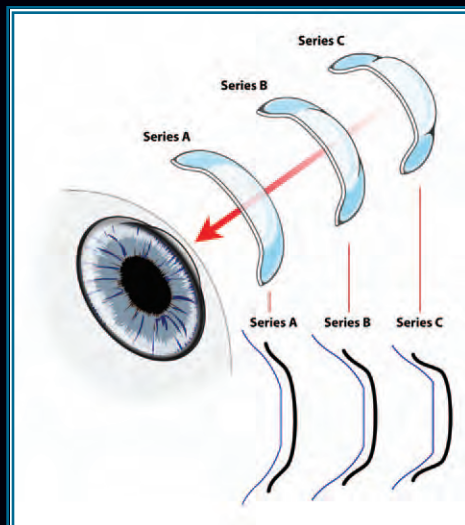


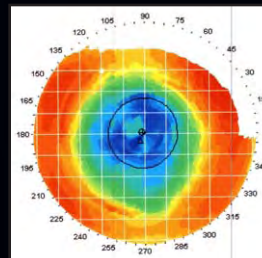
Dyna Intra-Limbal Special Reverse Geometry



Series A = 2 D of reverse curve
 Series B = 3 D of reverse curve
 Series C = 4 D of reverse curve
 *up to 12 D of reverse curve is available.

This design is best suited for Post Lasik and Post RK corneas that show the flat, central ablation zone with steeper cornea curvature from the mid-periphery out. The standard lens diameter is 11.2 mm with a 9.0 mm back optic zone and a reverse secondary curve option.

Post Lasik: The topography at right shows the classic flat central zone created by ablating the cornea.



RK Corneas: Some of these corneas will have the flat central zone and others will not. If the topography shows the flat central area surrounded by a steeper peripheral area, use a reverse geometry lens. If it does NOT have the flat appearance in the center, use the standard Dyna Intra-Limbal lens design.

Post Penetrating Keratoplasty - Sunken Grafts: The graft area sinks resembling a Post Lasik topography. A reverse geometry option is needed.

Starting Trial Lens:

Select a trial lens with a base curve one diopter steeper than the flat central K and 2 diopters of reverse curve (Series A, least reverse radius).

Diameter Selection:

The standard Dyna Intra-Limbal Special Reverse Geometry lens is 11.2 mm in diameter with a 9.0 mm BOZ. The lens is designed to fit intra-limbal and to achieve 0.5 mm to 1.0 mm of movement. With adequate edge lift, light limbal involvement is acceptable. The overall diameter should be approximately 0.2 mm to 0.5 mm smaller than the

cornea and the lens may need to be smaller or larger than 11.2 to meet this criteria. Dyna Intra-Limbal lenses come in diameters 10.4 mm to 12.5 mm.

Desired Fluorescein Pattern:

The best fit will exhibit an alignment pattern in the center, the reverse curve area, and the edge. First, find a base curve that aligns the central cornea, then look at the secondary curve area. If the mid-periphery needs to be changed, consider changing the Series rather than changing the base curve. Example: If there is pinch off in the mid-periphery, decrease the amount of reverse curve by going from a Series B to a Series A lens. If there is pooling in the mid-periphery, increase the reverse curve amount by going from a Series A to a Series B or Series C lens. Finally, evaluate the edge profile for adequate lift. The edge profile should show about 0.2 mm of clearance. Overall lens movement will be 0.5 mm to 1.0 mm. The ultimate fluorescein pattern will be as alignment looking as possible.

It is important to remember that this design needs to be carefully evaluated in three areas: 1st the base curve, 2nd the reverse curve area, and 3rd the edge

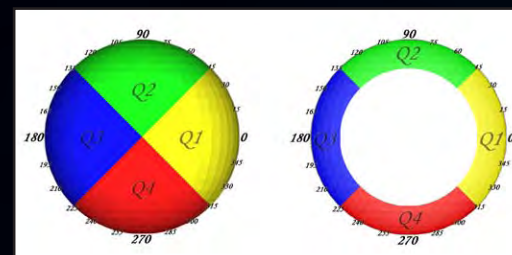
Edge Profile:

The desired edge lift should be about 0.2 mm wide. The Dyna Intra-Limbal system starts with a standard edge lift. Flatter or steeper edge lifts are available in a step system. You can order any edge profile in steps 1 through 15 flatter and 1 through 10 steps steeper. All changes are computer modeled so that reproducibility is insured.

Do NOT try to decrease the edge lift by adding more reverse curve. This will cause mid-peripheral seal-off.

Examples: Should the standard edge profile show pinch off, start with a 1 Flat edge lift. This should be adequate in most cases. Flatten the edge lift until a 0.2 mm edge width is achieved. The same is true in reverse. If the standard edge profile shows too much edge lift, steepen the edge until a 0.2 mm edge width is achieved.

Many times one or more of the four quadrants may have touch or stand-off. In these cases, the Quad Sym PC Option allows for increasing or decreasing the edge in any or all quadrants.



Other Design Options:

Multifocal Option: Front aspheric optics can be added for presbyopic correction. The base curve is not affected.

Toric Options: Bitoric and front toric designs are available.

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Dyna Intra-Limbal®

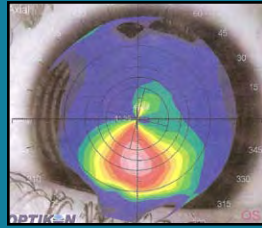


Kansas City, Missouri

Phone: (800) 228-2691 ♦ (303) 237-6927 local

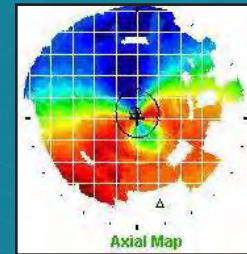
Fax: (800) 661-6707 ♦ (303) 274-6707 local

reception@lensdynamics.com



Keratoconic Corneas

Only steep Nipple cones are best fitted by smaller diameter (8.0 mm - 9.9 mm) contact lens designs. Globus and oval cones, very inferiorly placed cones, double cones and superior cones are all best fitted with larger diameter designs. The Dyna Intra-Limbal design with a standard diameter of 11.2 mm works best on these corneas.

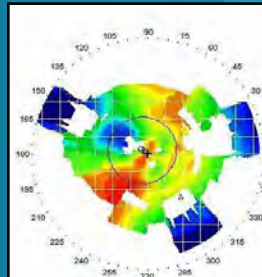


Pellucid Marginal Degeneration (PMD)

PMD is often misdiagnosed as severe keratoconus. PMD exhibits central to inferior corneal thinning with AGAINST-THE-RULE astigmatism and a curious steepening pattern. This topography has been described as two birds kissing, a crab claw, or a handle bar moustache appearance. See topography on the right.

Post Penetrating Keratoplasty

Many keratoplasty patients need visual enhancement following surgery. A critical component of these fits is to vault the host-graft interface. Impingement of this area will result in corneal deterioration and/or graft failure. A larger diameter corneal lens with large base optical zone is needed to vault the suture area. The Dyna Intra-Limbal design meets these criteria.



Types of Keratoplasty:

Standard Grafts: Donor zones of 6-9 mm with no steepening in the graft area. These can also be quite irregular with multiple ridges and valleys.

Steep Grafts: The graft area is quite steep and possibly shows signs of returning Keratoconus.

Raised Grafts: The cornea exhibits a steep area along most of the graft/host juncture.

Tilted Grafts: The graft area has a flat area at one side and a steep area at another size.

Sunken Grafts: The graft area sinks, resembling a Post Lasik topography. This type of graft is better fit with a Dyna Intra-Limbal Special Reverse Geometry design.

Post Refractive Surgery Patients

Post Lasik: These corneas typically require a reverse geometry design due to the flat central area surrounded by a steeper peripheral zone. Try the Dyna Intra-Limbal Special Reverse Geometry design on these corneas.

RK Corneas: Some of these corneas will have the flat central zone surrounded by a steeper peripheral area and others will not. If the topography does NOT have a flat area in the center, use the standard Dyna Intra-Limbal lens. If it does have a flat central appearance, use the Special Reverse Geometry lens design.

Fitting Cones, Pellucids & Grafts

Base Curve Selection:

Start with the base curve from the fitting set that is closest to the average of the central Ks or the average of the Sym Ks if using topography. For instance, if the Ks are 45.00 x 150 by 51.00 x 60, select a trial lens closest to 48.00 D or 7.03 mm.

Diameter Selection:

The overall diameter should be approximately 0.2 mm to 0.5 mm smaller than the cornea and may need to be smaller or larger than 11.2 mm to achieve this. The standard Dyna Intra-Limbal lens is 11.2 mm in diameter with a 9.4 mm BOZ. The lens is designed to fit intra-limbal and to achieve 0.5 mm to 1.0 mm of movement. With adequate edge lift, light limbal involvement is acceptable. The BOZ can be changed from the standard 9.4 mm to get the best fit. Small adjustments in sagittal depth can be achieved by increasing or decreasing the BOZ. Dyna Intra-Limbal is available in diameters 10.4 mm to 12.5 mm.

Desired Fluorescein Pattern:

Keratoconus and Pellucid Marginal Degeneration

The best fit will exhibit a light feather touch on the apex of the steepened area. The rest of the pattern should be as aligned as possible, but may exhibit a feather touch over the ectasia pooling outside of this area and alignment in the peripheral area creating a bulls eye appearance. Since ectasias are often located inferiorly, it is not unusual to see a fairly deep tear pool above the area of ectasia. This is acceptable as long as there is not a large or static bubble trapped in this area. Small, transient bubbles are acceptable on advanced ectasia. The edge profile will show about 0.2 mm of clearance and overall lens movement will be 0.5 mm to 1.0 mm.

Post Penetrating Keratoplasty

The best fit will exhibit as close to an alignment fluorescein pattern as is possible depending on the irregularity of the cornea. There should be no bearing on the host/graft margin. The edge profile will show about 0.2 mm of clearance and overall lens movement will be 0.5 mm to 1.0 mm.

Post R-K

The best fit will exhibit as close to an alignment fluorescein pattern as is possible depending on the irregularity of the cornea. There should be minimal to no bearing on incision sites as this can cause epithelial defects and possible scarring. The edge profile will show about 0.2 mm of clearance and overall lens movement will be 0.5 mm to 1.0 mm.

Edge Profile:

The desired edge lift will be about 0.2 mm wide. The Dyna Intra-Limbal system starts with a standard edge lift. Flatter or steeper edge lifts are available in a step system. You can order any edge profile in steps 1 through 15 flatter and steps 1 through 10 steeper. All changes are computer modeled so that reproducibility is insured.

Examples: Should the standard edge profile show pinch off, start with a 1 step Flat edge lift. This should be adequate in most cases. Flatten the edge lift until a 0.2 mm edge width is achieved. The same is true in reverse. If the standard edge profile shows too much edge lift, steepen the edge until a 0.2 mm edge width is achieved.

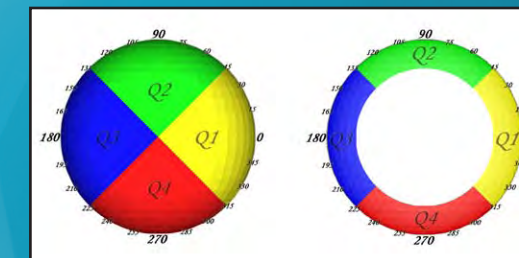
Quad Sym® Edge Treatment:

Many times one or more of the four quadrants may have touch or stand-off. In these cases, the Quad Sym PC Option allows for increasing or decreasing the edge lift in any or all quadrants.

Other Design Options:

Multifocal Option: Front aspheric optics can be added for presbyopic correction. The base curve is not affected.

Toric Options: Bitoric and front toric designs are available.



Fitting Guides

Keratoconic Corneas

Pellucid Marginal Degeneration

Post Penetrating Keratoplasty

Post Refractive Surgery