

ReLEx SMILE

ReLEx SMILE from ZEISS

The first minimally invasive, flapless SMILE solution

ReLEx® SMILE from ZEISS is the first and, until now, only solution for performing small incision lenticule extraction, or SMILE for short. ZEISS is the only company to provide a way for treating patients with this minimally invasive, flapless procedure. Now it is time: Move up to the 3rd generation of laser vision correction – with ZEISS ReLEx SMILE.

Explore the advantages of ReLEx SMILE from ZEISS

Minimally invasive, flapless surgery – With ReLEx SMILE, a lenticule and a small incision of 2 – 4 mm is created inside the intact cornea, enabling an 80 % smaller side-cut as compared to a LASIK flap. Furthermore, 30 % less cap cut is needed.

First SMILE solution – With ReLEx SMILE, ZEISS is at the forefront of the 3rd generation of laser vision correction, a procedure that is redefining refractive laser surgery as we know it.

ZEISS technology – High precision and quality, experience in optics and refractive surgery, ease of use and seamless integration are what ZEISS technology stands for.

ReLEx SMILE indication range for myopia and astigmatism:

- Sphere: -0.50 to -10.00 D
- Cylinder: 0 to 5.00 D
- Spherical equivalent: -0.50 to -12.50 D

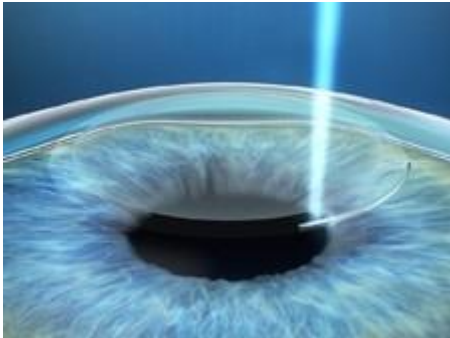


Refractive correction with ReLEx SMILE from ZEISS

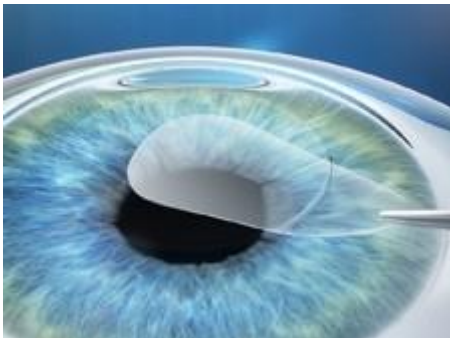
Whereas LASIK procedures involve cutting a flap, folding it back and removing the corneal tissue through point-by-point ablation using an excimer laser, ZEISS ReLEx® SMILE utilizes the high-precision femtosecond laser VisuMax® from ZEISS to create a lenticule inside the cornea and access incision in a single treatment step.

Treatment step

SMILE with VisuMax



A refractive lenticule and small incision are created inside the intact cornea – all in one step.



The lenticule is removed through the incision with only minimal disruption to the corneal biomechanics.



Removing the lenticule changes the shape of the cornea, thereby achieving the desired refractive correction.

Benefit

SMILE combines the advantages of PRK and LASIK. With ReLEx® SMILE from ZEISS, minimally invasive, flapless surgery is possible for the very first time. It is the only SMILE product available on the market.

Flapless

ReLEx SMILE enables to perform the flapless SMILE procedure. Because there is no flap, there are also no flap-related complications. ReLEx SMILE reduces the incidence of infections and epithelial ingrowth while expediting epithelial healing.

Up to 80 % smaller side-cut

Femto-LASIK requires a side-cut of roughly 20 mm. With ZEISS ReLEx SMILE, a small incision of 2 – 4 mm is sufficient.

Up to 30 % smaller cap incision area

The lamellar incision area is roughly 1/3 smaller compared to Femto-LASIK.

Greater integrity of the upper corneal layers

With SMILE, the majority of the upper corneal layers remains intact. This offers the potential for more biomechanical preservation and stability.

Less incidence of dry eye

Requiring only a small incision rather than a flap, there are fewer transected nerves. Consequently, a significantly reduced incidence of dry eye is likely to be correlated.

All-femto

With ZEISS ReLEx SMILE, the entire procedure is performed with the groundbreaking femtosecond laser technology of the VisuMax®. As a result, there is no need for complex nomograms or fluence tests.

Accuracy and dependability every time

ZEISS ReLEx SMILE embodies precision, predictability, reproducibility and perfection. Using the VisuMax, it creates a precalculated lenticule and incision with utmost accuracy and dependability.

Single-step

In a way, it could be called one-stop refractive surgery. With ZEISS ReLEx SMILE, the entire correction is performed as a single-step: on one laser, with one treatment plan and one laser process.

Lenticule and access in one

What also makes it a single-step solution is that the lenticule inside the intact cornea as well as the access incision are created in one treatment step.

Enhanced patient experience

Incorporating superior ZEISS technology, ZEISS ReLEx SMILE enhances the treatment experience for patients with the outstanding cutting precision, exceptional speed and gentle treatment approach of the ZEISS VisuMax.

Disadvantages

Delay in visual recovery

In most patients, It takes time until the cut surface becomes smooth.

Re-operation

Done by PRK surgery