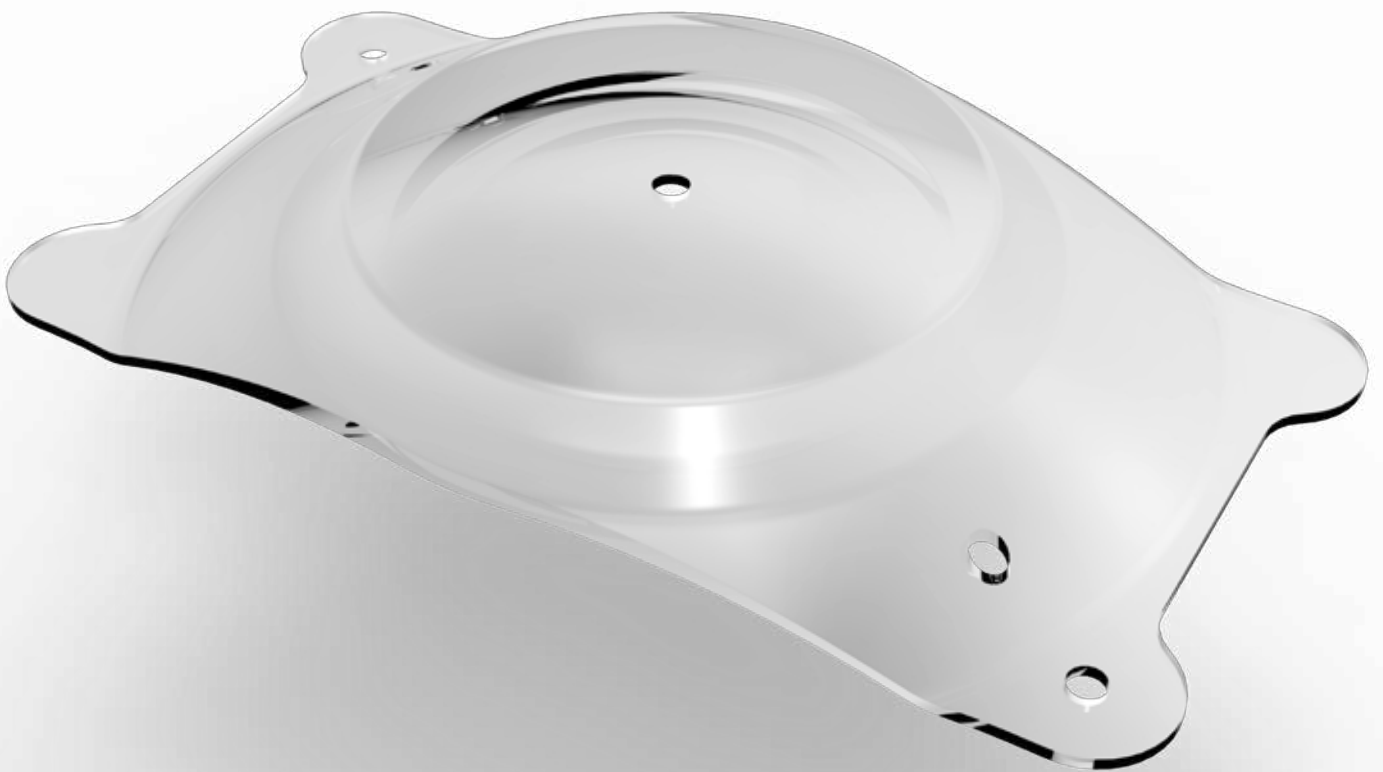




**The Evolution
of Phakic IOLs
is Here.**



From concept to reality



Intralens is a posterior chamber phakic intraocular lens developed by Mediphacos for the correction of myopia and astigmatism, preserving the natural anatomy and physiology of the eye. Intralens embodies 30 years of accumulated pIOL scientific evidence combined with modern engineering and manufacturing resources to provide new levels of safety and clinical performance.

4 years

of dedicated
development work

2023

ANVISA regulatory
approval (Brazil)

30 years

of accumulated pIOL
evidence

40 years

of Mediphacos IOL
manufacturing



7 Intralens innovations

1

Material

Hybrid HEMA/EOEMA acrylic copolymer

2

Optical design

Aspheric optic with zero spherical aberration

3

Haptic design

Fixed thickness and optical stabilization edge

4

Size options

Six diameters, from 11.6 mm to 13.7 mm

5

Correction range

From -6.00 D to -25.00 D in 0.50 D steps

6

Usability

Dedicated injector and loading instruments

7

Size calculation

Multiparametric Intralens Calculator app

Hybrid HEMA/EOEMA acrylic

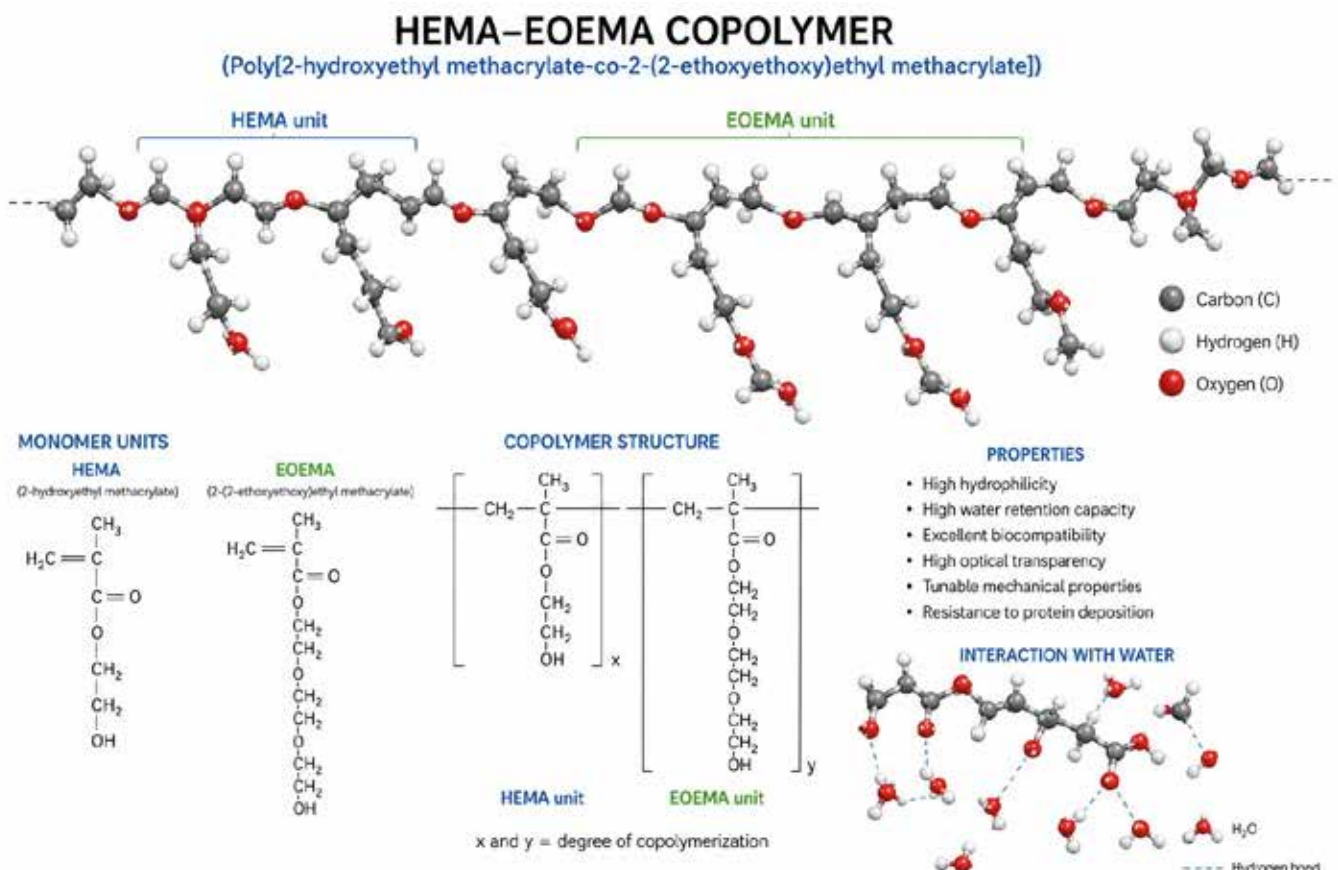
Copolymer of hydroxyethyl methacrylate (HEMA) and ethoxyethyl methacrylate (EOEMA): a hydrophilic material that combines excellent biocompatibility with the mechanical behavior of a high-strength acrylic for optimal performance. A time-tested material used for over 20 years and more than 50 million pseudophakic IOLs, with zero recalls.

Properties

- Highly resistant to manipulation, for better usability
- 25% water content
- Excellent biocompatibility
- High refractive index 1.462
- Abbe number 58
- High pseudoplasticity
- UV filter
- Safety record: 50 million lenses over 20 years

50 million

IOLs implanted and a 20+ year safety record for the material.

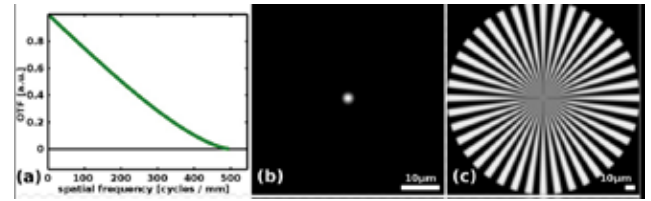


Aspheric optics and optical stability

Aspheric optics optimized with advanced ray-tracing software and a stabilization edge that isolates the optical zone from the mechanical stress transmitted by the haptics.

Optics

- Zero spherical aberration
- Power range from **-6.00 D to -25.00 D**, in 0.50 D steps
- Real optic diameter of **6 mm up to -18 D** (> 7 mm at the corneal plane)



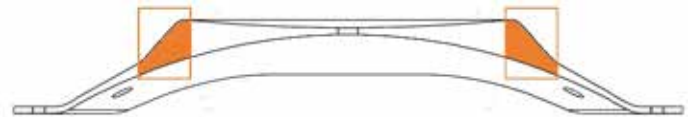
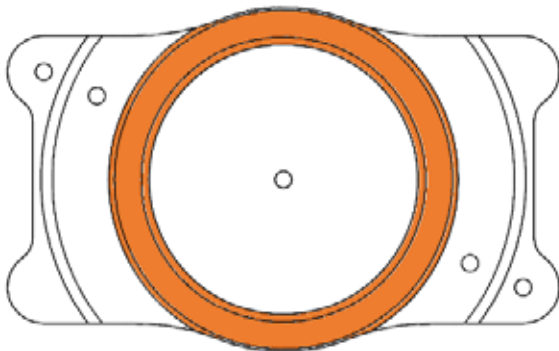
Optical transfer function and image response.

360 μm

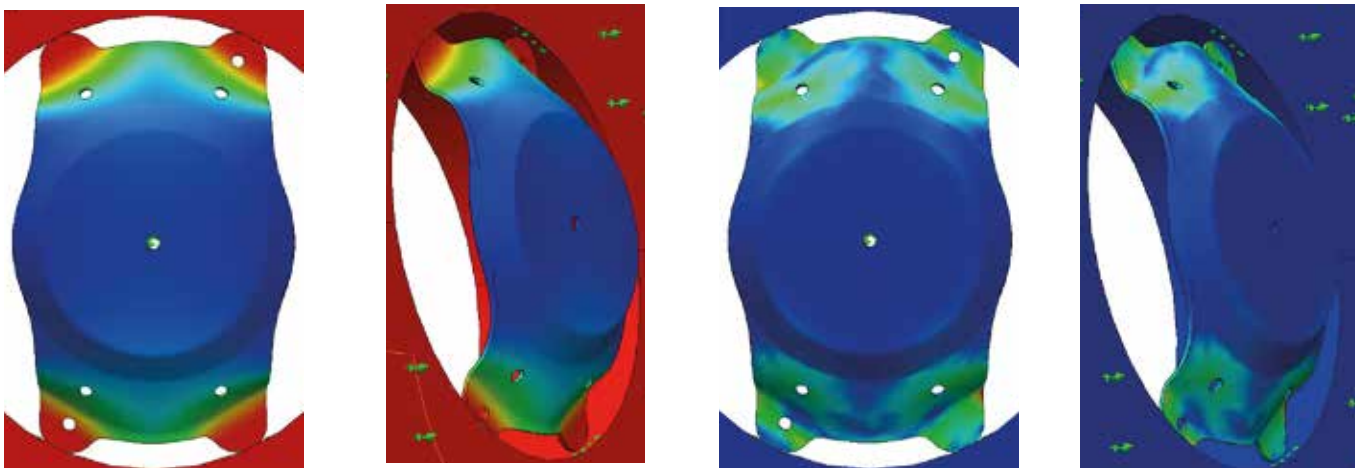
central hole in the optical zone of the lens.

Optical stabilization edge

The stabilization edge isolates the optical zone from the mechanical stress caused by haptic compression, eliminating optical distortion and maintaining high image quality even under excessive haptic compression.



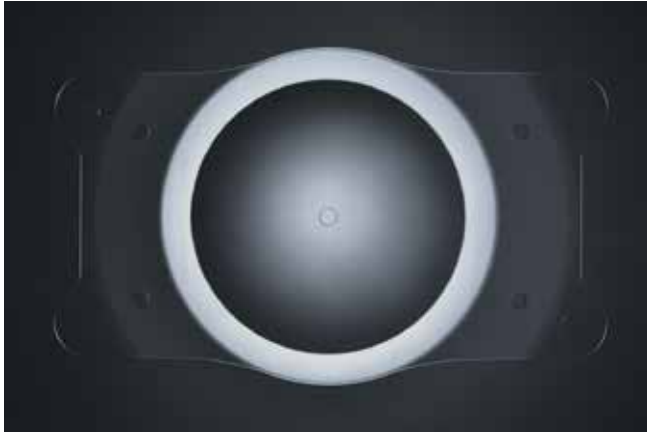
OPTICAL STABILIZATION EDGE



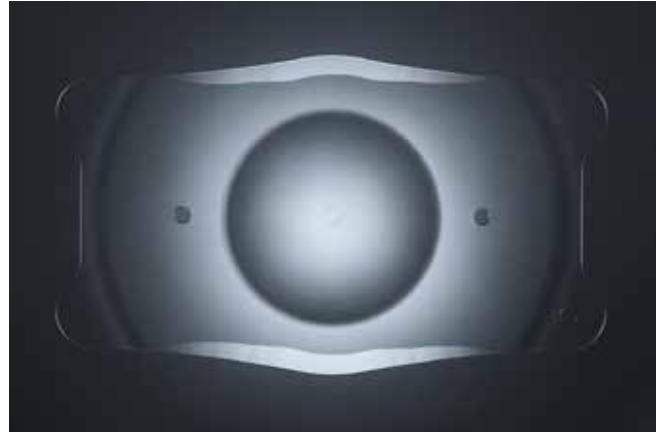
Optimized and validated by finite element modeling (FEM).

Fixed haptic thickness

Intralens haptic area with fixed thickness across the entire dioptric range, providing uniform mechanical behavior independent of lens power. Thin haptic area absorbs the mechanical stress generated during compression, reducing excessive vault.



INTRALENS



COMPETITOR pIOL

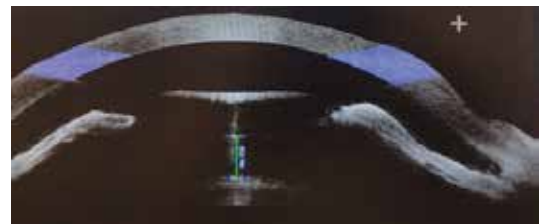
Haptic angulation

Controlled haptic angulation and reduced thickness for less impact on the anterior chamber angle, with a constant angle greater than 145° between the footplates and the haptic area across all sizes and dioptric powers. The result is a lower risk of angle closure even with high vaults.



> 145°

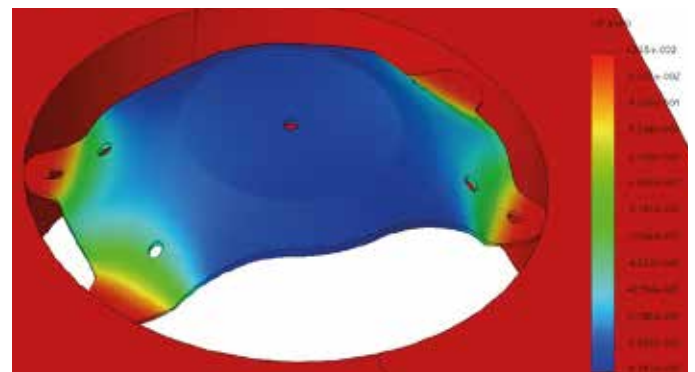
controlled haptic angle



Intralens with high vault



Competitor pIOL with high vault



SIZE OPTIONS

Expanded range of sizes

More size options to suit each individual ocular anatomy. Intralens is available in six diameters.



11.6

mm

12.1

mm

12.6

mm

12.9

mm

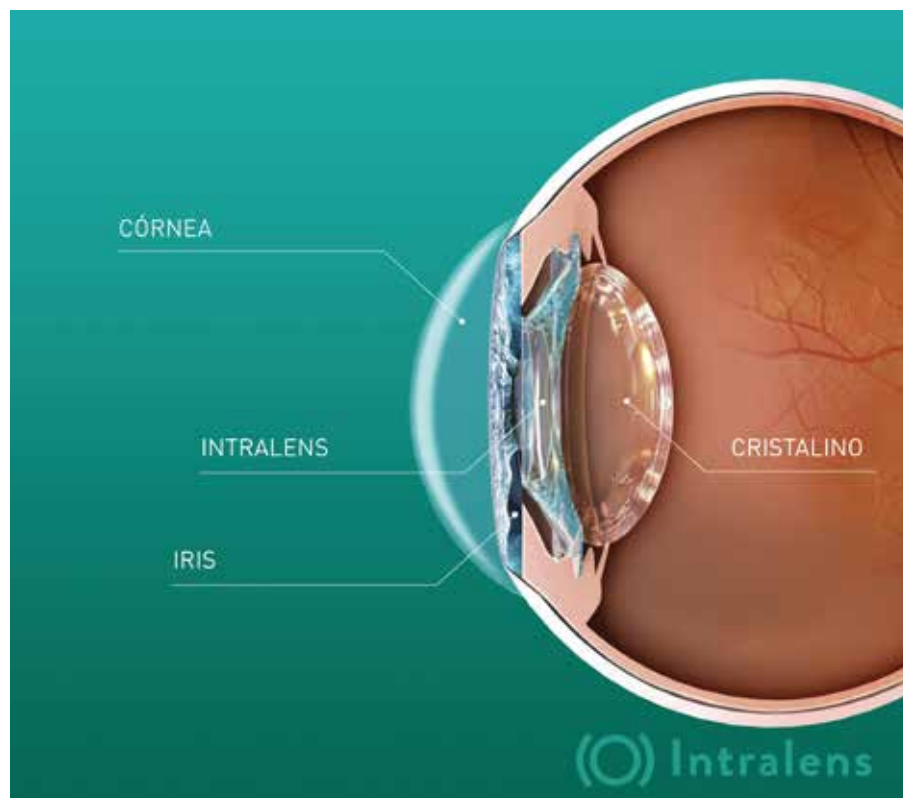
13.2

mm

13.7

mm

The additional Intralens diameters allow selection of the most appropriate implant size for each patient's individual anatomy, improving control of the final vault and achieving a more consistent position of the lens within the eye.



Customized toric power and axis

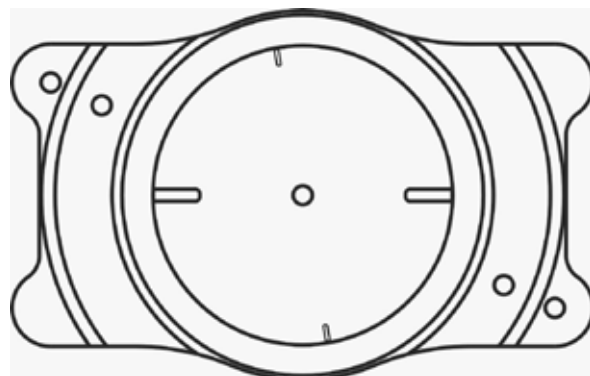
Toric power

0.50 – 6.00 D

Toric axis

0° – 179°

- Each ILT is custom-made with the patient's specific cylinder power and axis, allowing a more precise alignment and correction
- 0.50 D steps in toric power and 1° steps in axis
- The ILT is always aligned on the horizontal axis
- Excellent rotational stability

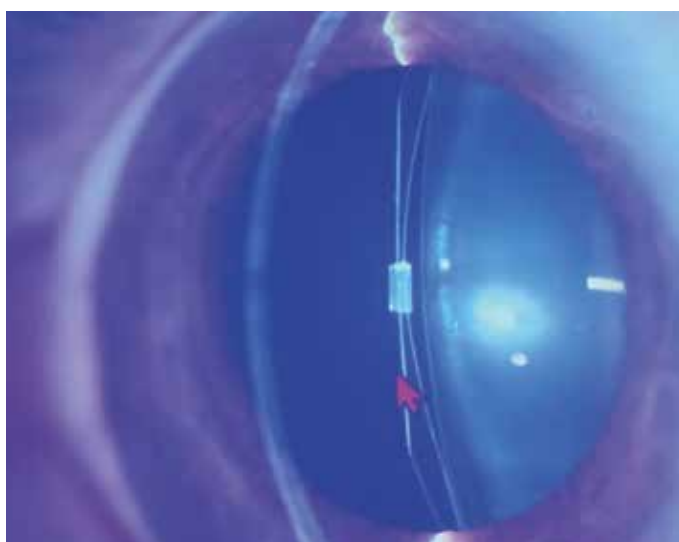


0°-180° and toricity axis markings.

TrueVault design

The vault problem...

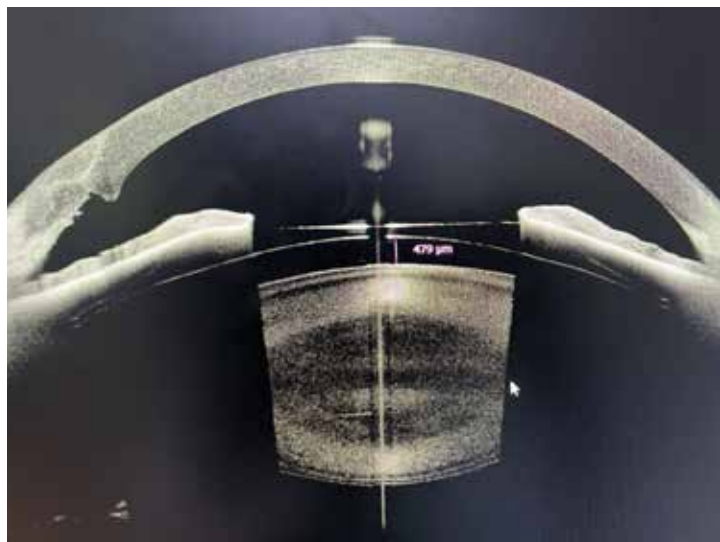
With competitor phakic lenses, the central vault is not indicative of the peripheral vault: the latter is always lower because of the concave posterior radius of the optic. The higher the pIOL power, the lower the peripheral vault relative to the central vault, and peripheral contact with the crystalline lens can occur even with a central vault considered to be acceptable.



Competitor pIOL with peripheral contact with the crystalline lens.

The TrueVault solution

With Intralens toric, the refractive correction is built on the anterior surface of the optic, and the posterior radius of curvature is fixed for all dioptric powers, matching the anterior radius of the relaxed crystalline lens. The central vault equals the peripheral vault at all powers, with no peripheral contact even with a low central vault.



Intralens with TrueVault: Uniform posterior vault: greater safety.

Dedicated injector and multiparametric calculation

Injector and instruments

- High-quality single-use injector
- 2.4 mm cartridge; 3.0 mm recommended incision
- Easy and safe pIOL loading
- Atraumatic manipulation forceps for easy one-step pIOL loading



Multiparametric calculation of pIOL size

Options for tomography, optical biometry, AS-OCT, UBM and very high frequency ultrasound (VHF U/S).

- Intralens Calculator app
- White-to-white (WTW) correction factors for 9 different measuring devices
- 10 dioptric power options with expected residual refraction

