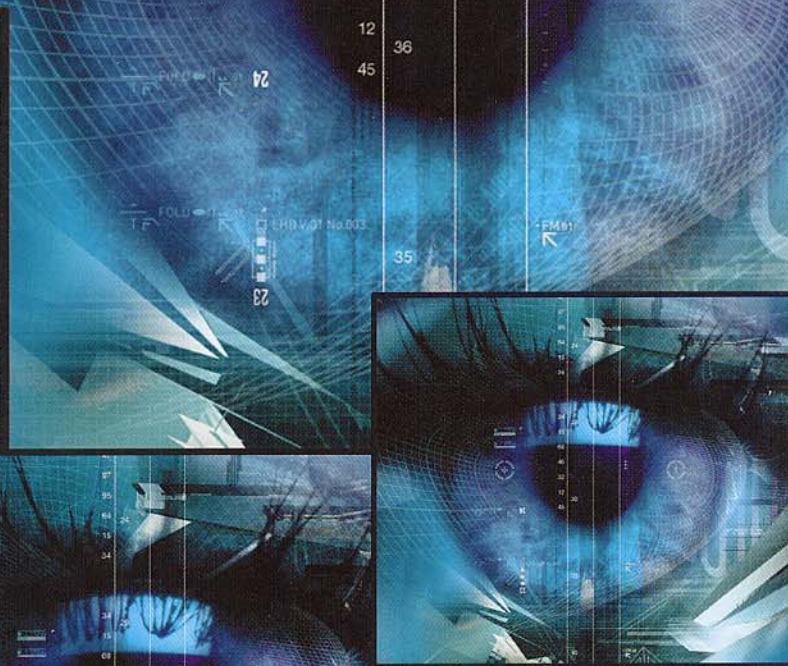


# The Dyna Intra-Limbal<sup>®</sup> Lens

Designed specifically for Pellucid Marginal Degeneration, Globus Keratoconus,  
Post Penetrating, Keratoplasty, Tilted Grafts, Inferior Apexed Keratoconus,  
Highly Asymmetric Corneas, GP Intolerant Patients, Soft Toric Non Adapt, Compromised Corneas

Released for marketing by the FDA



**LENS DYNAMICS**  
PRECISION LENSES

*Innovators in Irregular Corneal Treatment*



**Menicon**

Menicon Z material  
is recommended for these designs

ISO 9001-2000  
Certified

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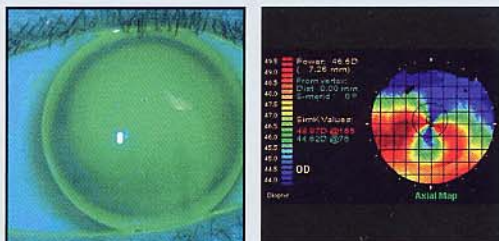
### THE CONDITION:

Pellucid Margin Degeneration is often mis-diagnosed as severe keratoconus. Keratoconus exhibits central corneal thinning, Pellucids exhibit inferior corneal thinning with AGAINST-THE-RULE astigmatism and a curious steepening topography pattern. This topography has been described as two birds kissing or handle-bar moustache in appearance. See topography illustration below.

### STARTING TRIAL LENS:

Manual Keratometer Fitting – Use the median K-reading and start with the first trial lens with a base curve nearest .3 mm flatter than the median K-reading. \* i.e. 35.00 D or 7.50 mm. .3 mm flatter is 7.80 B.C. so start with a lens from the trial set closest to 7.80 mm.

### DESIRED FLUORESCIN PATTERN:



The best fit will exhibit a light feather touch on the apex of the steepened area. The edge profile should show about .2 mm of clearance. Overall lens movement will be 1/2 - 1 mm. The ultimate fluorescein pattern will be as alignment looking as possible.

### DIAMETER SELECTION:

The standard Dyna Z Intra-Limbal® lens is 11.2 mm with 9.4 mm BOZ. The lens is designed to fit intra-limbal and to achieve 1/2 - 1 mm movement. With adequate edge lift, limbal involvement is acceptable. The overall diameter needs to be at least .2 mm smaller than the cornea and may need to be smaller or larger than the standard 11.2 mm to meet these criteria. BOZ can be smaller or larger than 9.4 mm as needed for the fit.

### EDGE PROFILE:

The desired edge lift will show .2 mm of clearance. The Dyna Z 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 step 1, step 2, step 3 as needed. This is for flatter or steeper edge lifts. All of these changes are computer modeled so that reproducibility is insured.

Examples – Should the standard edge profile show pinch off, start with a step 1 flat edge profile. This should be adequate in most cases. If the edge pinch off is still present with a step 1 flat profile, order a step 2 flat profile lens. Increase edge profile as needed to achieve desired .2 mm of edge clearance.

The same is true in reverse. If the standard edge profile shows too much edge lift, steepen to a step 1 steep edge profile. Decrease edge profile as needed to achieve desired .2 mm edge lift clearance.

### TROUBLE SHOOTING:

Inferior pooling is common in many irregular corneal designs as the lenses stand off at the 6 o'clock position. This is overcome by ordering our Flat/Steep Option that has steeper PC's in one quadrant, but standard PC's at 3, 12, and 9 o'clock positions.

**Fitting Pellucid Marginal  
Degenerative Patients**

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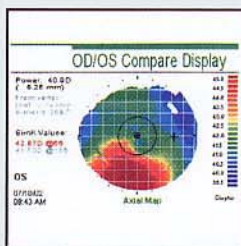
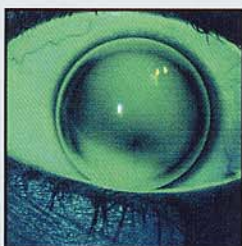


Some keratoconus types do not respond well to specialty cone designs, like the Rose K design, which have smaller optical zones. Globus cones, double cones or superior cones need larger optical zones to accommodate these unique shapes. The Dyna Z Intra-Limbal® lens works where other designs fail because it has a large optical zone ( 9.4 ) and covers the large area of corneal irregularity.

### STARTING TRIAL LENS:

Manual Keratometer Fitting – Use the median K-reading and start with the first trial lens with a base curve nearest .3 mm flatter than the median K-reading. \* i.e. 35.00 D or 7.50 mm. .3 mm flatter is 7.80 B.C. so start with a lens from the trial set closest to 7.80 mm.

### DESIRED FLUORESCEIN PATTERN:



The best fit will exhibit a light feather touch on the apex of the steepened area. The edge profile should show about .2 mm of clearance. Overall lens movement will be 1/2 - 1 mm. The ultimate fluorescein pattern will be as alignment looking as possible.

### DIAMETER SELECTION:

The standard Dyna Z Intra-Limbal® lens is 11.2 mm. The lens is designed to fit intra-limbal and to achieve 1/2 - 1 mm movement. With adequate edge lift, limbal involvement is acceptable. The overall diameter needs to be at least .2 mm smaller than the cornea and may need to be smaller or larger than the standard 11.2 mm to meet these criteria.

### EDGE PROFILE:

The desired edge lift will show .2 mm of clearance. The Dyna Z 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 step 1, step 2, step 3 as needed. This is for flatter or steeper edge lifts. All of these changes are computer modeled so that reproducibility is insured.

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The same is true in reverse. If the standard edge profile shows too much edge lift, steepen to a step 1 steep edge profile. Decrease edge profile as needed to achieve desired .2 mm edge lift clearance.

### TROUBLE SHOOTING:

The appearance of a classic "dumb-bell" fluorescein pattern would indicate the need of a base toric or bi-toric addition. 3 and 9 o'clock staining can be corrected by adding toric peripheral curves.

**Fitting Keratoconus Patients**

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Many keratoplasty patients need visual enhancement following surgery. A critical component of these fits is to vault the host-graft interface area. Impingement of this area will result in corneal deterioration and/or graft failure. A larger lens with a larger optical zone is therefore needed to accomplish this. The Dyna Z Intra-Limbal® lens meets this criteria. Reverse geometry can be incorporated into the Dyna Z Intra-Limbal® lens design.

### **Keratoplasty Types:**

**STANDARD GRAFT** – Donor zones of 6-9 mm. with no steepening in the graft zone.

**STEEP GRAFTS** – When steepening in the donor area occurs.

**TILTED GRAFTS** – Some grafts present with a steepened area on the host at the donor, host junction.

**SUNKEN GRAFTS** – In this instance the donor area sinks down and the topography resembles a post refractive surgery cornea. Reverse geometry is frequently needed.

### **STARTING TRIAL LENS:**

Topography Fitting – Start with a trial lens that is close to the measurement at the temporal 4-5 mm position.

### **DESIRED FLUORESCEIN PATTERN:**

The lens should show a minimum vault over the donor cornea and good alignment with host cornea. In the case of a steepened graft, a feather touch at the apex of the steepened area is desirable.

### **DIAMETER SELECTION:**

The standard Dyna Z Intra-Limbal® lens is 11.2 mm. The lens is designed to fit intra-limbal and to achieve 1/2 - 1 mm movement. With adequate edge lift, limbal involvement is acceptable. The overall diameter needs to be at least .2 mm smaller than the cornea and may need to be smaller or larger than the standard 11.2 mm to meet these criteria.

### **EDGE PROFILE:**

The desired edge lift will show .2 mm of clearance. The Dyna Z 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 step 1, step 2, step 3 as needed. This is for flatter or steeper edge lifts. All of these changes are computer modeled so that reproducibility is insured.

Examples – Should the standard edge profile show pinch off, start with a step 1 flat edge profile. This should be adequate in most cases. If the edge pinch off is still present with a step 1 flat profile, order a step 2 flat profile lens. Increase edge profile as needed to achieve desired .2 mm of edge clearance.

The same is true in reverse. If the standard edge profile shows too much edge lift, steepen to a step 1 steep edge profile. Decrease edge profile as needed to achieve desired .2 mm edge lift clearance.

**Fitting Post Penetrating  
Keratoplasty Patients**

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Post Refractive Surgery patients present corneas that are flattened centrally in a 6-8 mm zone. It is best to think of this fitting challenge as fitting two distinct areas – the flatter ablated zone and the original host cornea.

### STARTING TRIAL LENS:

Topography Fitting: Take the central Ks and a reading at the 4 mm temporal area.

Manual Keratometer Fitting: Take central Ks and then get temporal measurements or use pre-surgery K-readings.

The base curve of the Dyna Z Intra-Limbal® lens will be 1 diopter steeper than the flat central K. To determine the amount of reverse curve needed, calculate the difference between the base curve and the 4 mm temporal measure. i.e. central Ks of 40.00/42.00 and 4 mm temporal K of 44.00. Select a trial lens of 41.00 with 3 diopters or the Series B lens.

Flat K = 40.00

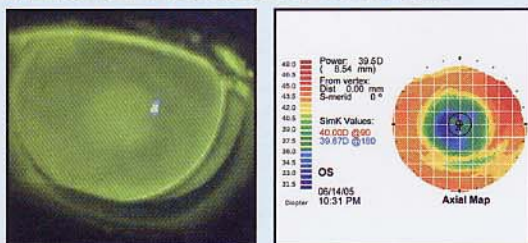
One D. steeper than flat central K of 40.00D. + 1 = 41.00 D.

Base curve is 41.00 D.

Difference between base curve of 41.00 D and temporal K of 44.00 = 3 D.

Try a series B Dyna Z Intra-Limbal that has a 3 D reverse curve.

### DESIRED FLUORESCEIN PATTERN:



An alignment pattern is the ultimate goal, but that is difficult to achieve. Get as close to an alignment pattern as possible. You want to see minimal vaulting in the central region. The lens with an 11.2 mm diameter, will move only 1/2 - 1 mm and should not impinge the limbus. The lens is made from Menicon Z material for good oxygen transmission and good wetting so metabolic wastes are washed away.

In our example if the mid-peripheral area is pinched off, you need less reverse curve so go to a Series A. If the mid-peripheral area is showing pooling you need more reverse curve so go to the Series C.

Select the 11.2 mm diameter unless you have a small cornea or a very large cornea. Lenses are available from 10.0 to 11.4 mm. All other parameters are totally custom and all parameters are available.

### EDGE PROFILE:

No one peripheral system will work on all corneas. You can get the edge profile in standard or any degree of flatter or steeper. i.e. one step flatter, two steps flatter, etc. DO NOT fit the edge too tight. You MUST have adequate tear exchange under the lens.

### REVERSE CURVE INFORMATION

Series A has 2 D. of reverse curve, Series B has 3 D. of reverse curve, Series C has 4 D. of reverse curve, Series D has 5 D. of reverse curve, Series E has 6 D. of reverse curve.

**Fitting Post Refractive Surgery Patients**

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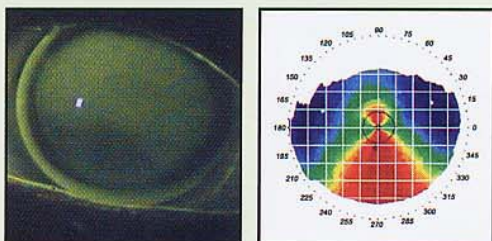


Another fitting technique for Highly Astigmatic corneas is a minimum vault with a large diameter GP lens, the Dyna Z Intra-Limbal® design.

### STARTING TRIAL LENS:

Manual Ks or topography simulated Ks - use the median K-reading and start with the first trial lens with a base curve nearest to .2 mm flatter than the median K-reading. \* i.e. 45.00 diopter or 7.50 mm median K, nearest base curve in set is 7.67- start with 7.67.

### DESIRED FLUORESCIN PATTERN:



The best fit will exhibit a minimum vault to a light feather touch on the central cornea. The edge profile should show about .2 mm of edge lift. Overall lens movement will be 1/2–1 mm. The ultimate fluorescein pattern will be as alignment looking as possible.

### DIAMETER SELECTION:

The standard Dyna Z Intra-Limbal® lens is 11.2 mm. The lens is designed to fit intra-limbal and to achieve 1/2 - 1 mm movement. With adequate edge lift, limbal involvement is acceptable. The overall diameter needs to be at least .2 mm smaller than the cornea and may need to be smaller or larger than the standard 11.2 mm to meet these criteria.

### EDGE PROFILE:

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The same is true in reverse. If the standard edge profile shows too much edge lift, steepen to a step 1 steep edge profile. Decrease edge profile as needed to achieve desired .2 mm edge lift clearance.

**Fitting Highly Astigmatic Corneal,  
GP Intolerant  
& Compromised Corneal Patients**

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