1st AddOn®
Trifocal

Trifocal Sulcus Technology

UPGRADE pseudophakic patients to trifocality
IMPROVE visual outcome at all distances
PLAN with a dual-lens approach

MEDICONTUR

Extend *Your Visual Toolbox!*

Patient demand for spectacle independence with excellent visual quality is continuously growing, independent of eye health or lens status.

The **1stQ AddOn® Trifocal** supplementary IOLs were designed to address this need and represent a unique addition to your surgical toolbox.

The 1stQ AddOn® Trifocal lens represents a **safe, stable, predictable** and personalized solution for post-cataract presbyopia-correction.[1,7]

Offer your pseudophakic patients a unique opportunity and improve their visual experience and **quality of life**. [1,6]

„The **1stQ AddOn® IOL** allows to bring patients into their visual comfort zone. Some cataract surgery patients who have a monofocal IOL implanted will tell me they did not realise how handicapped they had been in daily life when performing tasks involving near and intermediate vision."

Erik L. Mertens, MD
FEBOphth, Belgium

Spectacle independence & enhanced visual quality with the 1stQ AddOn® Trifocal & Trifocal Toric [1,12]

UPGRADE *pseudophakic patients*

- The **1stQ AddOn® Trifocal** platform enables clinicians to provide a premium and versatile solution to patients previously implanted with a monofocal capsular bag IOL.
- Pseudophakic patients can now also enjoy the comfort of spectacle independence by undergoing a familiar, however less invasive secondary procedure.[1,12]

IMPROVE *visual outcomes*

- Fine tuning with the **1stQ AddOn®** Trifocal can provide a continuous range of unaided vision. [1,12]
- The trifocal toric variation can further improve the visual quality of astigmatic patients. [1,12]

„The main advantage of implanting a secondary lens with trifocal performance is its ease of reversibility at any time, avoiding possible exchange of an IOL in a fibrosed capsular bag. This is a smart option for the patient who is particularly unsure about dealing with aberrations from multifocal IOLs."

Brian Harrisberg, MD
MBBCh, FRACS, FRANZCO, Australia

PLAN *a dual implantation*

- The Dual Lens System consists of a monofocal IOL in the capsular bag and a **1stQ AddOn® Trifocal** lens in the ciliary sulcus.
- This can be achieved with one simultaneous surgical intervention or sequential surgeries.
- Sulcus-based trifocal correction provides high predictability, particularly for more challenging patient cases.

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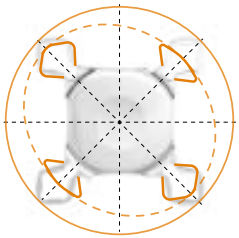
1stQ AddOn® Stability and Centration in The Sulcus

Variation in sulcus size and shape requires an adaptive design



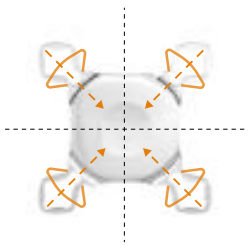
The unique 4-flex haptic configuration by 1stQ ensures independent anchorage on four pressure points as opposed to C-loop type sulcus lens designs.

The **1stQ AddOn® Trifocal IOL** maintains a stable position in eyes with a wide variety of axial lengths.[1,2]

"Based on the reliable stability of the **1stQ AddOn®Trifocal lens,** I use it often in clinical practice for increasing my options for refractive upgrades or correction."

Sathish Srinivasan, MD
FRCSEd, FRCOphth, FACS, United Kingdom

High rotational stability with the non-torque design



- To date, no cases (0%) have been reported in which **1stQ AddOn® Toric** IOLs needed repositioning.
- The mean absolute change in IOL position was below 5°.
- This confirms remarkably higher stability than that published in connection with C-loop type sulcus lens designs.[3,4]

1stQ AddOn® Safety in The Sulcus

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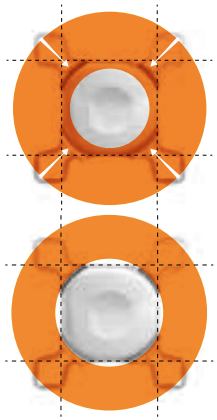
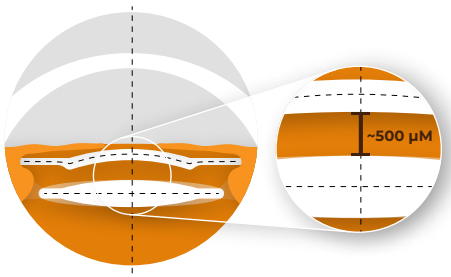
Maintaining iris function and anterior segment physiology

- The square optic design of the **1stQ AddOn® Trifocal** was engineered to prevent iris capture, independent of pupil size.
- The rounded edges of the optic and haptics help avoid iris chafing and iris pigment dispersion, thereby preventing secondary glaucoma.
- To date no reports of iris chafing, pupillary rupture or pigment dispersion syndrome have been published.

- Intraocular pressure (IOP) after **1stQ AddOn® Trifocal** implantation remains in the physiological range, hence it helps to maintain normal ocular conditions.[3, 5-7]



Maintaining IOL clearance



With the convex - concave optic design of the **1stQ AddOn® Trifocal** IOLs sufficient interlenticular space is created to avoid IOL touch and to minimize the development of interlenticular opacification.[5,7]

Preserved endothelial cell integrity and function
Endothelial cell loss is much less than during routine cataract surgery with phacoemulsification.[5]

Trifocal EPS Technology in the Capsular Bag

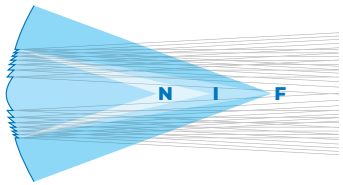
EPS technology

The state-of the-art EPS wavefront technology used in the 1stQ AddOn® Trifocal sulcus IOLs is well known from Medicontur's Liberty® Trifocal lenses for implantation into the capsular bag.

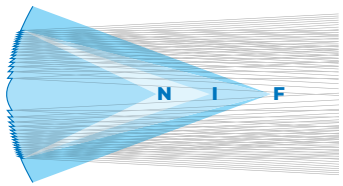
The power of EPS

By utilizing constructive wave interferences at the central part of the optic, fewer diffractive steps are needed to achieve spectacle independence, thereby:

- Minimizing light scatter resulting from extra steps
- Reducing out-of-focus light intensity
- Increasing light utilization at relevant focal points



A diffractive optic with double the number of diffractive steps creates minimum of 3 times more light scatter.



The intensity of the grey lines schematically shows the amount of light scatter caused by two different diffractive patterns.

How do patients benefit from the EPS technology?

- Trifocal performance[8-11]
- Complete spectacle independence[9-11]
- Outstanding contrast sensitivity[10,11]
- Minimal reports of dysphotopsia[8,10-12]
- Excellent reading speed[13]

What about the 1stQ AddOn®?

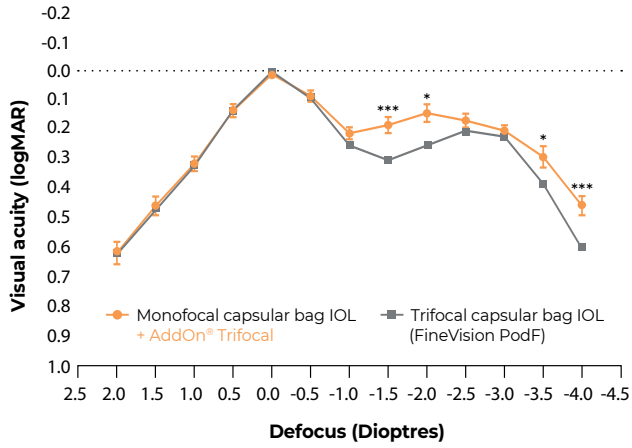
Visual and refractive outcomes of the **1stQ AddOn® Trifocal** are comparable with those achieved with the LIBERTY **trifocal** primary IOL.[12]

Trifocal EPS Technolgy in the Ciliary Sulcus

EPS technology

Excellent vision at multiple distances

Clinical studies have confirmed the trifocal performance of the **1stQ AddOn® Trifocal** in a cohort of pseudophakic patients who underwent a trifocal upgrade procedure. All eyes achieved spectacle independence at all distances.[5,12]



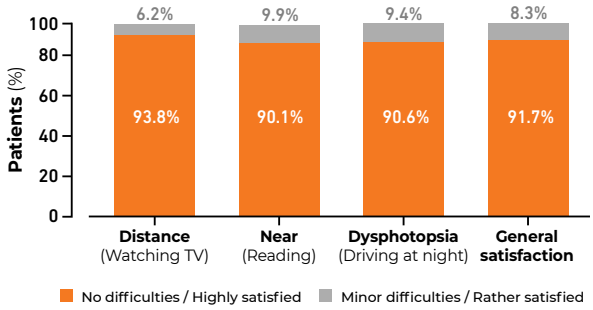
Monocular defocus curve of the 1stQ AddOn® Trifocal lens shows trifocal performance at all distances in comparison to one of the leading trifocal in-the-bag technologies on the market.[5]

„The supplementary **1stQ AddOn® Trifocal lens** seems to be a safe, efficient and stable solution for achieving spectacle independence in pseudophakic patients. The diffractive optic surface ensures good visual quality in all ranges of vision, without any further refractive correction required."

Carlos Palomino-Bautista MD
PhD, FEBO, Spain

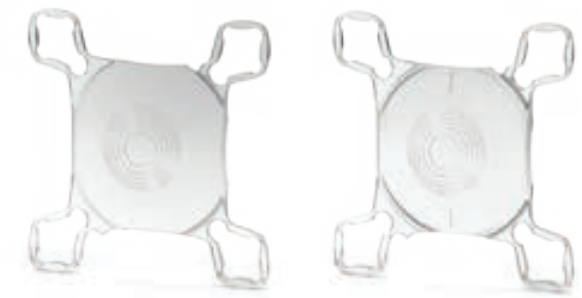
Highly satisfied patients

Patients reported high satisfaction six months postoperatively in all examined vision-related issues.[5]



1stQ AddOn®

Single-piece intraocular lens for implantation into the ciliary sulcus in addition to a primary IOL in the patient's pseudophakic eye.



	TRIFOCAL	TRIFOCAL TORIC
Material	Copolymer of hydrophobic and hydrophilic monomers with 25% water content and UV absorber Refractive index: 1.46 Abbe number: 58	
Optic design	Convex-concave design to avoid the development of interlenticular opacification	
Powers available	-5.0 D → +5.0 D (0.25 D steps)	-3.0 D → +3.0 D (0.5 D steps)
Cylinders available	-	+1.0 D → +4.5 D (0.5 D steps)
Diffractive zone	Anterior surface (diameter: 3.0 mm)	Anterior surface (diameter: 3.0 mm)
Addition (in IOL plane)	+3.0 D near +1.5 D intermediate	+3.0 D near +1.5 D intermediate
Dimensions	Overall diameter: 13.0 mm, Optic diameter: 6.0 mm	
Haptic design	Special 4 closed loop design with 0° angulation	
Sterilization	Steam (shelf life 5 years after sterilization)	
Storage conditions	+15 – +35 °C	

Further reading

1. Gundersen KG, Potvin R. A review of results after implantation of a secondary intraocular lens to correct residual refractive error after cataract surgery. Clin Ophthalmol. 2017 Oct 3; 11: 1791-1796. doi: 10.2147/OPTH.S144675. **2. Reiter N,** Werner L, Guan J, Li J, Tsaousis KT, Mamalis N, Srinivasan S. Assessment of a new hydrophilic acrylic supplementary IOL for sulcus fixation in pseudophakic cadaver eyes. Eye (Lond). 2017 May;31(5):802-809. doi: 10.1038/eye.2016.310. Epub 2017 Jan 20. **3. Gundersen KG,** Potvin R. Refractive and visual outcomes after implantation of a secondary toric sulcus intraocular lenses. Clin Ophthalmol. 2020; 14:1337-1342. **4. McLintock C,** McKelvie J, Apel A. Outcomes of 1stQ toric supplementary intraocular lenses for residual astigmatic refractive error in pseudophakic eyes. Presented at the RANZCO Congress in 2019, Sydney, Australia. Clin Exp Opthalmol. 2019; 47:Suppl. 1:46. **5. Palomino-Bautista C,** Sánchez-Jean R, Carmona Gonzales D, Romero Domínguez M, Castillo Gómez A. Spectacle independence for pseudophakic patients – Experience with a trifocal supplementary add-on intraocular lens. Clin Ophthalmol. 2020; 14:1043–1054. eCollection 2017. **6. Hassenstein A,** Niemeck F, Giannakakis K, Klemm M. [Toric add-on intraocular lenses for correction of high astigmatism after pseudophakic keratoplasty]. [Article in German]. Ophthalmologe. 2017 Jun;114(6):549-555. **7. Srinivasan S.** Implantation of Scharioth macula lens in patients with age-related macular degeneration: results of a prospective European multicentre clinical trial. BMJ Open Ophthalmol. 2019 Jul 7;4(1):e000322. doi: 10.1136/bmjophth-2019-000322. eCollection 2019. **8. García-Bella J,** Ventura-Abreu N, Morales-Fernández L, Talavero-González P, Carballo-Álvarez J, Sanz-Fernández JC, Vázquez-Moliní JM, Martínez-de-la-Casa JM. Visual outcomes after progressive apodized diffractive intraocular lens implantation. Eur J Ophthalmol. 2018 May;28(3):282-286. **9. Fernández J,** Rodríguez-Vallejo M, Martínez J, Tauste A, Piñero DP. Biometric factors associated with the visual performance of a high addition multifocal intraocular lens. Curr Eye Res. 2018;43(8):998-1005. **10. Győry JF,** Madár E, Srinivasan S. Implantation of a diffractive-refractive trifocal intraocular lens with centralized diffractive rings: Two-year results. J Cataract Refract Surg. 2019;45(5):639-646. **11. Győry JF,** Madár E, Balla L, Srinivasan S. Evaluation of the long- term performance of the trifocal intraocular lens with centralized diffractive rings: five-year results. [Under publication] **12. Harrisberg B.** Comparison of refractive and visual outcomes in cataract patients implanted with either premium primary IOLs or with dual implantation approach. Presented in the RANZCO NSW Congress in 2020, Newcastle, NSW, Australia. **13. Law EM,** Aggarwal RK, Buckhurst H, et al. Visual function and subjective perception of vision following bilateral implantation of monofocal and multifocal intraocular lenses: randomized controlled trial [published online ahead of print, 2020 Apr 15]. J Cataract Refract Surg. 2020;10.1097/j.jcrs.0000000000000210. doi:10.1097/j. jcrs.0000000000000210. **14. Medicontur** Supplementary (AddOn) Intraocular lenses Instructions For Use. Available from: http://www.medicontur.com/files/For_professional-s/eIFU/2020/-CE%20Change/EN/LB-003-5100-00-V01%20PACKA%20ADDON%20IFU%20EN_v01.pdf and from: https://www.1stq.de/en/intraocular-lens

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