




ESSILOR OPTOMETRY

YOU WILL MEASURE OUR DIFFERENCE

Optometry





Essilor – the world leader in corrective lenses – owes its success to its strategy which has been driven by innovation for over 160 years. Its objective is to enable everyone to have lenses suited to their needs. With you, the Essilor Instruments Division

is helping the Group achieve this goal. This entity, which is a leader in edging solutions, offers you dedicated solutions to optimise your sales outlet. Today, Essilor Instruments has decided to renew its optometry range, to further assist you in the daily performance of your work. This

purposely broad, high-quality range will meet all your needs in terms of refraction, contact lens adaptation, eye disease screening and diagnosis. It is completed by a range of services which includes training, image analysis software & data transfer.

4 REASONS FOR CHOOSING ESSILOR

1 QUALITY AND PERFORMANCE

Products which performances turn each vision test into a high-quality service.

2 VARIETY AND MODULARITY

A flexible range which adapts to different requirements depending on practices and available space.

3 COMFORT AND CONNECTIVITY

Products offering a wide range of connections and software to optimise the entire refraction and test chain.

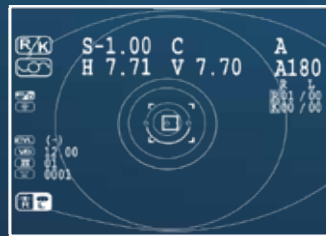
4 SERVICE AND TRAINING

A comprehensive range of services to take full advantage of the potential of each instrument.

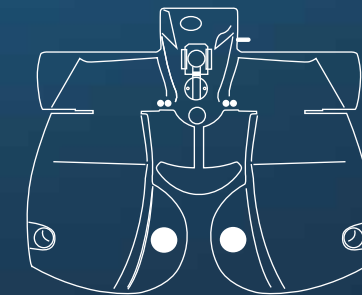
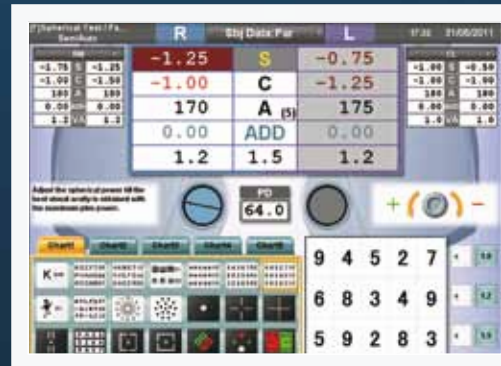


AN OPTIMISATION OF THE REFRACTION CHAIN

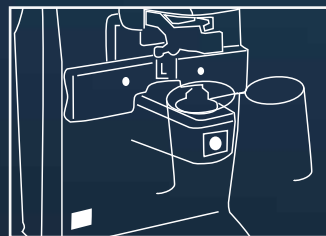
AND THE MANAGEMENT OF CUSTOMERS' DATA



Objective refraction



Visual exam



Previous prescription



Optotypes projection

AN ADAPTABLE RANGE

ACCORDING TO AVAILABLE SPACE, NUMBER AND DEPTH OF EXAMS



C O N T E N T S

1

Subjective refraction

Acuity measurement

- APH 500
- MPH 100

Projection of optotypes

- CS pola 500
- CS 500
- CS 100

2

Objective refraction, contactology & diagnosis

AKR and tonometer

- AKR medica 500
- AKR cornea 500
- AKR 700
- AKR 500
- ATNC 500

Slit lamps

- SL 7 medica +
- SL 5 cornea +
- SL 3 cornea
- DC 500

3

Software

- Eye Capture
- Cornea Topographer

4

Units & table

Units

- Refraline 3
- Refraline 2
- Refraline mini

Table

SUBJECTIVE REFRACTION





R	
170	C
0.00	A
1.2	ADD
	1.5



A wide range to perform easy and accurate prescription checks and comprehensive optometric tests.

For even greater speed and precision, Essilor products easily interconnect and enable you to customize test sequences according to your own practices.

Acuity measurement

- APH 500 - - - - - 1.2
- MPH 100 - - - - - 1.4

Projection of optotypes

- CS pola 500 - - - - - 1.5
- CS 500 - - - - - 1.6
- CS 100 - - - - - 1.7



- Light, compact design for perfect interaction with the customer.
- Extremely fluid refraction thanks to the high rotation speed of the lenses.
- Optimised management of near-vision test, for acuity measurement as well as final verification.
- Customer information and sales support functions.
- Fully interconnected system for an optimisation of the refraction chain.



APH
500 

LEADING-EDGE TECHNOLOGY FOR VISION PROFESSIONALS

The APH 500 automatic refractor is a top-of-the-range instrument offering speed and comfort for all types of tests. With its control and interconnection possibilities, it is the ideal instrument for those who want to optimise the refraction chain.



Patented Algorithm



EASE OF USE

- All prescription and optotype data managed in the twinkling of an eye.
- Assisted search for astigmatism and prisms, to perform thorough, customized tests in record time (patented technologies).
- Great ease of navigation and user comfort through the integrated help and recording of pre-programmed sequences.
- Compact design which gives an excellent perception of the patient's expressions.



NEAR-VISION PERFORMANCE

- Tilting and convergence capacity promoting a natural reading position.
- Integrated LED lighting.
- Daily scen simulation and reading tests to check the final prescription (available on the KB 500).

TWO CONTROL MODES

Reception of objective refraction and lensmeter data.
Simultaneous control of the refractor head and optotypes.



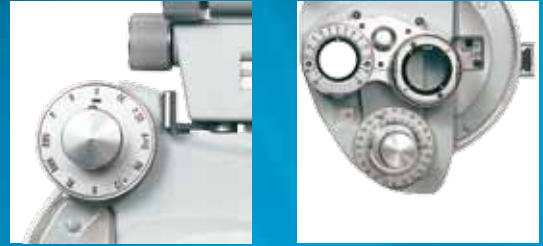
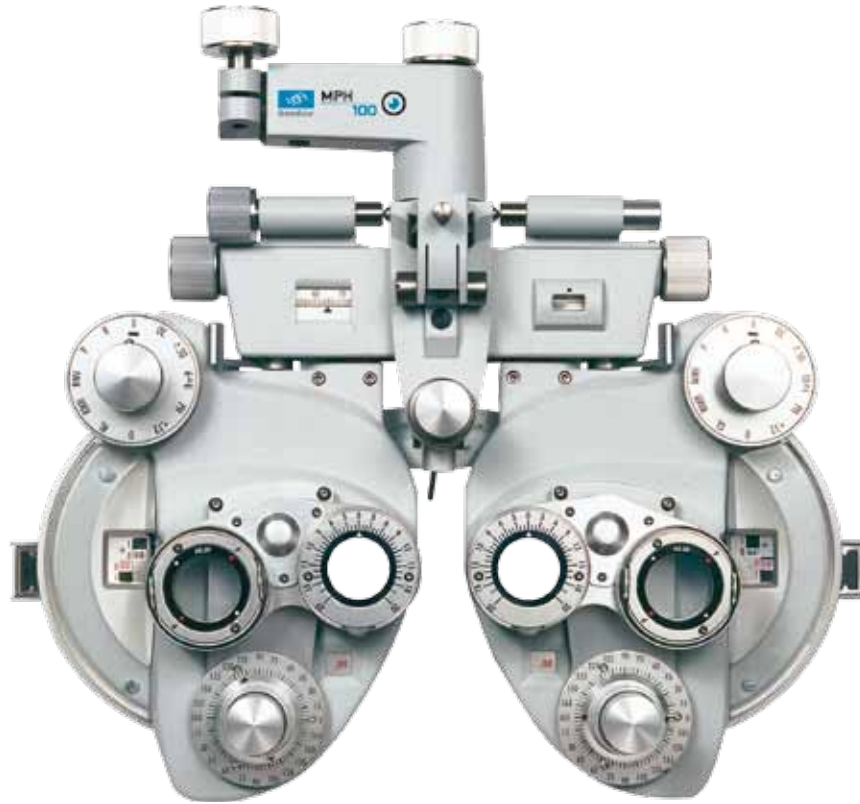
APH 500 with controller keyboard

- With its adjustable screen, the KB 500 offers mobility, user comfort and conviviality with the patient. In addition, its touchscreen interface offers unequalled handling and navigation comfort.

APH 500 with PC

- Simple and economical, it allows the centralisation of all software on an existing PC.

MPH 100



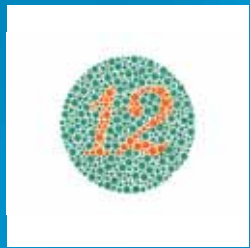
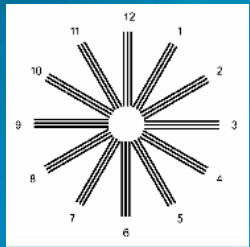
- Extensive range of lenses and filters for quality refractions in far and near vision.
- Robust and flexible mechanical design.
- Automatic convergence in intermediate and near vision.
- Rapid advance of lenses through a simple knob with automatic driving of the discs.
- Easy installation on the self-balancing arm of the column or on a wall-mounted arm.

MPH 100 

THE BENCHMARK MANUAL REFRACTOR

The MPH 100 manual refractor is a robust all-inclusive instrument for those who look for an efficient solution.





- Perfect dissociation of images through linear polarisation (binocular and stereoscopic vision test).
- Possibility of customizing test sequences and integrating educational tools and selling aids.
- Large choice of tests: visual acuity, binocular vision, colour vision and contrast sensitivity.
- Automatic adjustment of the optotypes size. Mirror-mode display for small premises.
- Connection to the APH 500 for combined management of lenses and optotypes.

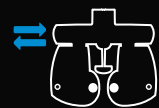


CS pola 500

CS pola 500

1 SUBJECTIVE REFRACTION

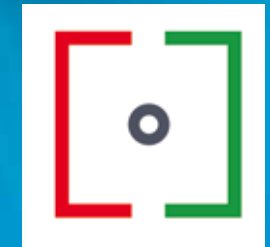
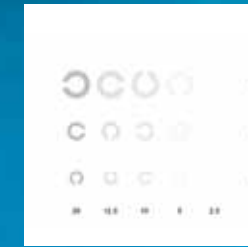
Min : 2 m
Max : 6 m



LARGE HIGH-DEFINITION SCREEN TO PERFORM ALL TESTS IN TOTAL COMFORT

The CS Pola 500 optotype screen is an all-embracing screen. With its customization options and its range of tests, it is highly appreciated by ECP's.

CS 500



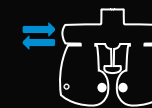
- Excellent screen contrast and luminosity.
- Extensive choice of tests (contrasts, binocular vision) and optotypes (Snellen, Landolt C, symbols for children, etc.), including ETDRS.
- Capacity to project images and videos.
- Daily scene simulation useful for checking the final prescription.
- Connection to the APH 500 for combined management of lenses and optotypes.

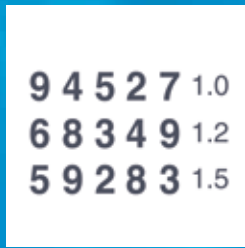
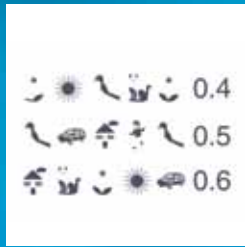
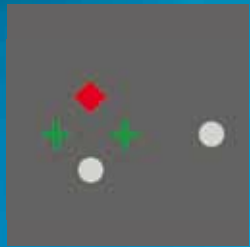


UNIVERSAL SCREEN FOR ALL REFRACTION ROOMS

The CS 500 LCD optotype screen is ideal for those who want a screen with numerous testing and customization options. With its carefully studied design, it will fit into all refraction rooms.

Min : 2,5 m
Max : 6 m



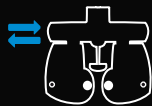


- Large range of tests (Snellen, fixation point, binocular vision, stereoscopic, children's tests, etc.)
- 2 specific programmable test sequences.
- Large choice of options: telescopic lens, projection plate, wall-mounted arm.
- Connection to the APH 500 for combined management of lenses and optotypes.



CS 100

Min : 3 m
Max : 6 m



THE QUICK AND EASY MULTI-FUNCTION PROJECTOR

The CS 100 is an optotype projector capable of displaying very sharp high-contrast images in a fluid way through the quick rotation of the tests. With its compact design and tilting system, it adapts to all refraction rooms.

**OBJECTIVE REFRACTION
CONTACTOLOGY
& EYE DISEASE DIAGNOSIS**



TION, GNOSIS



This range offers numerous solutions in terms of objective refraction, contactology and eye disease diagnosis.

Depending on practices and available space, you can choose the appropriate function level and be sure of reliable measurements, even in the most complex cases.

AKR and tonometer

- AKR medica 500 - - - 2.2
- AKR cornea 500 - - - 2.4
- AKR 700 - - - - - 2.6
- AKR 500 - - - - - 2.8
- ATNC 500 - - - - - 2.9

Slit lamps

- SL 7 medica + - - - - 2.10
- SL 5 cornea + - - - - 2.11
- SL 3 cornea - - - - - 2.12
- DC 500 - - - - - 2.13



- Fully automatic objective refraction, keratometry, tonometry and pachymetry.
- Non-contact tonometry with regulated air flow. Calculation of intraocular pressure taking into account the thickness of the cornea.
- Rotary prism technology applied to objective refraction.
- Connection to the APH 500 for automatic transmission of objective refraction data.



AKR medica 500 



K R Tn P

THE 4-IN-1 ULTRA COMPACT AND ULTRA PRECISE SOLUTION

The AKR Medica 500 is an auto-kerato-refractometer tonometer pachymeter with an ultra compact design combining 4 essential measurements to optimise the workspace and working time.

AKR medica 500

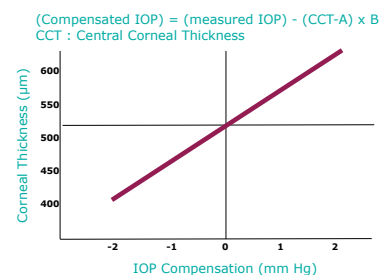
TIME & SPACE SAVER

- A comprehensive, easy-to-use 4-in-1 tool which performs all measurements in a totally automatic way.
- Compact design for optimal integration in all workspaces.
- Transfer of objective data to the APH 500 for easier subjective refraction



COMFORT

- Large adjustable colour screen and original user interface simplifying the operating process.
- Patient stress is minimised, thanks to the tonometer regulated air flow.
- For complex cases, 2 complementary modes: manual and semi-automatic.



UNEQUALLED PRECISION

- Extremely precise objective data, even on small-diameter pupils and damaged retinas (rotary prism technology).
- More reliable tonometry tests through pachymetry. The intraocular pressure measurement is adjusted to take account of the thickness of the cornea (calculation rule based on several medical studies).

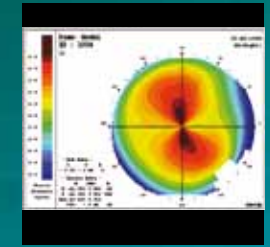
AKR cornea 500



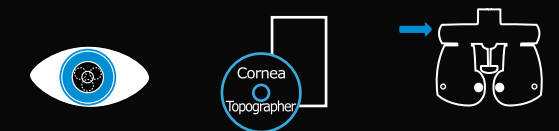
AKR cornea 500

IDEAL SYNTHESIS OF OBJECTIVE REFRACTION AND CORNEAL TOPOGRAPHY

The AKR Cornea 500 is an auto-kerato-refractometer-topographer which gives precise and reliable results. Easy to use, it is an ideal solution to optimise available space.



- High-precision objective refraction thanks to rotary prism technology.
- Screening for corneal problems (keratoconus, corneal degeneration, irregular astigmatism) or problems in adapting to special contact lenses (orthokeratology, gas-permeable contact lenses).
- Display and analysis of corneal topography with the Cornea Topographer software supplied (refer to Section 3).
- Connection to the APH 500 for automatic transmission of objective refraction data.



K R Tp

TECHNOLOGICAL FOCUS

ROTARY PRISM

A TECHNOLOGY WHICH MAKES THE DIFFERENCE, EVEN IN THE MOST COMPLEX CASES

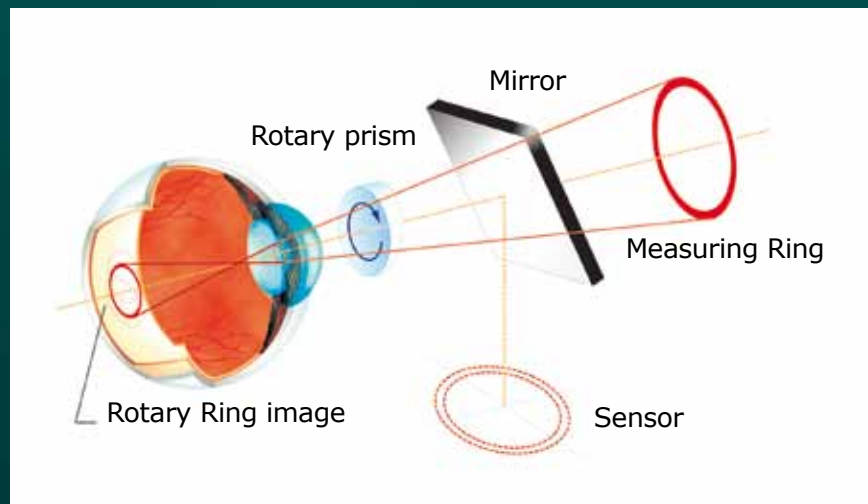
The rotary prism method – a unique technology used in all AKRs of this range – ensures objective measurement reliability, precision and regularity. An original optical system: measuring a wider area on the retina to ensure optimal results, even on small-diameter pupils.



AKR medica 500



AKR cornea 500



AKR 700



AKR 500

- Patented technology.
- Extremely precise refraction and keratometry.
- Extended measurement capacity, covering pupils as small as 2 mm.
- Improved ease of measurement and reliability in cases of glaucoma, asymmetric pupils or age-related retinal pathologies.



- Great freedom of movement provided by the swivelling touch screen.
- Astonishing capacity to adapt to all environments.
- Rapid and reliable results in comfort.
- Fully automatic.
- Connection to the APH 500 for automatic transmission of objective refraction data.

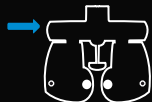


AKR
700



THE ULTIMATE COMFORT FOR USERS AS WELL AS PATIENTS

The AKR 700 is a latest-generation auto-kerato-refractometer allowing high-quality measurement through its revolutionary ergonomic design and automatic operation.





AUTOMATION

- A totally automatic process from alignment to printing.
- Automatic detection of abnormal measurement conditions.

COMFORT & CONVENIENCE

- Easily fits into the smallest spaces, thanks to its swivelling touch screen.
- Interaction and closeness with the patients, notably elderly people and children.
- Chinrest with a 5° tilt for greater comfort.



MEASUREMENT PRECISION

- Fast and precise measurement thanks to the rotary prism technology.
- Central and peripheral keratometry ensuring thorough evaluation of the cornea for adaptation of contact lenses.

AKR 7000

AKR 500



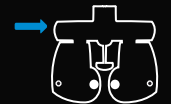
AKR
500

ULTRA PRECISION IN TOTAL SIMPLICITY

Quick, easy and ultra precise thanks to its rotary prism technology, the AKR 500 auto-kerato-refractometer is a must for all vision professionals.



- High-precision objective refraction thanks to rotary prism technology.
- Compact optical head improving interaction with the patient and visibility of his position.
- Quick, easy and stress-free measurement, particularly in burst mode.
- Measurement of corneal diameter.
- Automatic transmission of objective refraction data to the APH 500.





- Totally automatic cycle: alignment, adjustment and measurement.
- Air puff regulated according to the amount required to flatten the cornea.
- Easy to use.
- Auto-control function for easy maintenance.



ATNC 500

Tn



ATNC 500 

GENTLE AND PRECISE TONOMETRY

The ATNC 500 non-contact tonometer is a must for measuring intra-ocular pressure in glaucoma screening. Patient discomfort is minimised thanks to the use of a gentle, regulated air puff to flatten the cornea.

SL7 medica+



SL 7 medica+ 

THE HIGH-END BENCHMARK FOR ALL TYPES OF TESTS

The SL7 medica + slit lamp is aimed at demanding professionals wishing to carry out complete eye examinations. With its wide range of filters, magnification capacities and many options, it is the benchmark instrument in its field.



Yellow filter*



Background lighting*



Observation tube*



Hruby lens*

- Excellent image and colour rendering thanks to its binocular convergence system.
- Possibility of examining all eye structures (cornea, retina, crystalline lens, etc.) thanks to its light tilting feature and numerous slit adjustments and light intensity settings.
- 5 magnification levels allowing comprehensive examination of the state of all anterior eye structures.
- Combined with the DC 500, possibility of capturing images and video sequences.



8 MP photo

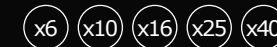


1 MP video

Range of filters



Magnifications





Yellow filter*



Background lighting*



Observation tube*



Hruby lens*

- Excellent image and colour rendering thanks to its binocular convergence system.
- Increased quality of contrast with the amber filter, for optimal examination conditions.
- Accurate assessment of the state of the eye's anterior structures thanks to 5 magnification levels.
- Combined with the DC 500, possibility of capturing images and video sequences.



8 MP photo



1 MP video

Range of filters



Magnifications



ESSILOR OPTOMETRY



SL5 cornea+

VERSATILITY AND PERFORMANCE IN CONTACTOLOGY

The SL5 cornea + slit lamp is a high-performance contactology equipment. With its 5 magnification levels, it is a versatile instrument suited to all tests.

SL5 cornea+

SL3 cornea



SL3 cornea 

ALL THE ESSENTIALS IN A COMPACT VERSION

The SL3 cornea is the ideal compact slit lamp for those who want the essential eye examination functions in a small-size instrument.



Yellow filter*



Hruby lens*



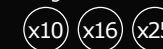
Fixation target*

- Excellent optical quality for optimal examination conditions.
- 3 magnification levels for accurate examination of the anterior parts of the eye.
- Instant access to the different functions thanks to its compact, ergonomic design.
- Thanks to its LED technology, the light lasts 100 times longer than on conventional equipment.

Range of filters



Magnifications





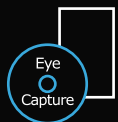
- Easy capture of images and videos thanks to a trigger on the joystick and multiple-shot mode.
- 8-million pixel CCD sensor for photos and resolution of 1 million pixels for videos.
- Plug and play installation.
- Comes with the Eye Capture software (refer to Section 3).



8 MP photo



1 MP video



HIGH-PERFORMANCE DIGITAL IMAGING

The discrete, high-performance DC 500 digital camera is easy to install and is totally compatible with the SL7 medica + and SL5 cornea + slit lamps. The high-resolution images can be saved.

DC 500

SOFTWARE





This software range offers solutions for digital image acquisition, analysis and archiving.

These flexible, convivial applications provide high-performance solutions to enhance customer files and allow efficient tracking of diagnoses.

Image management and analysis

- Eye Capture - - - - - **3.2**
- Cornea Topographer - **3.3**

Eye Capture



Eye Capture



HIGH-DEFINITION DIGITAL CAPTURE

In combination with the DC 500, the Eye Capture software generates digital photos and videos of the anterior parts of the eye. It allows to record them and provides a first level of analysis by adjusting the contrast and camera settings.



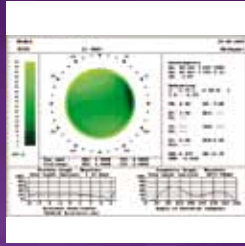
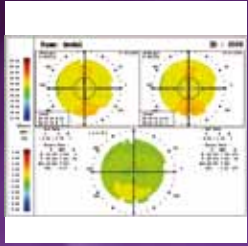
- Automatic indexing of files by date, folder and/or patient name.
- First level of analysis thanks to the contrast adjustments and camera settings.
- Export of various digital file formats.
- Photo formats: JPEG, TIFF, PNG, BMP.
- Operating system: Microsoft Windows® XP Pro, Windows® 7 Pro.
- Software included with the DC 500.



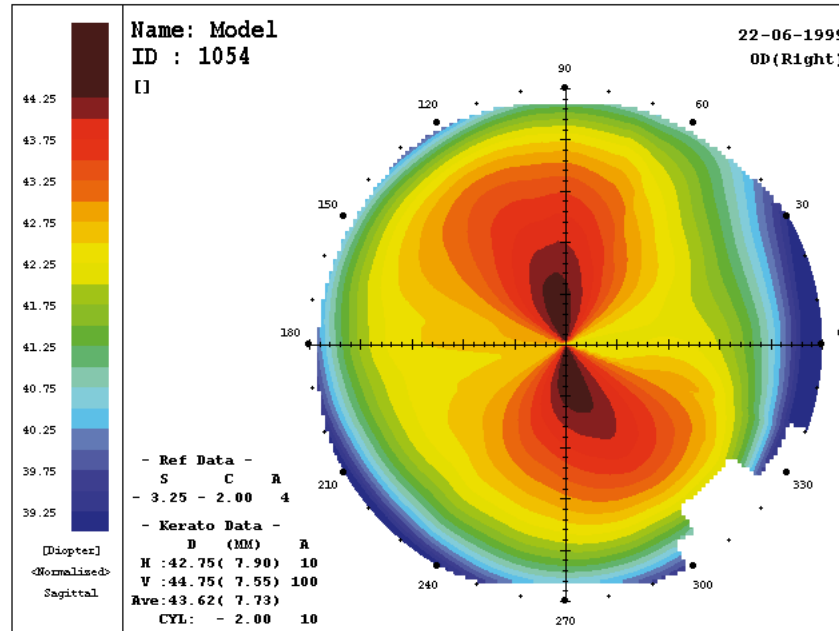
8 MP photo



1 MP video



- Large selection of graphical representations of corneal topography to perform quality analysis (irregular astigmatism, keratoconus, corneal degeneration, etc.).
- Simulation of the fit of the lens on the cornea.
- Operating system: Microsoft Windows® XP Pro Windows® 7 Pro 32 bits.
- Software included with the AKR cornea 500.



Cornea Topographer 


CORNEAL DIAGNOSTIC ASSISTANCE

The Cornea Topographer software analyses corneal deformations. It generates a wide choice of graphic representations of the corneal topography based on the projection of placido rings on the cornea.

Cornea Topographer

REFRACTION
FURNITURE





This adaptable range of units can meet all requirements in terms of space and layout. These units combine comfort and ergonomic design while also offering numerous customisation possibilities.

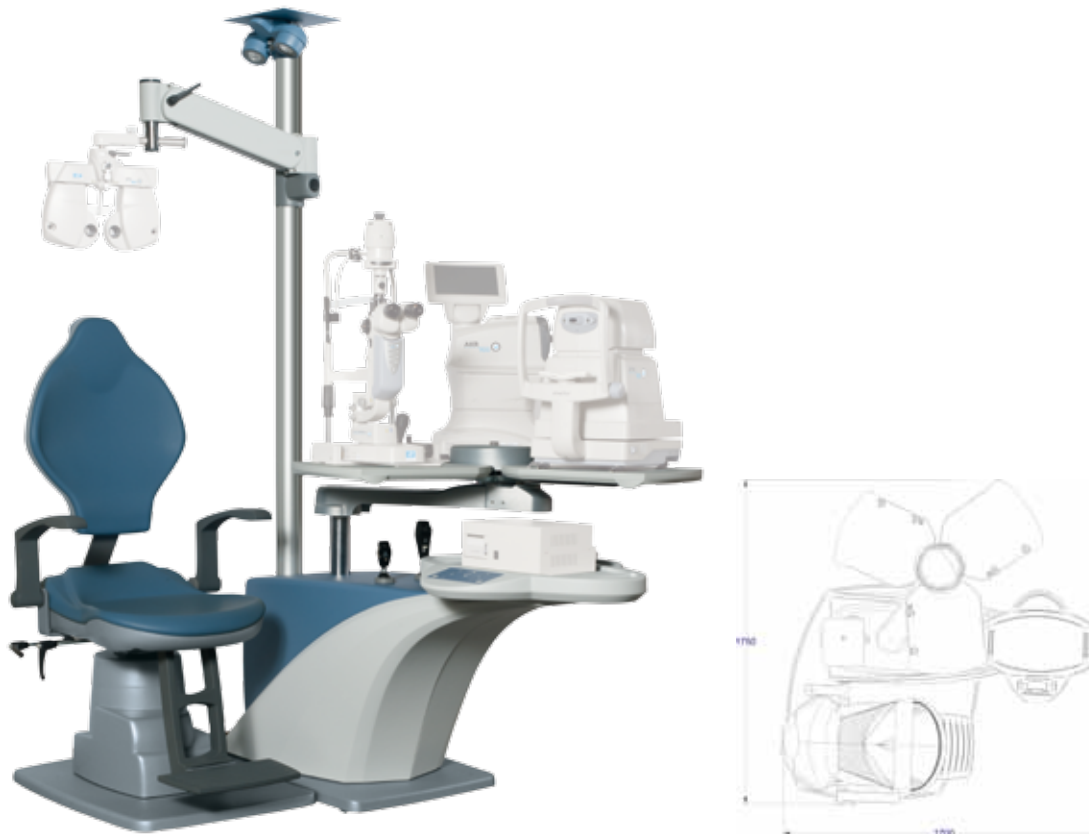
To ensure quick and easy installation, the units were purpose-designed for the integration of Essilor equipment.

Units

- Refraline 3 - - - - - **4.2**
- Refraline 2 - - - - - **4.3**
- Refraline mini - - - - - **4.4**

Table - - - - - **4.5**

Refraline 3



Refraline 3 

A MODEL OF PROFESSIONALISM, EFFICIENCY AND DESIGN

Designed to provide optimum comfort, the Refraline 3 refraction unit combines efficiency, performance and ergonomic design. It can adapt to a wide variety of spaces and configurations, while offering you a maximum number of functionalities.



Support for LCD screen*



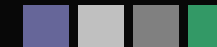
Drawer unit*

- 3-instrument swivel table, projector holder and self-balancing refractor holding arm.
- Motorised chair with tilting back. Lift-up elbow rests and footrest.
- Easy installation.
- Numerous options including colours and reversible column.
- Auxiliary electric socket and small-accessory compartment.
- Integrated near-vision lighting.

Unit colours



Chair colours





Support for LCD screen*



Drawer unit*

- 2-instrument translating table, projector holder and self-balancing refractor holding arm.
- Motorised chair with built-in footrest and elbow rests.
- Numerous options including colours and reversible column.
- Auxiliary electric socket and small-accessory compartment.
- Integrated near-vision lighting.



Refraline 2 

Refraline 2

THE BENCHMARK FOR HIGH-COMFORT DAILY USE

Ideal for comfortable daily use, the Refraline 2 refraction unit is highly practical and boasts a compact, modern design. Its handy, ergonomic translating table minimises patient's movement on changes of instruments.

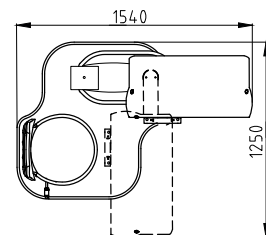
Unit colours



Chair colours



Refraline mini



Refraline mini

A WIDE RANGE OF FUNCTIONALITIES IN AN ULTRA COMPACT DESIGN

The Refraline mini ultra compact refraction unit was designed to maximise movement and is ideal to perform a comprehensive examination in a small space. Its new design elegantly and ergonomically combines all functionalities for optimum user's comfort.



Lighting*



Slide table top

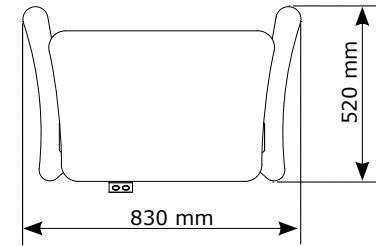


Fixed table top

- Versatile unit which comes in various configurations:
 - fixed or translating table,
 - projector holder with built-in light (optional),
 - comprehensive or simplified control panel.
- 2-instrument table and refractor holder.
- Motorised chair with fixed back.
- Available in right or left version.



- 2-position footrest (centre and side).
- Elevation: 590 to 840 mm.
- Tabletop dimension: 700 x 450 mm.
- Auxiliary electric socket.



Table

A PERFECT SOLUTION TO COMPLETE AN INSTALLATION

This motorised side table is ideal to install any type of instrument and expand an optometry installation.

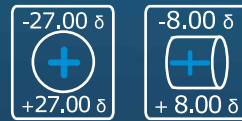
Glossary

SUBJECTIVE REFRACTION

Connection with automatic phoropter APH 500



Measurement Range - sphere and cylinder



Measurement range - Prism



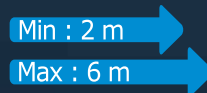
Cross Cylinder



Polarisation



Projection distance

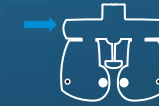


Screen size



OBJECTIVE REFRACTION, CONTACTOLOGY & DIAGNOSIS

Data transfer to APH 500



Rotary prism technology



Product functions:

- K:** Keratometry
- R:** Objective Refraction
- TP:** Topography
- Tn:** Tonometry
- P:** Pachymetry



Regulated air puff



Video resolution



Photo resolution



Software



As improvements are made, these specifications may be changed without prior notice.

RefraLine: Configurations presented for your guidance only. Instruments are sold separately.

APH 500 PC: Computer, screen and keyboard are not provided by Essilor.

*Available in option.



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