CAPTURE THE ESSENCE OF YOUR PATIENTS

EVERYONE'S EYES ARE UNIQUE

Now preloaded with

BAUSCH+LOMB SimplifEYE™ delivery system

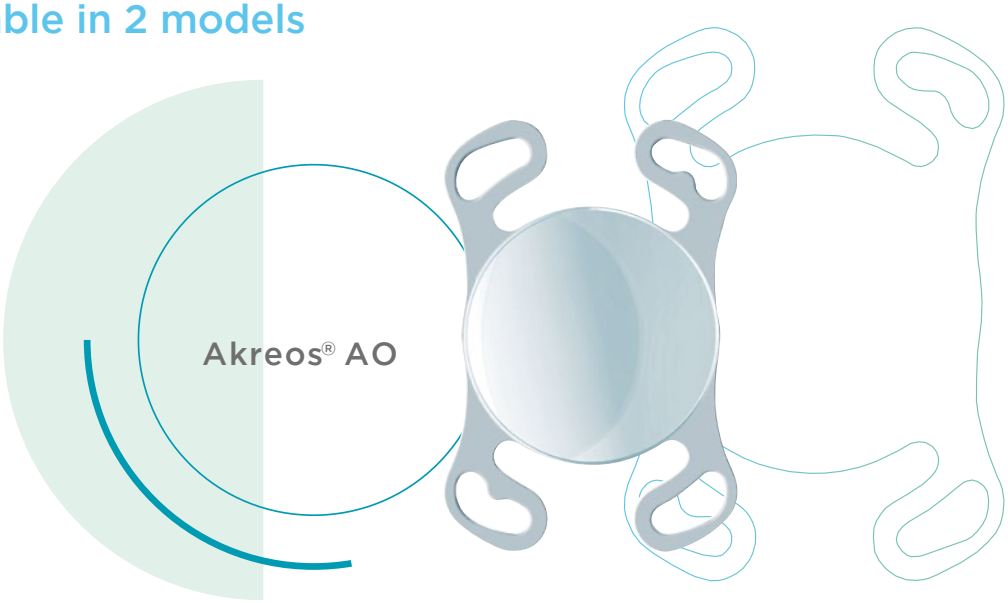
Akreos® AO

Akreos® AO Platform

Aspheric intraocular lenses (IOLs)
Aberration free with
ADVANCED OPTICS (AO) Technology

Akreos ®AO MICS

Available in 2 models



Benefits of the Akreos® IOLs with Advanced Optics (AO) Technology

- **Thanks to the design of their optic**, they do not introduce higher-order aberrations, providing a better quality of vision[1,2]
- **Uniform power from the center to the periphery of the optic**, for a predictable visual outcome in all patients regardless of the shape of the cornea, size and center of the pupil or the capsular bag
- They **maintain the natural positive spherical aberration of the cornea**, which may result in a greater depth of field compared with aberration correcting IOLs[3]

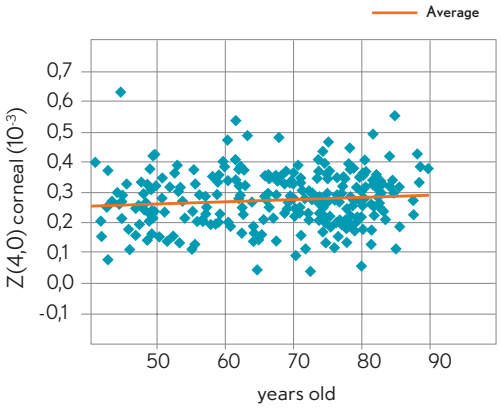
ASPHERIC IOLs - FOR IMPROVED **VISION QUALITY**

The Akreos® platform has an aspheric design that adapts to a wide range of patients*

Distribution of spherical aberration based on age

As reported by Beiko et al.[4], corneal spherical aberration varies widely from one person to the another.

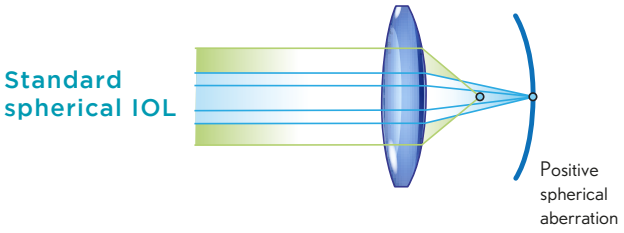
Figure adapted from Beiko et al.[4] Zernike Z coefficient (4.0) against the average age in 301 patients on the right and left eye[4]

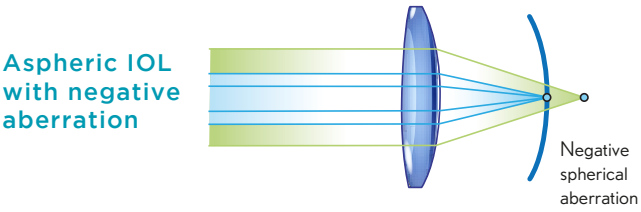


The optical performance of an IOL with AO technology should be better than that of a standard spherical IOL[1]

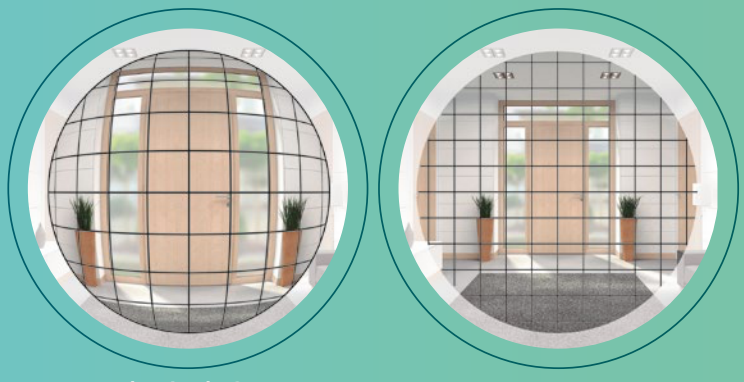
Advanced Optics (AO)

IOLs with BAUSCH + LOMB AO technology with aspheric anterior and posterior optical surfaces that do not induce spherical aberrations





- IOLs with AO technology do not have inherent spherical aberrations.
- Designed to obtain the expected refractive outcome.



ABERRATION-FREE IOLs

Greater contrast sensitivity is especially important in low light conditions



Akreos® AO improves contrast sensitivity in mesopic conditions[1]

Significant higher mesopic conditions in all spatial frequencies was reported by Santhiago, et al.[1] for the Akreos® AO (aspheric optic) compared to the Akreos® Fit (spherical lens of same material)[1]

(1.5, 3, 6, 12, y 18 cpd; P .004, P .042, P .017, P .0017, y P .001, respectively)

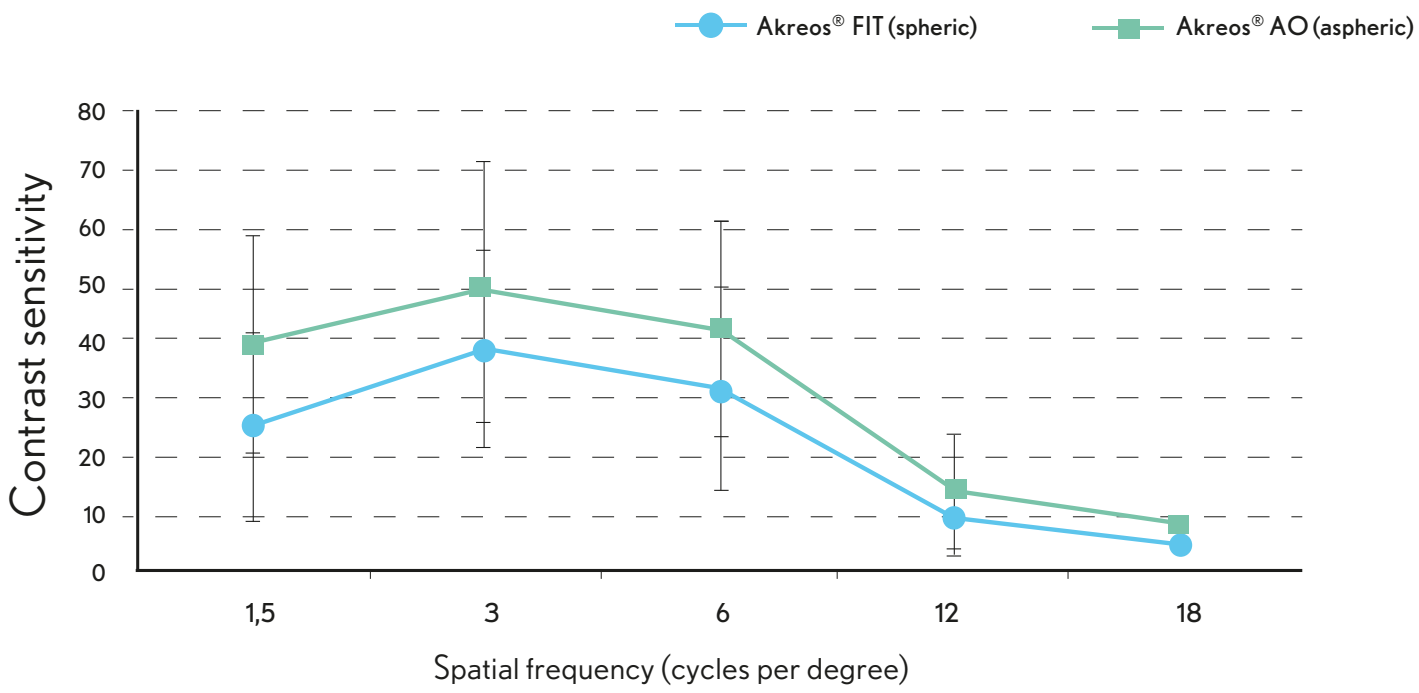


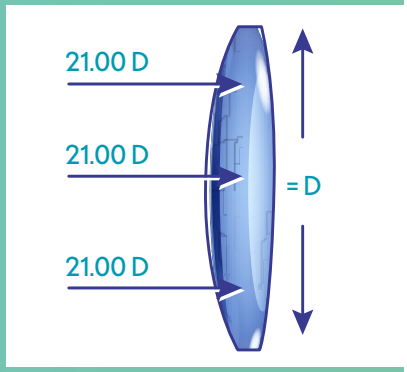
Figure adapted from Santhiago MR, et al.[1] 2010. Sensitivity to contrast in mesopic conditions (3 cd/m²) in patients with Akreos® AO (pupils 4.01 ± 0.45 mm) and Akreos® spherical Fit (pupil 4.04 ± 0.41 mm)[1]

Decentration is much more frequent than one might think

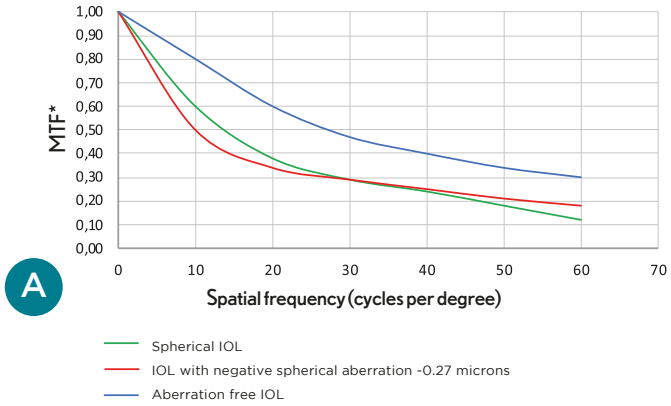
In general,
the average decentration after uncomplicated cataract surgery reported in studies is 0.30 ± 0.16 mm
(Range 0 to 1.9 mm)[5]

Akreos® AO decentration tolerance

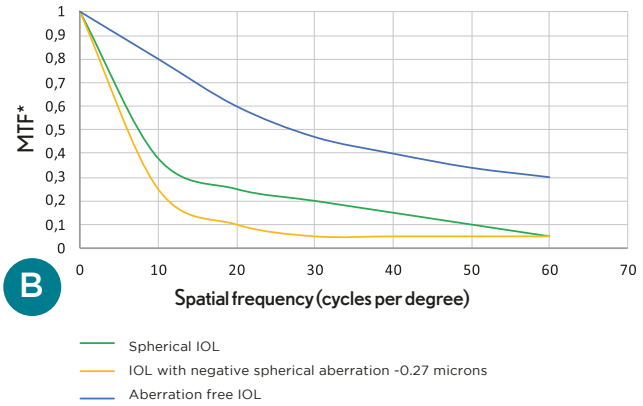
- The neutral aspheric design of both anterior and posterior optics surfaces of the Akreos® AO lens allows for the constant power of the lens, from the centre to the periphery of its optic.
- The Akreos® lens is aberration-free and, therefore, it does not induce other aberrations in case of decentration, even with decentration of 1 mm of more.[6]



Performance of different IOLs based on decentration[6]



A. The IOLs are decentered 0.5 mm. Induction of asymmetrical HOAs degraded the performances of the spherical IOL and the one inducing negative spherical aberration, causing the MTF curves to droop and separate.



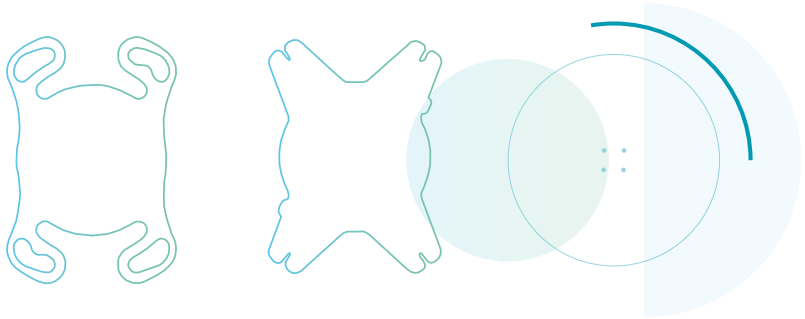
B. The IOLs are decentered 1.0 mm, further degrading performance of the spherical IOL and the one inducing negative spherical aberration IOL but not the aberration-free IOL.

Figure adapted from Altman GE, et al.[6] 2005. Sensitivity to contrast in mesopic conditions (3 cd/m²) in patients with Akreos® AO (pupils 4.01 ± 0.45mm) and Akreos® spherical Fit (pupil 4.04 ± 0.41mm)
*MTF: Modulation Transference Function

Depth of focus and residual spherical aberration

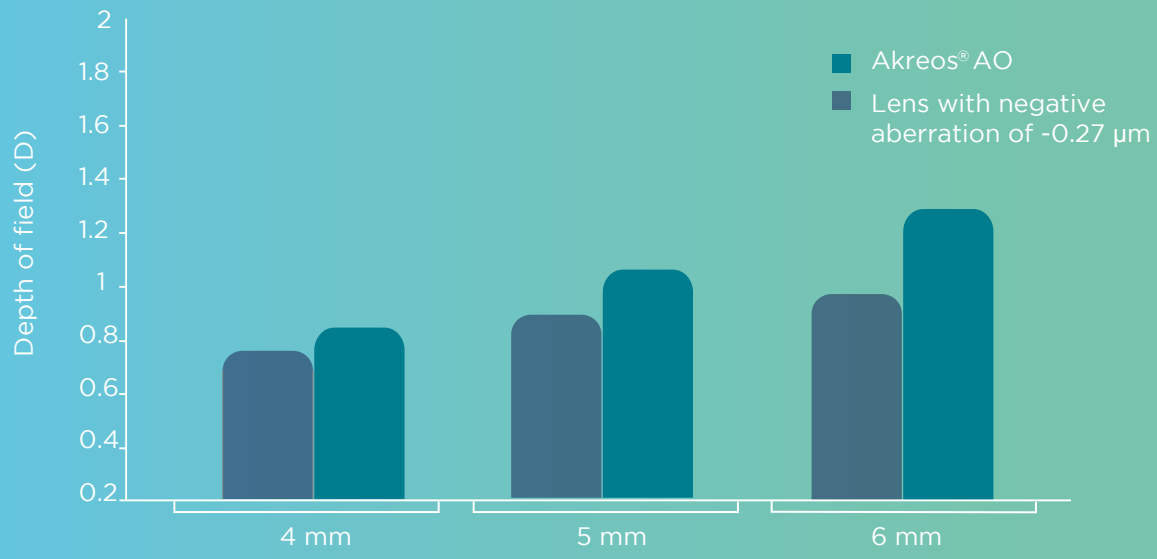
Maintaining a certain amount of positive spherical aberration after surgery can provide greater depth of focus[7]

- Many authors indicate that maintaining residual spherical aberration is beneficial for vision quality[8,9]
- The depth of focus should be greater with an aspheric IOL that does not induce aberration, in comparison with an aspheric IOL that induces negative aberration. Some studies found that the depth of focus was significantly greater[10,11]



Clinical results[3]

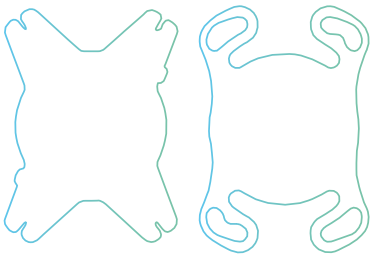
A multicentre study has shown that the IOL with Advanced Optics technology provides greater depth of field than the aspheric IOL with negative aberration, which could contribute to greater visual quality perception.



Graph adapted from Johansson B et al. Diagram of boxes that assesses the average depth of field by the Strehl ratio with different sizes of pupil where the medians and 1st and 3rd quartile are shown.

1.8 mm MICS*

The Akreos® AO MICS and Akreos® AO lenses are crafted from an acrylic hydrophilic material that makes it optimal for today's micro incision cataract surgery requirements. The lenses can be easily compressed to fit through a 1.8 mm incision; it unfolds smoothly once implanted into the eye and recovers its initial shape without damage.



MICS* benefits:

- Minimize the surgically induced corneal astigmatism (SIA)[12,13] and preserve optical properties of the cornea[12,14]
- Minimally traumatic surgery, providing better postoperative outcomes than standard small incision phacoemulsification[12]
- MICS favors the use of fluidics, reducing the use of phacoemulsification power[12]
- Reduces the risk for intraoperative anterior chamber instability[15]
- Less incision bleeding during the surgery[15]
- Higher structural stability of the anterior chamber[15]
- Easy in construction and less incidence of postoperative endophthalmitis[15]

Proven performance

The Akreos® lens material has been successfully implanted in over 8.8 million eyes

Physicians have been implanting the Akreos® lens material since 1998

Moderate refractive index, with an inherently low surface reflectivity for the reduction of glare and its adverse effects[16]

Platform Stability

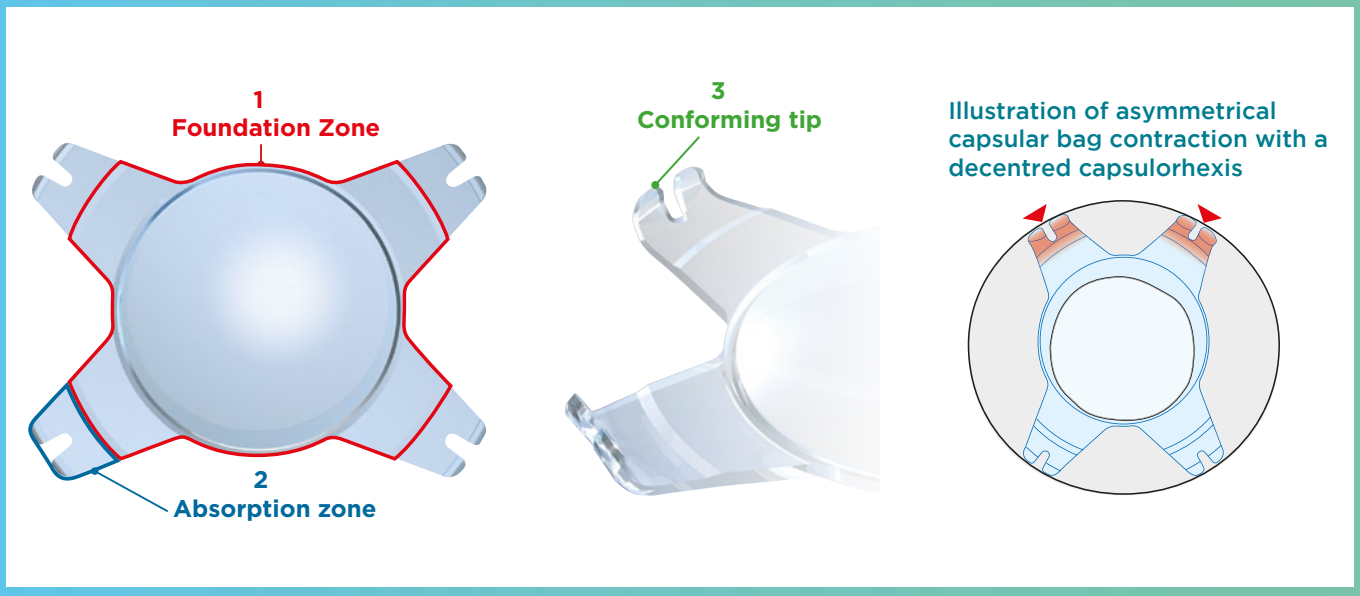
The Akreos® IOL platform has been shown:

- To have good centration[17]
- To have similar postoperative performances in terms of CDVA, inflammation and PCO compared with the same material in C-loop design[17]
- To have rotational stability. 90 % of Akreos® lenses rotate less than 5 degrees at 6 months[18]
- To be stable in the eye and even suitable for the application of a toric surface to correct corneal astigmatism[19]

Axis orientation of the haptics of the lens in the bag seemed to have no clinical impact as they did not find differences in decentration and tilt. Having mean decentration of 0.4 mm ± 0.2 (SD) with vertical orientation and 0.4 ± 0.2 mm with horizontal orientation and the mean tilt of 1.5 ± 1.1 degrees and 2.93 0.9 degrees, respectively[20]

3-dimensional stability

The shape of the Akreos® MICS IOL has been designed to optimize its post-operative behavior in the capsular bag and to allow for the absorption of forces in 3 dimensions.



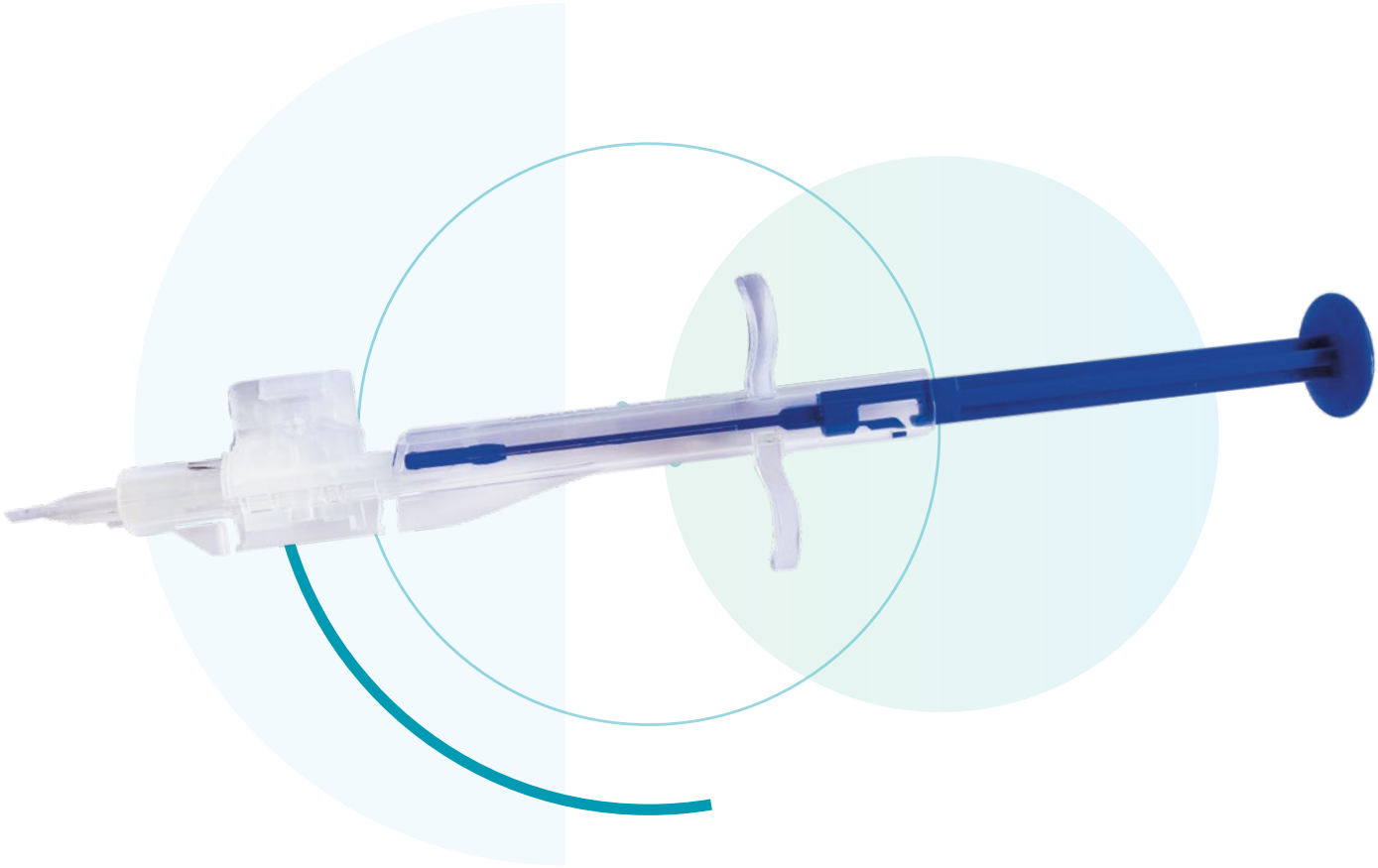
The Akreos® MICS IOL includes a foundation zone (1) formed by the optic and the base of the four haptics. This is the stable portion of the lens. It is surrounded by an absorption zone (2), which bends under the contraction forces of the capsular bag. The conforming tip (3) conforms to the curve of the periphery of the capsular bag and initiates the inflection of the absorption zone (2), which features an average 10° angulation.

PRELOADED INJECTION

BAUSCH + LOMB SimplifEYE™ delivery system

The Akreos® IOLs are available in a preloaded version with the BAUSCH + LOMB SimplifEYE™ delivery system.

- Less risks of IOL damage, cross-contamination and mishandling.
- It is thought that during the next several years, use of preloaded disposable injectors is expected to grow and may well represent the industry's future[21]

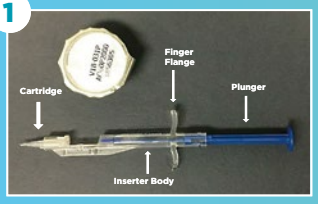


Scan the QR code to watch the loading video

Loading Instructions

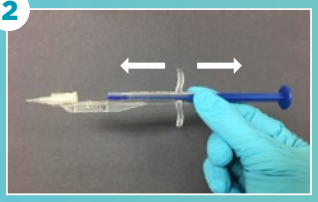
Akreos® AO and Akreos® AO MICS preloaded with the Bausch + Lomb SimplifEYE™ delivery system

1



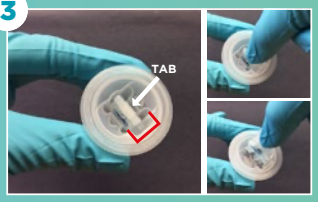
Open the box and remove the inserter and IOL pouch. Open the peel pouch to take the IOL vial out. Peel the tyvek lid and remove the inserter from the tray.

2



Ensure that the plunger is fully retracted by pulling it to the back and that the cartridge is fully forward by pushing it forward. The inserter is now ready for assembly with the lens shuttle.

3



Remove the lid from the vial by peeling it away from you. Ensure that the Uchannel (highlighted in red) in the vial is facing towards you. Using the thumb and index finger to remove the lens shuttle from the vial.

4

Grasp the inserter body with one hand and the shuttle with the other hand. Ensure that the four legs of the shuttle are centered to the inserter body side walls and insert the shuttle straight down until you hear an audible click. Visually confirm that the shuttle is sitting flush and that the top of the shuttle is horizontal with all four legs inside the side walls of the inserter body.

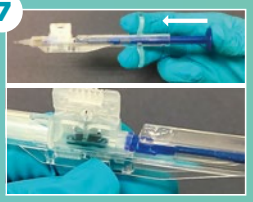
5

Hold down the tab on the top of the shuttle and apply viscoelastic* into the viscoport of the cartridge. Visually verify that the viscoelastic has traveled up to the mark as shown in the image.

6

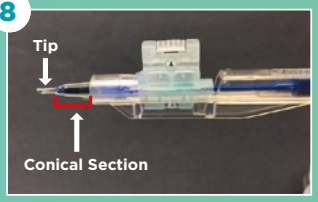
Add a drop of viscoelastic* to the soft tip for easy entry into the shuttle.

7



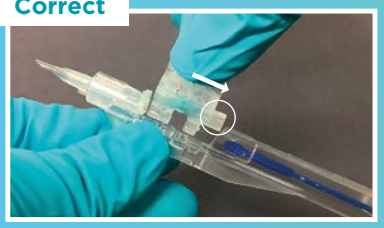
While holding the inserter body with one hand, gently advance the plunger. Visually confirm that the soft tip enters the shuttle without deforming.

8



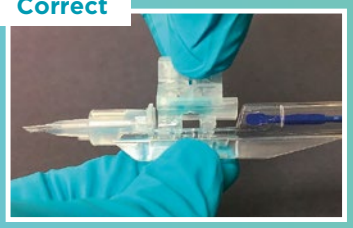
Continue to advance the plunger until the lens is in the conical section of the cartridge tip as shown in the image. Pull the plunger back slightly to visually confirm that the lens stays in the conical tip and then push the plunger forward again. The lens is now in the hand off position.
To deliver the lens, insert the cartridge tip into the incision with the tip bevel facing down. Slowly advance the plunger until the lens is fully released into the eye.

Correct



Correct orientation of shuttle

Correct



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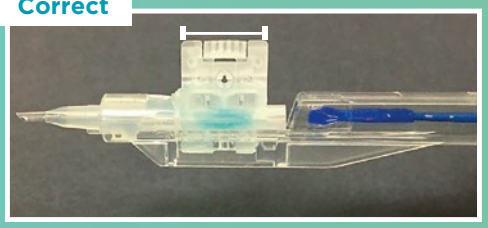


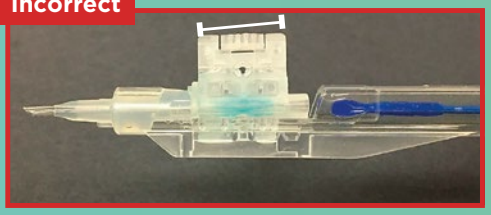
Incorrect

Incorrect orientation of shuttle

Incorrect

WARNING:
Do not roll or tilt the shuttle while attaching to the inserter.

Incorrect



WARNING:
The shuttle on the bottom is not the correct way to assemble the shuttle because it is not horizontal to the inserter, the body and could cause damage to

IOL WITH
ADVANCED OPTICS (AO) TECHNOLOGY

Akreos® AO MICS
Advanced Optics Microsinicion Lens

Ref MI60Pxxxx
Preloaded Ref: MI60PLCxxxx

MATERIAL
Hydrophilic acrylic
26 % water content
UV Filter
Refractive index: 1.46

DESIGN
Monofocal aberration-free aspheric optic
360° posterior square edge
Haptic angulation 10°
One-piece IOL with four-point fixation
Orientation features to indicate the anterior side
(top right and bottom left)

OPTIC DIAMETER
6.2 mm: 0.00 D to +15.00 D
6.0 mm: +15.50 D to +22.00 D
5.6 mm: +22.50 D to +30.00 D

OVERALL DIAMETER
11.0 mm: 0.00 D to +15.00 D
10.7 mm: +15.50 D to +22.00 D
10.5 mm: +22.50 D to +30.00 D

DIOPTER RANGE
0.00 D to +30.00 D
0.00 D to +10.00 D (increments of 1.00 D)
+10.00 D to +30.00 D (increments of 0.50 D)

INJECTORS
Viscoject™ BIO 1.8 (10 Units/box)

Ref: LP604350C
Recommended incision size: 1.8 mm (Wound assist technique)

SimplifEYE™ preloaded delivery system

Recommended incision size: 1.8 mm

OPTIC CONSTANT
A-Constant SRK/T: 119.1
ACD: 5.67
Surgeon factor: 1.90
Haigis: a_0: 1.49 / a_1: 0.40 / a_2: 0.10

ULTRASONIC CONSTANT
A-Constant: 118.4
ACD: 5.20
Surgeon factor: 1.45

Akreos® AO
Advanced Optics Aspheric Lens

Ref ADAPTAOPxxxx
Preloaded Ref: AO60PLCxxxx

MATERIAL
Hydrophilic acrylic
26 % water content
UV Filter
Refractive index: 1.46

DESIGN
Monofocal aberration-free aspheric optic
360° posterior square edge
Haptic angulation 0°
One-piece IOL with four-point fixation
Orientation features to indicate the anterior side
(top right and bottom left)

OPTIC DIAMETER
6.2 mm: 0.00 D to +9.00 D
6.0 mm: +10.00 D to +30.00 D

OVERALL DIAMETER
11.0 mm: 0.00 D to +15.00 D
10.7 mm: +15.50 D to +22.00 D
10.5 mm: +22.50 D to +30.00 D

DIOPTER RANGE
0.00 D to +30.00 D
0.00 D to +10.00 D (increments of 1.00 D)
+10.00 D to +30.00 D (increments of 0.50 D)

INJECTORS
Hydroport™: AI-28 (1 Unit/box)
Recommended incision size: 2.8 mm (in the bag)

Viscoject™ 2.2 (10 Units/box)

Ref: LP604340
Recommended incision size: 2.2 mm (Wound assist technique)

Viscoject™ BIO 1.8 (10 Units/box)

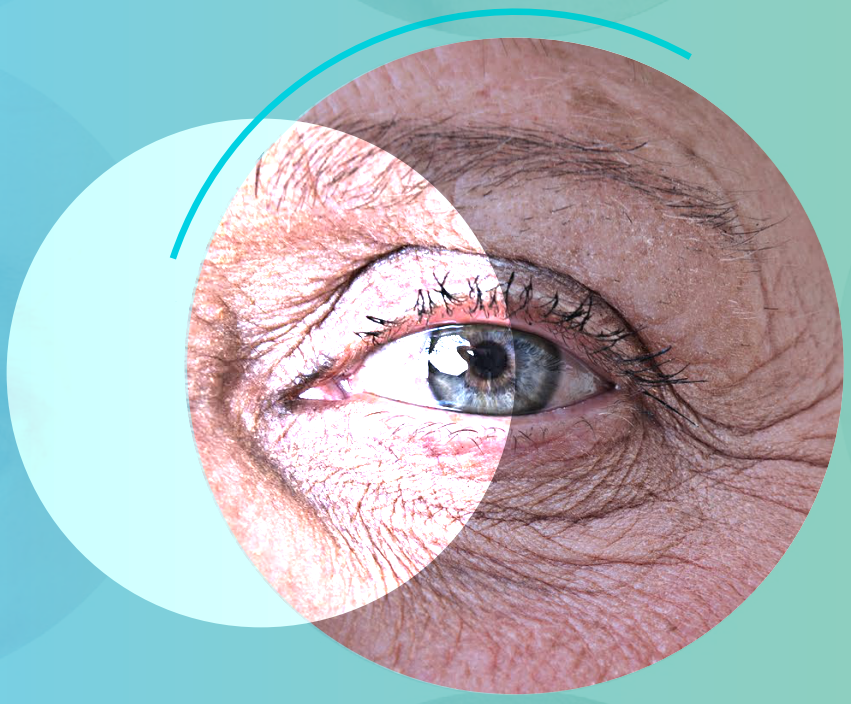
Ref: LP604350C
Recommended incision size: 1.8 mm (Wound assist technique)

SimplifEYE™ preloaded delivery system

Recommended incision size: 1.8 mm

OPTIC CONSTANT
A-Constant SRK/T: 118.5
ACD: 5.26
Surgeon factor: 1.51
Haigis: a_0: -0.83 / a_1: 0.305 / a_2: 0.191

ULTRASONIC CONSTANT
A-Constant: 118.0
ACD: 4.96



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