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EYEΦOS ε

Microscan Visum

FULL RANGE OF FEMTOSECOND LASER
CORNEAL SURGERY APPLICATIONS
FOR DAILY CLINICAL PRACTICE
INTEGRATED LENTICULE EXTRACTION PROCEDURE

MICROSCAN VISUM

UPHOLD THE HIGHEST STANDARDS OF REFRACTIVE SURGERY IN YOUR PRACTICE WITH MICROSCAN VISUM UNIQUE FEATURES

Market-highest repetition rate and Super Gauss beam energy profile assure the tissue saving, safe and precise daily operations.

SPEED

1.19 sec per D

TISSUE SAVING

12.9 um per D

FREQUENCY

1100 Hz

ROUGHNESS

190 nm

ENERGY PROFILE

Super Gauss

PLATFORM

Integrated platform with
Femto Visum femtosecond laser

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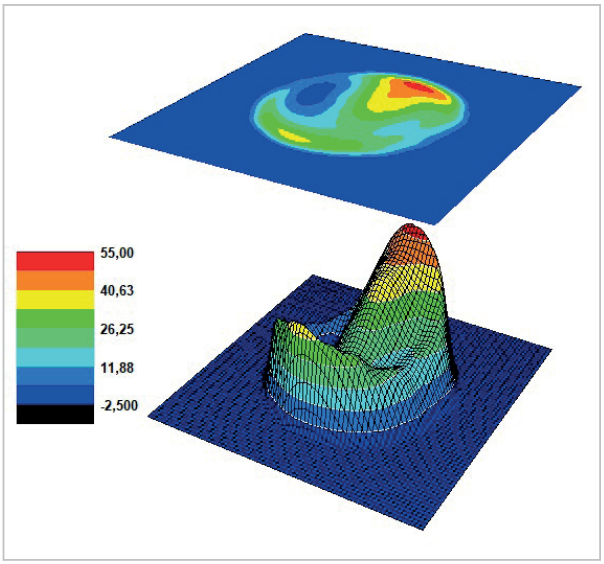
Worldwide Representation Platform

CUSTOMIZED ABLATION PROFILE

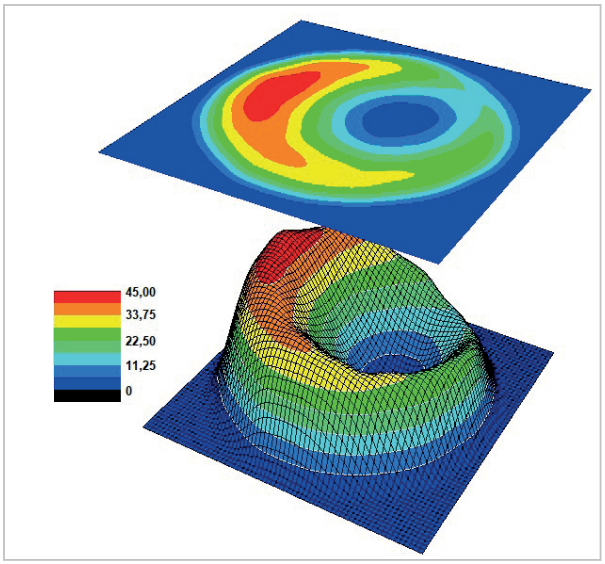
CUSTOM BEAM ENERGY PROFILE CREATED FOR THE TREATMENT OF THE COMPLICATED REFRACTION ERRORS:

- Mixed and irregular astigmatism
- Induced astigmatism
- Coma (decentration)
- Higher-order aberrations

Patient individual measurement data from the corneal topographer, autorefractometer or wavefront analyzer turns directly to the laser settings with our PLATOSCAN and KERASCAN software packages.



Mixed and irregular astigmatism ablation profile



Coma (decentration) ablation profile

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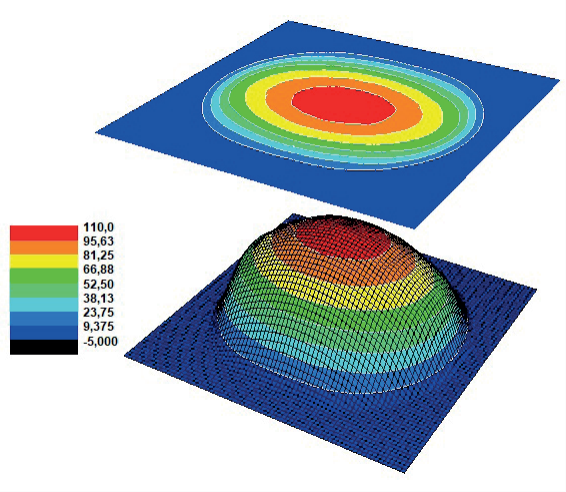
ABLATION PROFILE

«REFRACTION»

- Optimized ablation mode from 12.5 um per D
- Q-factor correction
- Multifocal refraction with wide peripherical zone for low accommodation compensation



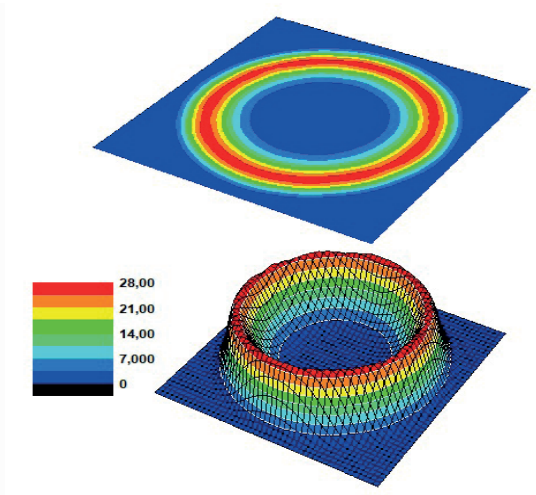
Myopia with astigmatism ablation profile

ABLATION PROFILE

«PRESBYOPIA»

Ablation profile for conventional 2-zone treatment:

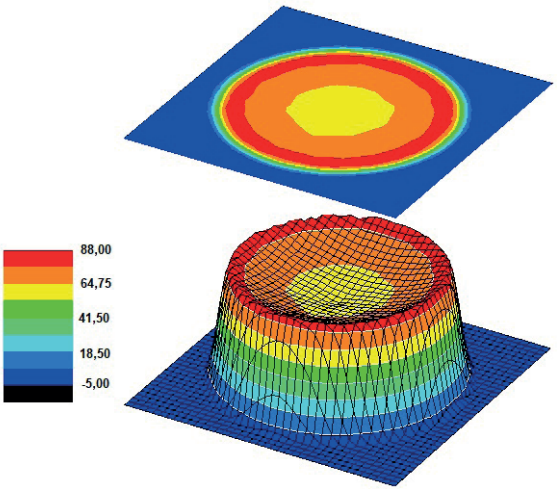
- Central zone optimized for vision at distance
- Side zone for close view



ABLATION PROFILE

«ADVANCED PTK»

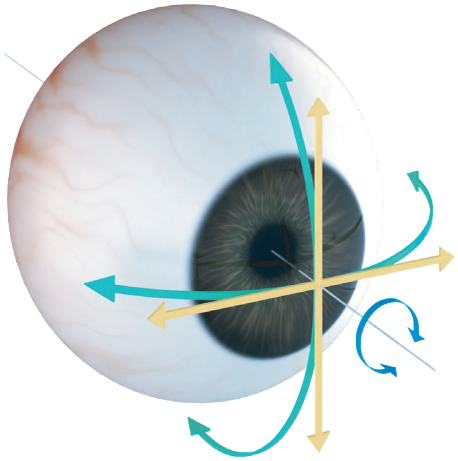
- Initial stage of TransPRK
- Treatment of cornea surface disorders



EYE TRACKING

OWN DESIGN AND PRODUCTION

PROPRIETARY ULTRASTABLE DESIGN OF THE OPTICAL SYSTEM AND CONTINUOUS MONITORING OF EYE POSITION ASSURE PRECISION OF THE TREATMENT



- Pupil or limbal ring may be tracked optionally
- Horizontal and vertical shifts are detected and compensated
- Horizontal and vertical rollings are detected and compensated
- Cyclotorsion is detected and compensated
- Unique optical layout assures an unprecedented focusing spatial stability with no need for any Z-axis shift compensation
- Continuous pachymetry on every treatment stage for the cornea thickness control

AIMING

- Automatic beam centration by:
  - Pupil center
  - Limbal ring center
- Automatic compensation for the Kappa angle
- Automatic compensation for the light-induced pupil size change and pupil center shift

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EXCELLENT ABLATION QYALITY

MICROSCAN VISUM VS ANY OTHER

UNIQUE SUPER GAUSS
BEAM ENERGY PROFILE

ROUGHNESS

less by 2.2 (~190 nm)

ENERGY DENSITY

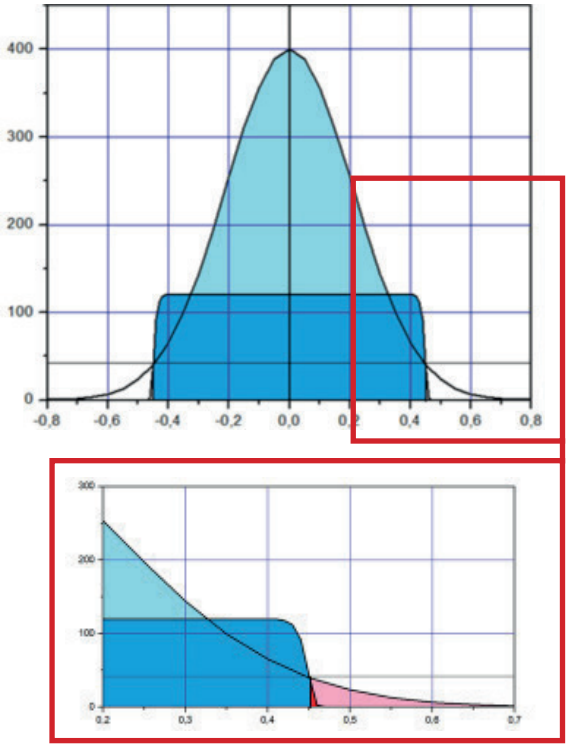
less by 3.5

CORNEA HEATING

less by 2.5

HEALING

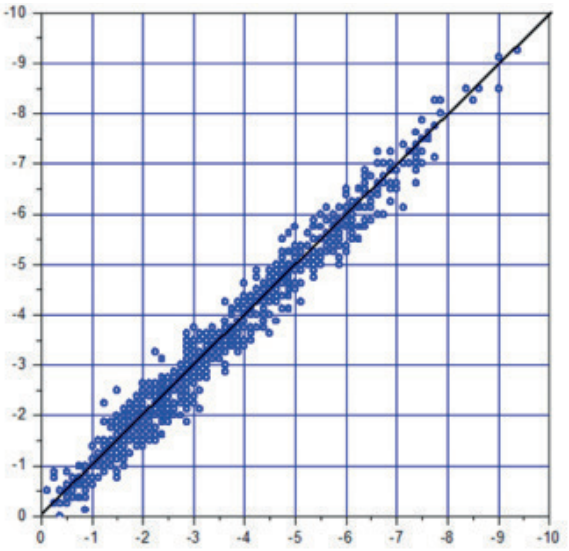
fast recovery after PRK



Energy below ablation threshold (red) turns to heat. Super Gauss *(dark blue) dramatically surpasses Gauss (light blue) in efficiency.*

PREDICTABLE TREATMENT OUTCOME
WITHOUT NOMOGRAM ADJUSTMENT

Spherical equivalent attempted
vs. achieved (1000 procedures)



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EXCIMER LASER CLS 5000

OWN DESIGN AND PRODUCTION

Fastest on the market - 1100 Hz

Long gas premix lifetime

RELIABILITY, SAFETY, EFFICIENCY

FAST SERVICE WORLDWIDE

LOW MAINTENANCE COST

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THE VISUM PLATFORM

MICROSCAN VISUM + FEMTO VISUM

COMPACT FOOTPRINT, ROTATING PATIENT TABLE

ONLINE PATIENT DATA EXCHANGE BETWEEN SYSTEMS

LIVE OPERATION WINDOW STREAM FROM ONE SYSTEM TO ANOTHER

- 1036 Pearl Gold
- 5011 Steel Blue
- 6005 Moss Green
- 7016 Anthracite Grey
- 3003 Ruby Red
- 9017 Traffic Black

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MICROSCAN VISUM AT A GLANCE

APPLICATIONS

- Topo-guided and wavefront-guided (WFG) treatments, wavefront-optimized (WFO) treatments
- FemtoLASIK, LASIK, LASEK
- PRK, topoPRK, transPRK
- Presbyopia
- PTK

System specifications

Laser type	Excimer laser with a metal-ceramic camera, ArF, of class 4 of the hazard degree of generated radiation in accordance with the standard IEC 60825-1
Laser Repetition Rate	1100 Hz & 500 Hz
Wavelength	193 nm
Pulse duration	8-10 ns
Mean energy density on patient's eye corneal surface	(120±5) mJ/cm2
Mean energy dispersion between treatments	Not greater than 2%
Mean radiation power output	750 mW
Maximum radiation power output	1000 mW
Transverse profile of laser beam energy distribution	Super-Gaussian
Laser radiation beam diameter in patient's eye corneal area (full width at half maximum, FWHM)	0.9 mm
Patient eye cornea's treated zone diameter (ablation zones)	Up to 10 mm
Radiation divergence angle	2×4 mrad
Warm-up time after system switching on	not more than 30 minutes
Continuous operating mode duration	6 hours
Working distance (from the instrument to a patient's eye)	180 mm
Laser system weight (without operating table)	340 kg
Overall dimensions (length x width x height)	1520×1500×1550 mm
Laser cooling	Air
Gas system	1 built-in cylinder with "PREMIX" gas, 16 litres
System for removal of ablation products (aspiration system)	Built-in
Monitoring system	Microscope (5 steps of magnification)
Tracking system	IR, active type
Control system	Built-in personal computer
Software	Windows 10 IoT

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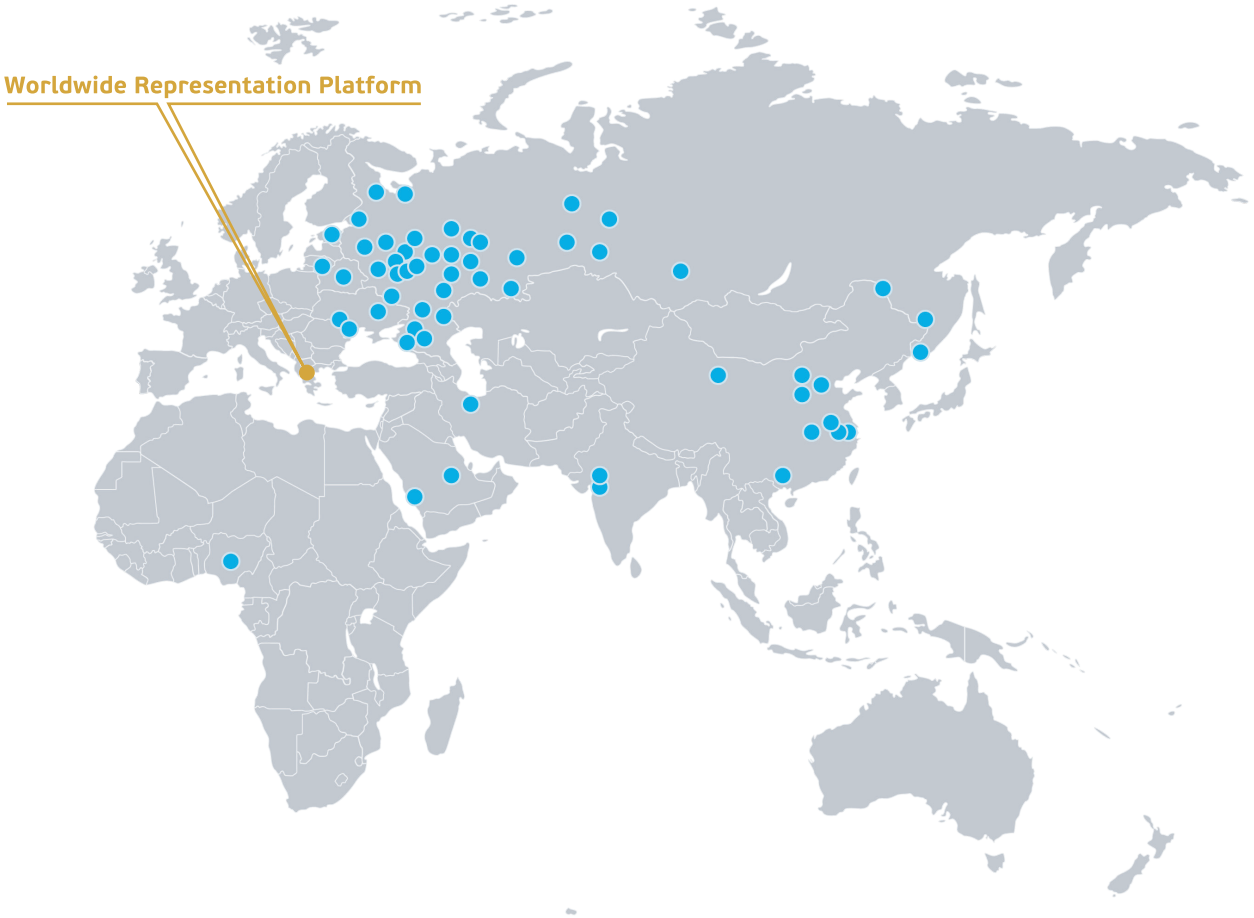

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