Elipsys

SYSTEM OF GP CONTACT LENS WITH ECCENTRICITY CONTROL AND PERIPHERAL SUPPORT

Myopia - Hyperopia
KC - Irregular Corneas
Astigmatism - Intolerance
DMP - Presbyopia

SPECTRUM
INTERNATIONAL

MADE IN EUROPE
PREMIUM QUALITY

Made by:
Lenticon
EUROPE

1. Introduction

Basic Concepts

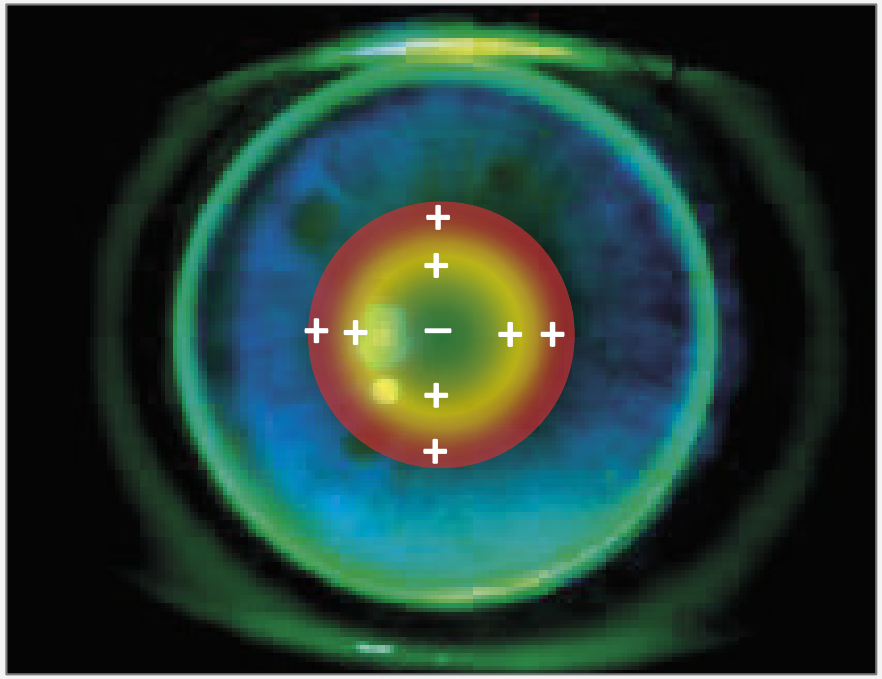
- Corneal Physiology and form coefficients
- Design of the Elipsys lens
- Material
- Data Sheet

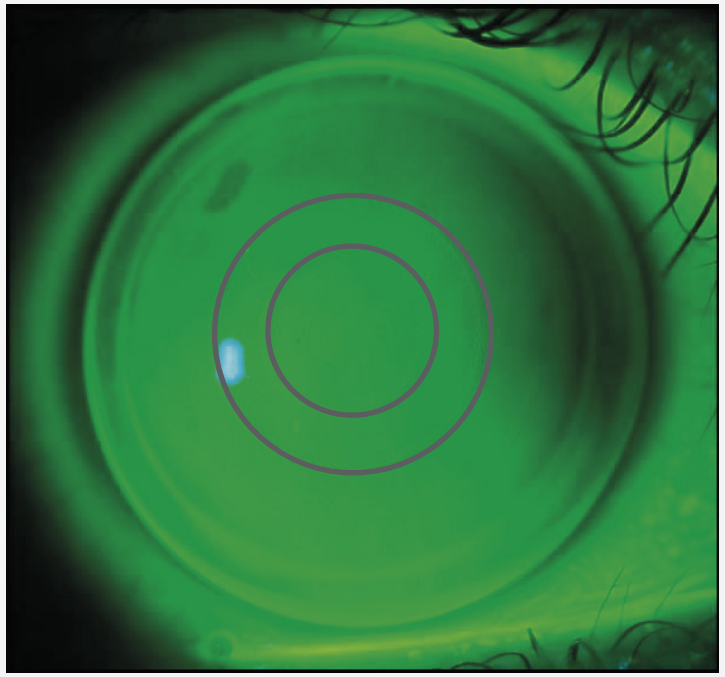
2. How to Fit Elipsys

Types of fitting

- **Regular cornea**
  - Initial lens calculation
  - Assessment of fitting
- **Irregular Cornea**
  - Initial lens calculation
  - Assessment of fitting

3. Elypsis Multifocal





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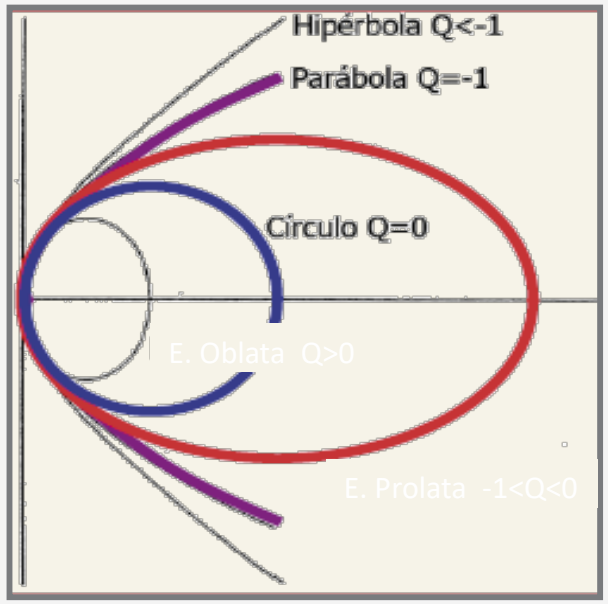
4. Introduction: Basic Concepts

Corneal Physiology and form coefficients

- P Value(p)
- Asphericity (Q)
- Eccentricity (e)
- Shape Factor (SF)

	p	Q	e	SF
p	-	1+Q	$1-e^2$	1-SF
Q	p-1	-	$-e^2$	-SF
e	$\sqrt{1-p}$	$\sqrt{-Q}$	-	$\sqrt{SF}$
SF	1-p	-Q	e^2	-



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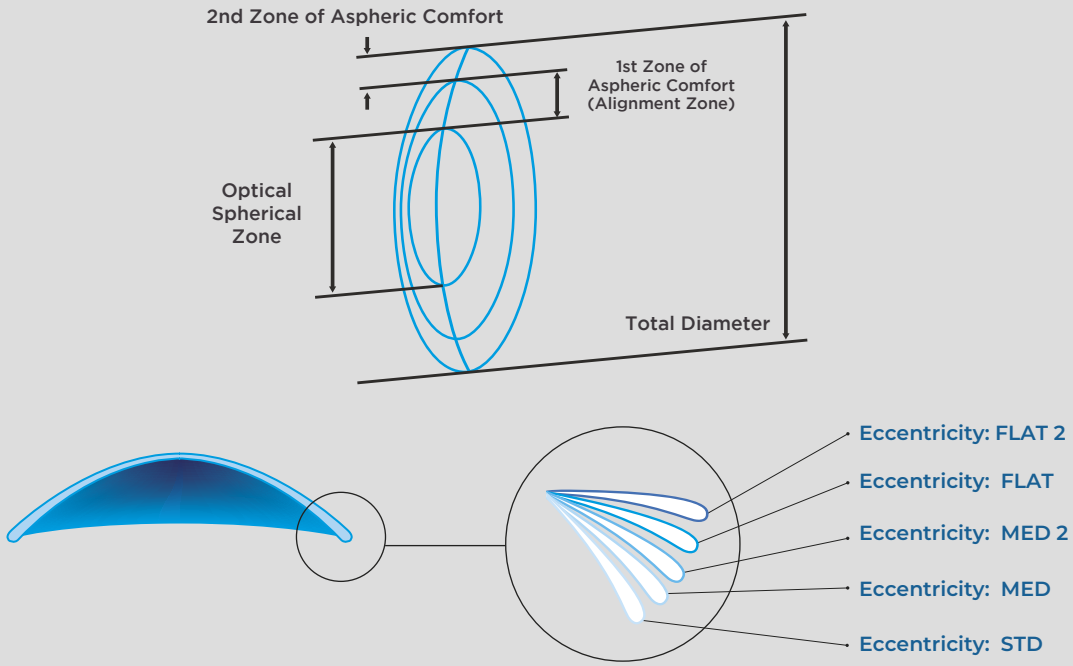
Design of the Elipsys lens



Sphero-Aspheric design on the posterior section with peripheral support control that allows a better corneal aligment optimizing the tear exchange, maintaining its centering and stability.

Multisphere geometry on the anterior side.

Indicated for patients with regular corneas or irregular corneas with keratoconus or other corneal ectasias.

Design with optical zone of variable diameter that allows it to stay centered and stable in most irregular corneas.

The new concept of “peripheral support control” is ideal for corneas that have different levels of eccentricity. Based on a statistical analysis, a nomogram was created identifying several levels of eccentricity for the different corneal conditions.

Material

Contamac™ EMPOWERING YOUR VISION

OPTIMUM EXTRA

Property	Optimum Extra
Classification	Focon III 4
USAN	Roflufocon D
Oxygen Permeability (Dk)	100 barrers
Refractive index	1,431
Hardness (Shore D)	75
Retracting contact angle	3°
Visibility Tint	Blue
Recommended Replacement	18 - 24 months

Data sheet

DATA SHEET

Geometry (interior):	Spherical-Aspheric with peripheral alignment control
Geometry (exterior):	Sphero-progressive

Characteristics:	Available Parameters:
Power (D):	25D
Eccentricity (Ecc):	STD, MED, MED 2, FLAT and FLAT 2
Base curve (mm):	5.00mm to 11mm (0.05mm steps)
Total diameter (mm):	7.00mm to 12.60mm (0.10mm steps)
Optic zone diameter (mm):	6.00mm to 10.00mm (0.10mm steps)
Central thickness:	0.17 (-3.00D) standard
Material:	Optimum Extra - CONTACMAC
Classification:	Focon III 4
Permeability to oxygen:	DK 100
Visibility Tint:	Blue
Recommended replacement:	Between 18 and 24 months
Plasma Treatment:	Yes
Identification Engraving:	Yes
Presentation:	Vial with security seal
Maintenance System:	Preservative + Isopropyl alcohol cleaner

Fitting Set with 30 Lenses

ElipSYS STD	Regular Cornea	DT. 9.80mm 10 Lenses
ElipSYS KC	Irregular Cornea	DT. 9.60mm 10 Lenses
ElipSYS SE	Readjustments / Decentralizations	DT. 11.20mm 10 Lenses

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2. How to Fit Elipsys

Important:

Before starting, make sure you have:

- Update graduation, AVsc and AVcc
- Current Keratometry or topography
- Horizontal diameter of visible iris (DHIV)
- Pupillary diameter (adap. subpalpebrales, LC MF, etc..)
- Evaluation of the patient's tear
- Valuation of the corneal surface (Avoid surprises)
- A good anamnesis (previous adaptations, expectations, etc.)

KNOW YOUR PATIENT

Subpalpebral Fitting

- Ø Large posterior optical zone
- Wide bands
- Base radio equal to and / or greater than Kflat

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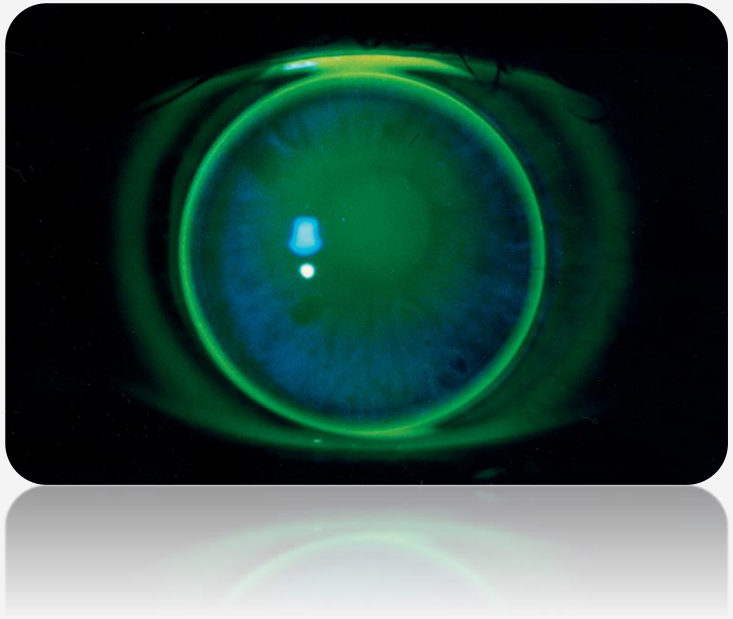
Subpalpebral Fitting

- Ø Large posterior optical zone
- Narrow peripheral bands
- Base radio equal to or less than Kflat
- Ø total < Parpebral opening



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Córnea Regular and Irregular
Elypsis Family (STD, KC and SE)

Step N° 1: *Calculate the total diameter of the lens*

9.60 mm
Diameter

9.80 mm
Diameter

Between 9.80 mm and
DHIV - 14.0mm

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Regular Cornea
Elypsis STD and SE

Step N° 2: *Selection of the base curve*

Select the lens from Fitting Set, with the base curve that is closer to the value obtained according to the calculations indicated by the table:

Elipsys STD and Elipsys SE			
AC: 0.00 to 0.75 D		AC: 0.75 to 1.75 D	
Diameter LC	BC	Diameter LC	BC
9.60	K_{flat} + 0.05 mm	9.60	K_{flat}
9.80	K_{flat} + 0.05 mm	9.80	K_{flat}
11.20	K_{flat} + 0.25 mm	11.20	K_{flat} + 0.20 mm

Design NOT recommended for values > 2.00 D dof corneal astigmatism (regular) It would condition the focus, comfort and visual stability.

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Regular Cornea
Elypsis STD and SE

Step N° 2: *Selection of Base Curve*

· For values > 2.00 D of corneal astigmastism (regular) or astigmatism 2.00 D but with an extension of limbus to limbus.

Treat the case as if it was an Irregular Cornea

· Select the lens out of the fitting set, with the base curve that is closer to the value obtained according to the calculations indicated by the table:

Diameter	BC
9.60 y 9.80	$\frac{K_{flat} + K_{steep}}{2} - 0{,}10$
11.20	$\frac{K_{flat} + K_{steep}}{2} + 0{,}10$

Analyze fluorogram and evaluate:

Centering and lifting of the edge

· Low edge lifting → ask for Exc. “MED”

· Excessive edge lifting → Try a steeper BC

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Regular Cornea
Elypsis STD and SE

Step N° 1

Between 9.80 mm and
DHIV - 14.0mm

Step N° 2

42.19 (8.00) @ 180 / 42.92 (7.86)@ 90
K_{flat} = 42.19 D (8.00 mm)
Corneal Cyl= 0.73 D
Base Curve= K_{flat} + 0.05 mm
= 8.05 mm
Base Curve= K_{flat} + 0.25 mm
= 8.25 mm

First Fitting Lens: 8.00/-0.50/9.80/STD *(Design Elipsys STD)*
8.30/+1.00/11.20/STD *(Design Elipsys SE)*

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Regular Cornea
Elypsis STD and SE

Step N° 3: *Evaluate centering and fluorogram*

1. Static Behavior (holding eyelids and focusing the lens):

· Movement of the contact lens without eyelid action (Push Up)

· Static fluorogram (acceptable, open, closed)

2. Dynamic Behavior (under the action of the eyelids):

· Movement
· Centering
- Increase diameter to raise the lens
- Decrease diameter to lower the lens

If the GP contact lens provides good AV, comfort and absence of problems, the fitting is good

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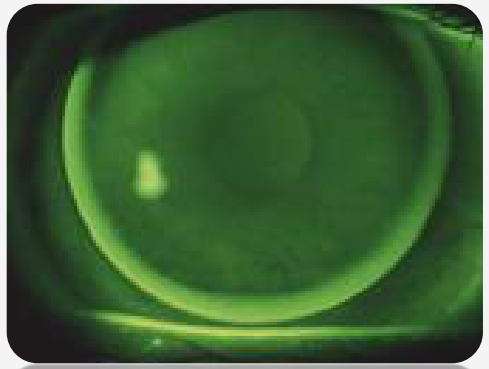
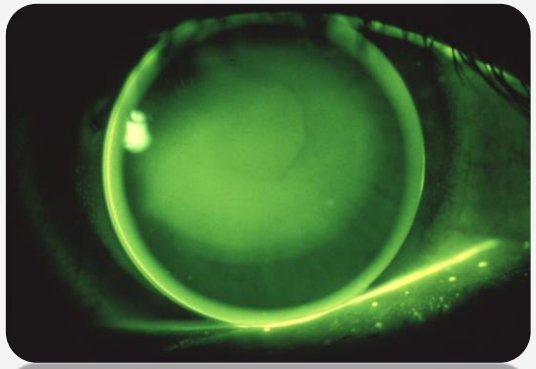
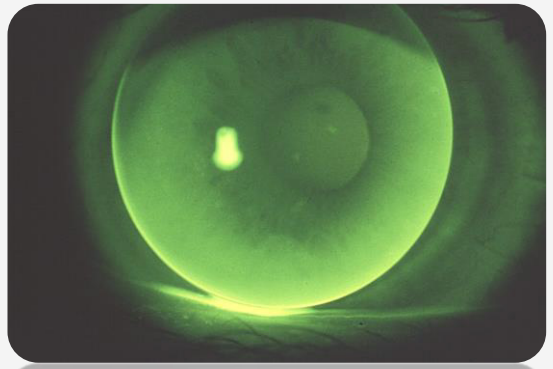
Regular Cornea
Elypsis STD and SE



Ideal



Steep



Flat

- ✓ Uniform distribution of fluorescein
- ✓ No touch zones
- ✓ Right edge lifting
- ✓ Good movement and centered

STEP LENS
Apply the solutions in this order
Make BC Flatter
Decrease Diameter
Decrease Optic DZ

FLAT LENS
Apply the solutions in this order
Make BC Steeper
Increase Diameter
Increase Optic DZ

SPECTRUM INTERNATIONAL

Elipsys

Irregular Cornea
Elypsis KC and SE

Step N° 2: *Selection of Base Curve*

Select lens out of the fitting set, with the base curve that is closer to the value obtained according to the calculations indicated by the table:

ElipSYS KC and ElipSYS SE	
Diameter	BC
9.60 and 9.80	$\frac{K_{flat} + K_{steep}}{2} - 0{,}10$
11.20	$\frac{K_{flat} + K_{steep}}{2} + 0{,}10$

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Elipsys

Irregular Cornea
Elypsis KC and SE

Step N° 1

Between 9.80 mm and
DHIV - 14.0mm

Step N° 2

49.63 (6.80) @ 180 / 53.57 (6.30)@ 90

$$\frac{K_{flat} + K_{steep}}{2} \mathbf{-0,10} = 6.45mm$$

$$\frac{K_{flat} + K_{steep}}{2} \mathbf{+0,10} = 6.65mm$$

1st fitting lens: 6.40/-10.75/9.60/FLAT *(Design Elipsys KC)*
6.70/-8.75/11.20/FLAT 2 *(Design Elipsys SE)*

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Irregular Cornea
Elypsis KC and SE

Step N° 3: *Evaluate centering and fluorogram*

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Elipsys

Irregular Cornea
Elypsis KC and SE

Step N° 3: *Evaluate centering and fluorogram*

- **IMPORTANT**
  - **Initially, evaluate the center of the lens**
    - Make the BC steeper or flatter until getting the ideal fitting
  - **Evaluate the lifting of the edge**
    - Adjust with the eccentricity (see troubleshooting).

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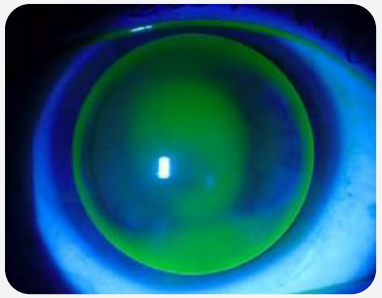
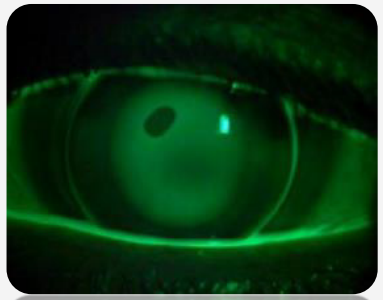
Irregular Cornea
Elypsis KC and SE

Ideal



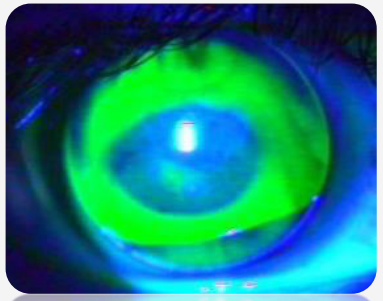
- ✓ Apical light touch (toque pluma)
- ✓ Middle-periphery support
- ✓ Right edge lifting
- ✓ Good movement and centered

Steep



STEP LENS
Apply the solutions in the order
Make BC Flatter
Increase Eccentricity
Decrease Diamater
Decrease Optic DZ

Flat



FLAT LENS
Apply the solutions in the order
Make BC Steeper
Decrease Eccentricity
Increase Diameter
Increase Optic DZ

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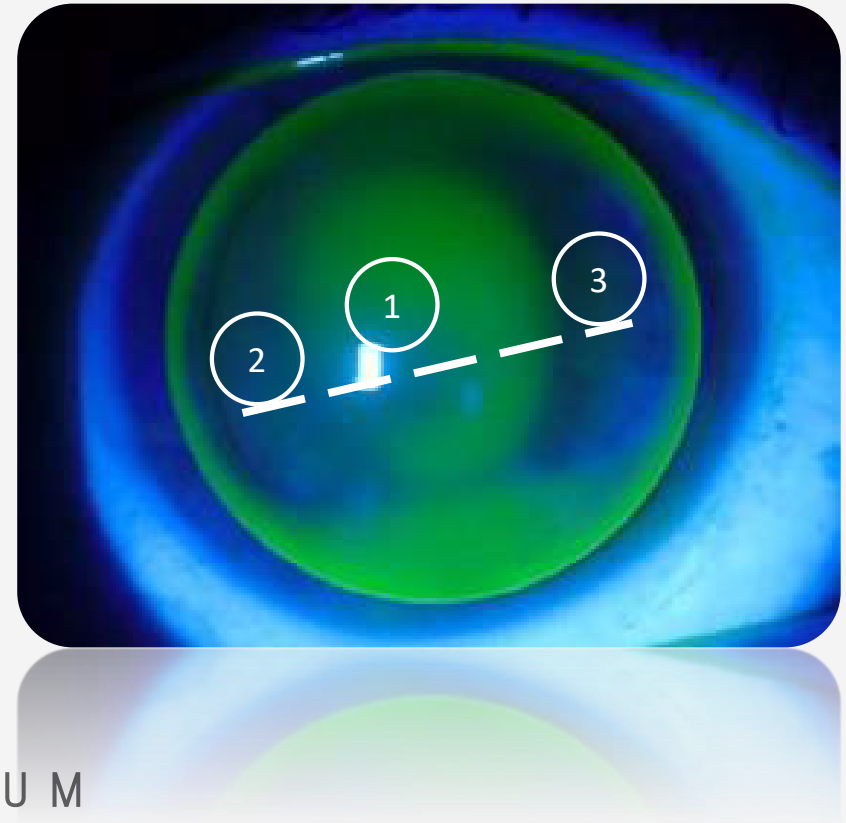
Irregular Cornea
Elypsis KC and SE

Ideal adaptation technique in irregular cornea



Three Support Points

1 Slight Apical Touch (feather touch)

2 y 3 Support in the Mid-periphery

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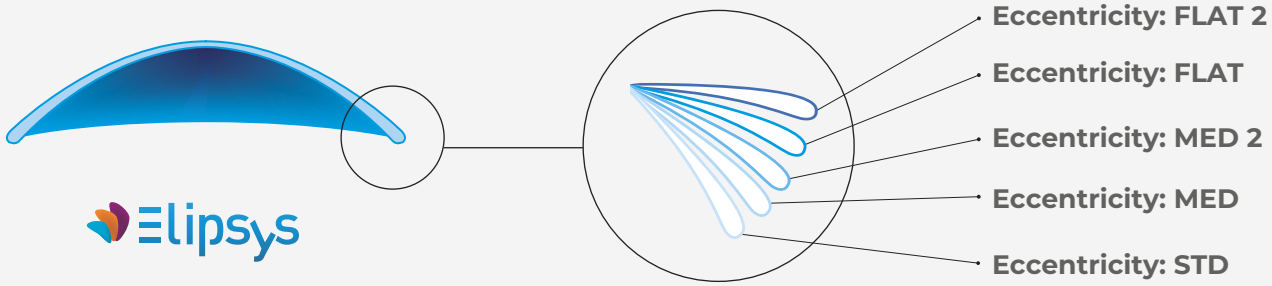
Irregular Cornea
Elypsis KC and SE

Troubleshooting

If you observe:

Lifting of the Edge	Solution
Insufficient (less than de mm)	**Increase Eccentricity** (ei.: MED → MED 2, FLAT or FLAT 2)
Exccessive (greater than 1 mm)	**Decrease Eccentricity** (ei.: FLAT 2 → FLAT, MED 2 or MED)



Regular and Irregular Cornea
Elypsis Family STD, KC and SE

Troubleshooting

	Base Curve	Diameter	Eccentricity
Dropped Lens	Flatten	Increase	Increase
Lens riding High	Close	Decrease	Decrease
Central Staining	Close		
Staining 3 and 9		Decrease	Increase
Superior Limb Stain		Decrease	
Blurry Vision	Value centered and / or Pupilar Diameter		
Poor Vision	Flatten		
Central Pooling	Flatten	Decrease	
Dimple Veiling (trapped bubbles)	Flatten	Decrease	

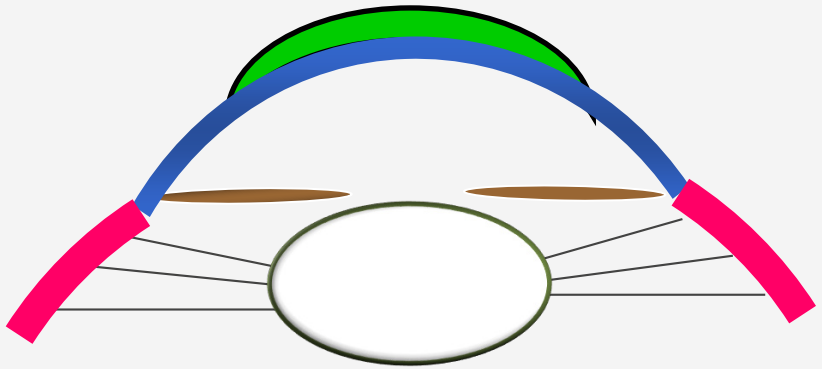
Regular and Irregular Cornea
Elypsis Family STD, KC and SE

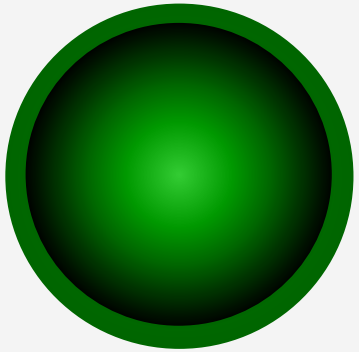
Step N° 4: *Power of the lens*

- Perform an Over-refraction
  - Do not forget to apply distometry (vertex distance) for values higher than ±3.75.
- Keep in mind that this design DOES NOT compensate for internal astigmatisms
  - Ast. Rx= Corneal Astisgmatism + Internal Astisgmatism
- Apply rules:
  - Make Steeper add negative
  - Make flatter add positive

Regular and Irregular Cornea
Elypsis Family STD, KC and SE

Step N° 4: *Power of the Lens*

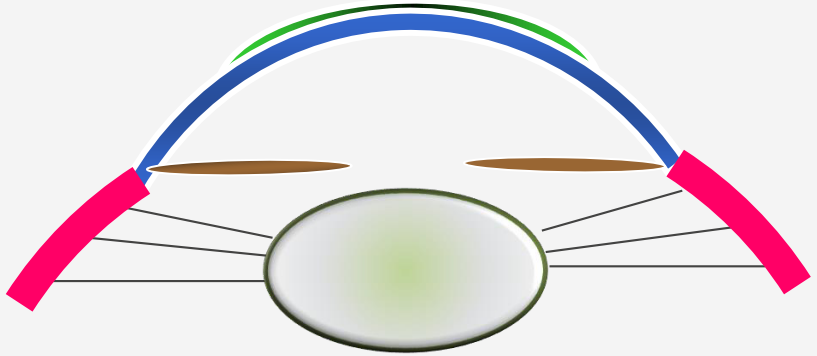


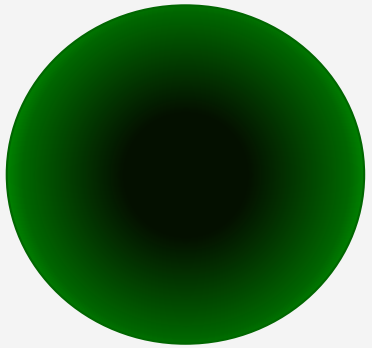


Make BC steeper

Meniscus lacrimal positive

Add Negative





Make BC flatter

Meniscus lacrimal negative

Add Positive

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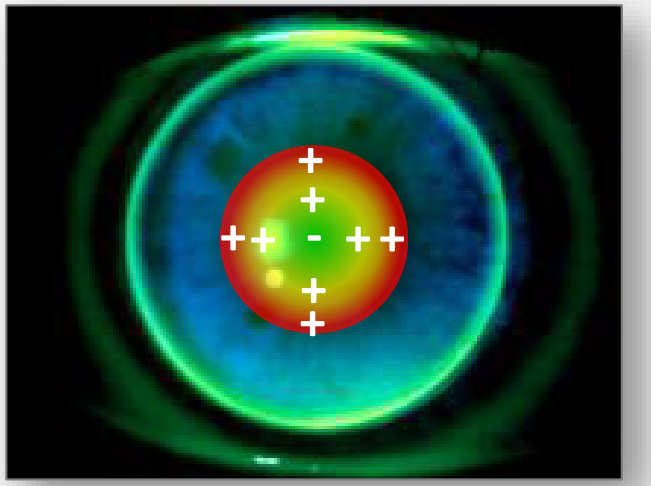
Regular and Irregular Cornea
Elypsis Family STD, KC and SE

Step N° 5: *Order of final lens (parameters to be identified)*

- Design/Geometry
  - Elipsys STD
  - Elipsys KC
  - Elipsys SE
- Base curve
- Power
  - Fitting lens number + Over refraction (Lab.will apply distometry)
  - Definitive lens power (distometry already applied)
- Diameter
- Eccentricity

Regular and Irregular Cornea
Elypsis Family STD, KC and SE

Possibility of Multifocal Design



- Presbyopic patients wearing Elipsys family contact lenses can now enjoy clear vision at all distances, regardless of their corneal condition** (regular and irregular cornea).
- Simultaneous vision multifocal design + Translation
  - Center - Far (CD)
- Required parameters for you order (empirically):
  - In addition the parameters required to order an Elipsys lens:
    - Pupillary Diameter
    - ADD
    - Ocular Dominance
    - (Sensorial by fogging test with + 2.00 D lens)

(**) We recommend special attention when trying to pass, the cases of very irregular cornea, to a Multifocal geometry, since an accumulation of optical aberrations both corneal and the same multifocality of the lens, may condition the final visual result.

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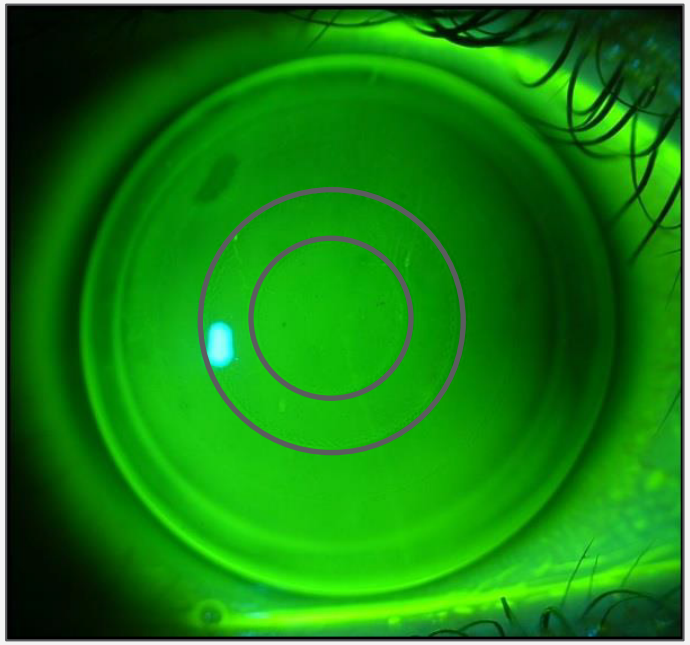
Regular and Irregular Cornea
Elypsis Family STD, KC and SE

Multifocal design possible

- Possibility of fitting set with multifocal geometry.



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