

FEMTO LOV **Z8** Cornea Cataract Presbyopia

IT'S TIME TO MAKE A MOVE



Efficiency



Mobility



Versatility

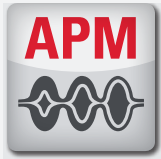


FEMTO LDV Z8

Next generation femto-cataract technology



ADAPTIVE 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 more 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 resection¹
- Very high precision²
- Very low complication rate²

Higher energy in the lens if needed:

- Efficient lens fragmentation of all grades¹
- Optimal fragmentation for reduced phaco energy¹

50 nJ – 2500 nJ
0.1 MHz – 10 MHz

The laser pulse energy can be adapted depending on resection type as well as cataract grade.



Unique femtosecond technology

In the world of refractive procedures, experience has proven that lower pulse energy is generally associated with fewer side effects³ and this also holds true for cataract surgery⁴. 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 lens⁵.

The precision optics on the FEMTO LDV systems produce such highly focused laser pulses that photodisruption can be achieved with much lower energy³. This very low pulse energy in the nanoJoule range, combined with the very high pulse frequencies in the megaHertz range, have distinguished the FEMTO LDV systems and demonstrated proven high performance.

Refract

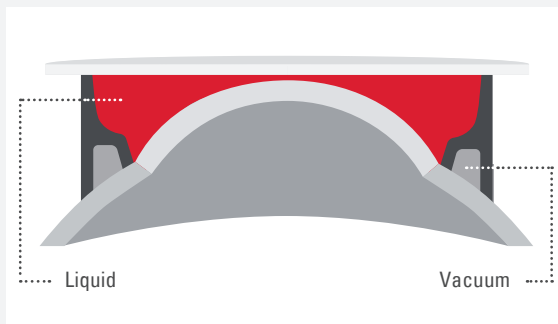
LESS ENERGY, MORE POWER

ADVANCED PATIENT INTERFACE

The unique and intelligent design of the Z8 hand-held system allows for a completely different docking procedure. First, a suction ring is easily placed on patient's eye, with or without the use of a speculum, and then vacuum can be applied.

Lastly, a simple and fast docking can be achieved manually thanks to the flexibility of the handpiece and an easily maneuverable articulating arm. Right under your operating microscope, docking made easy.

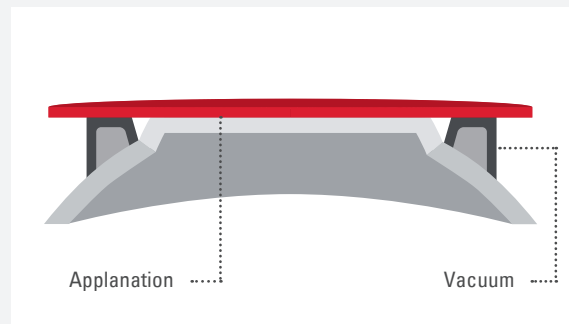
Patient interface: Liquid



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 liquid interface also ensures a minimal increase in intraocular pressure, which is especially important for elderly patients⁶. 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 hemorrhage¹.

Patient interface: Applanation



For corneal surgery, the design of the FEMTO LDV's patient interface has proven to be efficient and extremely precise². This transfers perfectly to the FEMTO LDV Z8.

The applanation of the cornea, together with a computer-controlled vacuum, guarantees a stable corneal position for a higher precision. Based on clinical experience from over 2 million successful Z-LASIK procedures, the FEMTO LDV stands out as a system with a remarkably low complication rate¹ and an extremely fast visual recovery⁷.

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



PROPRIETARY OCT SYSTEM

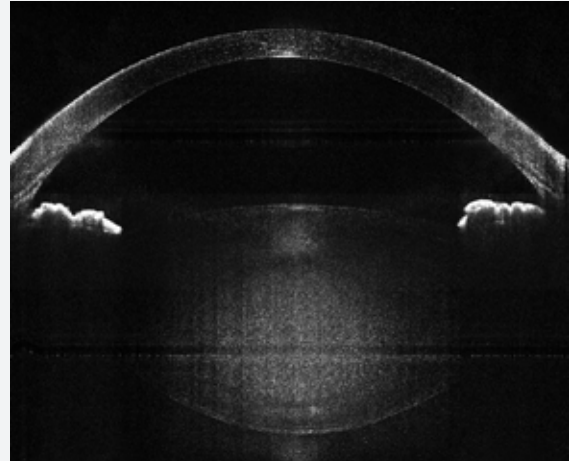
Ziemer has developed a proprietary Optical Coherence Tomography (OCT) system especially designed for the FEMTO LDV Z8. Integrated directly into the handpiece and using the same optics as the laser beam, provides precise alignment for an accurate resection.

This state-of-the-art OCT system enables the surgeon a clear visualization of the ocular surfaces and optimizes the surgical planning process.

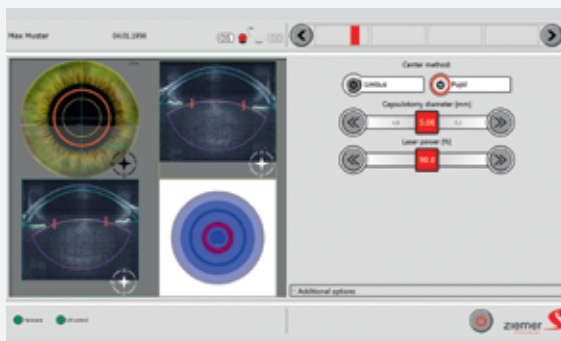
- Proprietary online OCT system
- High resolution images in cornea and lens
- Automatic edge detection and surface mapping.



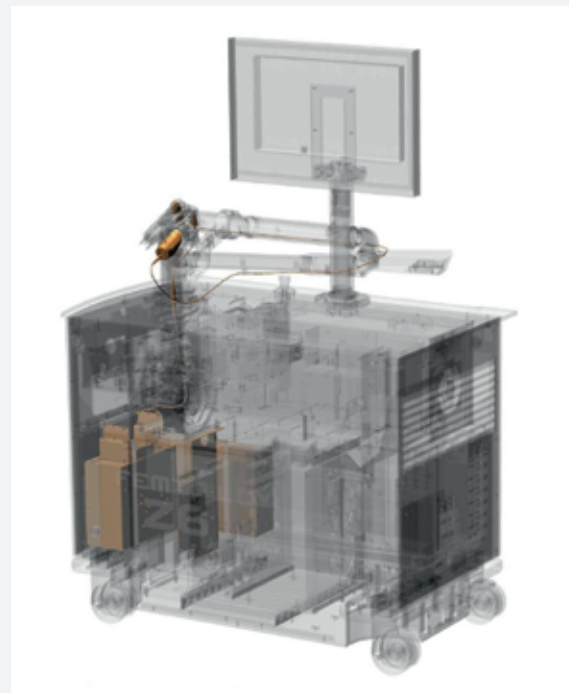
- Imaged-guided surgery
- Easy and optimized planning
- Safe and efficient procedure



High definition OCT imaging system



The surgeon can customize the treatment plan based on the information delivered by the OCT imaging

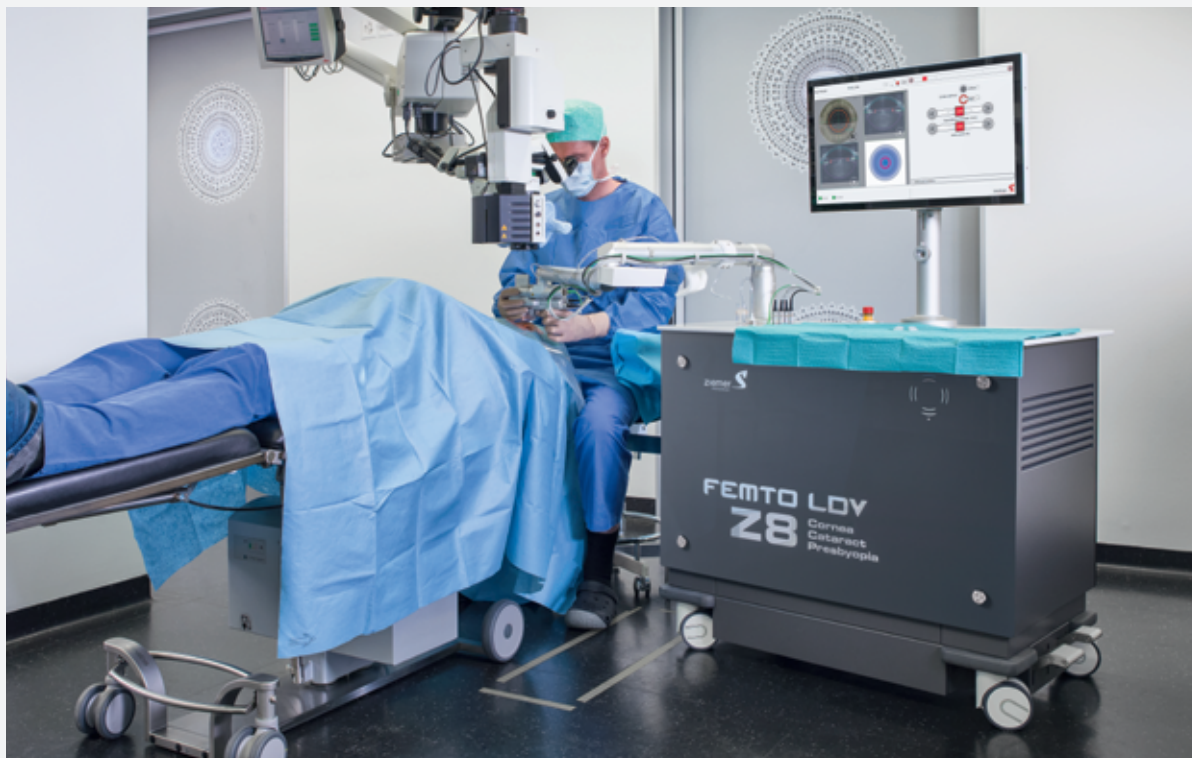


Integrated OCT system specifically designed for the Z8

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.

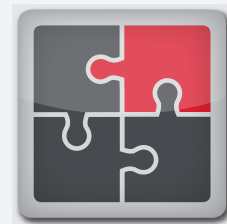
- Simplified patient flow – no need to move the patient or the surgeon
- Higher productivity: same workflow as conventional cataract surgery
- No investment in infrastructure needed
- Multi-site universal system

**READY WHENEVER
AND WHEREVER YOU ARE**

Surger

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 (CI) | | | ○ | ○ |
| Anterior Capsulotomy | | | | • |
| Lens Fragmentation | | | | • |
| Clear Corneal and Arcuate Incisions (CI) | | | | • |

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

• Standard software package
○ To be purchased separately

The FEMTO LDV Z8 covers a wide range of surgical procedures. The corneal and cataract applications are constantly being developed as we continue to learn – and your Z8 model is already designed for these applications. The future is here today.

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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. An upgrade possibility for the FEMTO LDV Z2, Z4 and Z6 is planned once cataract options are available and cleared by the respective regional regulations.

- 1 Data on file, Ziemer Ophthalmic Systems AG
- 2 Pietilä J., Flap characteristics, predictability, and safety on the Ziemer FEMTO LDV femtosecondlaser with the disposable suction ring for LASIK, Eye 2014; 28(1):66–71
- 3 Lubatschowski H., Comparing Femtosecond Lasers, Cataract & Refractive Surgery Today, October 2008
- 4 Lubatschowski H., Applications of the Femtosecond Laser, Cataract & Refractive Surgery Today Europe, February 2012

- 5 Talamo et al, Optical patient interface in femtosecond laser-assisted cataract surgery: Contact corneal applanation versus liquid immersion, J Cataract Refract Surg 2013; 39(4):501–10
- 6 Dick et al, Intraocular pressure variation during femtosecond laser-assisted cataract surgery using a fluid-filled interface, J Cataract Refract Surg 2013; 39(1):22–7
- 7 Durrie D., Evaluating the speed of visual recovery following thin-flap LASIK with a femtosecond laser, J Refract Surg 2012; 28(9):620–4