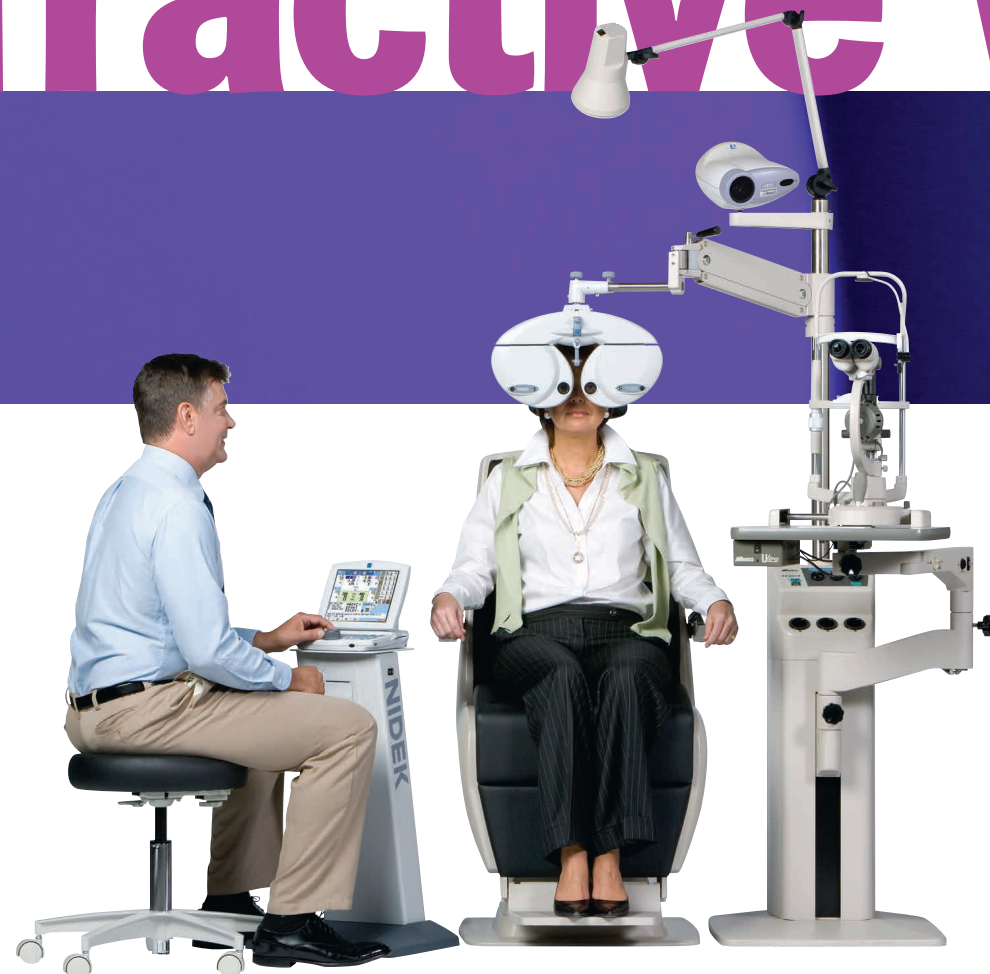
Practices benefit from the XFraction process in numerous, significant ways. More accurate and faster exam times translate in more reliable diagnostic and surgical outcomes and expanded capacity, respectively. Best optical Rx, reduced remakes, superior IOL selections and optimized outcomes all drive positive cash flow and overall profitability. Patients benefit from real satisfaction in the quality of visit time, prescribed Rx and surgical outcomes. They are partnered within their examination process, understanding, and results. Patients' overall elevated experience can be directly measured by patient loyalty and practice referral.

**[IMPACT]**



# Refractive Workstations

Exam lanes represent the heart and soul of every practice, and automated refracting workstations represent the future of integrated office efficiency. With dozens of exam lane configurations to choose from, as well as sophisticated options in automation, Marco truly blends the traditional approach to refraction with advanced technology designed to maximize office efficiency.



## Traditional Exam Lanes



- Dozens of customized exam lane configurations to suit any specific need or budget with digital or manual refractors

## Orion



- Sleek, attractive design comfortably integrates diagnostic exam room instruments
- An innovative sliding slit lamp table provides automated control of elevation and horizontal positioning. This unique mechanism also allows the operator to 'manually' control horizontal sliding motion. Safety features automatically disable table motion if patient contact occurs

- Adjustable height positions for the desk and main console panel accommodates any desired preference for the operator. A convenient desk shelf also accommodates computer accessories
- Slit lamp power, overhead lamp, and desk lamp illumination are automatically controlled when the sliding table is engaged. Overhead room light functions can also be wired for integrated control

- Orion's modular design offers a variety of configurations – from left to right-side operation, as well as accommodating smaller rooms and tight spaces. Expanded desk top work space provides a comfortable working environment for any practitioner



## EPIC®

- Compact, 4' x 5' multi-modality workstation redefines refractive efficiency
- Combines autolensmeter, ARK/OPD-Scan III, TRS-5100 digital refractor, and electronic chart
- The perfect workstation for delegation
- Glare testing capability (when outfitted with the electronic SSC-370MCG chart)
- Rapid testing means less chance for dry eye errors
- Available with many ARK and LM configurations



# Automated Fundus Camera

The Power to Simply Perform

PEDIGREE

AUTOMATION

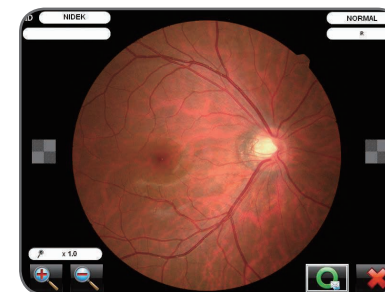
SPEED

The AFC-330's advanced X-Y-Z eye tracking takes the best possible picture every time regardless of the operator's skill level, and typically in less than 5 seconds. Many automated features simplify the most advanced functions, such as automated stereo pairs and automated multiple field imaging. The AFC-330 delivers improved efficiency in time, space, and patient comfort. The lower flash intensity, sound dampened mechanical movements, automatic small pupil mode, and blink detection make for consistent results and fewer retakes. The integrated high resolution sensor and internal PC eliminates complicated cabling and allows the AFC-330 to standalone without a connected PC or laptop in the same exam room space. The AFC-330 can automatically export information across a network, to a USB device, or directly to the NAVIS-EX™ data management software. NAVIS-EX provides features that augment the diagnostic capabilities of the AFC-330.



## 3D AutoAlign in X-Y-Z

- Enhanced speed of operation
- Alignment indicators for manual overrides



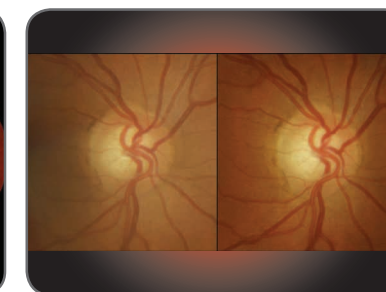
## 3D AutoAlign in X-Y-Z

- Auto blink detection
- Auto small pupil mode detection



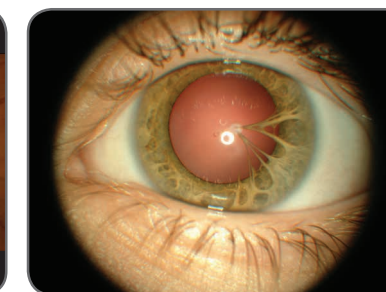
## AutoPanorama

- Automatic programmed pattern
- Auto montaged using NAVIS-EX
- 2-9 fields



## AutoStereo Pairs

- Automatic spatial separation
- Consistent results regardless of operator



## External Photos

- Automatic adjustments for proper settings
- Automatic readjustments to retina mode



## NAVIS-EX

- Chronological history data review & processing
- EMR integration



# Exam Chairs

With an emphasis on function, durability, and most importantly – patient comfort, Marco's selection of Exam Chairs combines all of these important elements with unsurpassed quality and craftsmanship. From simple and economical to the most feature-filled models, their attractive, modern appearance blends beautifully with any office decor. (Multiple color selections available.)



## Bravo

- Simple-featured/lower-cost exam chair for everyday patient care
- Up/down operations controlled by corded foot switch or numerous locations on instrument stand
- High, curved cushion back provides a comfortable patient headrest position for eye drops or indirect exams
- Modern, high-quality electronic lift mechanism ensures reliable, long-term elevation control
- 12-inch elevation range easily accommodates all
- No recline function allows user to maximize refraction distance in small exam rooms



## Encore Manual

- A pneumatic-assisted manual recline mechanism uses patient's weight for easy reclining adjustments. Recline capability includes a comfortable flat position, or any desirable position in between
- Fingertip chair elevation and auto-return switches are conveniently located on each side of the chair back and on the provided corded foot switch
- Single-handed headrest operation provides smooth patient headrest adjustments
- Rear-positioned, foot-activated rotation lock is easily accessible from both sides
- Standard fail-safe, sealed hydraulic system ensures smooth, long-term operation



## Encore Automatic

- Basic chair features and overall design is identical to the Encore Manual model
- Back-lit fingertip switches, as well as a corded foot switch, automatically control chair elevation, recline, and auto-return functions. Programmability allows the operator to pre-program any desired chair recline position – automatically; continuous adjustment range culminates in a full, comfortable recline
- Safety function disables the switch panel from curious fingers
- Chair reclining, as well as elevation, is controlled by Marco's exclusive field-proven hydraulic system for smooth, quiet reliable adjustments
- Optional surgical accessories conveniently transform the Encore Automatic Chair into a surgical procedure chair for any elective procedures



## EZ-Tilt

- Attractive, modern design blends seamlessly with any office decor
- Fast, effortless reclining motion uses the patient's own weight for counterbalancing. The 'bucket' type structure of the E-Z Tilt chair cradles the patient in a comfortable seated position throughout the entire range of motion
- Marco's exclusive dual hydraulic cylinder system provides an extended range of elevation, starting very low and extending to an extra high position
- Fingertip chair elevation and auto-return switches are conveniently located on each side of the chair back and on the corded foot control. A safety switch disables the chair reclining motion from curious fingers



# Instrument Stands

Marco's overall emphasis with instrument stands and delivery systems has always been simple – establish a high benchmark for quality, functionality, stability, and efficient operation. Throughout our history, Marco Instrument Stands have earned a reputation for their rugged durability, innovative features, and attractive, timeless designs.



## Deluxe 2 and Non-Console Deluxe 2

- A new, innovative design compliments the proven, 35-year mechanical operating system
- An electronic release button and a chair elevation switch are both located on the lower slit lamp arm. The slit lamp arm's increased vertical travel easily accommodates wheelchair patients
- An efficient counterbalanced refractor arm provides one-handed, immediate three-way locking of the refractor
- A full-featured flat overlay switch panel controls the slit lamp, chart projector, accessory instrument, overhead lamp, chair elevation, and voltage for a corded instrument
- ♿ Wheelchair accessible
- **Non-console Deluxe Stand 2** has the same proven mechanical design and operating features as the standard Deluxe2, but without instrument wells and full console panel



## Encore Stand

- The Programmable Electronic Room Controller (PERC) is a simple programmable room lighting system that controls overhead fluorescent and incandescent room lights. Any console panel switch or instrument well can conveniently be programmed to follow any exam room sequence
- Combines the proven mechanical structure and durability of the popular Deluxe2 Stand, with a modern, sophisticated appearance
- An efficient counterbalanced refractor arm provides one-handed, immediate three-way locking of the refractor



## Orion Workstation

- Sleek, design integrates all diagnostic instruments
- Innovative 'sliding' table provides automated control of slit lamp
- Allows the operator to 'manually' control the horizontal sliding motion
- Adjustable table automatically disables motion upon patient contact
- Dual fingertip switch panels provide convenient access for table and exam chair adjustments
- Modular design offers numerous configurations
- Slit lamp power, overhead lamp and desk lamp illumination automatically controlled when sliding table is engaged
- Overhead room light functions can be wired for integrated control
- Expanded desk top work space provides comfortable working environment for all staff



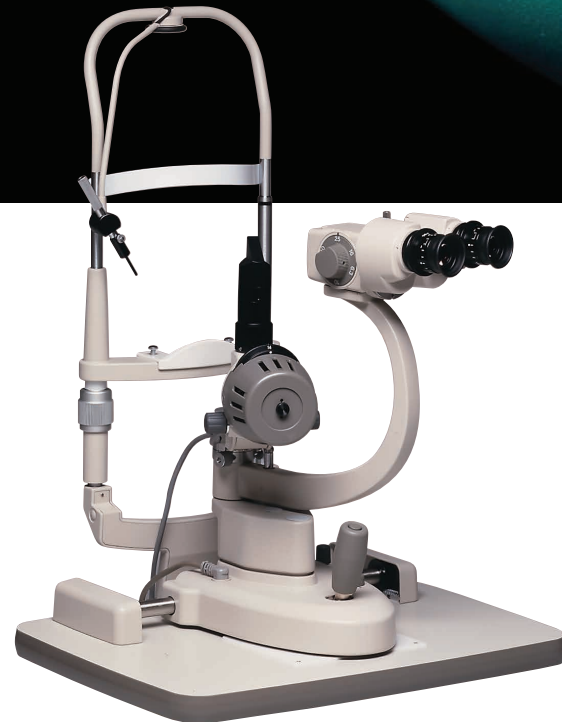
# Slit Lamps

With a sophisticated light-gathering optical design, the Ultra series of Slit Lamps from Marco has simply revolutionized, and redefined slit lamp biomicroscope design. The Ultra series utilizes a multi-layered, multi-coated system which transmits light more efficiently, producing a significant increase in optical resolution and clarity. From the very finest in materials and production techniques, to the important ergonomic performance that practitioners demand, Marco's Ultra series of Slit Lamps has ushered in a new age of diagnostic assessment.



## Ultra G2 and Ultra G4

- 'Light-gathering' Ultra optics transmit light more efficiently
- Parallel microscope head with 6-degree ocular convergence angle
- G2 offers 3-step magnification range: 10x, 16x and 25x
- G4 offers 5-step magnification range: 6x, 10x, 16x, 25x and 40x
- Designed for today's digital imaging
- Slit height is continuously adjustable from 1mm to 14mm



## Ultra 2b

- Slit width is continuously variable from 0 to 14mm – the largest slit aperture in the industry
- Single joystick controls both elevation and horizontal positioning for enhanced ease of use
- Rheostat conveniently located next to joystick for single-handed operation
- 'Light-gathering' Ultra optics transmit light more efficiently
- The model 2b is ideal for general examination procedures and contact lens work



## Ultra 5

- Five built-in filters, including two cobalt, are standard on the model 5. The model 2b comes standard with four built-in filters
- Fingertip millimeter slit-width control with precision adjustment. Single-handed elevation joystick
- Rheostat conveniently located next to joystick for single-handed operation
- The model 5 has the same light source features that are offered on our more sophisticated model G5
- 'Light-gathering' Ultra optics transmit light more efficiently



## Ultra G5 with idoc® Imaging System

- 'Light-gathering' Ultra optics transmit light more efficiently
- Parallel microscope head with 6-degree ocular convergence
- For those that prefer a tower light source with benefits of Galilean optics
- Five-step magnification range from 6.3x to 40x
- Single-handed elevation system
- Dial-in, and continuously variable aperture setting from 10mm to 0.2mm
- Rheostat conveniently located next to joystick for single-handed operation
- Patient hand rests standard
- Designed for today's digital imaging





# Acuity Systems

As standard projectors continue their transition into more automated systems and LCD Acuity Devices, Marco addresses the specific need of every buyer. From the most basic, manually controlled unit, to sophisticated, programmable flat panel systems, Marco Acuity Instruments are simply designed to deliver consistently accurate and reliable assessments.



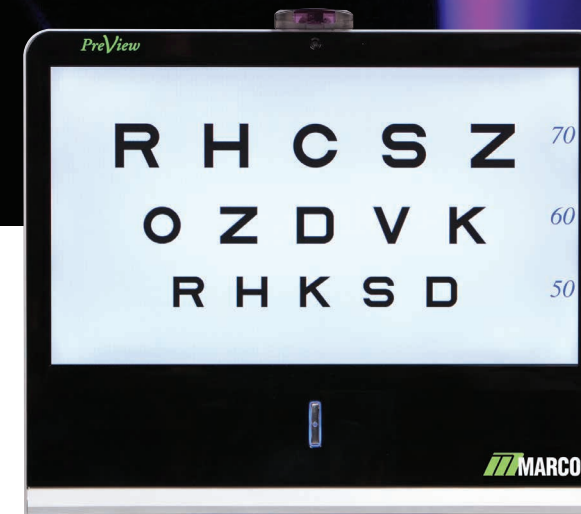
## CP-2 Everlight

- A classic industry-standard, the Marco Everlight Projector features a long-lasting halogen bulb that provides exceptionally even illumination over the entire image field
- The variable focus barrel is designed to provide accurate visual acuity testing at any distance between ten and twenty feet
- Controls for slide selection and duochrome test are conveniently located on both sides
- Accepts all major slides including Marco's Adult, Child, and HOTV Recognition Slides
- Optional mounting brackets include a wall, table, or unit model



## CP-770

- Sophisticated new design is much smaller and lighter
- New maintenance-free LED illumination system produces a brighter, more consistent high-resolution image
- Instant random access of 33 popular charts via infrared remote control
- Chart masking buttons allow the user to isolate individual lines horizontally, vertically, as well as individual letters, numbers, and characters
- Three programming buttons isolate separate programs for individual users
- 11 specialty/polarization charts
- 9 Snellen charts: (5) 20/20 lines, (3) 20/15 lines, (2) 20/10 lines
- 5 Numbers charts: (2) 20/20 lines, (1) 20/15 line, (1) 20/10 line
- 4 Illiterate E charts: (2) 20/20 lines, (1) 20/15 line, (1) 20/10 line
- 3 Children's charts: (1) 20/20 line



## PreView

- Extraordinarily simple, dedicated Acuity device
- Aesthetically attractive, modern look
- Comfortable, user-friendly remote control
- Programmable for three separate refracting routines
- Multiple levels of contrast sensitivity testing
- Animation video for pediatric fixation
- Patient education images
- ETDRS, specialty testing charts
- Randomization function helps prevent letter/character memorization



## SC-1600

- An aesthetically clean dedicated refracting device with an extreme emphasis on precise, high-quality visual acuities
- High resolution LCD screen provides a wide range of popular Snellen, ETDRS, and stereo testing options for binocular vision examinations
- Contrast sensitivity testing measures contrast at three distinctive levels below the normal threshold
- Randomization feature helps to prevent patient letter/character memorization
- User-friendly remote control includes an LCD chart display window for convenient operator reference
- Ability to add up to 18 personalized images on removable SD card
- Integrates with Marco's Digital Refraction Systems



# Additional Marco Products

A diversified portfolio of products has always been a true hallmark of Marco. From simple, everyday products to instruments that accommodate even the most specific surgical needs, our comprehensive line of products continue to develop and evolve as industry demands dictate.

**NOTE:**  
Not all Marco products are featured in this brochure. Please visit us at [marco.com](http://marco.com) for all our current product offerings.

## Surgiscope 3

- Perfect for all minor in-office surgical procedures
- Built-in 3-step magnification drum, motorized focusing, dual halogen lamp system, and a variety of optional accessories
- Can be mounted on an instrument stand or a floor stand for greater flexibility



## K1 Standard Keratometer

- Dual reading knobs measure in both millimeters and diopters
- Simple vertical adjustment to fit patient
- Two way adjustable head and chin rests
- Dual eye-level sighting system, facilitates horizontal alignment
- Positive fixation. Permits rapid measurement of central corneal area
- Wide-angle eyepiece with engraved focusing scale



## Brightness Acuity Tester

- A recognized industry-standard glare testing device, the Marco BAT™ is a simple hand-held device that conveniently measures the effects of glare without leaving the exam room
- The NEW modular, solid-state design accommodates most standard rechargeable handles, with recharging easily accomplished via an instrument stand well, or standard desk-top charger
- NEW state-of-the-art LED illumination system provides a better, more efficient light source
- Three variable light intensity settings simulate various glare conditions
- Effectively evaluates macular photo stress testing



## Trial Lens Sets

- Complete selection of full diameter and custom corrected curve lens set
- Full diameter lenses offer durable metal rims with well-defined, engraved handles
- Custom corrected offers fully additive effective power with no distortion or aberration beyond established limits
- Smaller, full diameter perimeter lens set offers a smaller selection of the same quality lenses
- The all-aluminum MTL trial frame provides solid operation with lightweight patient comfort

