

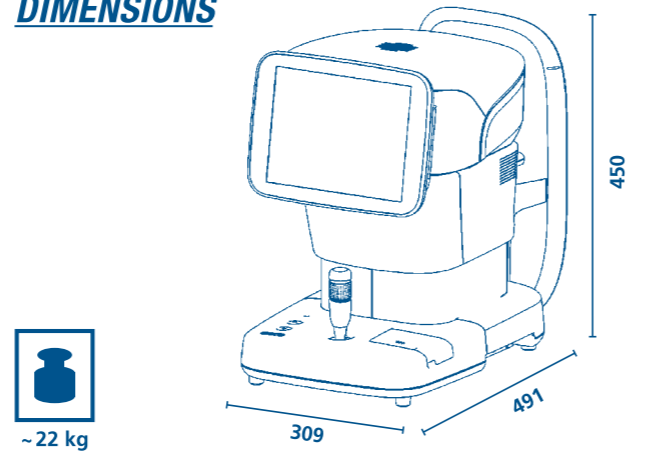
SPECIFICATIONS

| | |
|--|---|
| RESOLUTION | |
| Pixels used for picture taking | 80 (V) x 180 (H) pixels |
| Capturing scope | 0.25 x 0.54 mm |
| 1 centre + 12 peripheral measurements | 13 x fixation points |
| Photography magnification | x 190 |
| Display | 10.4" colour LCD |
| MEASUREMENT | |
| Auto alignment | Yes |
| Auto measurement | Yes |
| Manual mode (1 & 2) | Yes |
| MEASUREMENT FUNCTION | |
| Automated captured examination | 16 pictures for analysis |
| Number of analysed cells | Up to 300 cells |
| Capturing position | Center + 12 peripheral points |
| Analysis method | Automatic analysis, L-count, Core method, Dark area method |
| Analysis values | CD (cell density) AVG (average cell area) SD (standard deviation of cell area) CV (coefficient of variation of cell area) Cell size (max. + min. cell area) |
| Stroke of moving section | X: 88 mm Y: 40 mm Z: 50 mm |
| Stroke of electrical chin rest | 70 mm |
| Measuring accuracy Pachymetry | +/- 10 µm |
| DATA MANAGEMENT | |
| Built in printer | Thermal printer |
| Data output type | USB-Hx2, USB-Dx2, LAN, SD Card (for internal database) |
| OPERATING ENVIRONMENT | |
| Temperature | +10° to +40° |
| Humidity | 30 % to 75 % |
| Atmospheric pressure | 800 to 1060 hPa |
| Standards applied | MDD Annex ii, iSo 13485 |

DIMENSIONS & ELECTRIC REQUIREMENTS

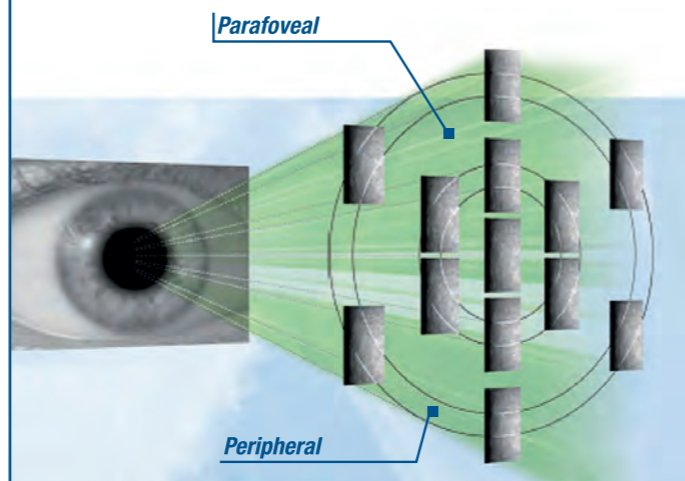
| | |
|--------------------------|--------------------|
| Dimensions WDH | 309 x 491 x 450 mm |
| Weight | Approx. 22 kg |
| Voltage | AC 100 to 240 V |
| Frequency | 50/60 Hz |
| Power consumption | 100 VA |

DIMENSIONS



WIDE CAPTURING AREAS INCLUDING PERIPHERAL

Different fixation targets enable you to capture images also in the periphery – 13 different areas in total! The wide range of positions increases the chance of capturing images on patients with partial cornea opacity.



2019/07 - subject to change without notice

SPECULAR MICROSCOPE EM-4000

ENDOTHELIUM ANALYSIS + PACHYMETRY

DELIGHT IN SIGHT

Stand alone, fast and easy handling.



- Auto alignment + auto measurement
- Integrated non-contact Pachymetry
- 13 measurement areas
- Integrated database and printer
- Automatic analysis, L-count, Core method, Dark area method
- Counts up to 300 cells
- Extremely fast

TOMEY
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THE TOMHEY EM-4000 SPECULAR MICROSCOPE



QUALITY IN DETAIL

Non-contact examination, auto alignment and measurement plus automatic analysis of the endothelium layer make working with the **EM-4000** professional and quick (4 sec. for both eyes). Thanks to our auto alignment technology we can assure the reproducibility of the measured area and therefore also the analysed values.

The integrated non-contact Pachymetry will be automatically measured with every central examination. The big colour touch screen is used as an operating monitor as well as for displaying all measured values. All commands can be given via touch screen.

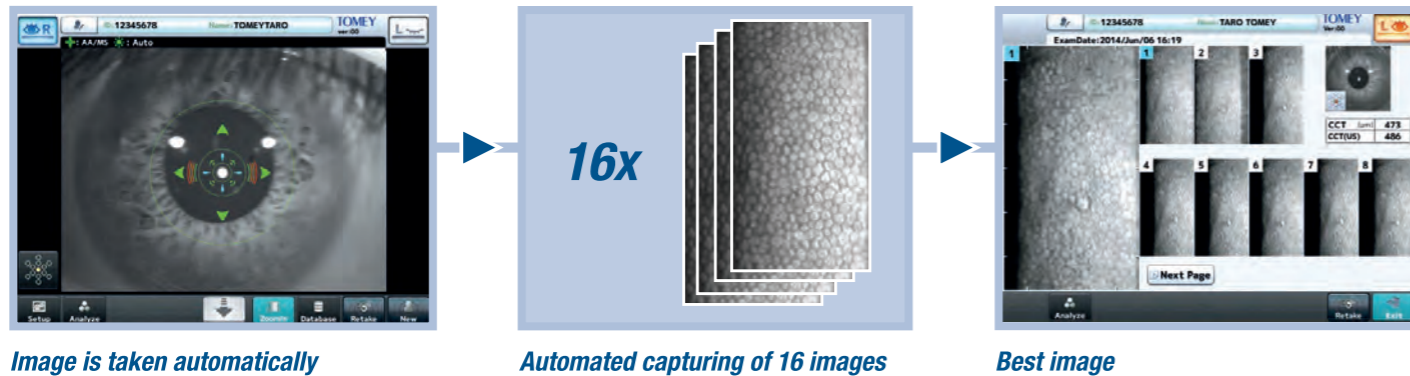
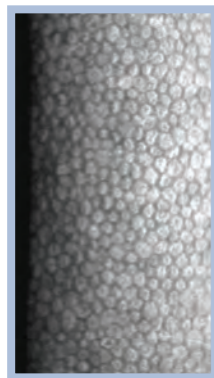


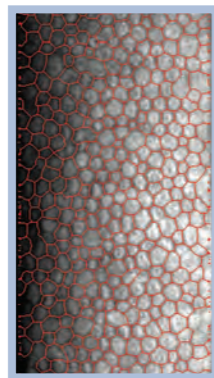
Image is taken automatically

Automated capturing of 16 images

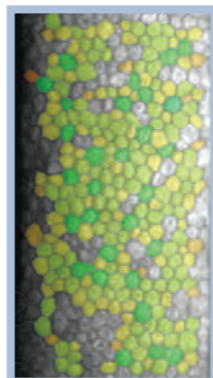
Best image



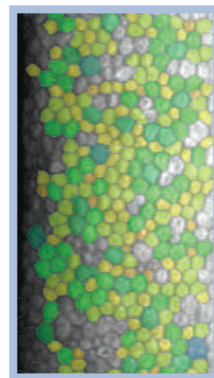
Endothelium layer



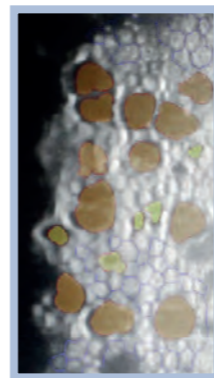
Traced image



Different sizes displayed in colours



Polygonal shapes displayed in colours



Dark area analysis

AUTO ALIGNMENT + AUTO MEASUREMENT

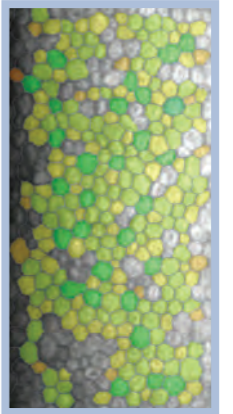
The handling of the **EM-4000** is very easy – it does almost everything by itself. Alignment and measurement are done automatically. Of course you also can do the examination in the manual mode.

13 MEASUREMENT AREAS + AUTOMATIC PACHYMETRY

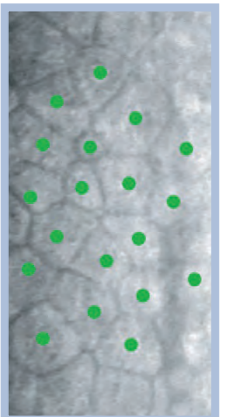
The **EM-4000** has a very large measurement area. With up to 300 counted cells the system assures a representative cell density analysis of your patients' cornea. Images can be taken at 13 positions: the centre and 12 peripheral points. Additional to that the thickness of the cornea will be automatically measured with every central exam – of course in non contact method.

FAST AND FULLY AUTOMATED ANALYSIS OF CORNEAL ENDOTHELIUM CELLS

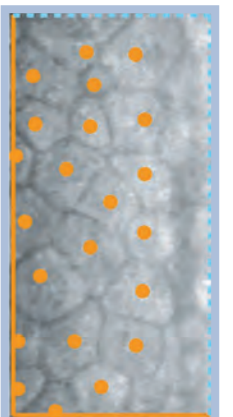
The software evaluates all relevant data respective to the endothelium, such as the density of cells as well as Polymegathism and Pleomorphism (morphology). High-quality images enable discovering irregularities or possible degeneration of the endothelium. For these difficult cases you can use the classical L-count function, the Core method and our special Dark area analysis tool.



Trace method



Core method



L-count method

You can choose between automatic or manual analysis.

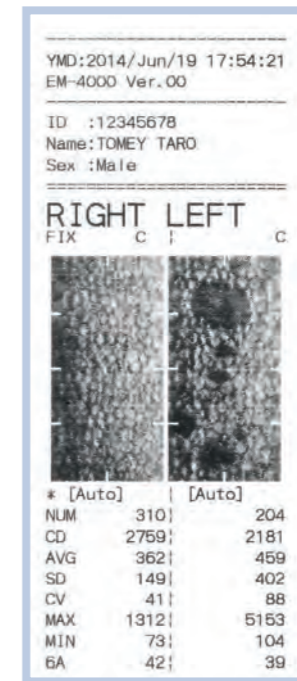
DATABASE FUNCTION & BUILT-IN PRINTER

A database function is provided in the main unit. Two selected measurements can be displayed simultaneously, allowing you to compare observations before and after surgery for the same patient. Data for approx. 16,000 patients can be stored in the SD card set in the main unit.

Performing reanalysis using a different analysis method is possible by retrieving data which has been stored. Printout displays the endothelium image and the analysis result.



Integrated database



Built-in printer