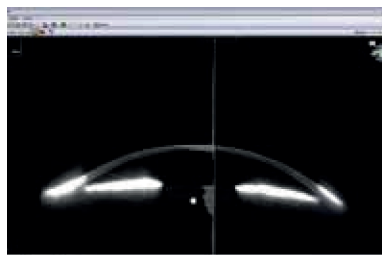


SCHEIMPFLUG CAMERA AND PLACIDO DISC

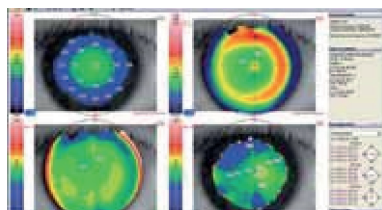
High precision instrument for the tomography of the anterior ocular segment and cornea analysis. The excellent combination between a rotating Scheimpflug camera and a Placido disk provides a complete analysis of both the entire cornea and the anterior segment.

An extremely fast guided acquisition system

- > Diagnosis
- > Pre and post cataract and refractive surgery
- > Corneal and anterior segment Scheimpflug image analysis
- > Tangential and axial curvature for the anterior and posterior corneal surface
- > Anterior refractive power, posterior refractive power and equivalent power of the whole cornea
- > Altimetric maps referred to various surfaces
- > Corneal thickness map and anterior chamber depth map
- > Corneal wavefront and visual quality analysis
- > Contact lens fitting module
- > Extremely fast alignment, acquisition, and processing (less than 10sec)
- > Retro-illumination image for densitometry



Anterior chamber analysis



Complete report

Height	510 mm (20.08 in)
Width	250 mm (9.84 in)
Depth	320 mm (12.60 in)
Weight	7 kg (15.43 lbs)
Electric power supply	(only instrument) external power supply



TECHNICAL SPECIFICATIONS

REF.	8217-0210-00 (without PC) 8217-0210-01 (with PC)
Camera	Double head CCD
Light source	LED Blue (475 nm - UV free)
Working distance	80mm
Rings	22
Measured points	21632 for anterior surface, 16000 for the posterior
Processed points	more than 100.000
Covered cornea diameter	0,4 up to 12 mm diameter
Diopters range	1 to 100 D
Accuracy	± 0.25 D (half scale)

OEM SIRIUS

The excellent combination between a rotating Scheimpflug camera and a Placido disk allows a complete analysis of both the entire cornea and the anterior segment:

Turnkey guided acquisition system

Corneal and anterior segment Scheimpflug image analysis

Tangential and axial curvature for the anterior and posterior corneal surface

Refractive power for the anterior and posterior corneal surface and equivalent power

Altimetric maps referred to various surfaces

Corneal thickness map and anterior chamber depth map

Corneal wavefront and visual quality analysis

Contact lens fitting module

Alignment, acquisition and processing extremely fast (less than 10sec)

Retro illumination image for densitometry

IOL design tool



OEM SIRIUS

Sirius, the excellent combination between rotating Scheimpflug camera and Placido disk, is a high precision system for the three-dimensional analysis of both the cornea and the anterior segment.

- Merging data from Placido's reconstruction to the one by Scheimpflug images, taken at the same time by 2 different cameras, Sirius is able to obtain the accurate measurement of elevations, curvature, power and thickness for the whole cornea. Although Scheimpflug images three-dimensional reconstruction is able to deliver accurate profile and thickness data, it's insufficient to calculate curvature and power data with acceptable accuracy. On the other hand Placido's technology can give just a partial information of corneal structures being not able to measure the posterior surface (and the corneal thickness) and measuring the anterior surface with a limited coverage. Sirius overcomes both limitations merging Scheimpflug's with Placido's data, acquired with the same reference axis and at the same time.

- Anterior and posterior corneal topography information are available for diagnosis, for refractive/ cataract pre-operative planning or for follow up purposes. Organized in one standard summary or three customizable reports it's possible to select up to six maps.

- Synthetic parameters like Summary Indices, K-readings, Refractive analysis indices, Shape indices are available for a quick comparison between examinations and follow-up.

- Keratoconus summary focuses the attention on the risk of ectasia. Thanks to the combination of several morphological maps – thickness, elevation anterior and posterior, tangential curvature anterior and posterior – and through specific indices with normative values this summary helps in the diagnosis of keratoconus in early stages too (fig 2).

- Corneal aberrometry analysis offers a complete overview of the corneal contribution to the vision. Anterior, posterior or total corneal aberration are selectable for several pupil diameters. The OPD/WFE map and the simulated vision functions (Spot Diagram, PSF, MTF, Image convolution) help the clinician understanding and explaining the visual discomfort to the patient (fig 3).

- Pupillography fully integrated with anterior and posterior corneal topography the measurement of the pupil condition is available in scotopic (0.04 lux), mesopic (4 lux), photopic (50 lux) and dynamic light condition.

- An autofit module is available for searching the best lens in a database containing most of international contact lens manufacturers' geometries (fig 4).

- Basic video stream operations on two views of the movie is available. Time gap is measured from two different frames of the movie, is saved and is available for further analysis (e.g. used as Tear Film break-up time).

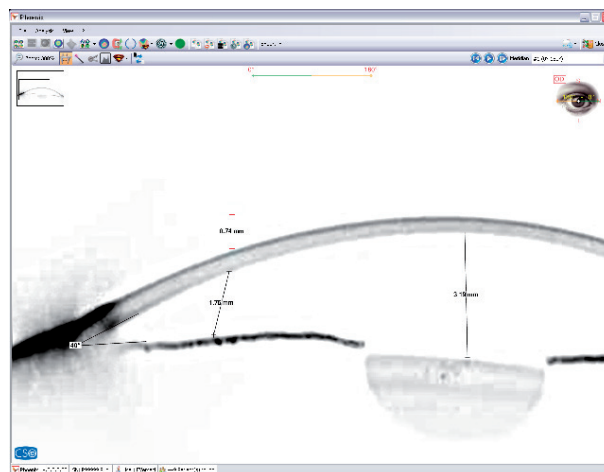


Figure 1

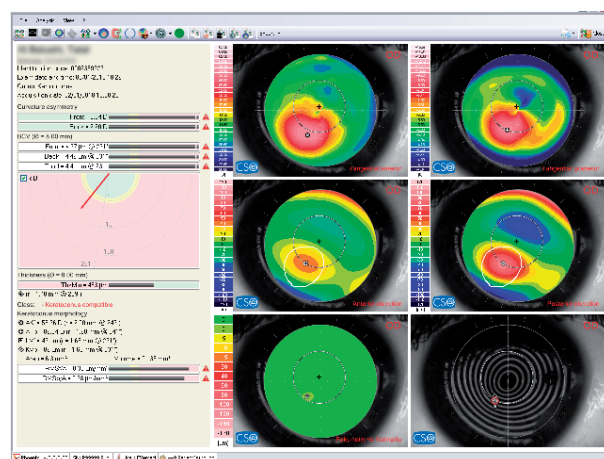


Figure 2

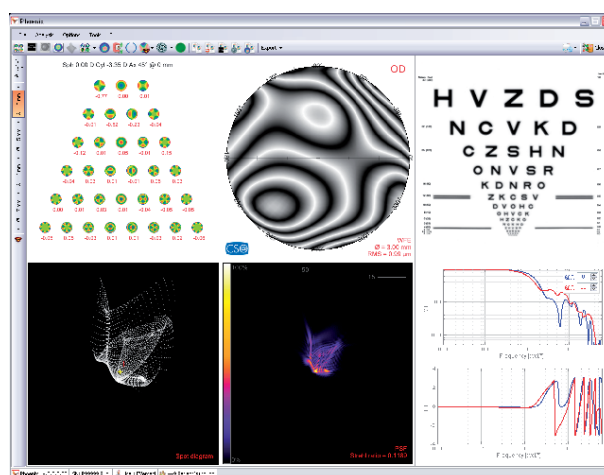


Figure 3

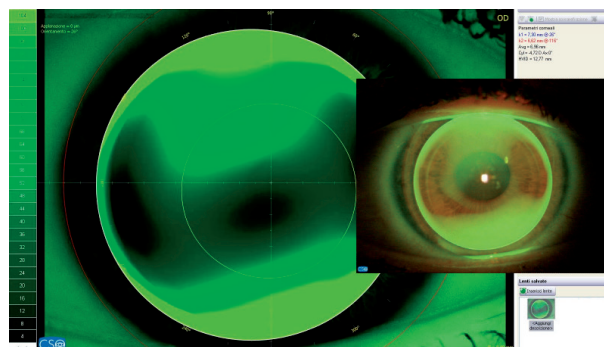


Figure 4

TECHNICAL SPECIFICATIONS

Working distance: 80 mm

Rings: 22

Measured points: 21632 for anterior surface and 16000 for the posterior.

Processed points: more than 100.000

Covered cornea diameter: 0,4 up to 12 mm diameter

Diopters range: 1 to 100 D

Accuracy ± 0.25 D (half scale)

Electric power supply (only instrument) External power supply

MINIMUM HARDWARE AND SOFTWARE REQUIREMENTS

PC Desktop: Processor Intel Pentium Dual Core - 1 GB RAM (2 GB suggested for Windows Vista and Windows 7) - Firewire board 1394B (800 Mb/s) OHCI 1.1 compatible - Video board 512 MB RAM (dedicated) resolution 1280x1024 pixels

Software: Operative system Microsoft Windows XP Home, Windows XP Professional, Windows Vista 32 bit Home premium, Windows 7 – 32 and 64 bit.