



Precilens

***“We create contact lenses
to allow vision without”***

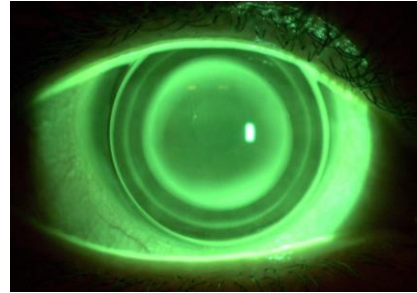
***The most comprehensive system in
ORTHO-K.***

DRL

***Double Reservoir Lens
For Advanced Orthokeratology***

Double Reservoir Lens (DRL) for Advanced Orthokeratology

Precilens' Double Reservoir Lens (DRL) solve current problems and disadvantages facing orthokeratology contact lens specialist. Basically, this system has simplified the fitting, thus making it logical and predictable for the fitter. The DRL lens is a patented design that improves centering and provides greater fluorescein pattern control.



One of the major obstacles currently facing Orthokeratology (Ortho-k) lenses is the need for great craftsmanship. Since the contact lens fitting error in sagittal height can amount to no more than five microns, problems such as decentering, once loose, and corneal distortion could happen. If the fit are too steep, this can result in poor visual quality. The worst situation is when astigmatism affects the cornea because the corneal sagittal height is not the same in the two axes, which will produce an unsatisfactory fit, as well as poor offset correction. Moreover, the type of ametropia, speed of correction and diameter of the treatment area is limited by the current technique.

DRL lenses, which have a fitting process guided by topography and or trial set to ensure an exact fit. Since the design allows direct control over the fluorescein image, the fitter can assure that the lenses being used are a perfect fit for any particular cornea within minutes.

Corneal molding is accelerated by the hydrodynamic forces produced by the second reservoir. Precilens Lens is the only truly comprehensive Ortho-k system that can treat myopia up to -7.00 D., astigmatism up to -4.00 D at any axis, hyperopia up to 3.50 D. and residual post-LASIK refractive errors.

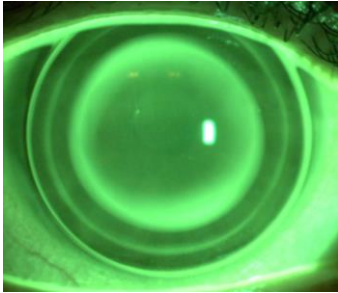
Innovative Design: Double Reservoir Lens vs Alignment curves.

DRL lenses offer up a fundamental characteristic, when inserted into the eye creates an extra peripheral ring. The formation of these two tear rings is due to its particular internal lens profile. This particular profile of DRL lenses provides greater tolerance in the adaptation of contact lenses. This is due that corneal epithelium can be distributed easily below the surface of the lens and adapt even adjusted lenses.

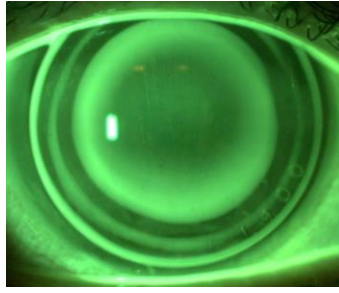
In addition the lenses provide a image with high fluoroscopic control. The comparison of the two areas, or rings of touch indicates very precisely the alignment of the lens in the periphery and its setting (fitted properly, steep or flat). If the first ring of touch is darker than outsider, the lens is fitted flat, on the other hand, a second ring darker than the inner means steep fit. In this way the desing allow the control of a change of 10 microns.

Fluorescein and topography control

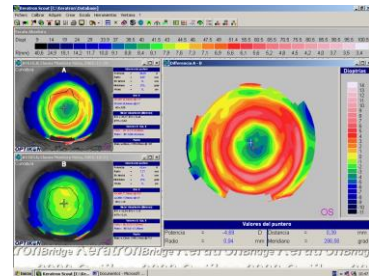
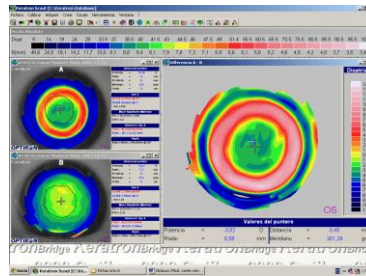
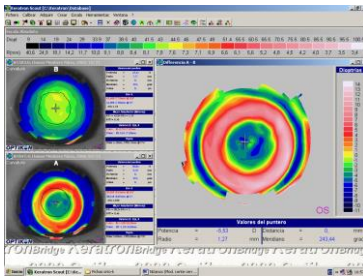
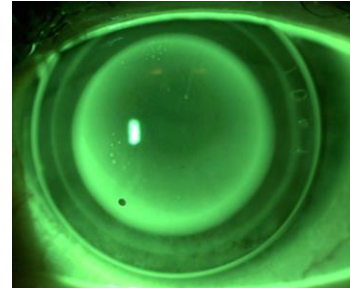
Perfect Lens



Flat Lens



Steep Lens



Its unique design and geometry allows:

1. Centering

DRL contact lenses allow for hydrodynamic suction forces, which maintain the ability to center the lens.

2. Accelerated myopia reduction.

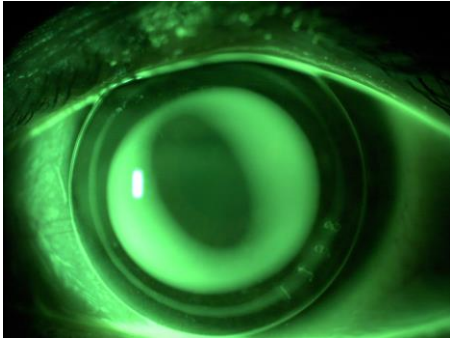
Three comparative studies found a faster reduction in comparison with alignment curves lenses. Also is possible to achieve a greater reduction of myopia regarding current lenses due to the extra suction forces generated by the two reservoirs.

3. No limitations on refractive error type.

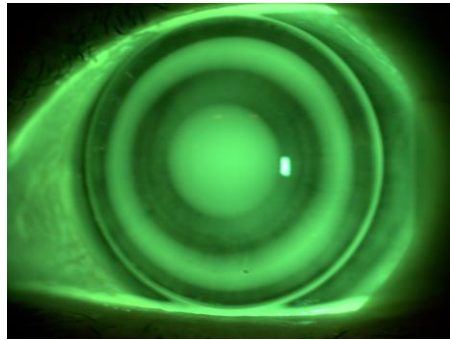
- Myopia: up to -7.00 D.
- Hyperopia: up to +3.50.
- Astigmatism: up to -4.00 at any axis.
- Post refractive surgery.

Empirical or diagnostic trial set

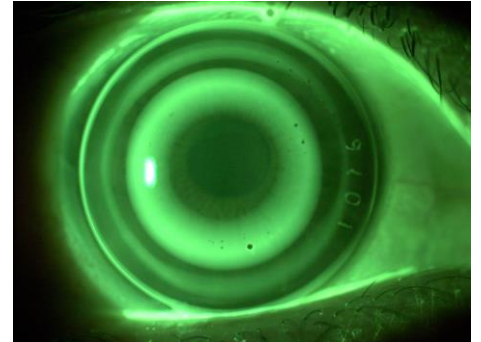
Lenses could be manufactured directly from topographic data or tested using a trial set composed of 24 lenses. Available in 0.05 mm steps. The sagittal change between lenses is approximately 10 microns.



Astigmatism



Hypermetropia



Myopia