

NON CONTACT

# SPECULAR MICROSCOPE

▶ *ENDOTHELIUM SPECULAR MICROSCOPE EM-3000*



- *Auto Alignment + Auto Shot*
- *Integrated Non Contact Pachymetry*
- *Counts up to 300 Cells*
- *7 Measurement Areas*
- *Fast and Automatic Analysis*
- *8.4" Colour Touch Screen*
- *Morphology and Density Diagrams*

# ALL-IN-ONE SPECULAR MICROSCOPE

## WITH CORNEAL ENDOTHELIUM PHOTOGRAPHING AND AUTOMATIC ANALYSIS

Non-contact examination, auto alignment and automatic analysis of the endothelium layer makes working with the EM-3000 professional and quick. Due to the low intensity source of light needed for evaluation, the Specular Microscope EM-3000 assures maximum patient comfort. The integrated non contact pachymetry will be automatically measured with every examination. The 8.4 inch colour touch screen is used as an operating monitor as well as for displaying all measured values. You can even move the unit in all directions by simply touching the screen. All commands can be given via touch screen.

### *Auto Alignment + Auto Shot*

The handling of the EM-3000 is very easy - it does almost everything by itself. Alignment and measurement are done automatically. You just roughly align the system towards the patient eye and the rest is taken care of by the instrument. With a tap on the screen the system automatically moves to the left or right eye. Of course you also can do the examination in the manual mode.

Step 1:



Simply touch the center of the pupil

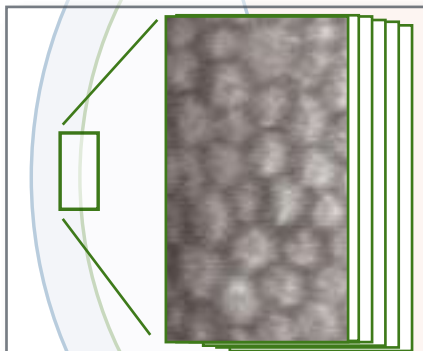
Step 2:



Image is taken automatically

### *Automated Capturing of 15 Images*

The EM-3000 takes 15 Images with every examination. The best image out of these 15 shots is automatically selected and displayed on the screen.



Best Image



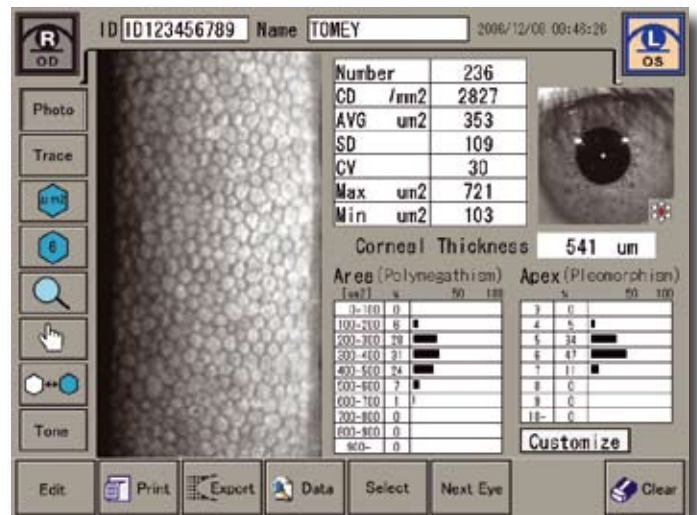
An easy to use colour touch screen shows even the tiniest detail. The EM-3000 does not need a separate monitor or computer.

## 7 Measurement Areas + Automatic Pachymetry

The EM-3000 has a very large measurement area. With up to 300 counted cells the system assures a representative cell density analysis of your patients cornea. Images can be taken at 7 positions: the center and 6 peripheral points (2,4,6,8,10 and 12° clock position). Additional to that the thickness of the cornea will be automatically measured with every exam - of course in non contact method.

## Fast and Automatic Analysis of Corneal Endothelium Cells

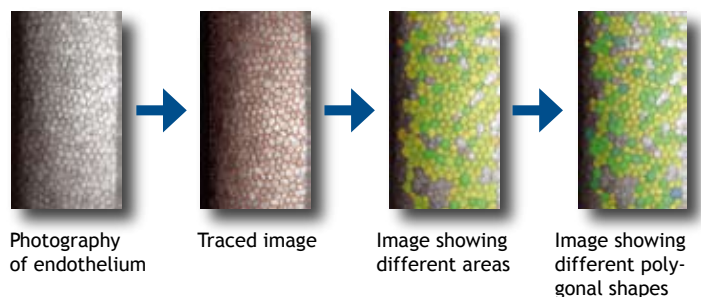
The software evaluates all relevant data respective to the endothelium, such as number and density of cells as well as their form and size. High-quality images enable discovering irregularities or possible degeneration of the endothelium. Also a manual adjustment of the evaluated area within the endothelium image is possible.



Analysis results screen

## Various Display Functions

The image of the corneals endothelium can be displayed with the cell shapes traced, as well as with different areas and structural forms of cells displayed in different colours. This provides a visual understanding of the condition of the corneal endothelium.



Photography of endothelium

Traced image

Image showing different areas

Image showing different polygonal shapes



# EM-3000

## ENDOTHELIUM SPECULAR MICROSCOPE

EM-3000



### SPECIFICATIONS

#### Resolution

<i>Pixels Used for Picture Taking</i>	480 (V) x 180 (H) Pixels
<i>Capturing Scope</i>	0.25 x 0.54 mm
<i>1 Center + 6 Peripheral Measurements</i>	7 x Fixation Points (center; 2; 4; 6; 8; 10; 12 o'clock)
<i>Min. Cell Resolution</i>	1.14 µm (V) x 1.45 µm (H)
<i>Optical Magnification</i>	x 190
<i>Display</i>	8.4" LCD Colour
<i>Display Resolution</i>	1.14 µm

#### Measurement

<i>Auto Alignment</i>	Yes
<i>Auto Shot</i>	Yes
<i>Manual Mode (1 &amp; 2)</i>	Yes

#### Measurement Function

<i>Automated Captured Examina</i>	15 Pictures for Analysis Up to 300 Cells Cell Density CV / SD Cell Size Cell Morphology None Contact Pachymetry
<i>Stroke of Moving Section</i>	X: 88 mm; Y: 40 mm; Z: 50 mm
<i>Stroke of Electrical Chin Rest</i>	70 mm

#### Measuring Accuracy

<i>Pachymetrie</i>	± 10 µm
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#### Data Management

<i>Print Out</i>	Via PictBridge Printer
<i>Data Export</i>	Via Data Transfer SW

#### Operating Environment

<i>Temperature</i>	+10° to +40°
<i>Humidity</i>	30 to 75 %
<i>Atmospheric Pressure</i>	700 to 1060 hPa

#### Communication Ports

<i>USB</i>	for PictBridge Printer
<i>LAN</i>	Data Transfer SW

#### Dimensions & Electric Requirements

<i>Dimensions WDH</i>	453 x 308 x 493 mm
<i>Weight</i>	Approx. 18.0 kg
<i>Power Supply</i>	AC 100 to 240 V
<i>Frequency</i>	50/60 Hz
<i>Power Consumption</i>	100 to 130 VA



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