

E&E Optics

www.eandeoptics.com

E & E Optics Ltd.

e Lens Pro
The new generation lenses for
Orthokeratology

Beyond The Limit

新界沙田源順圍 5-7 號沙田工業中心 B 座地下七號室
Unit 7, G/F, Block B, Shatin Industrial Centre, 5-7 Yuen Shun Circuit, Shatin, Hong Kong
TEL: (852) 2648-3338 FAX: (852) 2648-7333

FITTING GUIDELINE

eLens Pro, revolutionary lens design came out on 2004 by the contact lens designer of E and E Optics. After five years of clinical fitting and testing in Hong Kong, Taiwan, Japan, USA for thousands of challenging high myopic cases. The result is promising. With eLens Pro, changes of up to -10.00 diopters of myopia are possible for experience orthokeratologist. Changes allow the person treated to go without lenses all day while only wearing them for a few hours during sleep.

With most of the regular Ortho-K design like, e.g. eLens, Free Dimension, E4-Ortho-K. When the target positive pressure is more than five diopters, the negative pressure fitting curve zone will be tighter and may cause distortion of placido ring image in topography. For the patient with high myopia and/or flatter K. e.g. Rx= -4.50 to -7.00, FK = 39.00 to 41.00. An experienced practitioner may need to order a regular Ortho-k lenses with looser fitting curve or need to fit the first lenses with 3-4 diopters pressure then order a second lenses with more pressure with adjustment referring to the Fluorescein pattern and topographic change of the first lenses result. With the help of dual reverse S curve of **eLens pro**, the negative fitting curve pressure was eliminated from the peak to zero within 1.00mm curve width distance. And the distal edge of the dual reverse S curve also help to stabilized function of the stabilizing curve. (Alignment curve)

DESIGN CONCEPT

Compression Zone: The compression zone (optic zone) diameter is 5.80mm (5.60-6.20mm). The radius of base curve is designed to create the forces necessary to impart the desired corneal changes and the curve radius calculation is the same as all other Ortho-K design. The base curve of the lens is generally fitted as flat as the number of diopters as the refractive error plus 0.50-1.00D flatter than the central flattest keratometric finding. This guide is only a general recommendation and the specification of an individual patient will depend on the eye care practitioner's professional judgment.

Dual Reverse S Zone: Otherwise called the fitting zone or Tear Reservoir, this zone connects the optic zone to the stabilizing Zone and creates the gradual changing hydraulic force under the lens that is responsible for the change to the cornea. The programmed dual reverse S design is matched to the individual cornea by the same principle of sagittal depth calculation, it bring the posterior surface of the lens to the required relationship with the cornea. For the same cornea, the height of this curve will change as the BC is changed. This has to happen if the end of the reverse S curve is to have the same desired relationship with the cornea regardless of the BC radius. This means that when the BC is changed, the reverse S is automatically changed to compensate for the sagittal height difference induced by the BC change. The standard width of this curve is 1.00mm

Stabilizing zone (Alignment zone, tangential zone): This zone works as a balance point for the lens to rest on the mid-peripheral cornea. And this is a tangential curve to the mid-peripheral cornea in order to control centration better. This stabilizing zone should maintain approximately 1.00mm wide bearing ring. If the stabilizing zone lifts off of the cornea from the outside in, thereby increasing the amount of edge lift, the “e” of the lens is too high and should be lowered. Then order a lens with 0.50D (1 step or 1 degree) steeper in the stabilizing curve. If the alignment zone bearing is narrow and dark right where the peripheral curve begins, then the “e” of the lens is too low and should order lens with 0.50D (1 step or 1 degree) looser in the stabilizing curve.

Peripheral zone: The peripheral zone is designed to give edge lift. If the curve was found too tight, the lens can be loosen by modification done by the manufacturer. The standard PC is 13.00mm / 0.40mm width but can also be specified per practitioner’s preference.

FITTING PROCEDURE:

We need the practitioner to have at least 20 cases of e Lens / DreimLens fitting experience and familiar with topographer and fluorescein pattern interpretation.

When fitting the eLens pro, the first lens chosen can either be calculated empirically or determined with trial lens fitting.

Empirical Fit:

1. Practitioner can only provide the patient’s Rx and Flat K / Steep K and we will do all the rest with 80% successful rate for patient with myopia lesser than -5.50D.

Diagnostic Lens Fit:

1. Diagnostic lens fitting is the method of choice and should be conducted whenever possible.
2. Select a diagnostic lens based on the central flattest K and similar target power, and then place the lens upon the eye.

Example:

Ex: Km 41.50 / 42.35

Subj. -7.00 -1.25 X 165

Therefore, choose the trial lens 41.50 / -5.00

3. Evaluate the lens using white light for the following:
 - a 、 Centering: Lens should center as well or better than a regular RGP lens. The lens should be fitted according to the inter-palpebral fitting philosophy. Lenses fitted according to the "lid attachment" philosophy, in which the lens purposely rides in a high position, should be avoided.
 - b 、 Movement: Lens movement should be slightly less than a regular RGP lens, 0.10-0.30mm movement is desirable according to the inter-palpebral philosophy.
 - c 、 Check the over refraction. For the above case, Over Rx should be -1.50

- +/- 0.50D. (Vertex distance need to be consider)
- d 、 If Over Rx is out of +/- 0.50D range, verify the diagnostic lens used or re-check the refraction and Keratometry.
 - e 、 Check the fluorescein pattern with blue light carefully to see if the dual reverse S curve or the Stabilizing curve needs to be tighter or looser.

STANDARD DIAGNOSTIC SET (26 LENSES)

Diagnostic set price USD 800.00 / custom made lenses USD 90.00

Diagnostic set price HKD 6,000.00 / custom made lenses HKD 700.00

Flat K	38.50	39.00	39.50	40.00	40.50	41.00	41.50	42.00	42.50	43.00	43.50	44.00	44.50
	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00
	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00	-5.00

When using the diagnostic set, you can adjust the dual reverse S curve / stabilizing curve by referring the chart below.

	41.00	41.50	42.00	42.50	43.00
Standard	Loose 1.0D	Loose 0.5D	STD	Tight 0.5D	Tight 1.0D

When ordering Lens Pro,
We recommend Boston XO / Boston XO2

PURCHASE ORDER

Please fax or e-mail the following data

Fax: HK customer 2637-4000 / Int'l customer 852-2648-7333

e-mail: order@dreimlens.com.hk

Company name / Account code:

Practitioner's Name:

Tel/Fax/e-mail address:

Patient name or code:

Rx / K

Lens material / color

Note: Dual reverse S curve: tight / loose (1 step = 1 degree = 0.50D)

Stabilizing curve: tight / loose (1 step = 1 degree = 0.50D)

Optional: corneal 7.50-8.50 zone average K from Topo

If practitioner did not give Note, all lens parameter will be calculated by the computer.