

VisuMax and MEL 80
variable combination

Systems that communicate with each other

The optimal coordination of the MEL 80 excimer laser, the VisuMax and the CRS-Master allow 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.



Installation and Operation Overview

VisuMax femtosecond system

System components	Patient Supporting System with platform Integrated Uninterruptable Power Supply (UPS) Surgical microscope with additional slit illumination Integrated video camera with digital recording
Laser parameters	Wavelength 1043 nm Pulse duration 220 – 580 fs Repetition rate 500 kHz

Installation requirements

Weight	855 kg (incl. Patient Supporting System, platform, UPS)
Recommended room size	3.50 x 4.20 m ² (3.6 x 6 m ² in combination with the MEL 80 excimer laser)
Electrical requirements	100 – 240 V, 50/60 Hz, max. 16 A Dedicated power line with separate fuse

Ambient conditions

Room temperature	18... 25 °C
Relative humidity	30... 70 %
Accessories	Disposable Treatment Pack (sizes S / M / L and type KP) PSS Adapter for Keratoplasty



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VisuMax

Defining the pulse rate of femtosecond performance



500 kHz of high performance

Now featuring a laser pulse rate of 500 kHz, the VisuMax Femtosecond System from Carl Zeiss Meditec creates a new dynamic in corneal surgical efficiency. VisuMax combines excellent incision precision, best-in-class speed and comfort in performing modern femtosecond laser applications.

500

500

500

500



500
500
500 kHz
500
500

Enhanced surgical workflow

The high repetition rate femtosecond system of VisuMax can positively impact surgical workflow in a number of ways. Short procedures improve the comfort of patients and surgeons alike, while also enhancing overall surgical efficiency and patient throughput. VisuMax also gives surgeons the freedom to use advanced parameter combinations without compromising procedure time.

VisuMax is speed

- 500 kHz laser repetition rate
- Fast and precise corneal incisions
- Advanced treatment options
- Improved clinical efficiency
- High patient comfort

VisuMax

Incision with precision

A small incision in the cornea – a major step toward a carefree life without glasses. More and more people are choosing to fulfill their vision dreams with refractive surgery, a trend that is expected to continue to grow in the future. The VisuMax from Carl Zeiss Meditec puts you in a unique position to meet this development head on. This cutting-edge femtosecond system allows you to operate more precisely, safely and, in particular, gently. It opens the door to a broad and expanding

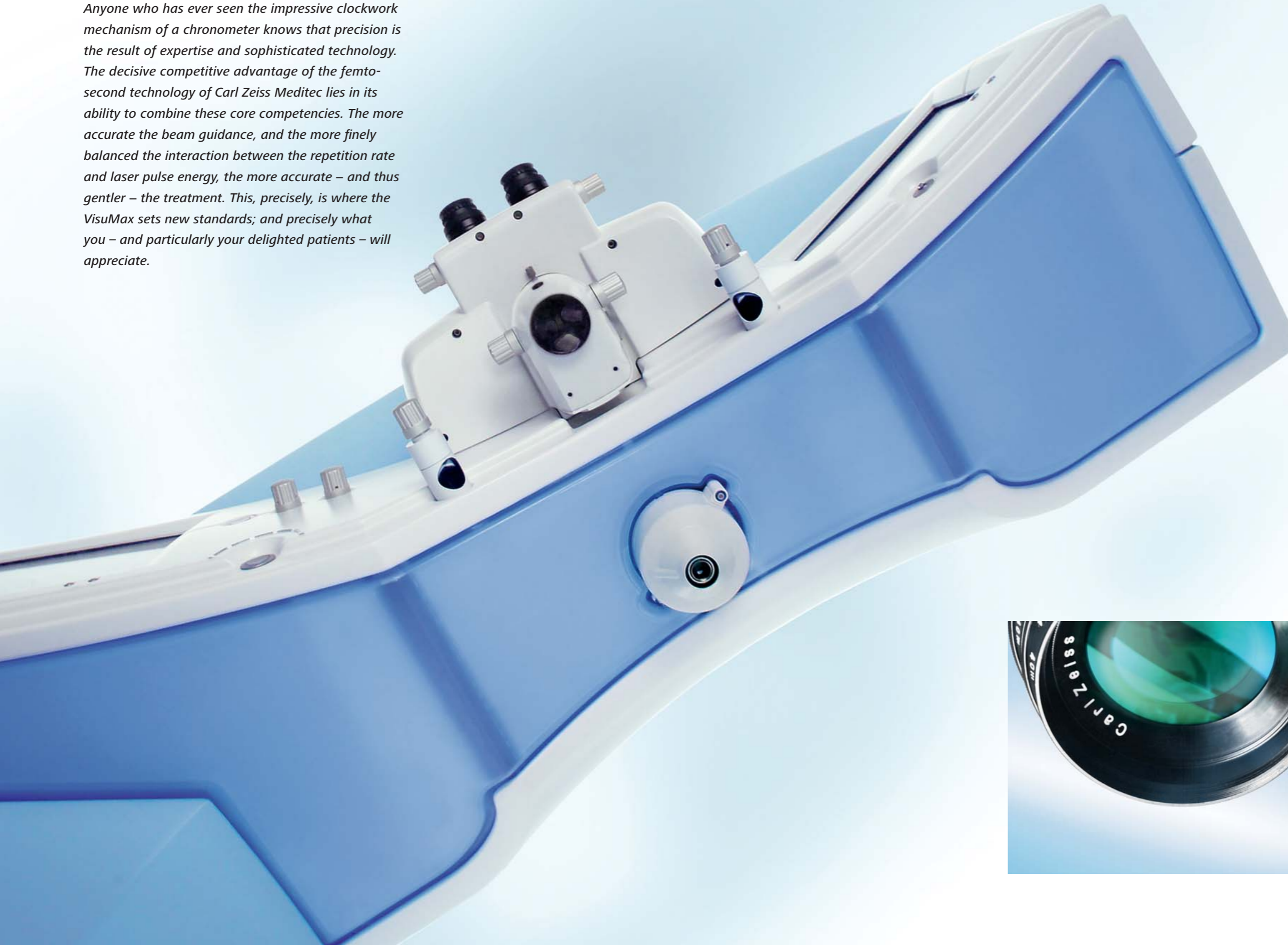
spectrum of surgical options, as well as to a new patient population. With its inspired design concept, the VisuMax is a superbly engineered corneal surgery workstation, well-prepared to also perform the surgical applications of tomorrow. VisuMax is the latest addition to Carl Zeiss Meditec's portfolio of products for refractive specialists, for whom we have been helping to advance corneal surgery for over 20 years.

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

For those who value precision

Anyone who has ever seen the impressive clockwork mechanism of a chronometer knows that precision is the result of expertise and sophisticated technology. The decisive competitive advantage of the femto-second technology of Carl Zeiss Meditec lies in its ability to combine these core competencies. The more accurate the beam guidance, and the more finely balanced the interaction between the repetition rate and laser pulse energy, the more accurate – and thus gentler – the treatment. This, precisely, is where the VisuMax sets new standards; and precisely what you – and particularly your delighted patients – will appreciate.



Operating as if with velvet gloves

How do you achieve faster, more accurate incision beam guidance? With minimum laser energy, made possible through high-precision Zeiss optics, and with a high pulse repetition rate enabling unparalleled incision beam guidance perfection – precisely to the desired ablation depth. As a result, the tissue outside of the defined area of interest remains untouched. There is simply no safer, more accurate way of guiding corneal incisions.

Multifaceted surgical options

Providing vast flexibility of incision geometry, the VisuMax is a unique universal system. Intuitive software allows you to conveniently adjust all patient-specific treatment parameters. Precise flaps and keratoplasty are just the beginning of the potential applications range of the VisuMax in corneal surgery – thanks to the innovative femtosecond laser technology from Carl Zeiss Meditec.

Targeting new patient groups

Incision guidance with the VisuMax is accurate and predictable. Variation in flap thickness, for example, is remarkably minimal. As a result, you benefit from far greater safety when treating patients with thin corneas or high ametropia, in whom refractive laser eye surgery may not have been indicated in the past.



Gentle treatment is the best recommendation

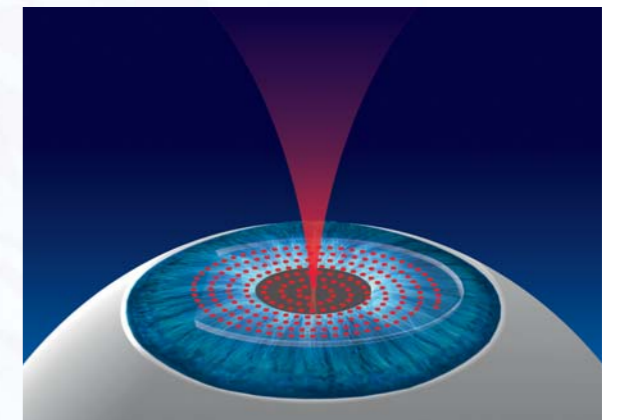
Everyone has a curved cornea. Our contact glasses with their new positioning design are therefore also curved. After all, nature often provides us with the best answers. Over the course of a long evolutionary process, nature developed numerous solutions for economically achieving its goals at minimal energy expenditure. In the interest of maximum patient comfort and safety, we took this knowledge and combined it with an attractive design to allow your patients to also feel completely comfortable. And, of course, news about feeling comfortable during treatment is sure to spread.

A contact interface as unique as the cornea itself

The positioning of the curved contact interface of the VisuMax is unique. Contact and suction to the patient's eye occur only on the cornea. This stable, gentle interface concept offers you ideal results. Various size contact interfaces enable optimal fitting for individual eyes, thus preventing unnecessarily high intraocular pressure while eliminating vision loss commonly associated with suction. A fully integrated vacuum system represents yet another safety advantage. Performed automatically, corneal suction is continuously monitored throughout the surgery, and – with the VisuMax – takes only seconds longer than the actual laser incision itself.

Design reflecting technological precision

The VisuMax introduces outstanding technology and sophisticated design into your practice. Its discreet blue illumination design creates a calming ambience. The ergonomic pivoting patient table, installed together with the VisuMax on an attractive and sturdy platform, ensures maximum comfort for both you and your patients. Your patients will recognize your expertise and professionalism the moment they enter your clinic.



Taking a page from the professionals

At Carl Zeiss Meditec, we are committed to manufacturing products and systems that fit seamlessly into your clinical workflow while offering superior treatment results. Already beginning with the conceptual design phase, we are in close consultation with physicians from around the world. The result: the VisuMax – a clinically sophisticated, superbly engineered instrument for precise, safe and fast laser treatments with optimal results.

How precision fits into your daily routine

With the VisuMax, perfect ergonomic design starts with the contact interface. Because patients retain their vision during the surgical procedure, they are able to actively cooperate throughout the entire laser treatment. As a universal workstation for corneal surgery, the VisuMax features a high-quality Zeiss surgical microscope and integrated slit illumination. During the surgical procedure, the VisuMax provides audio cues, allowing you to fully concentrate on the laser therapy.

Freeing up your head and hands

The intuitive software of the VisuMax offers you the surgeon complete freedom to focus on the treatment. Patient positioning between the surgical microscope and the treatment position, for example, is performed fully automatically. The touch screen and intuitive software enable easy system control, with interactive system features providing additional support. Preset treatment programs offer you the necessary level of standardization, and the patient-oriented planning the freedom needed to operate. An integrated video camera equipped with a DVD recorder enables comprehensive, up-to-the-minute treatment documentation.

Future integrated technology

Thanks to its convenient system handling features and thorough development planning, the VisuMax has the potential to pay fast dividends. Its robust, low-maintenance system design, for example, has no parts requiring routine replacement. Also, the system has no permanent standby mode, yet it is always ready for use – a feature that is not only economically beneficial, but also environmentally friendly. Moreover, precise flap incisions are only the beginning of the visionary clinical applications potential of the VisuMax femtosecond laser.



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.

MEL 80: everything you need for best results

All of the parameters of this first-rate excimer laser are designed for efficiency, best-in-class treatment results and fast visual recovery – thanks in particular to its extremely high ablation rate, its individual treatment planning capabilities with the optional CRS-Master, the powerful eye tracker system and the cyclotorsion control.

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.



A powerful platform for corneal transplantations

When combined with the new Keratoplasty option, VisuMax quickly converts into a workstation for corneal transplantations – a powerful platform with an extraordinary laser pulse rate of 500 kHz. Excellent incision quality and laser control enable fast creation of smooth lamellar and circular cut surfaces for highly precise corneal transplantations.

Engaged in the continuous pursuit to improve corneal surgical success at the point of care.

Precision

- Superior lamellar corneal grafts for anterior and endothelial transplantations
- Penetrating keratoplasty with excellent donor and recipient fit
- Highly predictable incision depths for preparation of particularly thin grafts
- Precise incision quality and easy tissue separation due to variable tight spot spacing

Performance

- 500 kHz laser pulse rate for exceptional speed
- High-quality surgical microscope for all surgical phases
- Dedicated adapter for donor graft preparation
- Special Treatment Pack KP compatible with most artificial anterior chambers

Patient Care

- Curved corneal interface for minimum IOP increase and corneal distortion during procedure
- Short procedure time
- High patient satisfaction

Productivity

- Comprehensive keratoplasty workstation
- Sterile workflow concept
- Higher patient throughput
- Greater clinical efficiency

Comprehensive keratoplasty solution

As a comprehensive corneal surgical workstation, VisuMax displays exquisite precision and speed in creating highly reproducible incisions for all three major keratoplasty procedures:

- Penetrating keratoplasty (PKP)
- Deep anterior lamellar keratoplasty (DALK)
- Posterior lamellar keratoplasty (DSEK)

Optimized corneal surgical workflow

The VisuMax Keratoplasty option comprises a range of features specially designed to optimize all phases of corneal transplantation procedures.

Graft preparation solution

A special adapter placed on the headrest of the Patient Supporting System (PSS) offers surgeons an ideal working platform for donor graft preparation.

Fully sterile workflow

VisuMax is designed to enable the entire corneal surgical procedure to be performed in a completely sterile environment (OR).

Special Treatment Pack KP

The Treatment Pack KP, a dedicated curved corneal interface for donor graft preparation, helps to avoid unnecessary compression of the corneal tissue.

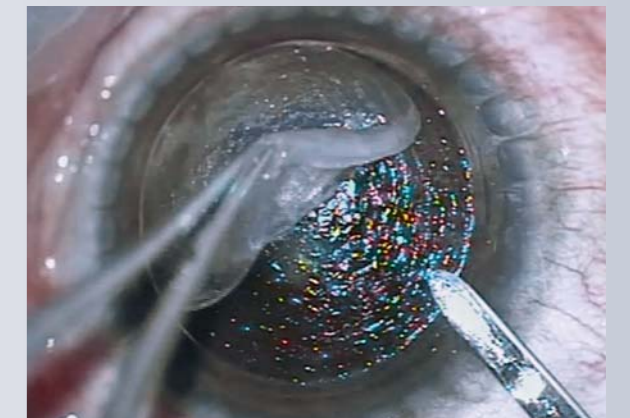
High-quality surgical microscope

The VisuMax surgical microscope offers surgeons excellent visual control during all phases of the keratoplasty procedure. For documentation an integrated digital video recording is already in place.

The Keratoplasty option for VisuMax is not available for sale in the US



The special adapter is a robust and sterile working platform for donor graft preparation



Lift of recipient corneal lamellar incision as seen through the VisuMax surgical microscope



Postoperative diagnostic evaluation showing excellent biometric results.



Dedicated Treatment Pack KP for donor graft preparation