

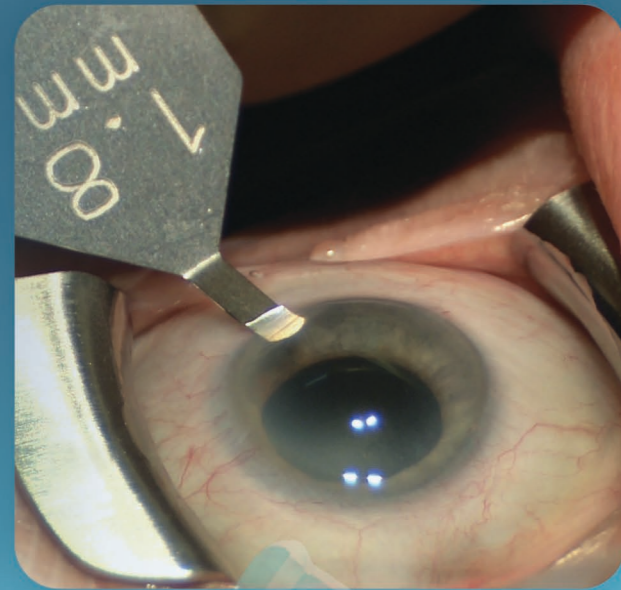


Ak
Akreos

1.8mm Reality
The Vital Element For Successful MICS™

BAUSCH + LOMB

Akreos®  MICS™
AO Micro Incision Lens



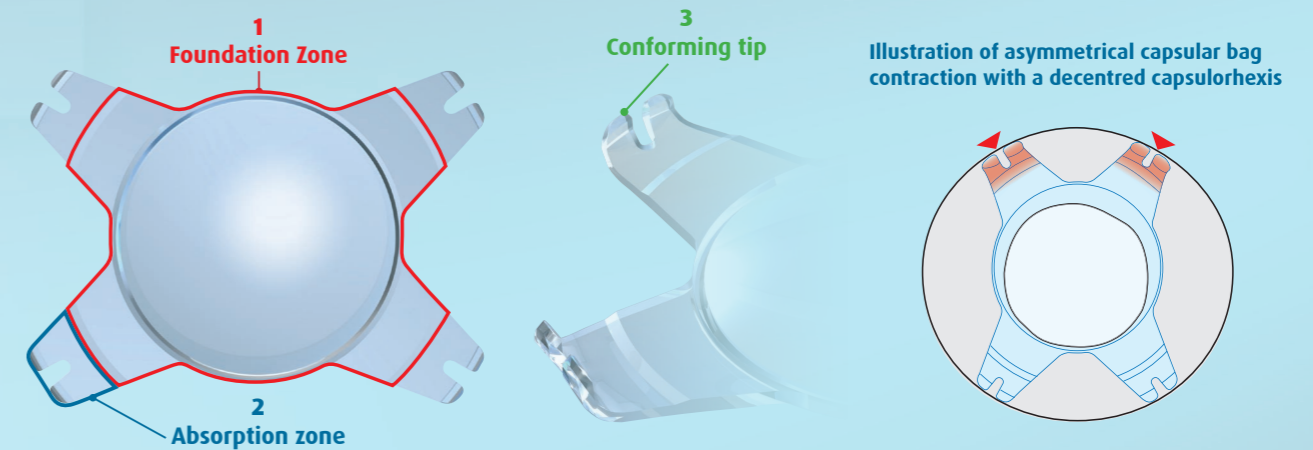
Award-Winning Design
 Recognised for its innovative design, the Akreos MICS Lens received the prestigious Gold Award in 2008 at the Medical Design Excellence Awards (MDEA).



Innovative Design

3-dimensional stability

The innovative shape of the Akreos MICS has been designed to optimise its post-operative behaviour in the capsular bag and to allow for the absorption of forces in 3 dimensions.



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

1.8mm MICS™ is a reality

The Akreos® Material

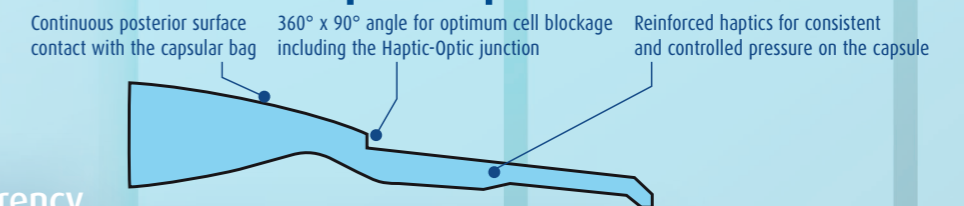
1.8mm MICS Requires The Material Difference

- The Akreos MICS Lens is crafted from a Bausch + Lomb proprietary acrylic material that makes it optimal for today's micro incision requirements
- The lens can be compressed easily to fit through a 1.8mm incision; it unfolds smoothly once implanted into the eye and recovers its initial shape without damage
- Homogeneous material is free of microvacuoles, resulting in a glistening-free IOL
- Moderate refractive index, with inherently low surface reflectivity, reduces glare and its adverse effects⁽¹⁾

Proven Performance

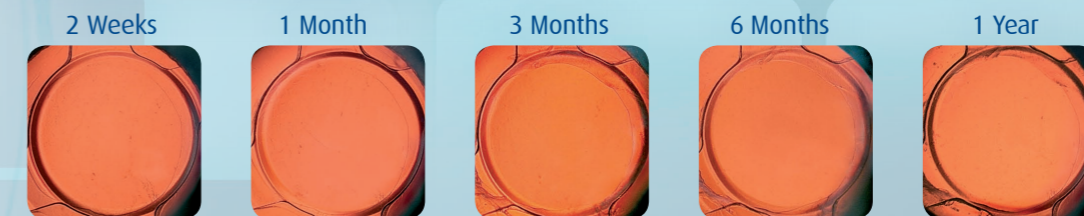
- The Akreos MICS Lens material has been successfully implanted in over 3.5 million eyes
- Physicians have been implanting Akreos MICS Lens material since 1998, signaling its safety and biocompatibility

EPCO Results in line with top competitor IOL



Capsular Transparency

Adhesion of anterior and posterior capsules is achieved very quickly with the Akreos MICS Lens, helping to preserve capsular bag transparency.⁽²⁾



Results in line with the best performing IOL

In the same study⁽²⁾, retro-illuminated pictures have been analysed with the EPCO software and have shown low scores of posterior capsular opacification after 1 year. These promising results place Akreos MICS at the level of the best performing intraocular lenses.

From a study of 18 eyes showing a mean EPCO score of 0.003 and 0% Nd: YAG capsulotomy at one year postoperative.⁽²⁾

EPCO results

	Akreos MICS ⁽²⁾			Hydrophobic acrylic ⁽³⁾		
Central area 3mm	0.005	0.015	0.003	0.062	0.046	0.039
Optic area 6mm	0.029	0.041	0.03	0.089	0.145	0.114
	M3 n=19	M6 n=19	M12 n=18	M3 n=136	M6 n=158	M12 n=123

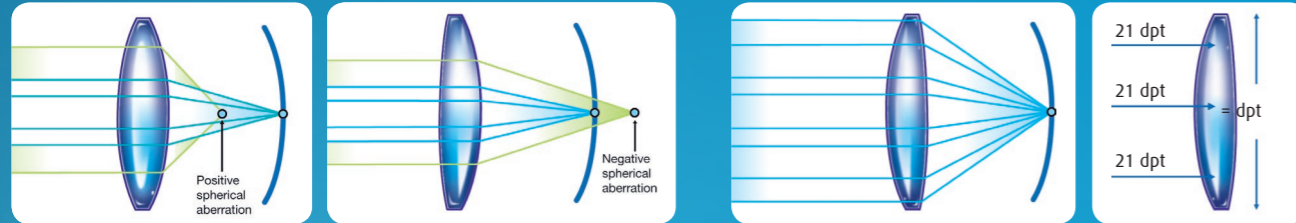
1) Erie JC, Bandhauer MH. Intraocular lens surfaces and their relationship to postoperative glare. J Cataract Refract Surg. 2003; 29: 336-41.

2) T. Amzallag. Akreos Micro-Incision IOL: final results of a pilot clinical study at one year follow up. Free Paper. ESCRS 2006.

3) Data on file, Bausch + Lomb.

Quality of Vision

Principle



Standard Spherical IOL

Aberrated Aspheric IOL

Akreos® Aspheric Aberration Free

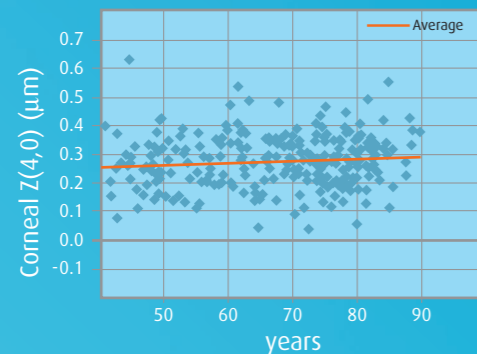
With uniform lens power from centre to edge Akreos MICS is a more “forgiving”⁽¹⁾ optic design minimising deterioration of optical performance in the event of lens decentration.

BENEFITS OF ADVANCED OPTICS (AO) VERSUS ABERRATED ASPHERIC IOLS

- 1 AO is a safe and reliable approach for the surgeon when pre op aberrometry is unknown because the AO design concept is independent of the cornea.⁽¹⁾
- 2 AO does not induce new Higher Order Aberration (HOA) when decentred optically or anatomically.⁽¹⁾
- 3 AO can provide greater depth of field than negative SA IOLs designed to compensate for corneal SA.⁽²⁾

An aspheric IOL designed to fit all corneas

Both Wang⁽³⁾ and Beiko⁽⁴⁾ studies conclude that the corneal spherical aberrations vary widely from subject to subject.



Based on Beiko study data on corneal SA distribution (Z4;0), the aberrated aspheric IOLs' objectives:

- Either a -0.27 µm IOL to reach 0 µm ocular SA.
- Or a -0.20 µm IOL to reach 0.10 µm ocular SA.

THESE ARE NOT ACHIEVABLE FOR AT LEAST 76% OF THE PATIENTS

AO is a safe choice for the surgeon when pre-op aberrometry is unknown

Authors highlight that aberrated aspheric IOLs are inadvisable for some corneal profiles:

“The patients who would do the worst with these lenses [aberrated aspheric IOLs] are those who have very steep corneas...”

PIRACHA⁽⁵⁾

“Anyone who has had his or her cornea modified from the average standard corneal spherical aberration will not derive benefits from these lenses [aberrated aspheric IOLs].”

KERSHNER⁽⁵⁾

Decentration occurs much more frequently than one may think

Many authors confirm that decentration and tilt are a major concern with the aberrated aspheric IOLs:

“IOL decentration induces defocus, astigmatism, and coma”. ALTMANN⁽¹⁾

“Aspheric IOLs should be avoided when gross anatomical decentration can be anticipated”. BELLUCCI⁽⁶⁾

“Excellent centration is required to maximise the visual outcomes of wavefront-corrected IOLs”. WANG⁽⁷⁾

Simulation 20/40 Letter E 4-mm Pupil

Centred and aligned with visual axis

0.5mm decentration

1.0mm decentration

Competitor Aberrated Aspheric IOL



Akreos Advanced Optics Aberration-Free IOL



These images do not represent individual patient outcomes.



AO is designed not to introduce new HOA

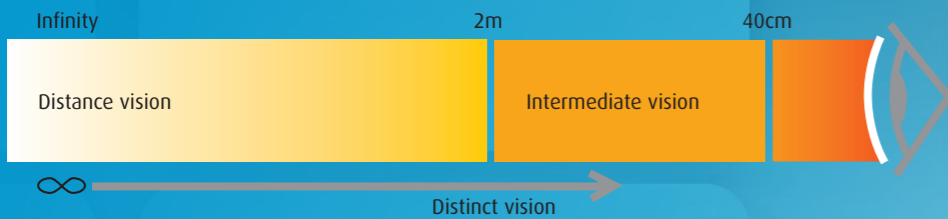
1) Altmann GE, Nichamin LD, Lane SS, Pepose JS. Optical performance of 3 intraocular lens designs in the presence of decentration. J Cataract Refract Surg. 2005; 31: 574-85.
 2) Johansson B, Sundelin S, Wikberg-Matsson A, Unsbo P, Behndig A. Visual and optical performance of the Akreos™ Adapt Advanced Optics and Tecnis Z9000 intraocular lenses: Swedish multicenter study. J Cataract Refract Surg 2007; 33: 1565-72.
 3) Wang L, Dai E, Koch DD, Nathoo A. Optical aberrations of the human anterior cornea. J Cataract Refract Surg 2003; 29: 1514-21.
 4) Beiko GH, Haigis W, Steinmueller A. Distribution of corneal spherical aberration in a comprehensive ophthalmology practice and whether keratometry can predict aberration values. J Cataract Refract Surg 2007; 33: 848-58.
 5) Quotes from in Article «Patient selection strategy for aspheric IOL's» Review of Ophthalmology. 14/03/2006 revophth.com.

6) Bellucci R, Morselli S, Pucci V. Spherical aberration and coma with an aspherical and a spherical intraocular lens in normal age-matched eyes. J Cataract Refract Surg. 2007; 33: 203-9.
 7) Wang L, Koch DD. Effect of decentration of wavefront-corrected intraocular lenses on the higher-order aberrations of the eye. Arch Ophthalmol. 2005; 123: 1226-30.

Quality of Vision

A certain amount of ocular SA can be beneficial for Quality of Vision^(1,2,3)

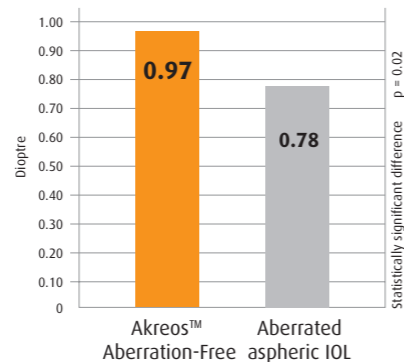
Depth of field is particularly important for pseudophakic patients as it increases their range of vision.



Depth of field improves intermediate vision which helps patients see the floor when walking, read from a computer screen and watch television.

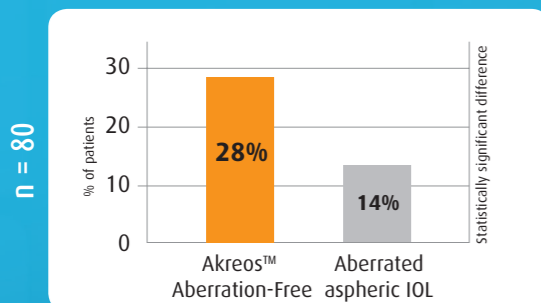
Akreos Aberration-Free provides more depth of field than an aberrated aspheric IOL⁽⁴⁾

Mean depth of field
5mm pupil*

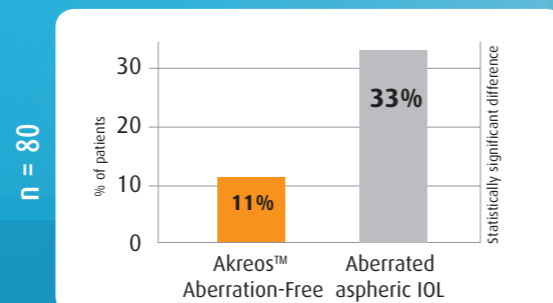


Patients' spontaneous preference in double-masked bilateral comparison is in favour of Akreos Aberration-Free⁽⁴⁾

Preference for one eye*

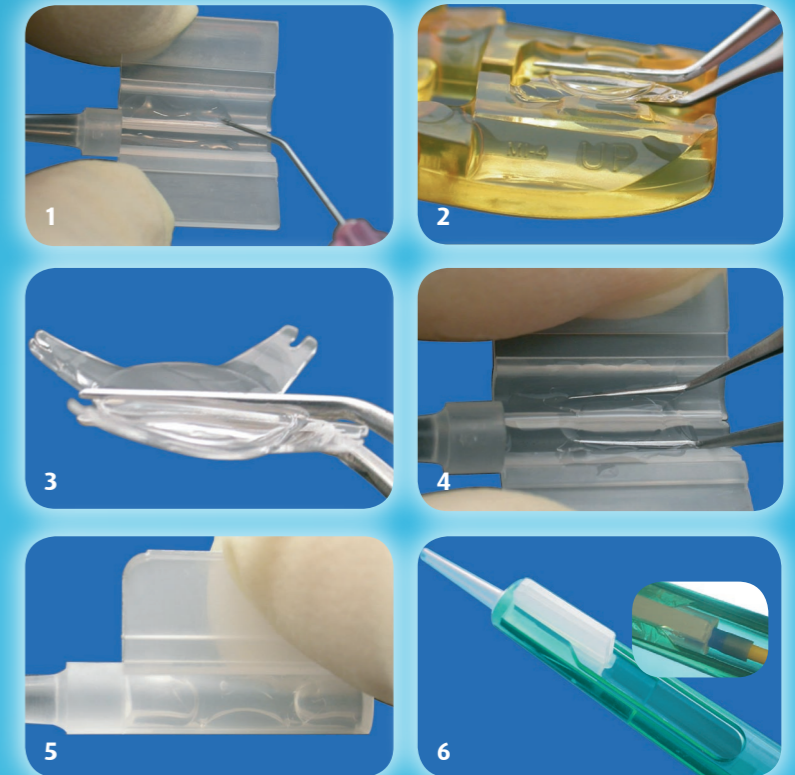


More dysphotopsia in one eye*



In practice: Loading steps

- 1 The loading chamber is coated with Amvisc® Plus viscoelastic: a small amount in the opening of the cartridge tunnel, two lines in the lateral grooves.
- 2 The lens is removed from its holder by grasping the full optic with the forceps. The lens must be positioned at the top of the holder, anterior face up.
- 3 The position of the lens is checked before loading: the haptics must be oriented upwards.
- 4 The lens is placed in the centre of the loading chamber and the haptics are pushed down inside the lateral grooves.
- 5 The cartridge is closed and locked after having checked that no lens material is trapped between the wings.
- 6 The cartridge is placed in the injector and the plunger is advanced slowly until the silicone cushion has reached the tunnel opening. The lens is ready for injection.

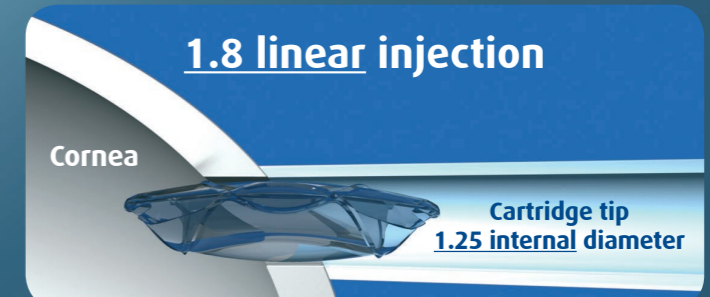


True 1.8mm incision Wound-assisted injection

The wound-assisted injection technique consists of using the corneal tunnel to inject the lens. It prevents the cartridge tip from being introduced into the anterior chamber.



To minimise corneal stress, the internal cartridge diameter must fit the incision size. The hydrophilic nature of the Akreos MICS lens and its softness helps to preserve corneal integrity.



1) Rocha KM, Soriano ES, Chamon W, Chalita MR, Nosé W. Spherical aberration and depth of focus in eyes implanted with aspheric and spherical intraocular lenses: a prospective randomized study. *Ophthalmology*. 2007; 114: 2050-4.
 2) Nio YK, Jansonius NM, Fidler V, Geraghty E, Norrby S, Kooijman AC. Spherical and irregular aberrations are important for the optimal performance of the human eye. *Ophthalmic Physiol Opt*. 2002; 22: 103-12.
 3) Marcos S, Barbero S, Jiménez-Alfaro I. Optical quality and depth-of-field of eyes implanted with spherical and aspheric intraocular lenses. *J Cataract Refract Surg* 2005; 21: 223-35.

4) Johansson B, Sundelin S, Wikberg-Matsson A, Unso P, Behndig A. Visual and optical performance of the Akreos™ Adapt Advanced Optics and Tecnis Z9000 intraocular lenses: Swedish multicenter study. *J Cataract Refract Surg* 2007; 33: 1565-72.

*Measured with the Strehl ratio as described by S. Marcos et al. *Implantation of Spherical and Aspheric IOLs*. *J Cataract Refract Surg* 2005; 21: 1-13.
 *58% of patients reported no preference and 56% of patients reported no difference in visual disturbances.

St
Stellaris

Ak
Akreos

In
Instruments

Vi
Viscoelastic

Su
Support

The MICS™ Platform

The Exclusive 1.8mm Solution From Bausch + Lomb

Stellaris® MICS

The Stellaris Vision Enhancement System delivers the critical capabilities required for 1.8mm MICS: superior fluidics control, efficient cutting dynamics and the ergonomic insights that make the system easy to use.

Akreos® MICS

The Akreos MICS Lens combines the vision benefits of an aspheric acrylic lens with the material and design characteristics that allow it to be inserted into a true 1.8mm incision.

MICS Instruments

The MICS Platform includes precision performance instruments from STORZ® Ophthalmics for both C-MICS and B-MICS procedures.

MICS Viscoelastic

Amvisc® Plus is the versatile viscoelastic that is ideal for every step of your 1.8mm MICS procedure.

MICS Support

When you move to the MICS Platform you benefit from a comprehensive support program designed to assist cataract surgeons in developing and perfecting their MICS techniques.



Akreos® MICS™ Lens Specifications

MATERIAL:

26% hydrophilic acrylic
UV blocker. Refractive index
1.458 (hydrated)

OPTIC:

Biconvex aspheric anterior
and posterior

DIOPTER RANGE:

0.0 to 9.0 in 1 dpt
10.0 to 30.0 in 0.5 dpt

HAPTICS:

One-piece
Angulated haptics

OVERALL DIAMETER:

11.0mm from 0.0 to 15.0 dpt
10.7mm from 15.5 to 22.0 dpt
10.5mm from 22.5 to 30.0 dpt

APPLANATION A-SCAN:

A-Constant* 118.4
ACD* 5.20
Surgeon Factor* 1.45

OPTIC BODY:

6.2mm from 0.0 to 15.0 dpt
6.0mm from 15.5 to 22.0 dpt
5.6mm from 22.5 to 30.0 dpt

IMMERSION A-SCAN:

OR IOL MASTER:
A-Constant* 119.1
ACD* 5.67
Surgeon Factor* 1.90

ORDER CODE:

Lens: Akreos MI60G
Injector: LP604350 (10/Box)

*A-Constant, ACD and Surgeon Factor are estimates only. It is recommended that each surgeon develops his or her own values.

Learn more about the MICS Platform
and the benefits of 1.8mm surgery at
www.micsplatform.com

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