



EFFICIENCY  
WITHOUT COMPROMISE



**VISION-R 700**

FAST AND SECURED REFRACTION



# VISION-R 700

## ACCELERATE REFRACTION... WITHOUT COMPROMISING ON ACCURACY

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A good refraction can take time, but more time means less efficiency. Until now, the only way to shorten the traditional procedure of bracketing sphere, cylinder and axis independently was by cutting crucial steps. This leads to bigger variances and an estimation of the prescription.

## TAKE ADVANTAGE OF A BREAKTHROUGH IN REFRACTION TECHNOLOGY

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Essilor developed a unique lens module that allows for a much smoother refraction process. This innovative technology incorporates a fast, multiple increment algorithm to give you an exact 0.25D refraction in a short time. Furthermore, enhanced data communication with patient management systems makes for a seamless workflow across your practice.

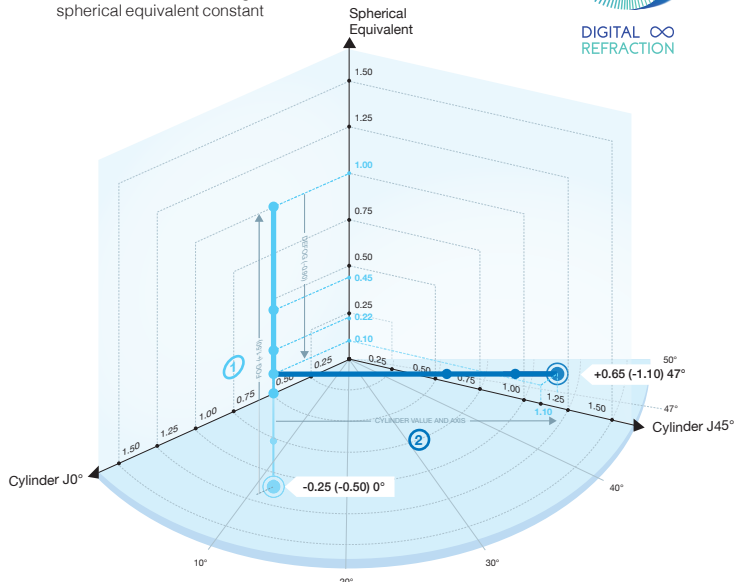




# DIGITAL INFINITE REFRACTION™:

## A MORE DIRECT ACCESS TO THE FINAL REFRACTION

- 1 Determining spherical equivalent value
- 2 Determining cylinder axis and value while maintaining spherical equivalent constant



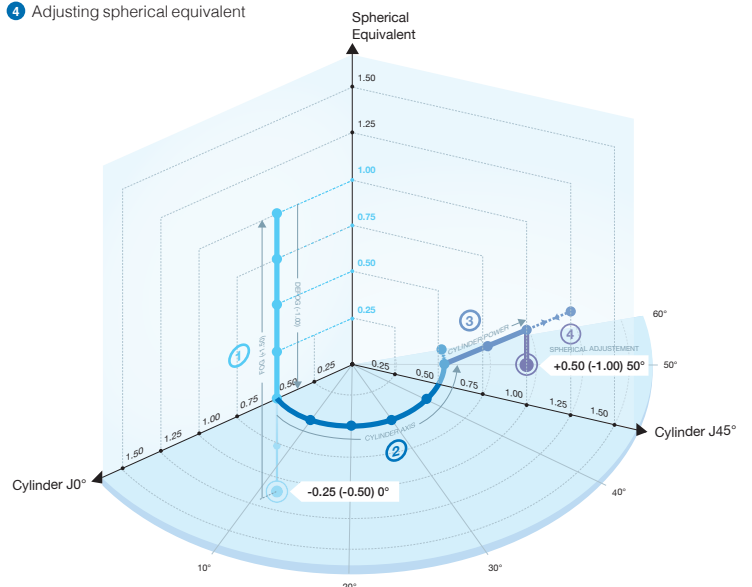
### DIGITAL INFINITE REFRACTION™ IN ONLY 2 STEPS

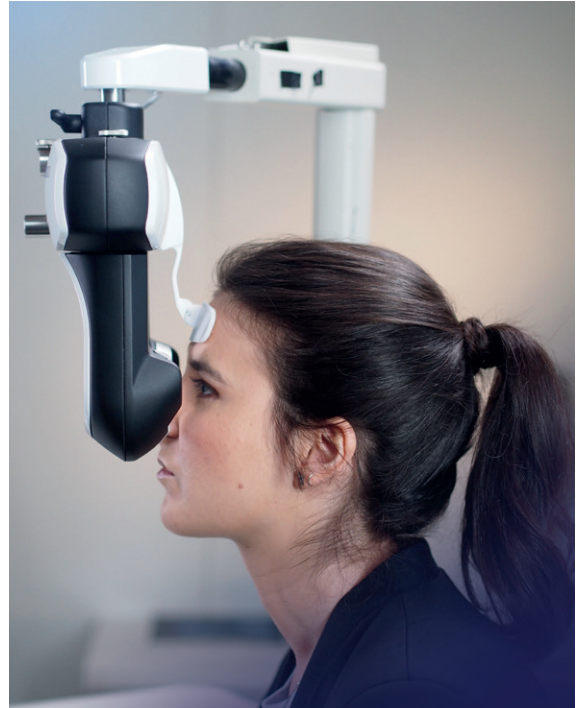
Thanks to the optical module, the new Digital Infinite Refraction™ process automatically compensates for the effect that any change in sphere, cylinder and axis has on one of the other dimensions. This leads directly to the final result, making it less labour intensive for the patient and ECP. The simultaneous compensation of the dimensions makes each answer from the patient more relevant. The effect of each change is immediately taken into account, therefore the patient and ECP make an informed decision.

### TRADITIONAL REFRACTION 4 STEPS REQUIRED

Traditionally, ECPs achieve the result by bracketing the sphere, cylinder and axis individually, even though these three dimensions affect each other. This requires the rechecking of the values by repeating the process to give an accurate result. The ECP also has to compensate for the sphere and then estimate the final result.

- 1 Determining sphere value
- 2 Determining cylinder axis
- 3 Determining cylinder value
- 4 Adjusting spherical equivalent





## A POWERFUL OPTICAL MODULE

Vision-R™ 700 phoropter incorporates an exclusive breakthrough optical module. It allows for much smaller incremental power changes making the switch significantly smoother for the patient. This liquid lens module is controlled by digital micromotors and provides:

WIDER FIELD OF VISION

CONTINUOUS POWER

SIMULTANEOUS CHANGES

SILENT LENS CHANGES

INSTANT POWER

ALGORITHMS

DIGITAL INFINITE REFRACTION™



# FAST REFRACTION WITH SECURED ACCURACY

## BREAK THE COMPROMISE BETWEEN SPEED AND ACCURACY

Outdated technology had ECPs believe that any increase in speed meant a decrease in accuracy. Essilor's Vision-R™ 700 automated phoropter breaks this compromise.

Thanks to Digital Infinite Refraction™, Vision-R™ 700 phoropter obtains a fast refraction in only three minutes, while securing accuracy.

With dedicated Smart Programs and algorithms, the Vision-R™ 700 phoropter controls accuracy by using smaller and larger increments of the continuous lens.

### How does Vision-R™ 700 phoropter redefine refraction ?

#### SMART PROGRAMS AND ALGORITHMS

A series of patient specific smart programs incorporating Digital Infinite Refraction™ shorten the procedure and assist in calculating the best endpoint for the patient.

#### SIMULTANEOUS COMPENSATION

This innovation allows for a fast and direct refraction method: Digital Infinite Refraction™. Continuous compensation on sphere, cylinder and axis ensures accuracy, as answers are based on compensated powers, eliminating the need for estimated lens compensation.

#### CONTINUOUS LENS POWER

Smooth and instant transition between multiple dioptric powers, eliminating unwanted stimulus and controlling accommodation.

#### VERTEX DISTANCE MEASUREMENT

Vertex distance is measured to the millimeter and controllable from a distance. Combined with the automatic compensation to the reference vertex distance, accuracy is controlled right to the end.





# 2

## EASY TO PERFORM



### EXCEPTIONAL PERFORMANCE IS THE NEW STANDARD

Vision-R™ 700 phoropter has been developed with **Ease of Use** and **Performance Excellence** as its starting point. The process is designed to guide the practitioner from start to finish. The ECP only needs to record data, while the phoropter changes the dioptric values and relevant tests to achieve the final result.

#### What makes it easy to use with excellent results?

##### PROGRAM RECOMMENDATION FUNCTION

Smart Program recommendation for each patient. Depending on the imported patient data, the ideal program is recommended by the phoropter.

##### SMART TESTS AND ALGORITHMS

Vision-R™ 700 phoropter comes with automated Smart Tests that assist the ECP when performing the refraction, making the phoropter truly user friendly.

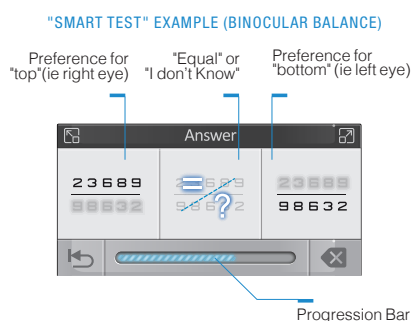
Algorithms change the tests and calculate the dioptric power in reaction to the patient's answers.

##### SECURE PROCEDURE

The secure and guided procedure from start to finish ensures an accurate result, even in the hands of less experienced operators.

##### HELP FUNCTION

If needed, you can easily access a 'help function' with details regarding the current test to help guide the ECP through the process.



Note: the Vision-R™ 700 phoropter can be performed as a normal digital phoropter without performing smart tests, allowing for total freedom of the ECP.



# 3 IMPROVED PATIENT EXPERIENCE

## GROW YOUR BUSINESS THROUGH PATIENT EXPERIENCE

Vision-R™ 700 phoropter provides an excellent patient experience during refraction and eliminates the feeling of failing a test. Make the refraction memorable through:

### COMPACT DESIGN & SILENT LENS CHANGE

A modern design as a showcase for innovative technology. Its compact size makes it easier to handle; its silent lens changes minimize distractions.

### WIDER FIELD OF VISION

No need for superposition of lenses as in traditional phoropters. The patient has a more natural field of vision and is more comfortable without the effect of tunnel vision.

### EASIER TO ANSWER

The patient now has the option to report that he sees “no difference” or “doesn't know which option is better”. The smart tests use this information to give accurate results. The guessing game is eliminated and patient confidence reassured.

### MULTIPLE FINAL COMPARISON

An efficient and detailed comparison function, where multiple different scripts and scenarios can be compared at the click of a button. This allows the patient to imagine what to expect with the new prescription.

### NO VISUAL FATIGUE

Thanks to the shorter process, the patient experiences less visual fatigue by providing fewer direct answers.

## DISCOVER THE MANY OTHER FEATURES OF VISION-R™ 700

### CUSTOMIZABLE

Full freedom to set up the phoropter just the way you want... from programming tests and programs, to personalizing test charts and customizing the workflow.

### REMOTE MAINTENANCE

Assistance in real time, whether it's for training, troubleshooting or upgrading.

### CONNECTIVITY

The Vision-R™ 700 phoropter fits seamlessly into your practice. Data transfer between different connected devices is easy. Import to, and export from Vision-R™ 700 phoropter for a fully streamlined workflow.

### UPGRADABLE

Ability to upgrade the phoropter with the latest needs and new software, makes Vision-R™ 700 phoropter not only innovative today, but future-proof also.

### AUTOMATIC NEAR VISION CONTROL

Selecting near vision mode automatically changes to near pupillary distance and activates the white LED near vision illumination.

### TOUCH SCREEN

10.4 inch, high-resolution adjustable touch screen with ergonomic layout.



# PHOROPTER SPECIFICATIONS

## CENTERING

Interpupillary distance	49.0 to 80.0 mm at far distance (in 0.50 mm steps) 55.0 to 83.0 mm at near distance (in 0.50 mm steps)
Binocular and monocular adjustments	
Convergence	Automatic, compared to the position of the target for near vision and to the patient's pupillary distance
Vertex distance	From 4.0 to 30.0 mm in 0.1 mm steps, monocular, measured by cameras

## MEASUREMENT RANGE

Sphere	From -20.00D to +20.00D
Cylinder	up to 8.00D dependent on lens combinations - In "Standard" mode: 0.25D increments with adjustable steps - In "Intelligent" mode: multiple smaller and larger steps which rounds to 0.25D
Axis	0° to 180° in 1° increments, with adjustable steps
Prism	0 to 20 $\Delta$ in 0.1 $\Delta$ increments, with adjustable steps

## AUXILIARY LENSES

Occluders	Dark
Pin hole	Yes
Retinoscopic lenses	+1.50D, +2.00D (powered by optical module)
Fog lenses	+1.50D, +2.00D (powered by optical module)
Jackson cross cylinders	$\pm$ 0.25D, $\pm$ 0.5D (powered by optical module)
Fixed cross cylinders	$\pm$ 0.50D (powered by optical modules)
Prisms	3 $\Delta$ base up / 3 $\Delta$ base down, 6 $\Delta$ base up, 10 $\Delta$ base in (powered by varying prisms / diasporameters)
Maddox rods	Red, horizontal and vertical
Red/green filters	Red on right eye, green on left eye
Polarized filter	Both linear and circular

## DIMENSIONS AND WEIGHT

Head of the phoropter	Width: 29.6cm at top - 21.9cm at bottom / height = 22.2cm Depth: 8.4cm at top - 6.5cm at bottom Total weight: 3.5Kg
Console (keyboard + screen)	Keyboard: 28x22cm Screen display: 10.4" Total weight: 3.0Kg
Power supply	Length: 16.3cm Width: 19.3cm Depth: 5.8cm Total weight: 1.0Kg

CE Conformity marking

As improvements are made, these specifications are not contractually binding and may be modified without prior notice.  
Vision-R™ 700 is a trademark of Essilor International.



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