

MEL 80 Excimer Laser

When you want to see better performance



Reward your practice

Invest in the very latest refractive excimer technology!

The MEL 80™ makes vision correction even safer, more patient-friendly and individual. This ultramodern work platform is designed to increase efficiency for optimum treatment results and rapid visual recovery. To achieve this, the MEL 80™ offers extremely fast ablation, high-performance eyetracking, cyclotorsion compensation and optional CRS-Master custom treatment planning.

More patients, less work

The higher patient volume facilitated by the system's fast setup and treatment time is complemented by an intuitive and user-friendly ergonomic design.

Ambition and a vision for technological progress are the forces that drive us to meet the highest expectations:

Precision for best results

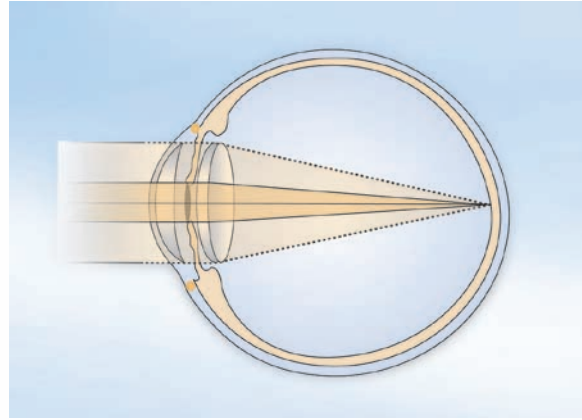
Performance for smooth treatment procedures

Patient Care for delighted patients

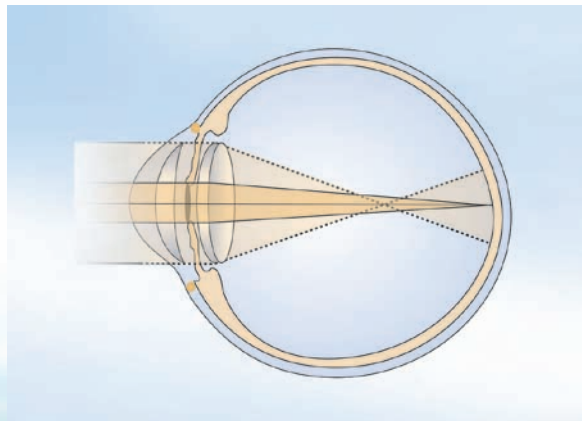
Productivity for efficient clinical workflows



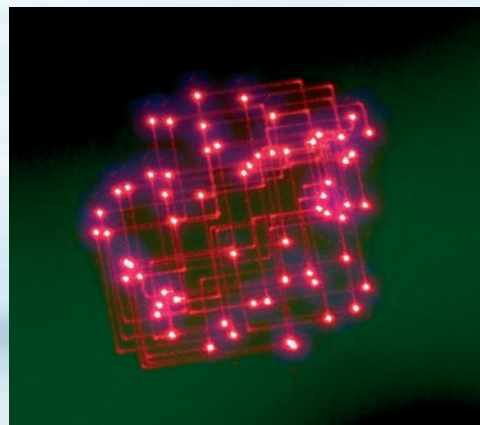
Reward your patients



Prolate cornea
With a prolate cornea the image on the retina is the same in bright daylight as in half-light.



Spherical cornea
Mesopic vision; peripheral beams cause aberrations



Thermally-optimized firing distribution

Performance which speaks for itself

The MEL 80™ uses an extremely small spot size and Gaussian beam profile to produce high quality corneal ablation – exact, even and protective of the surrounding tissue. Even in complex ablation procedures, the large overlap of the laser spot zones yields very smooth surfaces.

Two proven, specially optimized ablation profiles help produce excellent results:

- **ASA (Aberration Smart Ablation)** – strongly aspheric profiles, optimized for mesopic vision
- **TSA (Tissue Saving Algorithm)** – conservative alternative with lower asphericity for re-treatment and thin corneas

Safety and Efficiency

The faster the treatment, the lower the stress

The MEL 80™ helps you significantly reduce treatment time. This has the following benefits:

- Reduced stromal bed exposure to minimize dehydration and accelerate regeneration
- Thermally-optimized laser firing pattern to protect the stroma
- Relieved patients' stress; they only need to concentrate for a few seconds on the fixation light
- Increased efficiency levels and number of patients

Everything under control

The highly responsive active eyetracker and IR camera provide exact positioning during treatment.

Automatic pupil recognition and limbus registration enable rapid adjustment to the desired treatment center. Shifts in pupil center from asymmetrical iris contraction are automatically compensated by the eyetracker.

And what's more – no pupil-dilating medication (with its attendant waiting times) is necessary prior to this treatment.



Perfect workflow with a new swing

With the VisuMax, the MEL 80 excimer laser and the CRS-Master, Carl Zeiss Meditec has assembled three top-of-the-line products as a seamlessly coordinated systems solution for refractive laser surgery, including preoperative examinations, individualized treatment planning and precise flaps, followed by highly accurate refractive corrections and follow-up examinations – all designed to ensure convenient workflow, efficient patient management and best practice treatment results.

Equipped to outperform

Through the combined use of the pivoting patient table between the VisuMax femtosecond system and the MEL 80 excimer laser, patient transfers between surgical steps are no longer necessary. The patient experiences the surgery as an integrated process. Unnecessary waiting periods are minimized and treatment efficiency increased.

Systems that communicate with each other

The optimal coordination of the MEL 80 excimer laser, the VisuMax and the CRS-Master allows you to take full advantage of a highly efficient clinical workflow. We thereby offer you an integrated solution from a single source; a solution that offers you the potential to subsequently expand your networking capabilities with continuously enhanced data flow efficiency and individualized patient treatments.

CRS-Master:

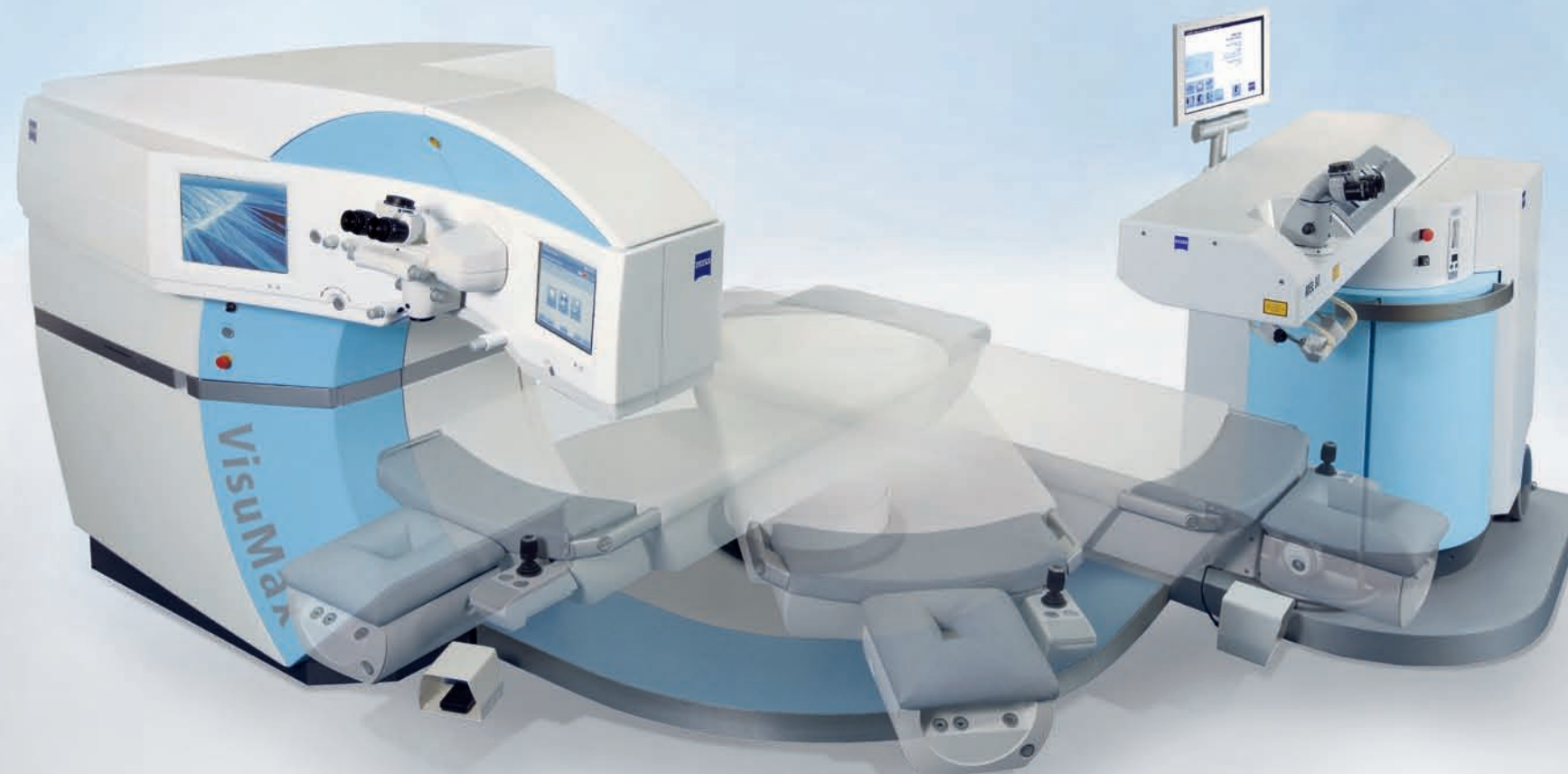
for a truly individual treatment

A top-notch treatment planning tool, the CRS-Master integrates wavefront examination and corneal topography data for the MEL 80, thereby allowing you to create customized treatment programs. The inclusion of additional patient-relevant data offers individualized optical profiles for tailored laser applications.

VisuMax

Improved precision for corneal incisions

The new VisuMax femtosecond system allows you to operate with great accuracy and, what's more, less invasively. Thanks to the system's highly advanced laser technology and innovative optical design, corneal incisions with improved precision are easily performed. As such, the VisuMax offers a very gentle treatment option for corneal surgical procedures – for you and your patients.



CRS-Master



VisuMax

Easy to use

It couldn't be simpler to operate

At Carl Zeiss, we strive to make advanced technology applications as simple and ergonomic as possible for our customers. When using the MEL 80™, take advantage of an extensive list of standardized PRK and LASIK treatment procedures, regardless of your experience level.

The software has been specially developed for this workstation and its graphic interface is self-explanatory. It is clearly structured and takes you step by step through the treatment. Click the mouse to enter data from the left and right eye or to import CRS-Master files.

A large number of other helpful features facilitate and support your work with the MEL 80™: the ergonomically designed workstation, the articulating system display monitor and the internal cable-routing. There are also practical options such as an integrated video camera and a pivoting slit lamp.

The MEL 80™ is also designed to accommodate future system developments through various interfaces.



Practical to operate



Portable and Easy to Set Up

The space-saving platform and integrated wheels make the MEL 80™ easy to set up and stow in operating theatres which are not only used for ophthalmic surgery.

Robust Design and Reliable Operation

Thanks to the sturdy construction, especially of the optics, you can expect completely reliable operation and a long active life from the system. One reason for this is the ceramic material of the laser head.

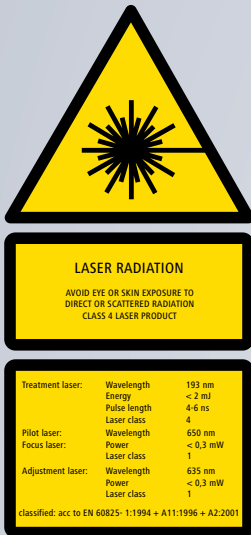
And a further practical feature ...

The beam path is evacuated during operation. This means there is no need for flushing gas systems and extra gas bottles.



Technical Data

Laser data	
Type	ArF excimer laser
Wavelength	193 nm
Frequency	10 / 250 Hz depending on treatment mode
Aiming beam diode	650 nm (laser class 1)
System data	
Weight of base unit	Total weight approx. 260 kg
Dimensions (laser; L x W x H)	155 x 80 x 149 cm (61.0 x 31.5 x 58.7 inches)
Floor area including patient bed (L x W x H)	314 x 180 x 149 cm (123.6 x 70.9 x 58.7 inches)
Cooling	Air, noise-reduced
Mains connection	100 V AC; 50 / 60 Hz; 17.5 A 120 V AC; 50 / 60 Hz; 14.6 A 208 / 220 / 230 / 240 V AC ; 50 / 60 Hz; 7.9 A
Approval	CE mark in conformity with Medical Product Guideline 93/42/EEC
Gas supply	1 integrated ArF-Premix cylinder 10 l 1 integrated helium cylinder (flushing gas) 10 l
Beam manipulation	2 mirrors on closed-loop galvano scanner
Power consumption	1,600 W
Equipment	
Surgical microscope	Carl Zeiss OPMI pico with integrated co-observer video camera (optional)
Monitor	Digital color TFT monitor, 15"
Operating system	WindowsXP®
Eyetracking	Active eyetracking, IR, 250 fps, limbus
Patient bed	LS Comfort 80
Doctor's chair	Jörg & Sohn
CCA+ (smoke extractor)	Integrated in device
Spot scanning parameters	
Beam diameter	0.7 mm FWHM, Gaussian beam profile
Treatment area	max. 10 mm
PTK treatment	
Area ablation	Programmed PTK shaping
Spot ablation	PTK spot ablation
Optional extras	
Video camera, integrated	
Pivoting slit lamp	
Second monitor	



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