OptoSystems

MICROSCAN VISUM

EXCIMER LASER FOR REFRACTIVE AND TERAPEUTIC EYE SURGERY

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

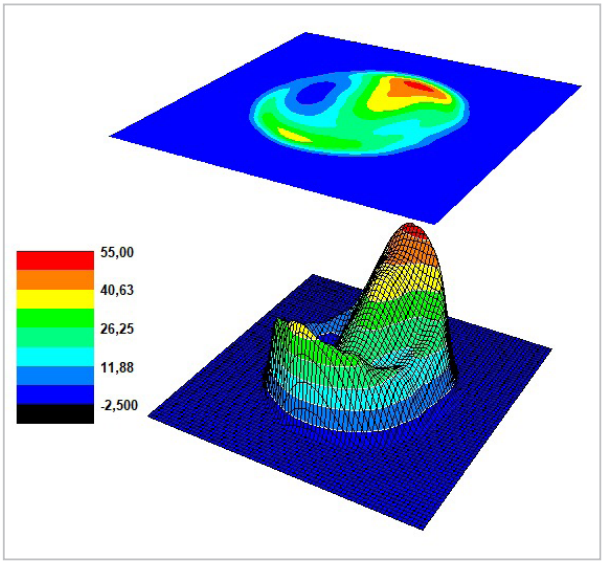
PLATFORM
Integrated platform with Femto Visum femtosecond laser

CUSTOMIZED ABLATION PROFILE

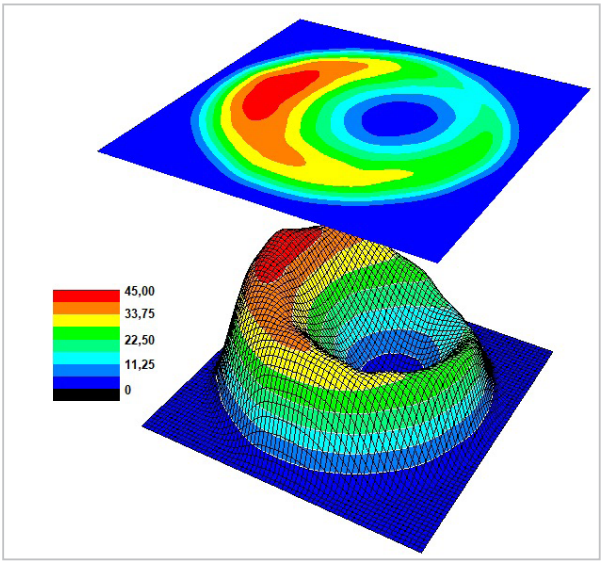
CUSTOM BEAM ENERGY PROFILE CREATED FOR THE TREATMENT OF THE COMPLICATED REFRACTION ERRORS:

- 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

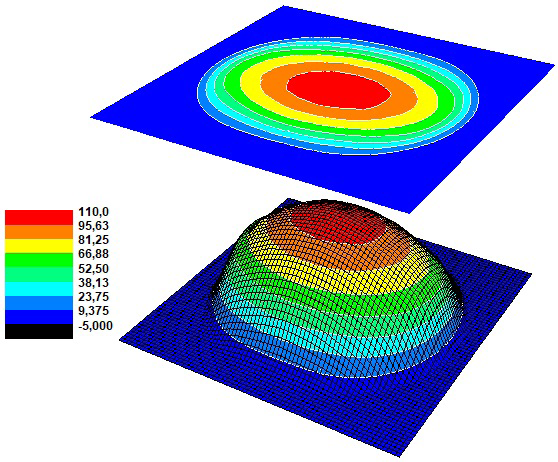


Coma (decentration) ablation profile

STANDARD ABLATION PROFILES

ABLATION PROFILE
«REFRACTION»

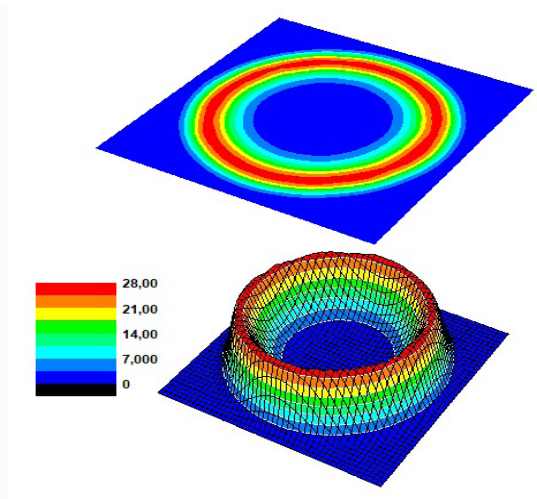
- Optimized ablation mode from 12.5 um per D
- Q-factor correction
- Multifocal refraction with wide peripherical zone for low accommodation compensation



Myopia with astigmatism ablation profile

ABLATION PROFILE
«PRESBYOPIA»

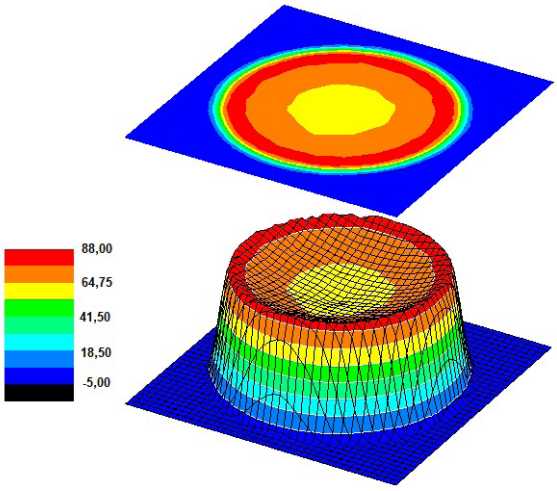
Ablation profile for conventional 2-zone treatment:
- Central zone optimized for vision at distance
- Side zone for close view



Presbyopia ablation profile

ABLATION PROFILE
«ADVANCED PTK»

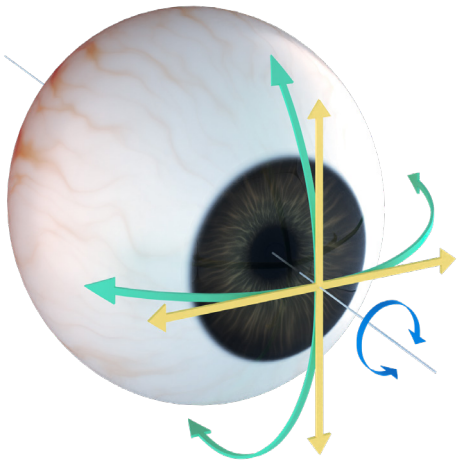
- Initial stage of TransPRK
- Treatment of cornea surface disorders



Advanced PTK ablation profile

EYE TRACKING

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
  - Coaxial corneal light reflex center
- Automatic compensation for the Kappa angle
- Automatic compensation for the light-induced pupil size change and pupil center shift

EXCELLENT ABLATION QUALITY

MICROSCAN VISUM VS ANY OTHER

UNIQUE SUPER GAUSS BEAM ENERGY PROFILE

ROUGHNESS

2.5 times less (~190 nm)

ENERGY DENSITY

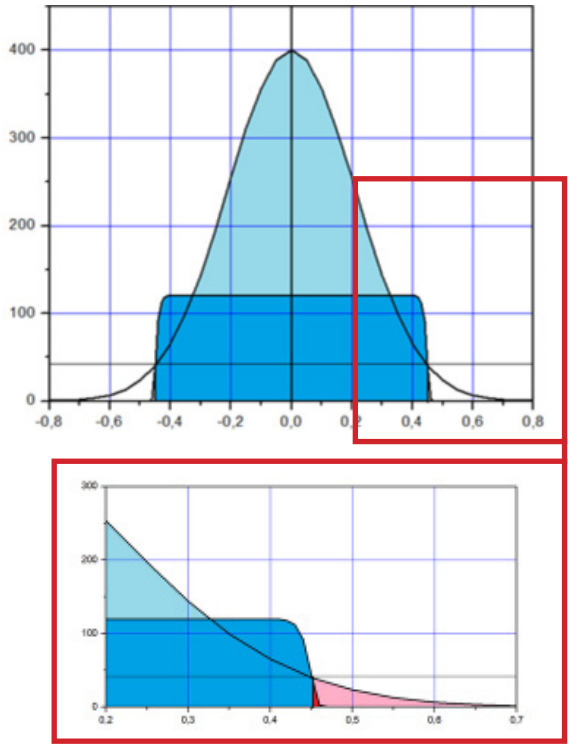
2.2 times less (~190 nm)

CORNEA HEATING

3.5 times less

HEALING

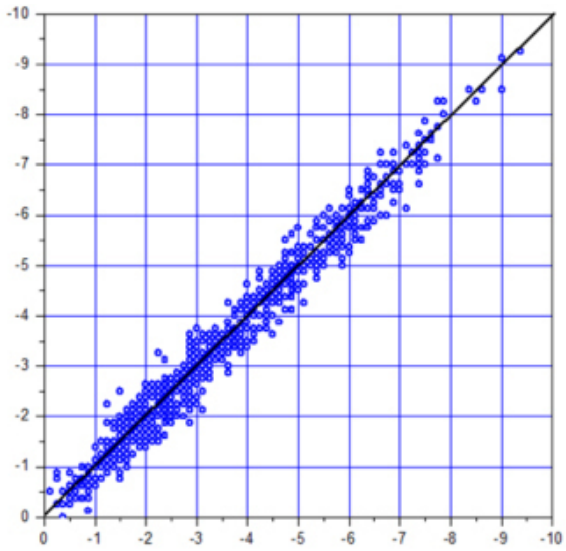
fast recovery after PRK



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)



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

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

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

INDICATIONS RANGE	Myopia up to 13 D, hyperopia up to 7 D, astigmatism up to 10 D
TRACKING	By pupil, limbal ring or scleral vessels
AIMING	By pupil, limbal ring or coaxial corneal light reflex
ABLATION DEPTH	From 12.5 um per D
ROUGHNESS	190 nm
TREATMENT TIME	From 1.19 sec per D
LASER REPETITION RATE	1100 Hz or 500 Hz
LASER WAVELENGTH	193 nm
LASER BEAM DIAMETER	0.9 mm
LASER BEAM PROFILE	Super Gauss
ACCESS CARD	Not required
SUPPORTED DIAGNOSTIC INSTRUMENTS	Topcon KR-1W, Visionix VX 120, Tomey TMS-5
COLD START TIME	30 min
FOOTPRINT	72 x 135 cm (28 x 53 in)

OPTOSYSTEMS

Founded in 2000 with personal participation of nobel-awarded laser pioneer prof. Alexander Prokhorov and one of the refractive surgery's founding fathers prof. Svyatoslav Fyodorov.

More than 150 refractive and terapeutic surgery systems installed worldwide.

OPTOSYSTEMS

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