ziemer
OPHTHALMOLOGY

FEMTO LDV Z8

Cornea
Cataract
Presbyopia

IT'S TIME TO MAKE A MOVE

Efficiency

Mobility

Versatility

FEMTO LDV Z8

Next generation femto-cataract technology

TISSUE ADAPTED PULSE MANAGEMENT

The future of femto-cataract surgery

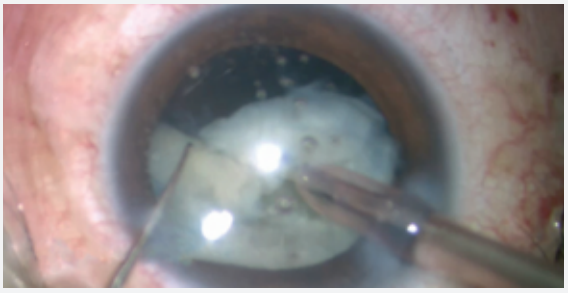
Precisely designed for corneal and cataract surgery, the FEMTO LDV Z8 provides the most advanced technology available for laser-assisted surgery. A powerful and unique laser source allows you to individually adapt the pulse energy to your surgical needs. Put the power in the right place.

Lower energy in the cornea:

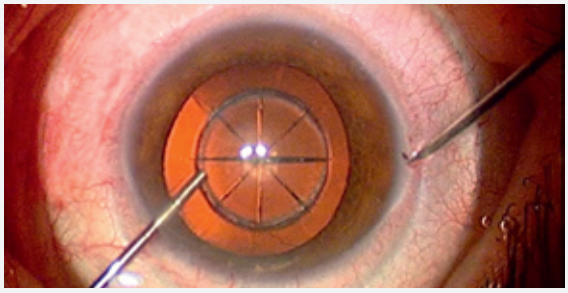
- Excellent resection[1]
- Very high precision[2]
- Very low complication rate[2]

Higher energy in the lens if needed:

- Efficient lens fragmentation of all grades[1]
- Optimal fragmentation for reduced phaco energy[1]



Femtosecond laser cataract pre-treatment – removing the segments from the lens fragmentation in an intumescent cataract (Courtesy of Dr. Luis Izquierdo, Oftalmosalud, Peru)



Capsulotomy and lens fragmentation (Courtesy of Prof. Bojan Pajic, Eye Clinic Orasis, Switzerland)

Unique femtosecond technology

In the world of refractive procedures, experience has proven that lower pulse energy is generally associated with fewer side effects[3] and this also holds true for cataract surgery[4]. Increased pulse energy may cause weakness in the edges of the capsulotomy and potentially compromise the capsular bag due to the excessive gas production inside the lens[5].

The optics on the FEMTO LDV systems produce precise focused laser pulses so that photodisruption can be achieved with very low energy in the nanojoules range[3]. This very low pulse energy, combined with the very high pulse frequencies in the megahertz range, have distinguished the FEMTO LDV systems and demonstrated proven high performance.

Refract

LESS ENERGY, MORE POWER

FEMTO LDV Z8
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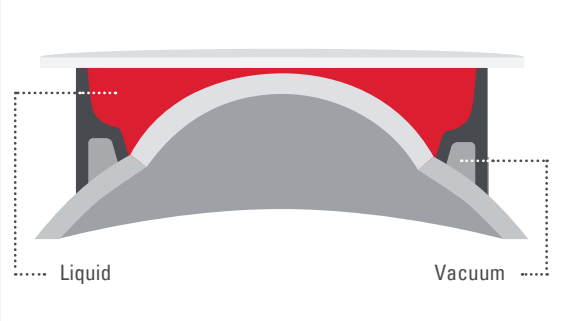
ADVANCED PATIENT INTERFACE

Patient interface: Liquid

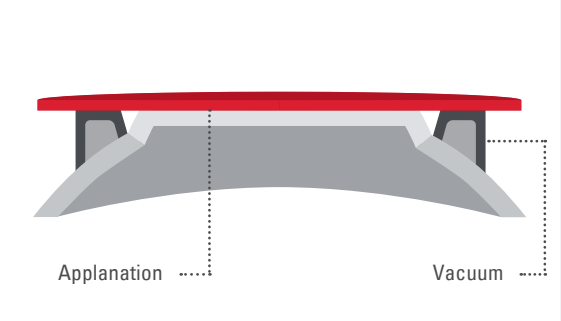
For cataract surgery, a fluid-filled patient interface provides a relaxed, non-deformed cornea without posterior folds. This avoids shifts of the laser beam and degradation of its focus, assuring an optimal resection with complete capsulotomies[1,5]. The docking procedure is easily achieved and guarantees for maximal visualization.



The liquid interface ensures only a minimal increase in intraocular pressure, which is especially important for elderly patients[6]. The FEMTO LDV Z8 interface utilizes non-applanation and a novel design to assist with higher patient comfort and leads to minimal or no subconjunctival hemorrhage[1, 8].

Patient interface: Applanation

For corneal surgery, the design of the FEMTO LDV's patient interface has proven to be efficient and extremely precise[2]. This transfers perfectly to the FEMTO LDV Z8. A simple and fast docking can be achieved manually thanks to the flexibility of the handpiece and an easily maneuverable articulating arm.



The applanation of the cornea, together with a computer-controlled vacuum, guarantees a stable corneal position for maximal precision. Based on clinical experience from over 2 million successful LASIK procedures, the FEMTO LDV stands out as a system with a remarkably low complication rate[2] and extremely fast visual recovery[7].

One handpiece, two patient interfaces – cornea and cataract all in one system

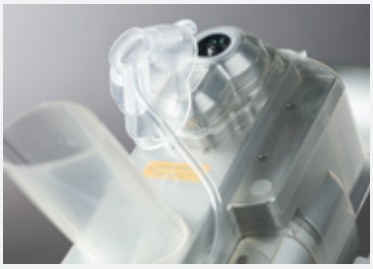


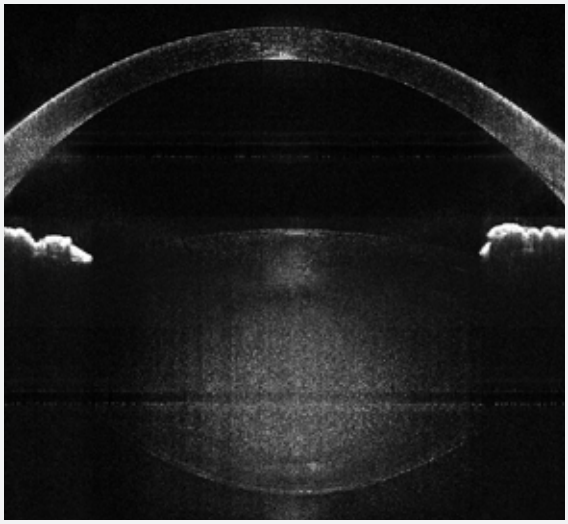
IMAGE-GUIDED SURGERY

Proprietary OCT system

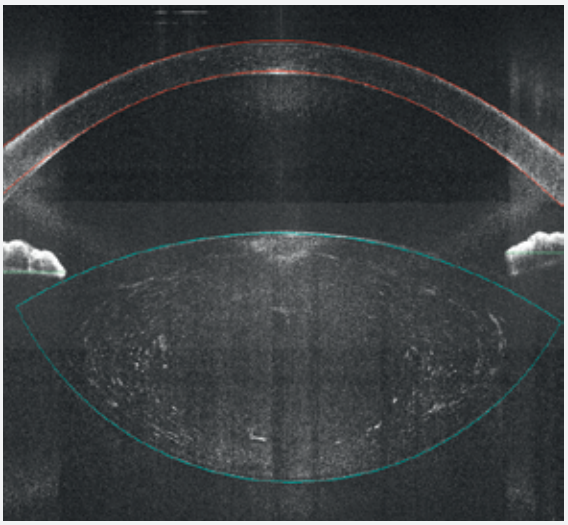
Ziemer has developed a proprietary Optical Coherence Tomography (OCT) system especially designed for the FEMTO LDV Z8. Integrated directly into the handpiece and using the same optics as the laser beam, it provides precise alignment for an accurate resection.

This state-of-the-art OCT system enables the surgeon a clear visualization of the ocular surfaces – before, during and after the procedure.

- High resolution images in cornea and lens
- Automatic edge detection and surface mapping
- Easy and optimized planning

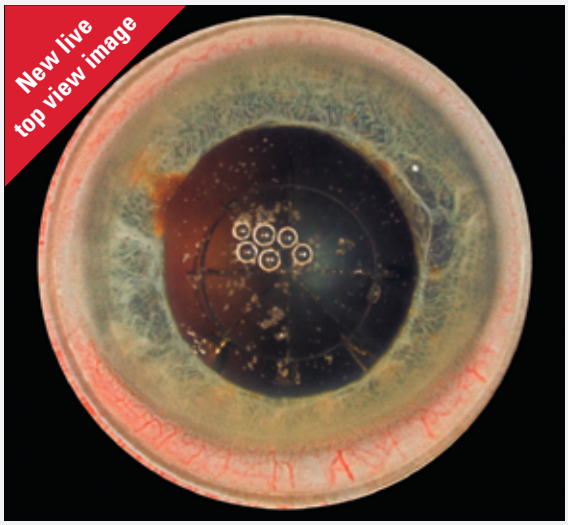


High definition OCT imaging – before, during and after the procedure.



The surgeon can customize the treatment plan based on the OCT imaging. Automatic edge detection and surface mapping make the procedure even more convenient.

Live top view image

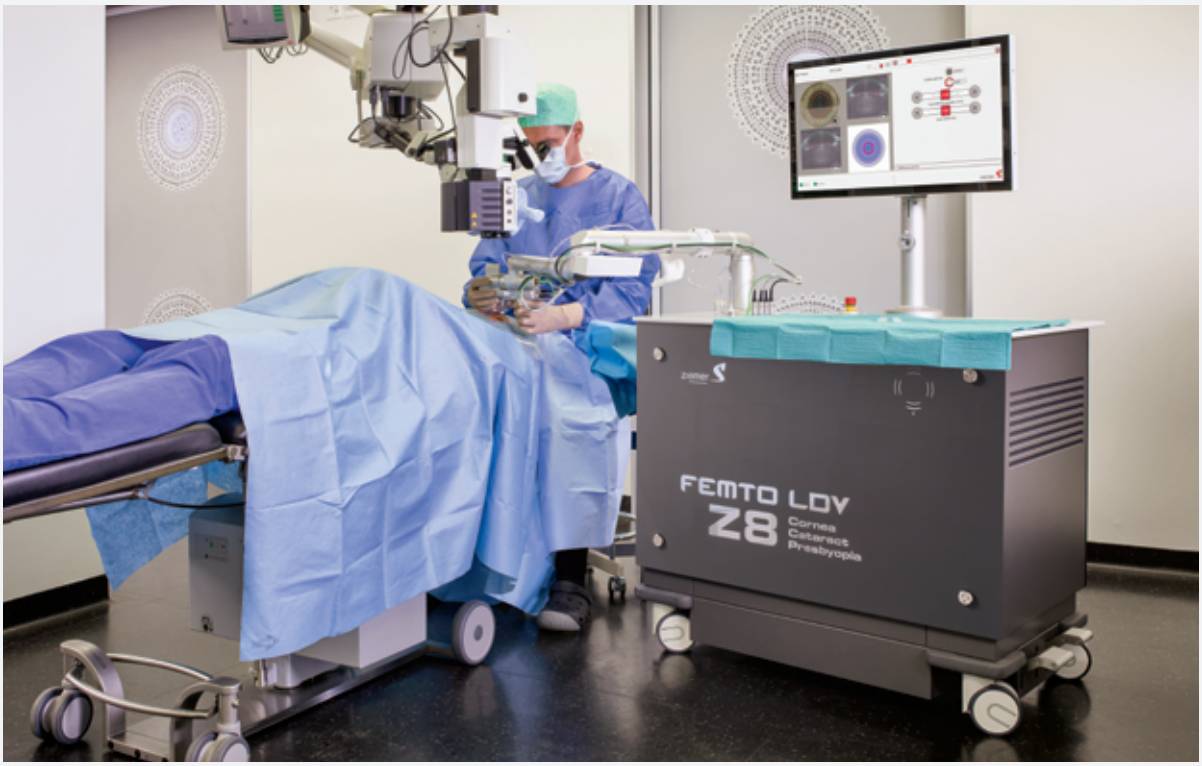


The FEMTO LDV Z8 features live top view imaging between different steps of the procedure.

FEMTO LDV Z8

Perfect integration for an efficient workflow

KEEPING YOUR DAY ON TRACK

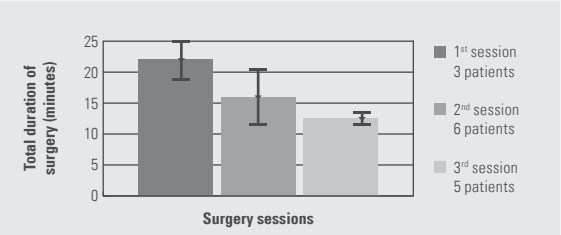


The FEMTO LDV Z8 femtosecond laser truly integrates into your practice and in your daily workflow. All optical and electronic components have been designed for utmost precision and stability. Compact and mobile, the Z8 model provides seamless integration into your OR environment and delivers an extremely efficient workflow for your refractive and cataract surgeries.

- Simplified patient flow – no need to move the patient or the surgeon
- Higher productivity: same workflow as conventional cataract surgery
- No investment in infrastructure needed
- Multi-site use

Surgery duration

As a result of the easy handling, the FEMTO LDV Z8 has a fast learning curve. Since the laser is in your OR and the workflow remains the same, total duration of surgery decreases significantly.



Total duration of surgery (patient in / out):
12.5 ± 1.1 minutes per patient after three surgery sessions[8].

READY WHENEVER AND WHEREVER YOU ARE

FEMTO LDV Z8

The ultimate all-in-one femtosecond system

MODULAR PLATFORM SOLUTION

Modular architecture Adapted to your individual requirements	**Z2 Model**	**Z4 Model**	**Z6 Model** PowerPlus	**Z8 Model**
Z-LASIK	●	●	●	○
Z-LASIK Z		●	●	○
Intracorneal Rings (ICR)		○	●	○
Intrastromal Pocket (ISP)		○	●	○
Lamellar Keratoplasty (LKP)			○	○
Penetrating Keratoplasty (PKP)			○	○
Clear Corneal and Arcuate Incisions (CCI / ARC)			○	○
Anterior Capsulotomy				●
Lens Fragmentation				●
Clear Corneal and Arcuate Incisions (CCI / ARC)				●

Corneal and Presbyopia Applications = Applanation Interface
Cataract Applications = Liquid Interface

● Standard software package
○ To be purchased separately

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The FEMTO LDV Z8 is CE marked but not yet cleared by the FDA for the use in the United States.
For other countries, availability may be restricted due to regulatory requirements; please contact Ziemer for details.

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