

Nanex™ multiSert+™



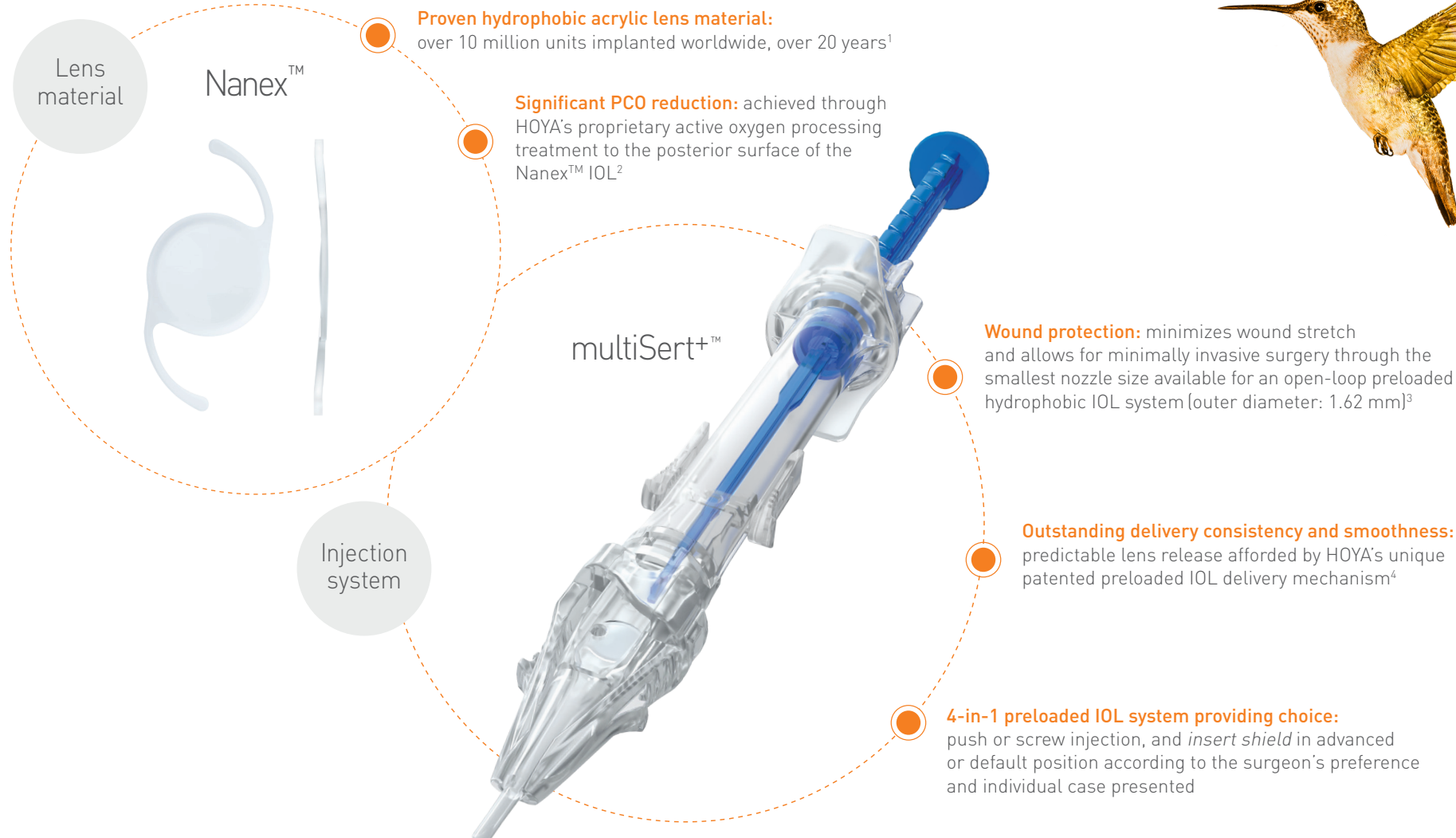
PERFORM MICRO
INCISION CATARACT
SURGERY WITHOUT
COMPROMISES

The world's smallest nozzle size for an
open-loop preloaded hydrophobic IOL
system, designed for cataract surgery
as low as 1.8 mm



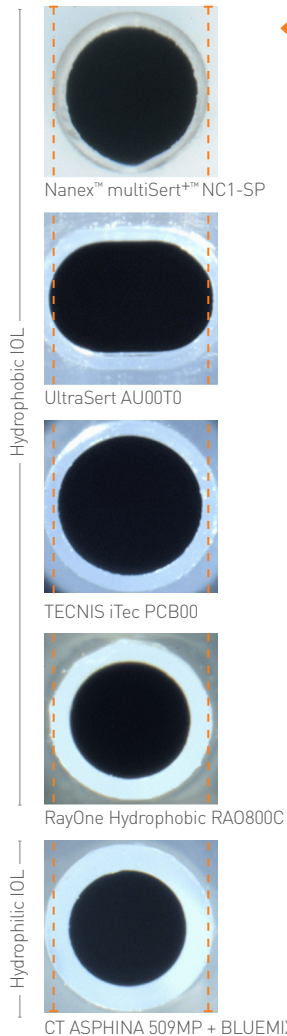
The preloaded Nanex™ multiSert+™ system eliminates the compromises traditionally associated with sub-2.2 mm cataract surgery

The innovative design of Nanex™ multiSert+™ allows for sub-2.2 mm incision cataract surgery without compromises



Protecting sub-2.2 mm incision quality through the world's smallest nozzle tip for an open-loop preloaded hydrophobic IOL design

Nozzle size comparison



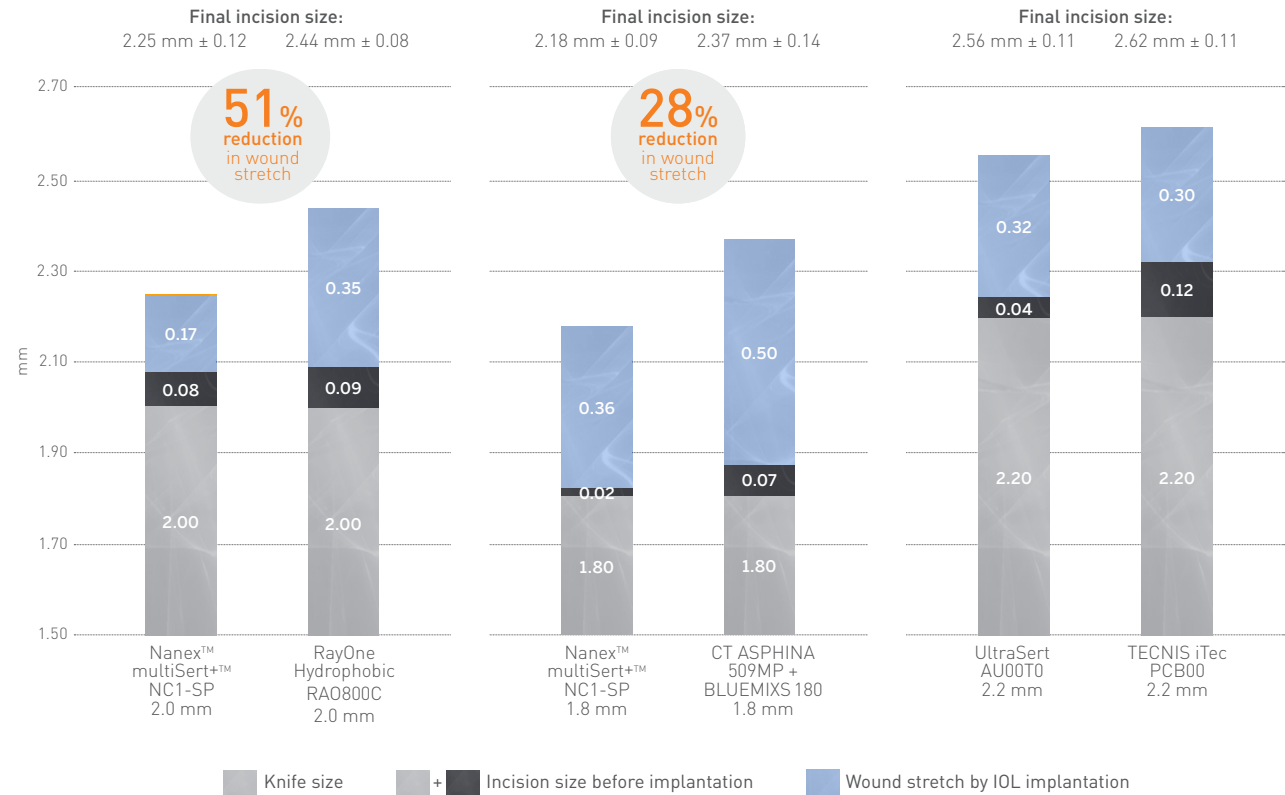
The smallest nozzle available for an open-loop preloaded hydrophobic IOL system¹

In a comparative observation, the 1.62 mm outer diameter injector tip of Nanex™ multiSert+™ was reported to be the smallest nozzle size among all tested devices, allowing for implantation through incisions as small as 1.8 mm

Images are not actual size but comparisons are presented within scale

Nanex™ multiSert+™ provides the smallest final incision size and least amount of wound stretch when performing cataract surgery through a 1.8 mm or 2.0 mm incision²

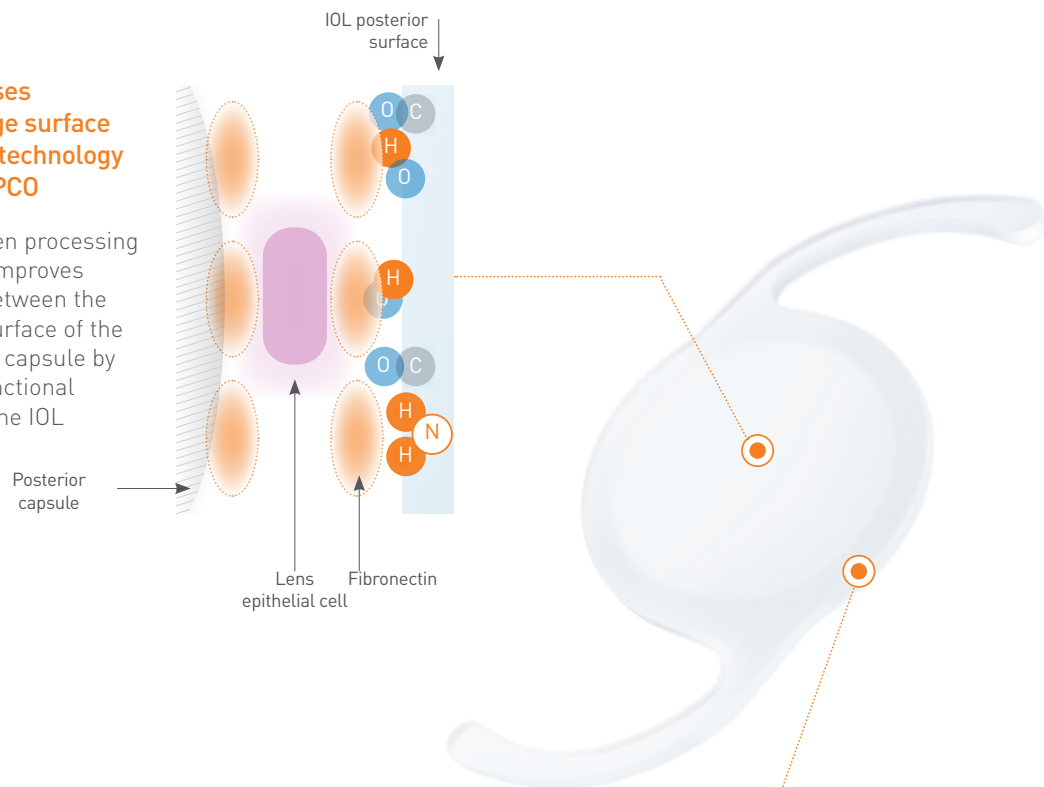
The following data is from a study comparing incision sizes in porcine eyes (n = 10, +20.0 D)



Designed to minimize posterior capsule opacification (PCO)

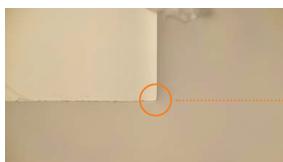
Nanex™ uses cutting edge surface treatment technology to reduce PCO

Active oxygen processing treatment improves adhesion between the posterior surface of the IOL and the capsule by creating functional groups on the IOL surface¹



Sharp optic edge²

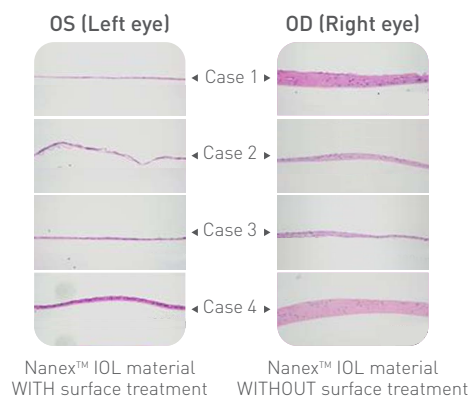
Designed to minimize PCO



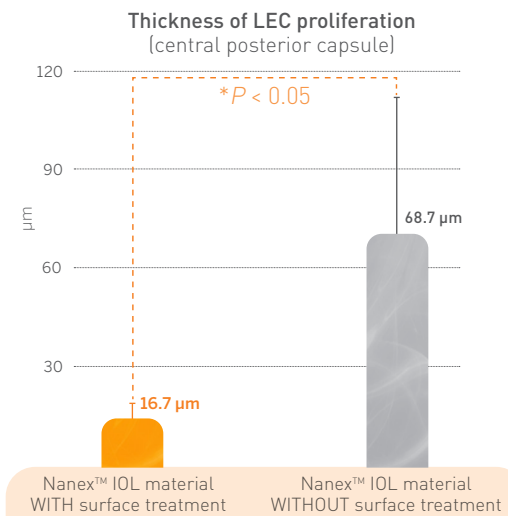
Significant PCO reduction demonstrated in an *in vivo* rabbit study¹

Nanex™ IOL material, with its active oxygen processing treated IOL surface, showed strong capsular adhesion and significantly reduced PCO compared with untreated IOL surfaces

(a) Rabbits receiving lenses with active oxygen processing treatment showed reduced PCO in comparison with those without



(b) Active oxygen processing treatment significantly inhibits PCO formation on the IOL material in comparison with untreated IOL surfaces. Statistical significance at $*P < 0.05$



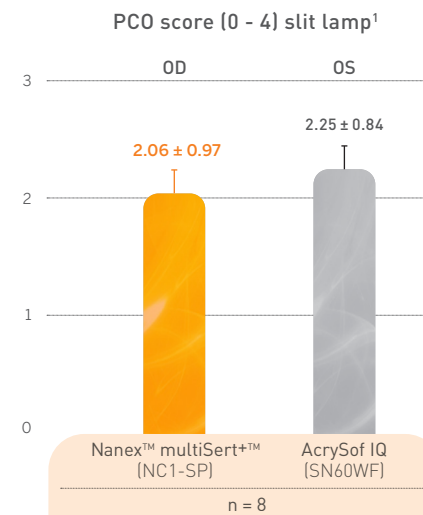
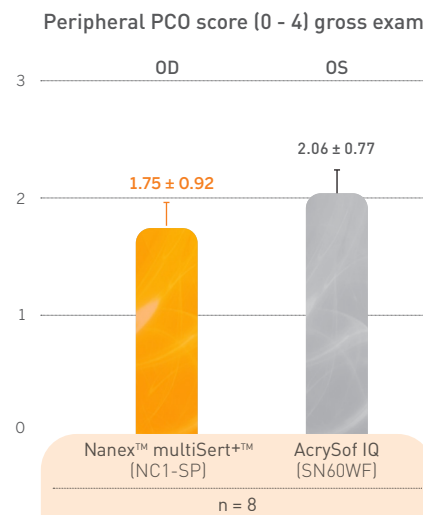
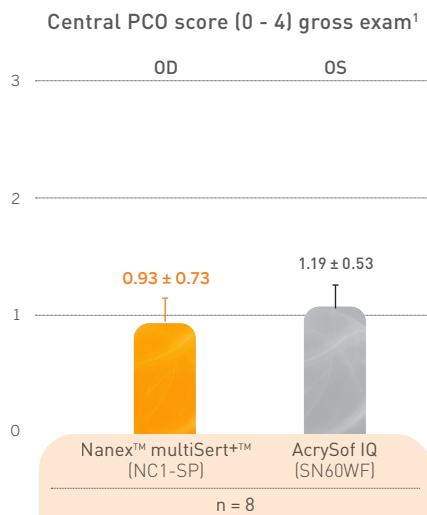
1. Matsushima H, et al. Active oxygen processing for acrylic intraocular lenses to prevent posterior capsule opacification. *J Cataract Refract Surg.* 2006; 32:1035-1040. 2. Data on file, HOYA Medical Singapore Pte. Ltd, 2019.

Demonstrated PCO reduction with Nanex™ multiSert+™

Nanex™ multiSert+™ showed a consistent trend towards stronger PCO inhibition vs AcrySof IQ across all three scores^{1,2}

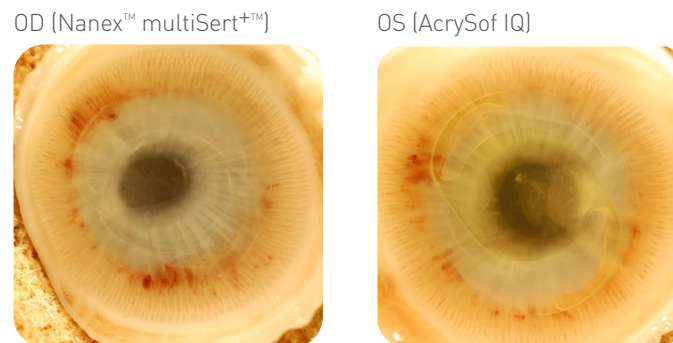
In a GLP-study evaluating the PCO of Nanex™ multiSert+™ (NC1-SP) and AcrySof IQ (SN60WF) in rabbits, while not statistically significant, Nanex™ multiSert+™ showed a trend towards less PCO in comparison with AcrySof IQ, in the 4-week postoperative study

PCO scoring in a paired rabbit study

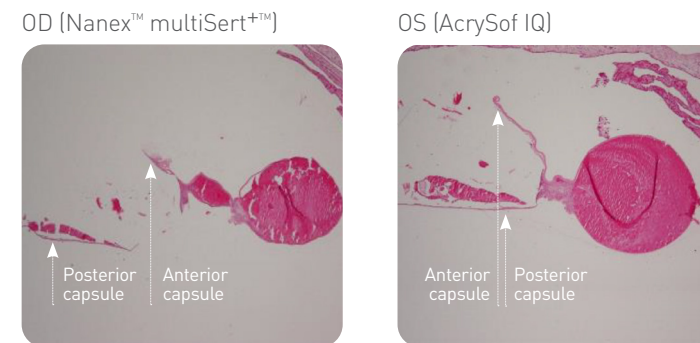


Representative paired images in rabbits^{1,2}

Gross examination (Miyake-Apple view)



Histopathology



GLP; Good laboratory practice.

1. Balendiran V, et al. Uveal and capsular biocompatibility of a new hydrophobic acrylic microincision intraocular lens. J Cataract Refract Surg. 2020; 46:459-464.

2. Data on file, HOYA Medical Singapore Pte. Ltd, 2019.

Nanex™ multiSert+™ provides peace of mind with a highly consistent, predictable and smooth IOL delivery

Nanex™ multiSert+™ achieved outstanding delivery consistency in a test series of 630 lens deliveries¹

100%
Success

No leading or trailing haptic tucking failure reported in 630 attempts



No broken injector tips after IOL release reported in 630 attempts

100%
Success

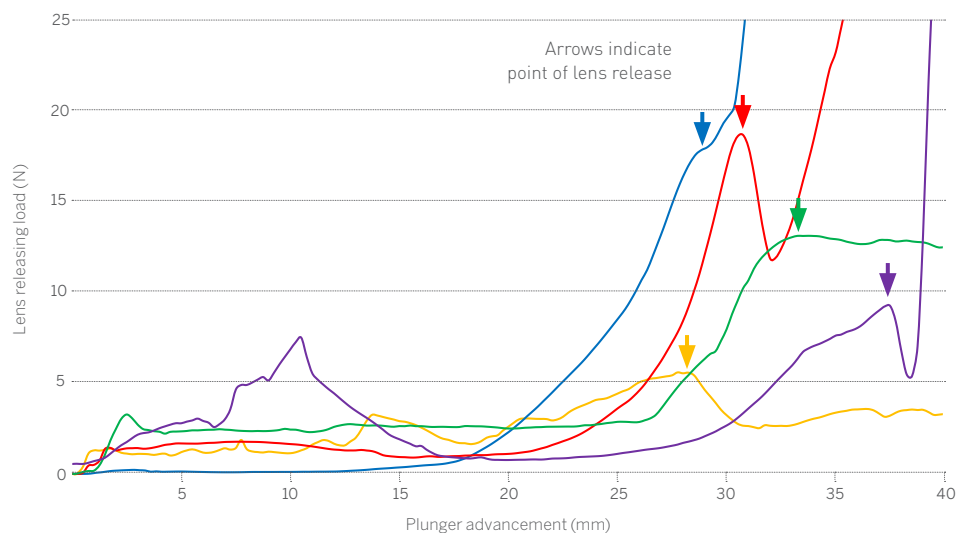


Nanex™ multiSert+™ is designed to provide a smooth lens delivery in comparison with other IOL delivery systems to mitigate risk of abrupt release²

- Nanex™ multiSert+™ NC1-SP (+20D, n = 10)
- CT Asphina 509MP + BLUEMIXS 180 (+20D, n = 5)
- Cristalens ARTIS PL E (+20D, n = 5)*
- RayOne Hydrophobic RA0800C (+20D, n = 5)
- UltraSert AU00T0 (+20D, n = 5)

* The tests began with the condition that the plunger was pushed forward by 5 mm

Comparison of forces required to deliver the IOL

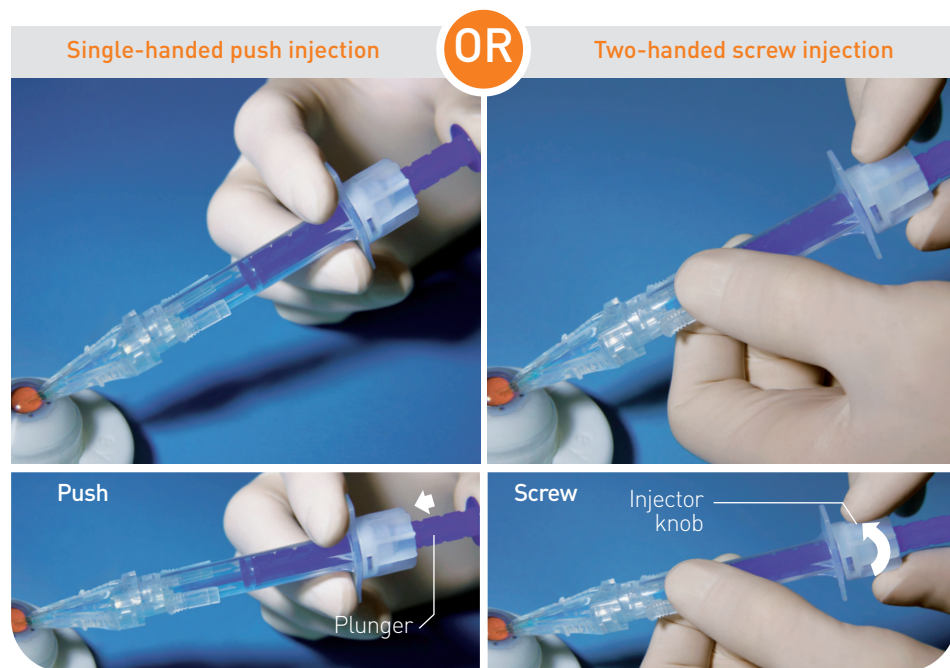


1. Data on file, HOYA Medical Singapore Pte. Ltd, 2019. 2. Data on file, HOYA Medical Singapore Pte. Ltd, 2019.

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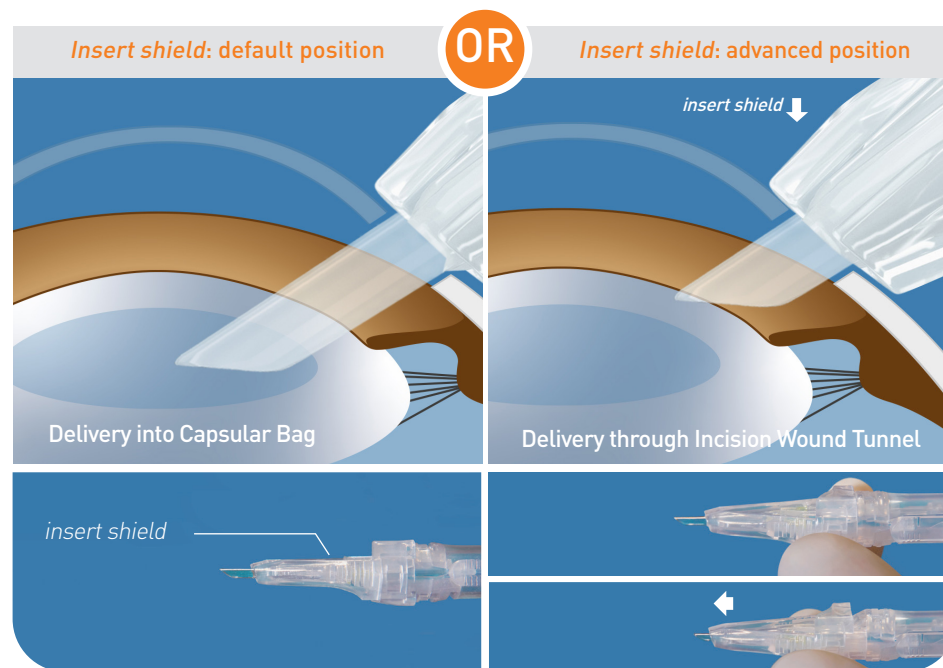
Nanex™ multiSert+™ is a 4-in-1 preloaded IOL system providing multiple choices at your fingertips

A single-handed push and two-handed screw injection within one device



Uniquely designed *insert shield* for precise depth management of injector tip insertion

Allows the surgeon to decide whether to position the injector tip directly into the capsular bag or through the incision wound tunnel: no other IOL delivery system offers this feature

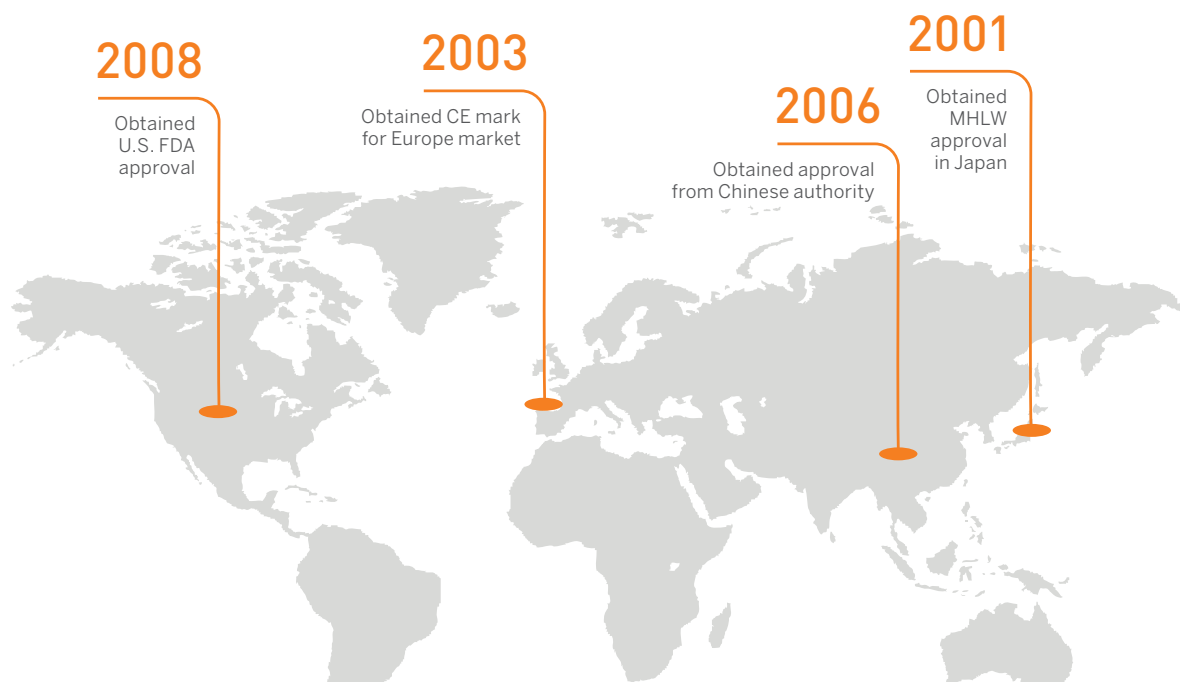


Trust in HOYA

A pioneer in fully preloaded IOL delivery systems, with a proven hydrophobic IOL material

Proven hydrophobic lens material with over 10 million IOLs implanted worldwide over 20 years¹

History of Nanex™ IOL material



Nanex™ multiSert+™

Model name	NC1-SP
Optic design	Aspheric design with sharp optic edge
Optic & haptic material	Hydrophobic acrylic with UV-Filter
Haptic design	Modified C-loop, 5° angulation
Diameter (optic/OAL)	6.0 mm/ 13.0 mm
Power	+6.00 to +30.00 D (in 0.50 D increments)
Nominal A-constant [†]	119.2
Injector	multiSert+™ preloaded
Front injector tip outer diameter	1.62 mm
Incision size	As low as 1.8 mm
Optimized constants [†]	Haigis a0 = -0.2676 a1 = 0.2382 a2 = 0.1993 Hoffer Q pACD = 5.715 Holladay 1 SF = 1.904 SRK/T A = 119.112

¹ Data on file, HOYA Medical Singapore Pte. Ltd, 2018.

* 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.

[†] These optimized constants for the calculation of intraocular lens power published by IOLCon on their website: <https://iolcon.org> are calculated from 211 clinical results for Nanex™ multiSert+™ model NY1-SP/NC1-SP as of September 9, 2021. These constants are based on actual surgical data and are provided by IOLCon as a starting point for individual constant optimizations. The information available on the website is based on data originating from other users and not by HOYA Surgical Optics ("HSO"). HSO therefore does not warrant the correctness, completeness and currentness of the contents on the said website.

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