



Vivonex™ Gemetric™

WE SEE EYE TO EYE

**INTRODUCING
A NEW FAMILY
OF PRELOADED
TRIFOCAL IOLS**

A NEW RANGE OF VISION

Vivinex™
Gemetric™

Vivinex™ Gemetric™ and Vivinex™ Gemetric™ Toric
Designed to provide excellent distance vision, and well balanced intermediate and near vision¹



GOOD

GOOD

EXCELLENT

Add power intermediate +1.75 D
Add power near +3.50 D

NEAR



INTERMEDIATE

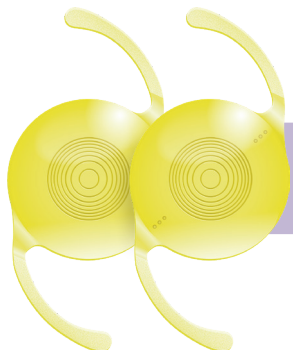


FAR



Vivinex™
Gemetric™ Plus

Vivinex™ Gemetric™ Plus and Vivinex™ Gemetric™ Plus Toric
Designed to provide excellent near vision, while maintaining good distance and intermediate vision¹



EXCELLENT

GOOD

GOOD

Add power intermediate +1.75 D
Add power near +3.50 D

THE FREEDOM TO CHOOSE

Two complementary profiles to meet individual patient needs

Simulated MTF through focus response showing the difference between Vivinex™ Gemetric™ and Vivinex™ Gemetric™ Plus

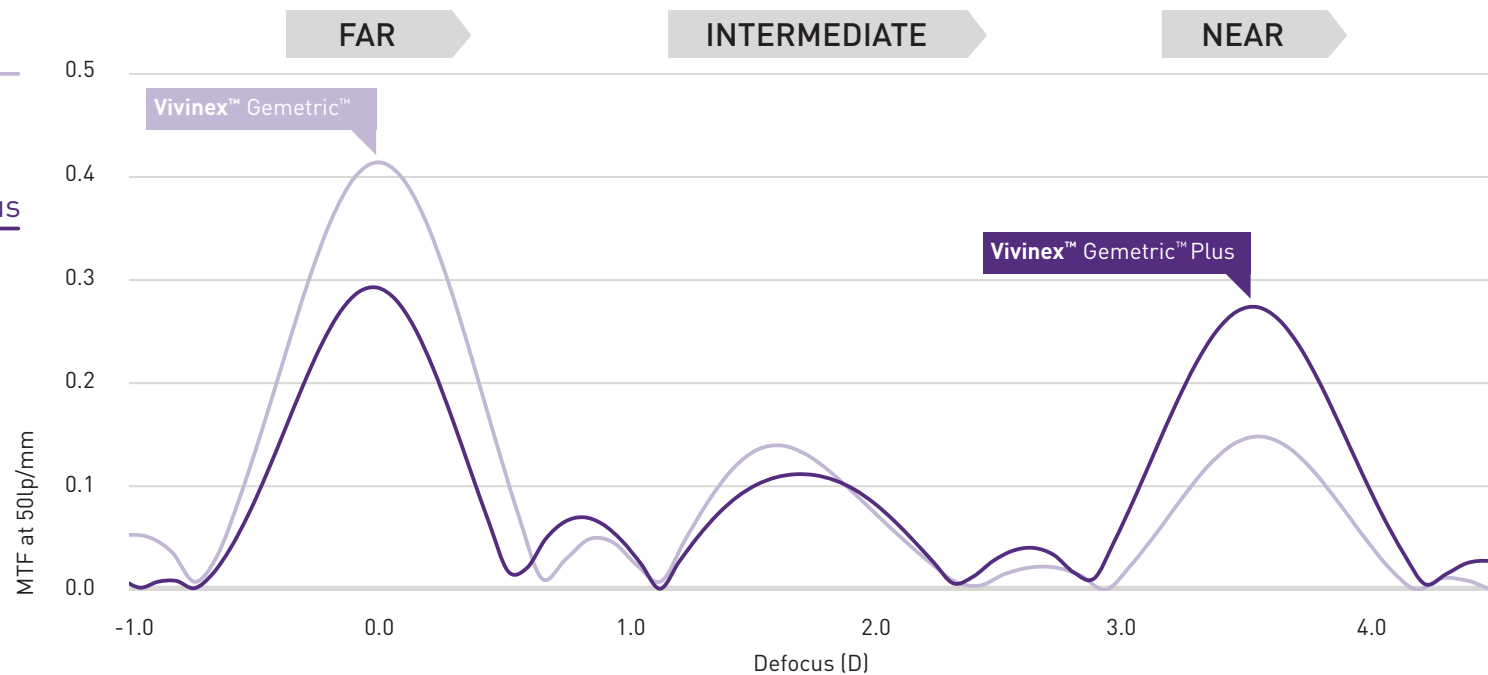
(Aperture 3.0 mm and $\lambda=546$ nm)

Vivinex™ Gemetric™

More dominant for far distance¹

Vivinex™ Gemetric™ Plus

More dominant for near distance¹



Vivinex™
Gemetric™

Vivinex™
Gemetric™ Plus

Vivinex™
Gemetric™ Toric

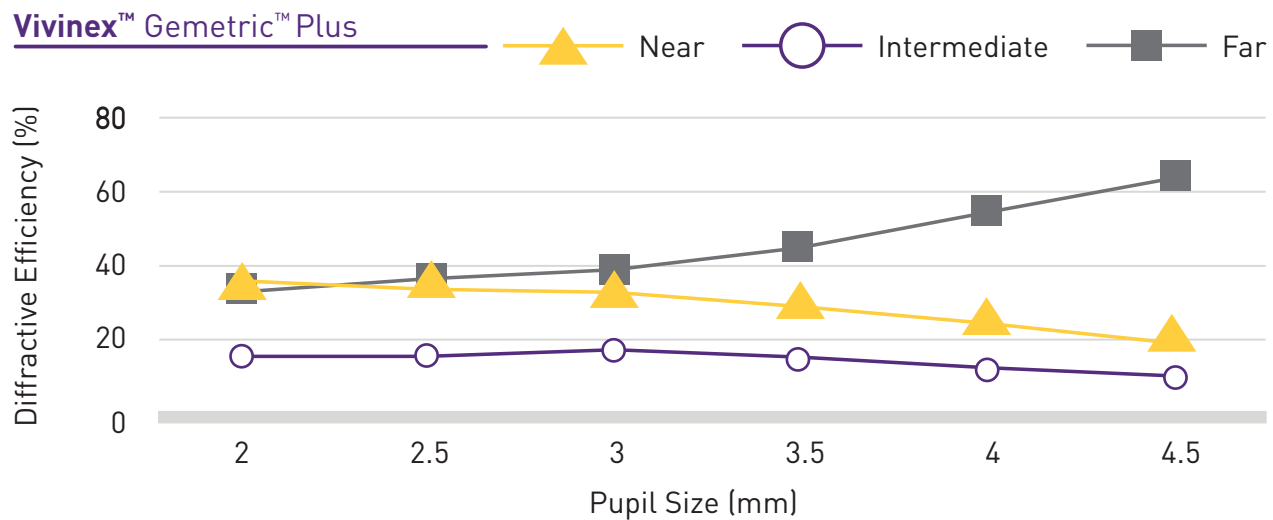
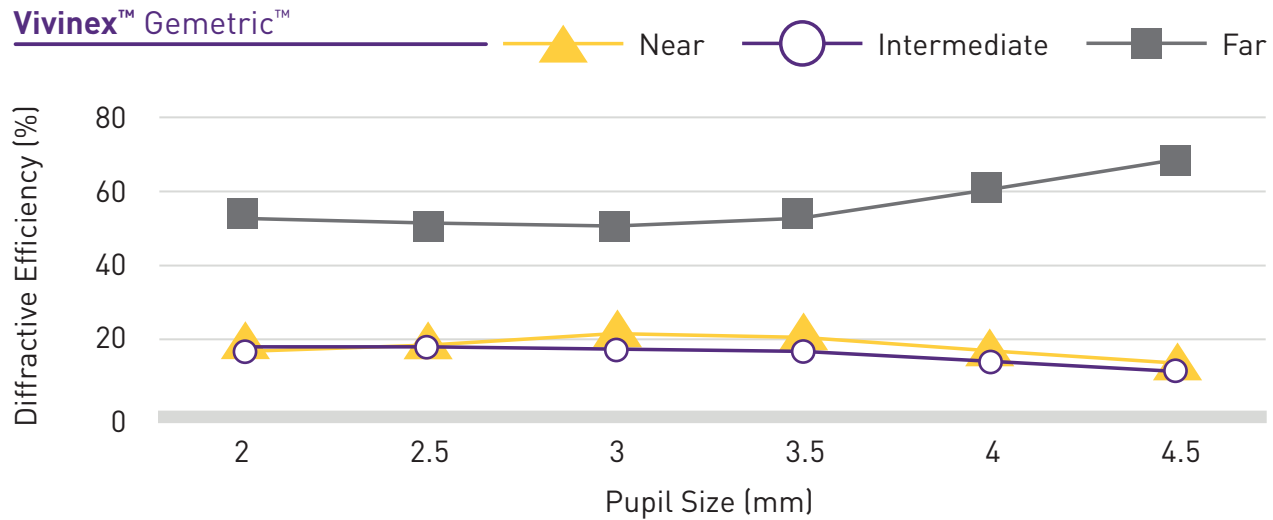
Vivinex™
Gemetric™ Plus Toric

With a choice of products and profiles, patients can experience spectacle independence.

SEE MORE

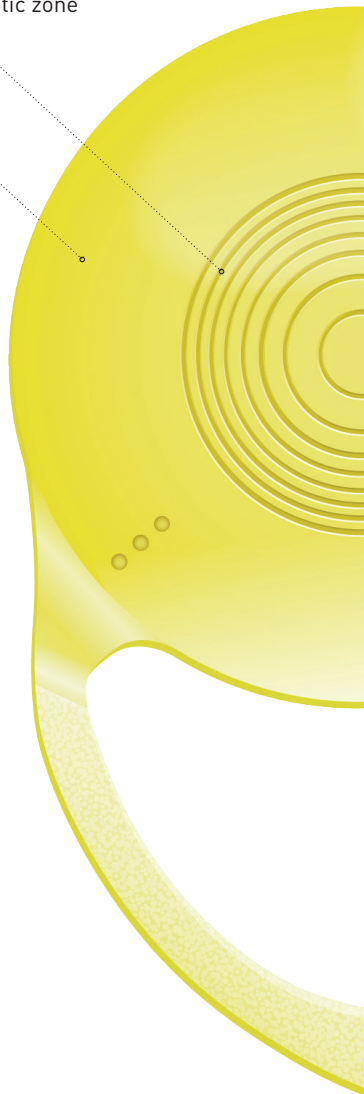
OPTIMIZED TO SUIT DIFFERENT PATIENT LIFESTYLES

Vivonex™ Gemetric™ and Vivonex™ Gemetric™ Plus show different light distribution profiles for different pupil sizes¹



Truncated diffractive design in the central 3.2 mm optic zone

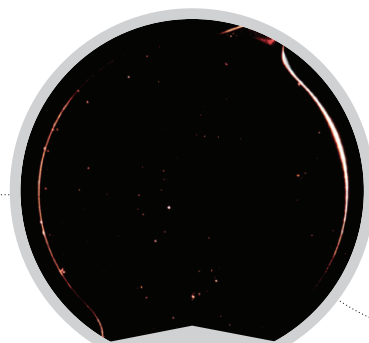
Refractive optic zone



BUILT ON THE VIVINEX™ PLATFORM

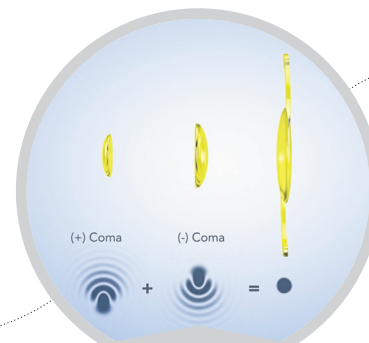
All Vivinex™ IOLs offer:

- ✓ Glistening-free hydrophobic acrylic IOL material^{2,3}
- ✓ Proprietary aspheric optic design for improved image quality⁴
- ✓ Active oxygen processing treatment, a smooth surface and square optic edge to reduce PCO^{3,5,6,7,8,9,10,11}
- ✓ Textured-rough haptic surface for better grip inside the capsular bag and designed to reduce the potential for adhesion to the optic surface
- ✓ Reliable outcomes through outstanding rotational stability¹²



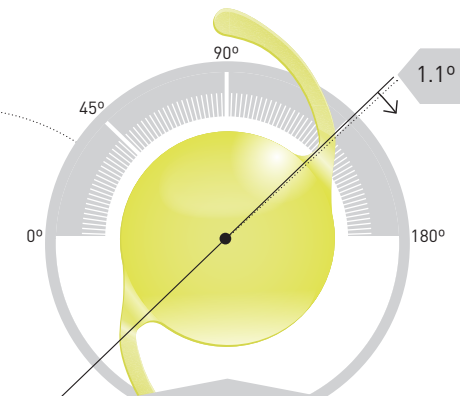
Glistening-free IOL material

Grade 0
based on Miyata et al.¹³
with 11.6 ± 5.7 MV/mm²



Improved image quality

The proprietary aspheric optics of Vivinex™ reduce spherical aberration without incurring significant susceptibility to decentration associated coma.⁴



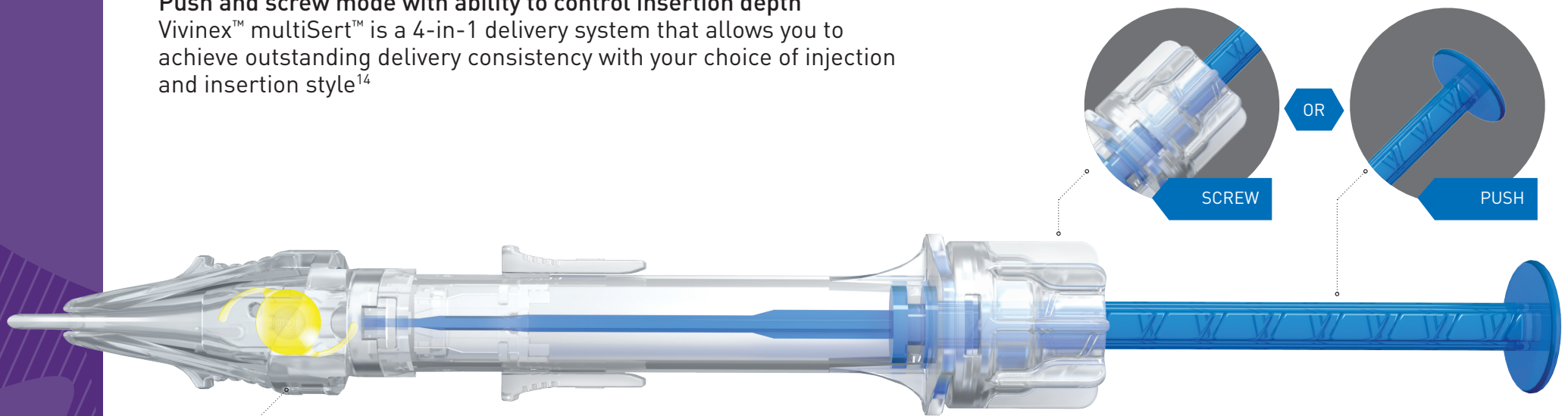
Outstanding rotational stability

Median rotation 1.1°
(range: 0.0° – 5.0°)
100% of lenses (n=103) had $\leq 5^\circ$ of rotation from their initial axis at end of surgery through all follow up visits at 1 hour, 1 week, 1 month and 6 months¹²

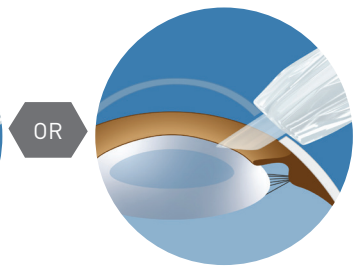
SEE MORE

DELIVERED IN THE PRELOADED MULTISERT™ INJECTOR

Push and screw mode with ability to control insertion depth
Vivinex™ multiSert™ is a 4-in-1 delivery system that allows you to achieve outstanding delivery consistency with your choice of injection and insertion style¹⁴



Delivery into capsular bag
insert shield:
Default position



Delivery through incision wound tunnel
insert shield:
Advanced position



“

The Vivinex™ Gemetric™ and the multiSert™ injector are a perfect combination. The product combines an excellent optic with an excellent material and an excellent IOL delivery device.¹⁵

Ramin Khoramnia, Head of the Cataract and Refractive Surgery Department at the University Eye Hospital Heidelberg, Germany.

”

CLEARlog – Power in the palm of your hand



CLEARlog is an intuitive Record-Analyze-Optimize app for cataract and refractive lens exchange.

CLEARlog allows you to:

- ✓ Capture data quickly across all devices
- ✓ Conduct complex analyses easily
- ✓ Generate reports with just one click



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HOYA Toric Calculator

- ✓ The HOYA Toric Calculator can take account of posterior corneal astigmatism in the calculation by giving the option to apply the Abulafia-Koch Regression formula.
- ✓ The Abulafia-Koch Regression, applied to a clinical patient cohort, has been shown to improve predictability of TIOL refractive outcomes.¹⁶



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HOYA Surgical Optics is devoted to delivering the world's leading **preloaded IOLs, personalized services** and **specialized support.**

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SEE MORE

AVAILABLE IN

Vivinex™ Gemetric™ | Vivinex™ Gemetric™ Plus

Model name	XY1-G XY1-GP
IOL power (Spherical equivalent)	+10.00 D to +30.00 D in increments of 0.50 D
Add power at IOL plane	Intermediate: +1.75 D Near: +3.50 D
Nominal A-constant*	119.0
Injector	multiSert™ preloaded
Front injector tip outer diameter	1.70 mm
Recommended incision size	2.20 mm

* The A-constant is presented as a starting point for the lens power calculation. When calculating the exact lens power, it is recommended that calculations be performed individually, based on the equipment used and operating surgeon's own experience.

Vivinex™ Gemetric™ Toric | Vivinex™ Gemetric™ Plus Toric

Model name	XY1-GT XY1-GPT
IOL power (Spherical equivalent)	+10.00 D to +30.00 D in increments of 0.50 D
Add power at IOL plane	Intermediate: +1.75 D Near: +3.50 D
Nominal A-constant*	119.0
Injector	multiSert™ preloaded
Front injector tip outer diameter	1.70 mm
Recommended incision size	2.20 mm
Cylinder power at IOL plane	1.00 D 1.50 D to 3.75 D in 0.75 D increments

Model XY1-GT, XY1-GPT	Cylinder power at IOL plane	Cylinder power at corneal plane ¹⁷
T2	1.00 D	0.69 D
T3	1.50 D	1.04 D
T4	2.25 D	1.56 D
T5	3.00 D	2.08 D
T6	3.75 D	2.60 D

> Refer to the datasheet for full specifications



Your companion to renew sight | Delivered by multiSert™



CE 0123 2022-06-01_HSOE_XY1-G_XY1-GP_XY1-GT_XY1-GPT_BR_EN

References: 1. HOYA data on file. HOYA Medical Singapore, 2020. 2. Tandogan, T. et al. (2021): In-vitro glistening formation in six different foldable hydrophobic intraocular lenses. In BMC Ophthalmol 21, 126. 3. HOYA data on file. DoF-CTM-21-002, HOYA Medical Singapore Pte. Ltd, 2021. 4. Pérez-Merino, P.; Marcos, S. (2018): Effect of intraocular lens decentration on image quality tested in a custom model eye. In: Journal of cataract and refractive surgery 44 (7), p. 889-896. 5. Leydolt, C. et al. (2020): Posterior capsule opacification with two hydrophobic acrylic intraocular lenses: 3-year results of a randomized trial. In: American journal of ophthalmology 217 (9), p. 224-231. 6. Giacinto, C. et al. (2019): Surface properties of commercially available hydrophobic acrylic intraocular lenses: Comparative study. In: Journal of cataract and refractive surgery 45 (9), p. 1330-1334. 7. Werner, L. et al. (2019): Evaluation of clarity characteristics in a new hydrophobic acrylic IOL in comparison to commercially available IOLs. In: Journal of cataract and refractive surgery 45 (10), p. 1490-1497. 8. Matsushima, H. et al. (2006): Active oxygen processing for acrylic intraocular lenses to prevent posterior capsule opacification. In: Journal of cataract and refractive surgery 32 (6), p. 1035-1040. 9. Farukhi, A. et al. (2015): Evaluation of uveal and capsule biocompatibility of a single-piece hydrophobic acrylic intraocular lens with ultraviolet-ozone treatment on the posterior surface. In: Journal of cataract and refractive surgery 41 (5), p. 1081-1087. 10. Eldred, J. et al. (2019): An In Vitro Human Lens Capsular Bag Model Adopting a Graded Culture Regime to Assess Putative Impact of IOLs on PCO Formation. In: Investigative ophthalmology & visual science 60 (1), p. 113-122. 11. Nanavaty, M. et al. (2019): Edge profile of commercially available square-edged intraocular lenses: Part 2. In: Journal of cataract and refractive surgery 45 (6), p. 847-853. 12. Scharfmüller, D. et al. (2019): True rotational stability of a single-piece hydrophobic intraocular lens. In: The British journal of ophthalmology 103 (2), p. 186-190. 13. Miyata, A. et al. (2001): Clinical and experimental observation of glistening in acrylic intraocular lenses. In: Japanese journal of ophthalmology 45 (6), p. 564-569. 14. HOYA data on file. DoF-SERT-102-MULT-03052018, HOYA Medical Singapore Pte. Ltd, 2018. 15. HOYA (2022): Vivinex Gemetric Testimonial Video R. Khoramnia, Video on file, 2022_05_31_05_HSOE_XY1-G_XY1-GP_XY1-GT_XY1-GPT_VD_EN_RKhoramnia. 16. Abulafia, A. et al. (2016): New regression formula for toric intraocular lens calculations. In: Journal of cataract and refractive surgery 42 (5), p. 663-671. 17. Based on an average pseudophakic human eye.

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