



Wavefront
Linking
Technology



Basis Z EDOF

The Evolution of Standard

Established IOL platform – featuring EDOF optics

The Basis Z EDOF with extended depth of focus stands representative for a new generation of presbyopia-correcting optics using Wavefront Linking technology. The non-diffractive optic design aims to achieve excellent distance and intermediate visual acuity, while minimizing visual disturbances.

Advanced vision comfort for an active lifestyle

Extended depth of focus through continuously elongated range of focus^{1,2}



High vision comfort for everyday activities and sports

Excellent distance and intermediate visual acuity, functional near visual acuity³



Full visual acuity from a distance to the laptop without glasses. Reading glasses remain necessary in certain situations.

Minimized dysphotopias³



Largely visually undisturbed driving possible, even at night

Non-diffractive optic design using Wavefront Linking



Excellent image quality and contrast sensitivity^{3,4}

Established IOL platform in a preloaded system



High safety and efficiency in surgery

Find further information under www.1stq.de/en/basiszedof
Contact your **local 1stQ distributor** or our **International Sales Team:**

export@1stq.eu

Basis Z EDOF – hydrophobic, preloaded



Material	Hydrophobic acrylic
A-constant	118.738 (SRK/T) [IOL Con 01/2025]
Refractive index	1.47
Abbe number	58
Diameter	Total: 13 mm Optics: 6 mm
Optic design	Aspheric, with central 2 mm Wavefront Linking zone
Supply range (Spheric/SEQ)	+8 D to +30 D (in steps of 0.5 D) +31 D to +35 D (in steps of 1.0 D)

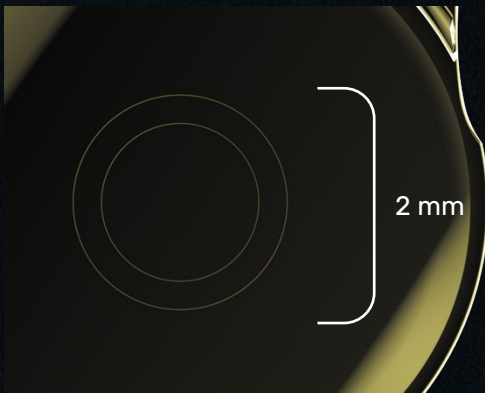
Preloaded – incision size of 2.2 mm

Integration into the proven Basis Z platform allows standardized procedures for efficient and safe implantation.



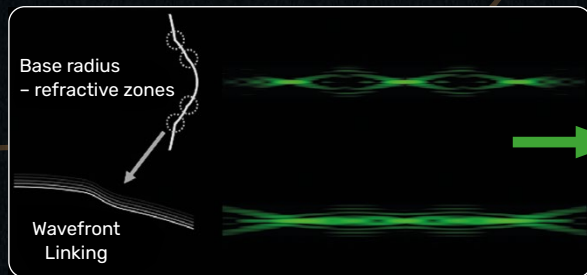
EDOF empowered by Wavefront Linking technology¹

The Basis Z EDOF's excellent EDOF performance relies on Wavefront Linking. Wavefront Linking uses specially designed surface elements to cause continuous light energy distribution along the optical axis, resulting in higher intermediate light intensity and an elongated range of focus. **Wavefront Linking stands for intelligent optic design and extended vision performance.**

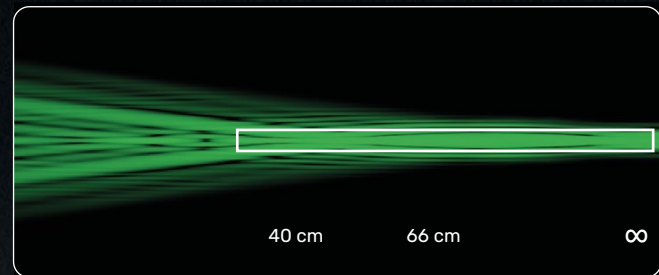


(Abb. 1)

Non-diffractive optic design with 2 mm Wavefront Linking zone. **Central refractive zones with different curvatures** are linked by specially designed **linking zones**.



(Figure 2) Linking the anterior basic curvature of the optic with the additional central refractive zones optimizes the light yield and ensures a continuous distribution of light energy along the optical axis between distance focal point and intermediate focal point.



(Figure 3) This creates an elongated range of focus from distance to intermediate. Since Wavefront Linking does not require diffractive rings, the risk of visual disturbances is minimized.

High-end EDOF performance

The criteria for EDOF optics have been defined according to ANSI standard Z80.35 2018 A*. The Basis Z EDOF clearly excels the criteria by a significant margin, and achieves outstanding EDOF performance through Wavefront Linking (Figure 4).



Excellent distance vision

with a mean value of -0.04 ± 0.08 logMAR for an active lifestyle



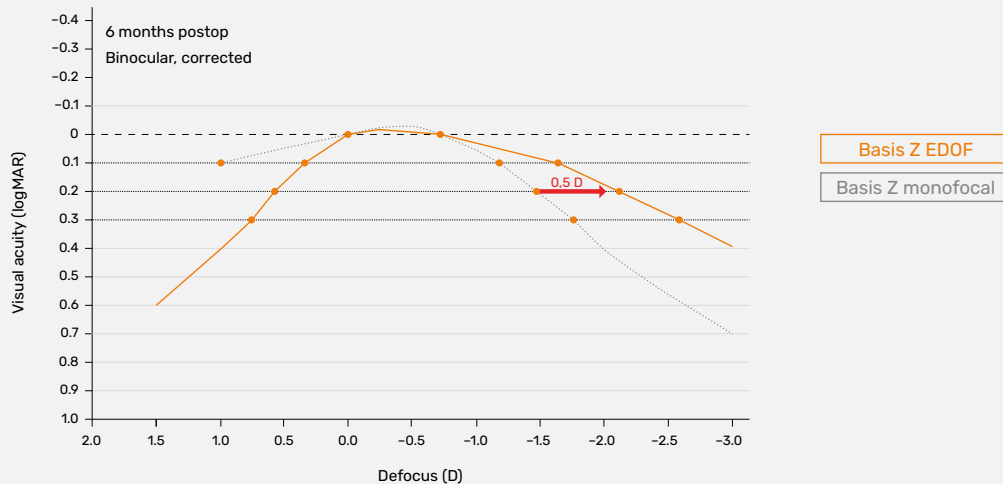
Uncompromising intermediate vision

of 0.08 ± 0.18 logMAR for comfortable depth of focus



Functional near vision

of 0.19 ± 0.26 logMAR. Reading glasses are still necessary for comfortable near vision



(Figure 4) The horizontal arrow indicates the default of the ANSI standard. Basis Z EDOF: Preliminary data, further investigation in progress to confirm the current results; Basis Z monofocal: representative VA values according to PMCF survey by 1stQ, data on file.

*American National Standard Institute: Corrected distance visual acuity (CDVA) not worse than 0.1 logMAR compared to monofocal IOLs. Depth of focus at 0.2 logMAR at least 0.5 D greater than with monofocal IOLs. 50 % of the eyes achieve a visual acuity of 63 % in the intermediated range (66 cm).

Basis Z – Evolution of safety and vision comfort

From the outset, it has been 1stQ's philosophy to supply only excellent solutions, even for standard monofocal care. The Basis Z has been implanted millions of times worldwide, and has advanced to become one of the most comprehensive IOL platforms.



Launch 2008

Basis Z hydrophilic

2010

Basis Z toric

2011

Basis Z hydrophobic

2013

Basis Z trifocal

Standard features for the highest demands

- In terms of sphere/SEQ and cylinder the supply range exceeds what is customary on the market
- Undisturbed quality of vision due to premium-quality hydrophilic and hydrophobic acrylics
- Optimized contrast vision due to aspheric optic design
- High image quality through reduced chromatic aberration



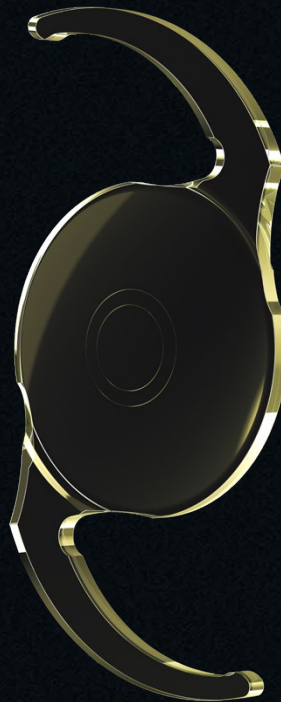
2014

Basis Z toric-trifocal



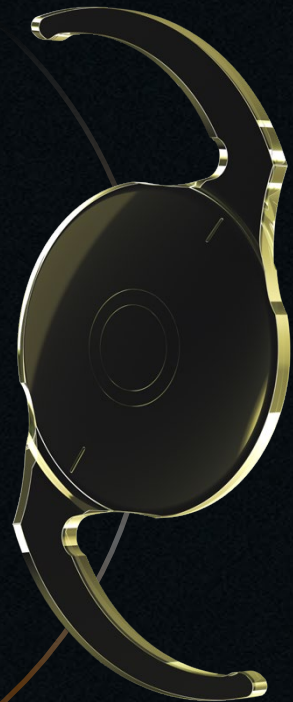
2015

Basis Z Preloaded



2022

Basis Z EDOF



2023

Basis Z EDOF-toric

- Extended PCO prevention due to 360° sharp edge design
- Reliable target refraction due to optimized A-constants

- Natural color perception and enhanced retina protection due to the "Natural Yellow" blue light filter

Leading begins together

Want to find out more about Basis Z EDOF? Want to learn about the entire Basis Z series? Or discuss 1stQ's versatile IOL solutions?

We are ready and happy to assist with expertise or new ideas. Let us drive quality, standards and the best possible individual vision together.

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Service Box
Basis Z EDOF



▶ Handling video



↓ Further material

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www.1stq.de/en

References

(1) Medicontur/R&D, 2022. (2) Alarcon A, Canovas C, Rosen R et al. Preclinical metrics to predict through-focus visual acuity for pseudophakic patients; Biomed Opt Express, 2016;7(5):1887-1888.doi:10.1364/BOE.7.001877 (3) Györy-Medicontur/HB CER 2022 (4) Medicontur Clinical Advisory Board, Budapest, Hungary, 27th May 2022. Clinical data verified at 2 sites, for 16 eyes, equivalent optics 1stQ Basis Z EDOF