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CRISTALENS

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TORIC HYDROPHOBIC
INTRAOCULAR LENS

PRELOADED

ARTIS® T PL *E*

PRELOADED

- Stability
- Easy-to-use
- Efficiency
- Online calculator

MADE IN FRANCE

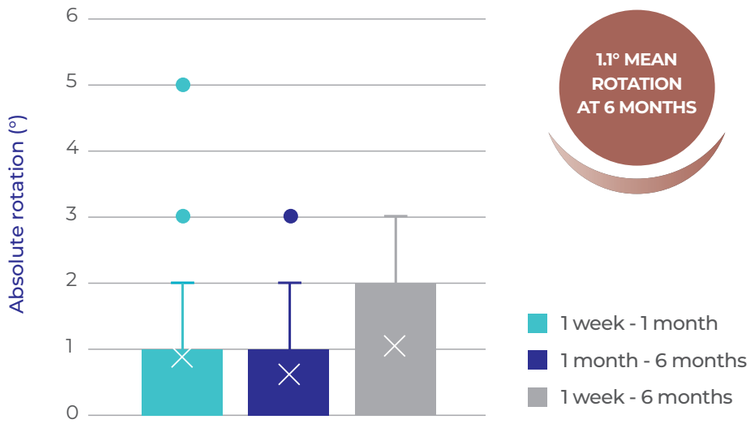
CRISTALENS

CE 0459

AN ASTIGMATISM can lead to substantial reductions in visual performance according to a variety of clinical vision measurements and functional visual tasks.[1] Correcting astigmatism with glasses leads to deleterious to prismatic effects. Preexisting astigmatism ≥ 1D was present in 47% of cataract eyes. So long as the intraocular lens (IOL) is rotationally stable, the intraocular astigmatism correction during cataract surgery improves refractive outcomes and visual performance.[2]

STABILITY OF ARTIS T PL *E*

ARTIS T PL *E* IOL demonstrates great postoperative stability: on average 1.18 ± 1.01° between one week and 6 months,* for astigmatism correction and optimal postoperative refractive accuracy.



1.1° MEAN ROTATION AT 6 MONTHS

Whisker box plot of IOL absolute rotation one week, one month and 6 months after surgery
(Interim outcomes of a study conducted in France, Promotor Cristalens Industrie)

CLEAR IOL FOR HAPPY PATIENTS

Implanting a clear, UV-blocking, but not blue light-blocking IOL during cataract surgery has the potential for improving circadian rhythm and systemic health parameters.[3] Clear IOLs are providing a protection from depression in elderly patients.[4]

PATIENT SATISFACTION

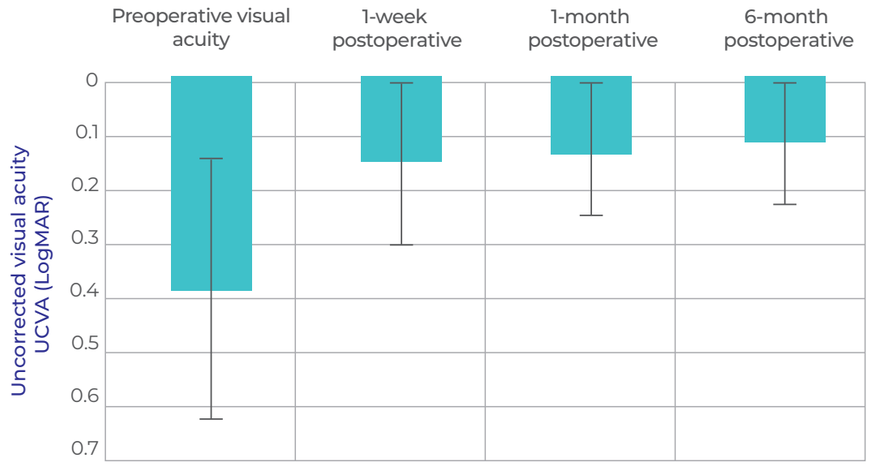
96% of patients found the outcomes very good or good after having an ARTIS T PL *E* implanted**.

* Interim outcomes: 22 eyes

** 47 patients, interim outcomes of a study conducted in France by Cristalens Industrie

EFFICIENCY

ARTIS T PL *E* intraocular lens succeeded to restore spectacle independence for distance vision: spherical equivalent 6 months after surgery was 0.06 ± 0.62 and the mean residual cylinder was -0.82 ± 0.52D.*** Postoperative uncorrected visual acuity (presented hereafter) was very satisfactory for an aged cohort (mean age: 77±8 years old).



Preoperative corrected distance visual acuity and uncorrected distance visual acuity at one week, one month and 6 months.
(Interim outcomes of a study conducted in France, Promotor Cristalens Industrie).

PEROPERATIVE MANOEUVRABILITY

With its 4 closed haptics, during surgery, the IOL can be easily rotated clockwise and counterclockwise in the capsular bag, for easy and precise alignment.

*** Interim outcomes of the study on 42 eyes

[1] Read SA, Vincent SJ, Collins MJ. The visual and functional impacts of astigmatism and its clinical management. Ophthalmic Physiol Opt. 2014 May;34(3):267-94

[2] Harris WF. Ray vector fields, prismatic effect, and thick astigmatic optical systems. Optom Vis Sci. 1996 Jun;73(6):418-23. Review.

[3] Ayaki M, Negishi K, Tsubota K. Rejuvenation effects of cataract surgery with ultraviolet blocking intra-ocular lens on circadian rhythm and gait speed. Rejuvenation Res. 2014 Aug; 17(4):359-65

[4] Mendoza-Mendieta ME, Lorenzo-Mejía AA. Associated depression in pseudophakic patients with intraocular lens with and without chromophore. Clin Ophthalmol. 2016 Mar 31;10:577-81.

OPTIMIZED PRELOADED SYSTEM

Preloaded system personalized for Cristalens Industrie's hydrophobic IOLs:
2 mm incision size.

Preloaded IOLs tend to reduce endophthalmitis[5] due to the absence of IOL manipulation.
Remove the lens holder, hydrate for a minute, protect your IOL with viscoelastic product, clip the cartridge and everything is ready for injection:

- IOL inspection is possible before injection,
- Easy to use,
- No need for help,
- IOL stays hydrated,
- One of your hands is free (unlike a screw loading system).

CRISTALENS' CALCULATOR INTEGRATES POSTERIOR CORNEAL ASTIGMATISM:

Corneal astigmatism occurs when the corneal curvature is not constant; its power is then not the same depending on the meridian.

Astigmatism is a common type of **refractive error.** It is a condition in which the eye does not focus light evenly onto the retina, the light-sensitive tissue at the back of the eye.

Until now, the toric calculators calculated the IOL cylinder in the IOL plane with respect to the anterior cornea power taking into account the mean surgically induced corneal astigmatism.

ARTIS® TORIC CALCULATOR

Eye selection

○ RIGHT EYE (OD) ○ LEFT EYE (OS)

Pre-operative information

IOL spherical power (SEQ) .... D

Keratometry data in

○ Diopter (D) ○ Millimeter (mm)

Flat axis: K1 30.00 D

Steep axis: K2 30.00 D @ 90

Pre-operative astigmatism: 0.00 D x 90°

Crossed cylinder (at corneal plane): 0.00 D x 90°

○ *Include posterior corneal astigmatism*

Calculation | Print | New calculation

Computed toric iol

Recommended cylindrical power*:

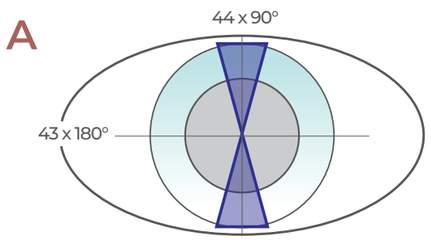
IOL axis of placement:

** I want to select a different cylindrical power than the one suggested* ....

Post-operative predictions

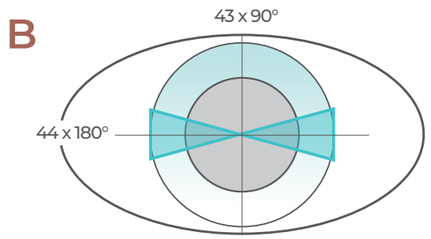
Cristalens toric IOL:

Estimated residual astigmatism: x



WTR (With the rule)

- Steeper axis at 90°
- 44 x 90° and 43 x 180°
- More common in younger patients and myopic eyes



ATR (Against the rule)

- Steeper axis at 180°
- 44 x 180° and 43 x 90°
- More common in older patients (cataract patients)

The cornea has an anterior cornea, accounting for the majority of corneal power (43D on average), but also a posterior cornea accounting for 0 to 2D of astigmatism, non negligible in terms of refractive accuracy.

The severity of posterior astigmatism depends on the orientation of the anterior corneal astigmatism. Ueno's study[5], based on more than 500 patients, identified a linear relationship between the posterior astigmatism (PA) with respect to the anterior one (KA): this means that depending on the amount of anterior corneal astigmatism and on its orientation, the value of the posterior astigmatism may be determined. This improves accuracy when calculating the IOL's cylindrical power.

The current calculator offers the possibility to compensate for posterior cornea power depending on the anterior cornea astigmatism power and orientation.

[5] K Weston, R Nicholson, C Bunce... An 8-year retrospective study of cataract surgery and postoperative endophthalmitis: injectable intraocular lenses may reduce the incidence of postoperative endophthalmitis. Br J Ophthalmol. 2015 Oct;99(10):1377-80.

[6] Ueno Y, Hiraoka T, Miyazaki M, Ito M, Oshika T. Corneal thickness profile and posterior corneal astigmatism in normal corneas. Ophthalmology. 2015 Jun;122(6):1072-8.

TECHNICAL SPECIFICATIONS

Lens type	For implantation in the capsular bag
Optic diameter	6.00 mm (from +10.0D to +25.0D) 5.80 mm (from +25.5D to +35.0D)
Overall diameter	10.79 mm (from +10.0D to +25.0D) 10.50 mm (from +25.5D to +35.0D)
Design	One-piece square edge on 360°
Optic design	Monofocal Aspherical with negative spherical aberration to partly correct corneal spherical aberration Toricity and marks on the posterior face, biconvex
Angulation	5°
Material	Hydrophobic CBK 1.8 from Cristalens
Dioptric powers (spherical equivalent)	From +10.0D to +35.0D by 0.5D
Cylinder powers	+0.75D / +1.50D / +2.25D / +3.00D +3.75D / +4.50D / +5.25D / +6.00D
Estimated A-Constant (SRK-T)	119.3 Ultrasound biometry 119.7 Interference laser biometry
Suggested Anterior Chamber Depth (ACD)	5.77 mm Ultrasound biometry 6.03 mm Interference laser biometry
Refractive index	1.54
Sterilization	Ethylene oxide
Injection system	Preloaded system
Recommended incision size	2.0 mm