



KERARING
INTRACORNEAL RING SEGMENTS

THE WORLD LEADER
IN THE TREATMENT
OF KERATOCONUS



325°



210°



160°



150°



120°



90°



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VISION IN EVOLUTION



INTRASTROMAL CORNEAL RING SEGMENTS THE WORLD LEADER IN THE TREATMENT OF KERATOCONUS

KERARING® intrastromal corneal ring segments are precision implantable devices for the correction of corneal surface irregularities and reduction of refractive errors associated with keratoconus and other corneal ectatic disorders.

INDICATIONS

- Keratoconus with decreased BSCVA and intolerance to contact lens wear;
- Pellucid marginal degeneration;
- Post-LASIK corneal ectasia;
- Irregular astigmatism post-RK, post-penetrating keratoplasty or post-trauma;

EXCLUSIVE PRISMATIC DESIGN

KERARING® unique cross sectional shape produces a prismatic effect to reflect incoming light, thus minimizing glare and halos.



DOES NOT COMPROMISE CORNEAL GRAFT

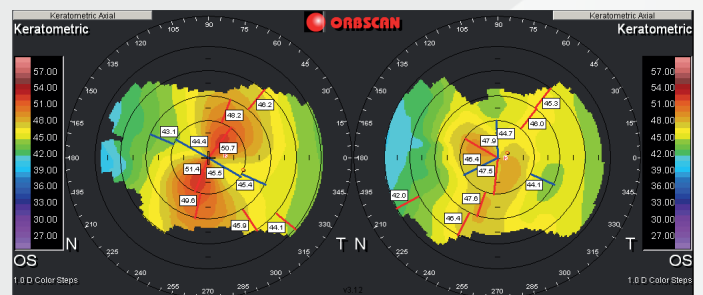
KERARING® does not interfere with the normal execution of lamellar or penetrating keratoplasty procedures, if and when needed.

COMPATIBLE WITH COMPLEMENTARY TECHNIQUES

KERARING® implantation may be synergistically combined with other techniques such as corneal collagen crosslinking, PRK and phakic IOL implantation.

MECHANISMS OF ACTION

- Corneal remodeling through addition technique, preserving the corneal integrity;
- Corneal topography regularization and refractive correction, preserving the natural corneal prolate profile;
- Reduction of optical aberrations and improvement of visual acuity;
- Improvement of contact lens tolerance;
- Delays or eliminates the need for corneal transplantation;

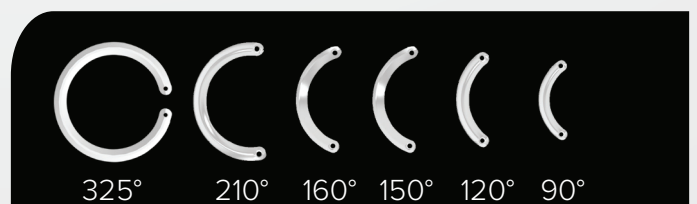


REVERSIBILITY

KERARING® may be explanted at any time, allowing the cornea to return to its original characteristics.

ADJUSTABILITY

Refractive and topographic effects can be easily adjusted by exchanging and or repositioning the implant.





KERARING AS

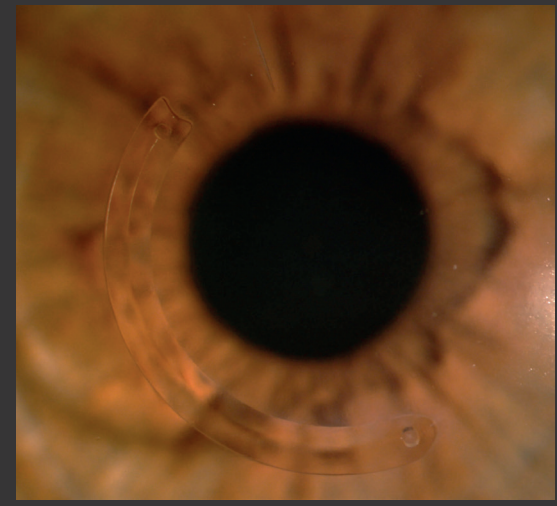
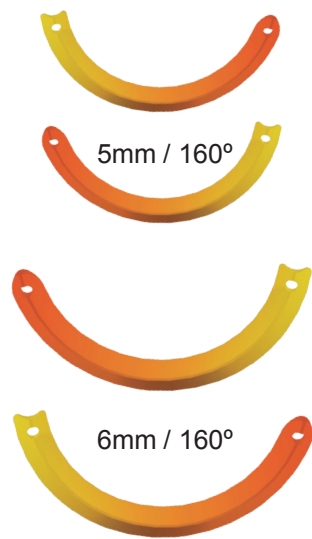
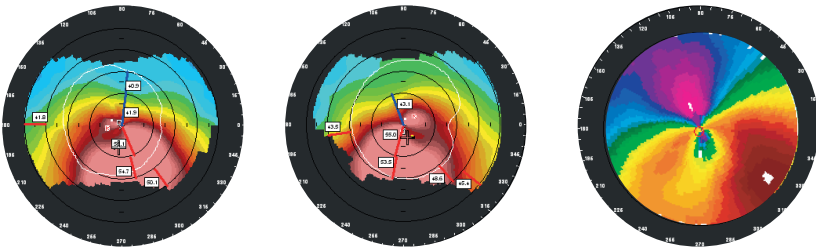
INTRACORNEAL RING SEGMENTS

KERARING® AS is the first and only intrastromal ring segment with progressive thickness. It allows for even greater treatment customization options when planning to achieve optimal visual and refractive outcomes for each individual case. The KERARING® AS is implanted by using existing techniques and instrumentation.



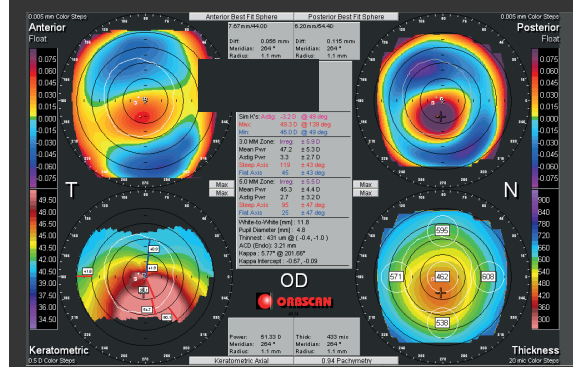
160° segments can have clockwise or counterclockwise direction of thickness progression. The direction of the "arrow" indicates the direction of the thickness increase.

INDICATIONS: ASYMMETRIC TOPOGRAPHIC PATTERNS; NON COINCIDENT TOPOGRAPHIC CYLINDER AND COMA AXIS



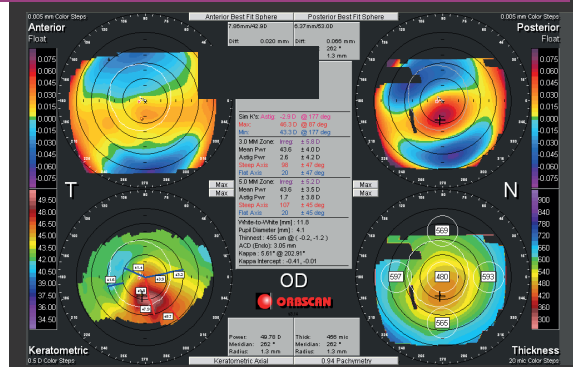
PREOP:

Rx: -5,75 -3,25 @ 138°
UCVA:0,1 BCVA:0,4
K =49 x 46 @ 50°

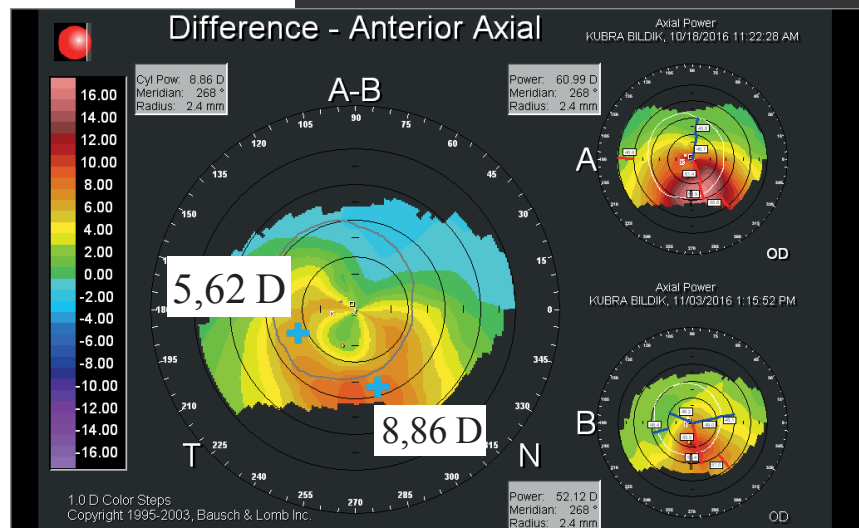


POSTOP:

Rx: -0,25 -1,75 @ 150°
UCVA:0,4 BCVA:0,9
K =46 x 44 @ 170°



DIFFERENCE:



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| Type | REF | Description | Diameter (mm) | Arc Length (degrees) | Thickness (µm) | |
|----------------------------|---|--|---|----------------------|----------------|---------|
| Constant Thickness | 5 mm Diameter | SI5A90M150 | INTRASTROMAL CORNEAL RING KERARING - SI5-90 - Symmetric - 5mm | 5 | 90 | 150 |
| | | SI5A90M200 | INTRASTROMAL CORNEAL RING KERARING - SI5-90 - Symmetric - 5mm | 5 | 90 | 200 |
| | | SI5A90M250 | INTRASTROMAL CORNEAL RING KERARING - SI5-90 - Symmetric - 5mm | 5 | 90 | 250 |
| | | SI5A90M300 | INTRASTROMAL CORNEAL RING KERARING - SI5-90 - Symmetric - 5mm | 5 | 90 | 300 |
| | | SI5A120M150 | INTRASTROMAL CORNEAL RING KERARING - SI5-120 - Symmetric - 5mm | 5 | 120 | 150 |
| | | SI5A120M200 | INTRASTROMAL CORNEAL RING KERARING - SI5-120 - Symmetric - 5mm | 5 | 120 | 200 |
| | | SI5A120M250 | INTRASTROMAL CORNEAL RING KERARING - SI5-120 - Symmetric - 5mm | 5 | 120 | 250 |
| | | SI5A120M300 | INTRASTROMAL CORNEAL RING KERARING - SI5-120 - Symmetric - 5mm | 5 | 120 | 300 |
| | | SI5A120M350 | INTRASTROMAL CORNEAL RING KERARING - SI5-120 - Symmetric - 5mm | 5 | 120 | 350 |
| | | SI5A160M150 | INTRASTROMAL CORNEAL RING KERARING - SI5-160 - Symmetric - 5mm | 5 | 160 | 150 |
| | | SI5A160M200 | INTRASTROMAL CORNEAL RING KERARING - SI5-160 - Symmetric - 5mm | 5 | 160 | 200 |
| | | SI5A160M250 | INTRASTROMAL CORNEAL RING KERARING - SI5-160 - Symmetric - 5mm | 5 | 160 | 250 |
| | | SI5A160M300 | INTRASTROMAL CORNEAL RING KERARING - SI5-160 - Symmetric - 5mm | 5 | 160 | 300 |
| | | SI5A160M350 | INTRASTROMAL CORNEAL RING KERARING - SI5-160 - Symmetric - 5mm | 5 | 160 | 350 |
| | | SI5A210M150 | INTRASTROMAL CORNEAL RING KERARING - SI5-210 - Symmetric - 5mm | 5 | 210 | 150 |
| | | SI5A210M200 | INTRASTROMAL CORNEAL RING KERARING - SI5-210 - Symmetric - 5mm | 5 | 210 | 200 |
| | | SI5A210M250 | INTRASTROMAL CORNEAL RING KERARING - SI5-210 - Symmetric - 5mm | 5 | 210 | 250 |
| | | SI5A210M300 | INTRASTROMAL CORNEAL RING KERARING - SI5-210 - Symmetric - 5mm | 5 | 210 | 300 |
| | SI5A210M350 | INTRASTROMAL CORNEAL RING KERARING - SI5-210 - Symmetric - 5mm | 5 | 210 | 350 | |
| | SI5A325M150 | INTRASTROMAL CORNEAL RING KERARING - SI5-325 - Symmetric - 5mm | 5 | 325 | 150 | |
| | SI5A325M200 | INTRASTROMAL CORNEAL RING KERARING - SI5-325 - Symmetric - 5mm | 5 | 325 | 200 | |
| | SI5A325M250 | INTRASTROMAL CORNEAL RING KERARING - SI5-325 - Symmetric - 5mm | 5 | 325 | 250 | |
| | SI5A325M300 | INTRASTROMAL CORNEAL RING KERARING - SI5-325 - Symmetric - 5mm | 5 | 325 | 300 | |
| | 6 mm Diameter | SI6A90M150 | INTRASTROMAL CORNEAL RING KERARING - SI6-90 - Symmetric - 6mm | 6 | 90 | 150 |
| | | SI6A90M200 | INTRASTROMAL CORNEAL RING KERARING - SI6-90 - Symmetric - 6mm | 6 | 90 | 200 |
| | | SI6A90M250 | INTRASTROMAL CORNEAL RING KERARING - SI6-90 - Symmetric - 6mm | 6 | 90 | 250 |
| | | SI6A90M300 | INTRASTROMAL CORNEAL RING KERARING - SI6-90 - Symmetric - 6mm | 6 | 90 | 300 |
| | | SI6A120M150 | INTRASTROMAL CORNEAL RING KERARING - SI6-120 - Symmetric - 6mm | 6 | 120 | 150 |
| | | SI6A120M200 | INTRASTROMAL CORNEAL RING KERARING - SI6-120 - Symmetric - 6mm | 6 | 120 | 200 |
| | | SI6A120M250 | INTRASTROMAL CORNEAL RING KERARING - SI6-120 - Symmetric - 6mm | 6 | 120 | 250 |
| | | SI6A120M300 | INTRASTROMAL CORNEAL RING KERARING - SI6-120 - Symmetric - 6mm | 6 | 120 | 300 |
| | | SI6A120M350 | INTRASTROMAL CORNEAL RING KERARING - SI6-120 - Symmetric - 6mm | 6 | 120 | 350 |
| | | SI6A150M150 | INTRASTROMAL CORNEAL RING KERARING - SI6-150 - Symmetric - 6mm | 6 | 150 | 150 |
| | | SI6A150M200 | INTRASTROMAL CORNEAL RING KERARING - SI6-150 - Symmetric - 6mm | 6 | 150 | 200 |
| | | SI6A150M250 | INTRASTROMAL CORNEAL RING KERARING - SI6-150 - Symmetric - 6mm | 6 | 150 | 250 |
| | | SI6A150M300 | INTRASTROMAL CORNEAL RING KERARING - SI6-150 - Symmetric - 6mm | 6 | 150 | 300 |
| SI6A150M350 | | INTRASTROMAL CORNEAL RING KERARING - SI6-150 - Symmetric - 6mm | 6 | 150 | 350 | |
| SI6A210M150 | | INTRASTROMAL CORNEAL RING KERARING - SI6-210 - Symmetric - 6mm | 6 | 210 | 150 | |
| SI6A210M200 | | INTRASTROMAL CORNEAL RING KERARING - SI6-210 - Symmetric - 6mm | 6 | 210 | 200 | |
| SI6A210M250 | | INTRASTROMAL CORNEAL RING KERARING - SI6-210 - Symmetric - 6mm | 6 | 210 | 250 | |
| SI6A210M300 | | INTRASTROMAL CORNEAL RING KERARING - SI6-210 - Symmetric - 6mm | 6 | 210 | 300 | |
| SI6A210M350 | INTRASTROMAL CORNEAL RING KERARING - SI6-210 - Symmetric - 6mm | 6 | 210 | 350 | | |
| Progressive Thickness (AS) | 5 mm | AS5160M15-25C | INTRASTROMAL CORNEAL RING KERARING - AS5-160 - Asymmetric - 5mm | 5 | 160 | 150-250 |
| | | AS5160M15-25W | INTRASTROMAL CORNEAL RING KERARING - AS5-160 - Asymmetric - 5mm | 5 | 160 | 150-250 |
| | | AS5160M20-30C | INTRASTROMAL CORNEAL RING KERARING - AS5-160 - Asymmetric - 5mm | 5 | 160 | 200-300 |
| | | AS5160M20-30W | INTRASTROMAL CORNEAL RING KERARING - AS5-160 - Asymmetric - 5mm | 5 | 160 | 200-300 |
| | 6 mm | AS5330M15-25 | INTRASTROMAL CORNEAL RING KERARING - AS5-330 - Asymmetric - 5mm | 5 | 330 | 150-250 |
| | | AS5330M20-30 | INTRASTROMAL CORNEAL RING KERARING - AS5-330 - Asymmetric - 5mm | 5 | 330 | 200-300 |
| | | AS6160M15-25C | INTRASTROMAL CORNEAL RING KERARING - AS6-160 - Asymmetric - 5mm | 6 | 160 | 150-250 |
| | | AS6160M15-25W | INTRASTROMAL CORNEAL RING KERARING - AS6-160 - Asymmetric - 5mm | 6 | 160 | 150-250 |
| AS6160M20-30C | INTRASTROMAL CORNEAL RING KERARING - AS6-160 - Asymmetric - 5mm | 6 | 160 | 200-300 | | |
| AS6160M20-30W | INTRASTROMAL CORNEAL RING KERARING - AS6-160 - Asymmetric - 5mm | 6 | 160 | 200-300 | | |

| | |
|----------|---|
| Remarks: | Keraring AS with arcs of 160 degrees have increasing thickness according to the direction - W (clockwise) or C (counterclockwise). Example: AS5-160 15-25W - Thickness increases from 150µm to 250µm in clockwise direction. |
| | Keraring AS with arcs of 330 degrees have increasing thickness from tips to the center. Example: AS5-330 15-25 - Thickness increases from 150µm to 250µm and from the tips to the center of the arc. |

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