



# KERARING

INTRASTROMAL CORNEAL RING SEGMENTS

NEW VARIABLE OPTICAL ZONES

GLOBAL LEADER IN KERATOCONUS TREATMENT



**MEDIPHACOS**  
OPHTHALMIC PROFESSIONALS

VISION IN EVOLUTION

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INTRASTROMAL CORNEAL RING SEGMENTS

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THE MOST COMPREHENSIVE AND VERSATILE  
CORNEAL REMODELLING TECHNOLOGY  
AVAILABLE WORLDWIDE

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Keraring intrastromal corneal ring segments are implantable precision devices used to correct corneal surface irregularities and reduce refractive errors associated with keratoconus and other corneal ectatic disorders. Unlike other intracorneal rings, Keraring was specifically designed to treat corneal ectasia, providing better and greater corneal surface regularization and refractive correction.

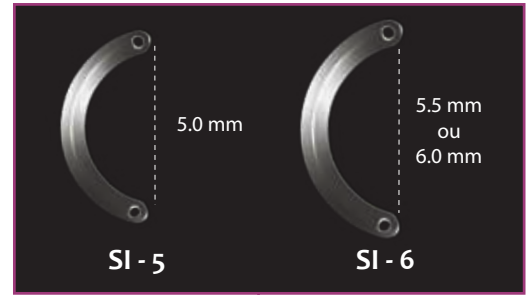


## FEATURES AND BENEFITS:

NEW!

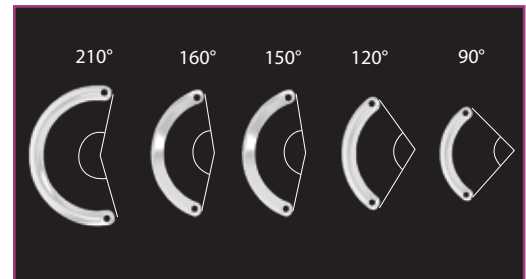
### VARIABLE OPTICAL ZONES

Keraring is available in two models (SI-5 and SI-6) for implantation in optical zones of 5.0, 5.5 and 6.0mm, offering surgeons additional options to meet each patient's needs.



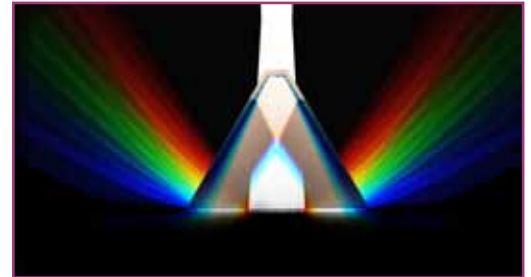
### VARIABLE ARC LENGTHS AND THICKNESSES

Keraring offers 40 different variations of thicknesses, arc lengths and diameters, allowing for enhanced customization of corneal remodeling and refractive correction.



### UNIQUE PRISMATIC DESIGN

Keraring's design generates a prismatic effect by which the light coming through the implant is reflected, reducing the incidence of glare and halos.



### GREATER REFRACTIVE CORRECTION

Keraring corrects low, moderate, and high degrees of myopia and astigmatism.



### PROVEN CLINICAL SAFETY

Extensive track record of use and longest follow-up worldwide: over 150,000 implants followed up for as long as 18 years. Independent clinical trials have confirmed Keraring's safety and effectiveness.



## SURGICAL TECHNIQUE AND TRAINING

Keraring implantation is a simple outpatient procedure performed under topical anesthesia. Surgical instruments have been specifically developed by Mediphacos for manual and femtosecond laser assisted techniques. Keraring surgeons must attend one of the certification courses regularly offered by Mediphacos and its authorized distributors. Please contact us for current program schedules or to request training in your own practice.



## NOMOGRAMS AND CONSULTANCY

Keraring surgical outcomes are greatly dependent on accurate selection of implant size and position for each individual patient. Based on extensive statistical analysis of results, Mediphacos constantly updates the calculation nomograms and provides surgeons with personal attention and highly reliable expert support.

## SPECIFICATIONS

- Material: Medical Grade PMMA.
- Models: SI5 (5mm optical zone). SI6 (5.5mm or 6mm optical zone).
- Variable thickness: 150µm to 350µm (all models) in 50µm increments.
- Variable arc length:
  - SI-5: 90°, 120°, 160° and 210°
  - SI-6: 90°, 120°, 150° and 210°
- Keraring is presented with one ring segment per box.



## INDICATIONS

- Keratoconus with poor BSCVA and contact lens intolerance.
- Progressing keratoconus.
- Pellucid marginal degeneration.
- Post Lasik ectasia.
- Irregular astigmatism following radial keratotomy.
- High astigmatism secondary to penetrating keratoplasty.
- Post-trauma corneal irregularities.



## CONTRA-INDICATIONS

- Acute keratoconus with keratometry  $> 70$  D.
- Major central corneal opacity.
- Hydrops.
- Following penetrating keratoplasty when graft is decentered.
- Severe atopic disease.
- Recurring corneal erosion syndrome.
- Patient's high expectations to achieve emmetropia.

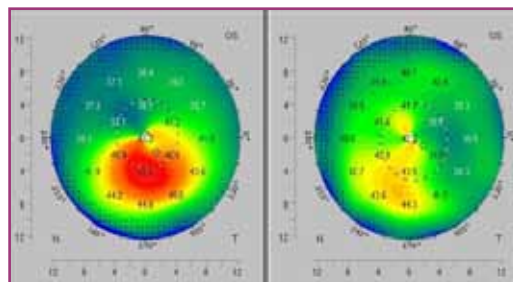


## MECHANISMS OF ACTION

- Corneal remodeling through addition technique: preserves corneal integrity.
- Corneal topography regularization and refractive correction preserving the natural prolate profile, reducing optical aberrations and improving visual acuity and contact lens tolerance.
- Displacement of corneal apex towards the central pupil.
- Corneal stabilization, delaying or eliminating the need for corneal transplantation.

## REVERSIBILITY

Keraring may be explanted at any time, allowing the cornea to revert to its original preoperative shape. The procedure is reversible.



## ADJUSTABILITY

Refractive and topographic results may be easily readjusted by exchanging or repositioning the implant.



## COMPATIBILITY WITH OTHER PROCEDURES

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

## DOES NOT COMPROMISE CORNEAL TRANSPLANTATION

Keraring does not interfere with normal execution of lamellar or penetrating keratoplasty, if needed.

## OUTSTANDING PATIENT SATISFACTION

Keraring patients report highly positive improvements in their quality of life.

## QUICK VISUAL RECOVERY

Minimally invasive technique allows patients to rapidly resume their normal activities. Topographic and refractive changes are noticeable right after implantation and stabilize in 3 months on average.





Mediphacos is a world-class company with over 37 years of experience in ophthalmology and international presence in more than 48 countries in 5 continents.

Mediphacos has earned global presence and recognition through strong R&D investments, state-of-the-art manufacturing technology and sharp focus on the evolving needs of eye care professionals. In our modern manufacturing plant we employ exclusively the very best materials and technologies available worldwide, yielding innovative products of the highest quality, safety and efficacy.

All Mediphacos products are designed and manufactured under a comprehensive quality assurance system implemented in all areas of the enterprise and certified in conformity to ISO 9001-2000, ISO 13485, European Medical Devices Directive and GMP.



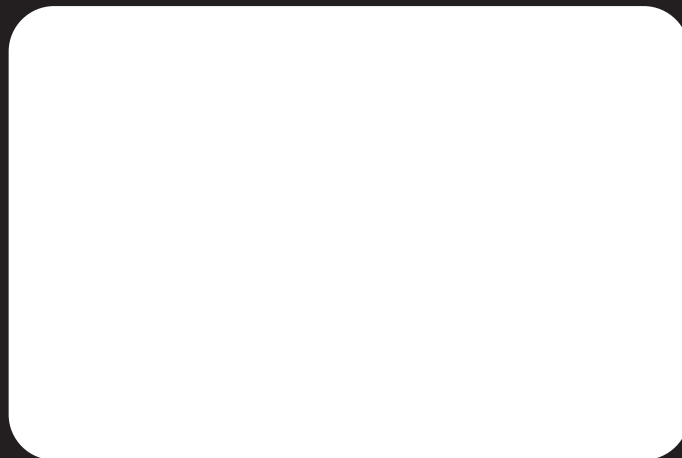
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Authorized Distributor:



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