

SBK without compromise using Moria One Use-Plus



One Use-Plus by numbers



2+ million patients operated



300,000+ patients treated / year since last 3 years



120,000+ eyes followed in peer-reviewed protocols



45+ peer-reviewed published studies



MORIA • OPHTHALMIC INSTRUMENTS

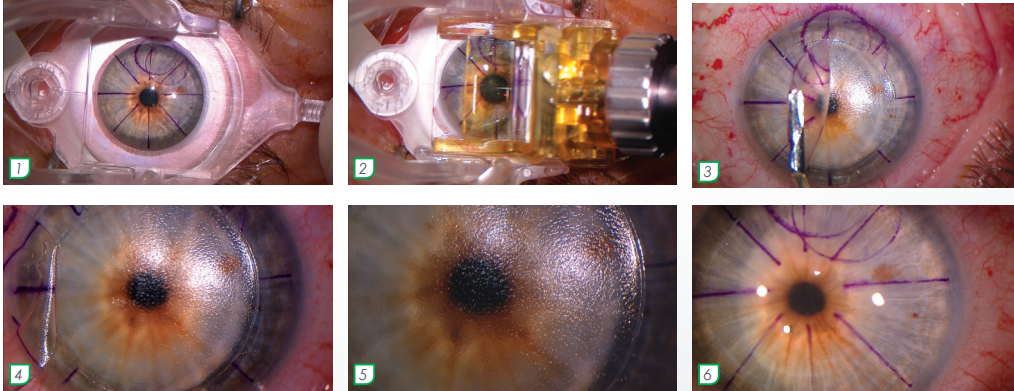


SBK without compromise to reach ...



Flap creation in less than 4 seconds for a minimal suction time, potentially preserving goblet cells¹

- with a full intraoperative visibility during the whole flap creation

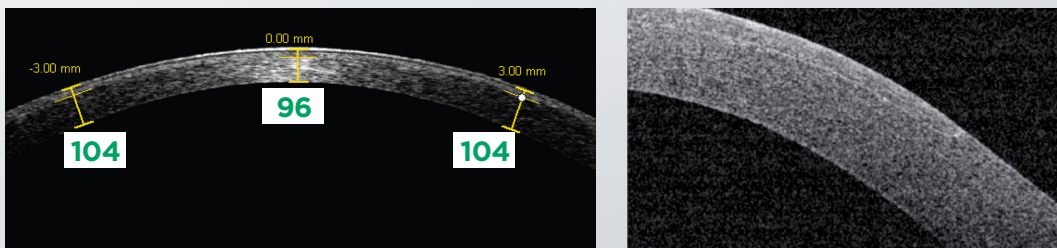


Sequence showing flap creation and lifting on a patient's right eye using Moria One Use-Plus SBK
Courtesy of James S. Lewis, MD (Elkins Park, PA, USA)



Predictible thin sub-Bowman flaps centrally²⁻¹²

- with a high reproducibility between OD then OS^{2-4,8,12}
- with a planar profile/architecture throughout the whole flap surface⁵⁻⁷



Anterior segment OCT pictures of a nasal-hinged corneal flap profile created using Moria One Use-Plus SBK
Courtesy of James S. Lewis, MD (Elkins Park, PA, USA)

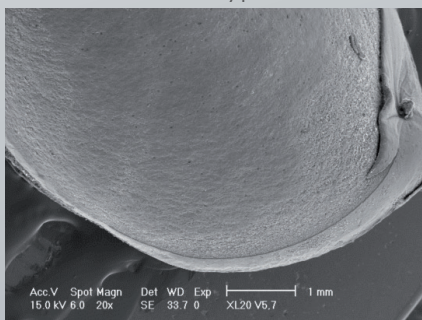
When using the SBK 90- μ m calibrated head, mean central flap thickness is:

- at **Speed 2 (fast motion): 100 \pm 10 [80 – 120] microns**
- at Speed 1 (slow motion): 110 \pm 10 [90 – 130] microns

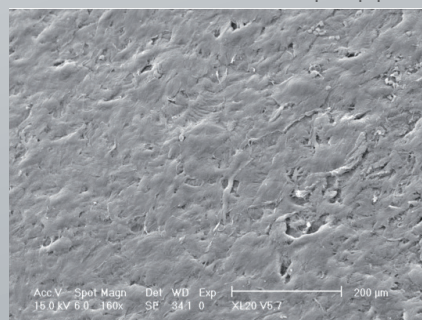


Excellent stromal surface smoothness for an accurate photoablation

- confirmed by Scanning Electron Microscopy¹³
- no « velcro-type » surface for a crystal clear anatomical flap apposition^{6,13-14}



X20



X160

Scanning Electron Microscopy pictures at different magnifications after cutting a flap with Moria One Use-Plus SBK with an intended flap thickness of 100 microns
Courtesy of Richard J. Duffey, MD (Mobile, AL, USA)¹³

... highly-expected patient satisfaction



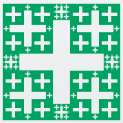
Excellent safety profile:

- intraoperatively:
 - no buttonhole, no incomplete flap, no epithelial erosion, no irregular stromal bed reported in a large-scale retrospective study on flat corneas (2883 eyes)¹⁴
 - with very large flaps (>9.5 mm) required for high hyperopia and presbyopia corrections¹⁵
- postoperatively:
 - no single flap displacement¹⁴, no haze nor energy-related DLK¹⁶
 - one of the lowest incidence rate of epithelial ingrowth (0.49%) in a large-scale cohort study¹⁷
 - one of the lowest myopic & hyperopic LASIK retreatment rates in large-scale cohort studies: <0.5% & 4.6% respectively¹⁸⁻¹⁹



Very fast visual recovery:

- equivalent to Femto-LASIK^{1,11}
- providing a real « WoW » effect far awaited by every patient



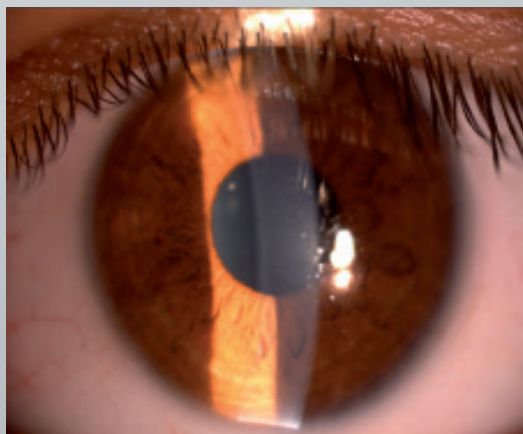
Excellent quality of vision:

- limited changes of higher order aberrations (HOAs)^{9,20-22}
- and evenly less induction of total HOAs and spherical aberrations than during Femto-LASIK²³
- intraocular straylight measurements equivalent to Femto-LASIK²⁴
- negligible changes of higher order Point Spread Function (PSF) Strehl ratio, preserving an optimal retinal image quality²¹



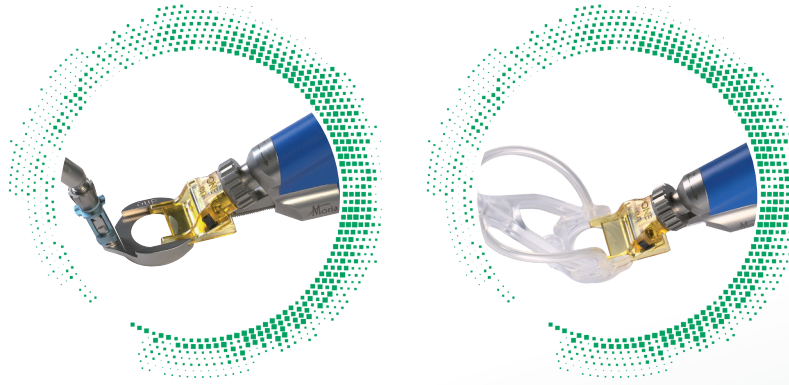
In terms of **in-vivo confocal microscopy** research comparing SBK to Femto-LASIK and other microkeratome⁶:

- higher density of stromal keratocytes at 3 months postoperatively
- faster regenerative velocity of subbasal nerve fibers due to the nasal hinge which preserves more anatomically-placed corneal nerve branches.



Slit-lamp picture of a SBK flap at Day 1 postoperative: edges are almost invisible.
Courtesy of Ahmed El-Massry (Alexandria, Egypt)

What makes One Use-Plus microkeratome the state-of-the-art in today's automated microkeratomes



Excellent ergonomics for a user-friendly automated microkeratome



- ✓ Automated linear motion to benefit from nasal hinge^{3,7,10,12,17,19}
- ✓ Pre-assembled and one-handed usage possible
- ✓ Safety and reliability of two independent motors: one for head advancement, one for blade oscillation



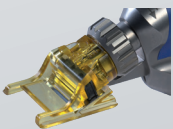
- ✓ Wide range of suction rings to individualize flap geometry based on photoablative patterns: from oval-shaped to extra-large hyperopic treatments¹⁵
- ✓ Adjustable stops for customized hinge length
- ✓ Design of suction ring makes the use of a speculum unnecessary on small fissures
- ✓ Translucent single-use plastic ring enables visual confirmation of suction



Unique choice of single-use calibrated cutting heads & suction rings & aspiration tubings

Single-use means simplicity, safety, convenience, and ease-of-use:

- ✓ Protected blade to avoid potential damage
- ✓ Limits complications and risks linked to damaged or improperly maintained reusable heads
- ✓ Unique solution to limit infection and contamination from prions, virus, bacteria, germs and other micro-organisms²⁵⁻²⁷



And as a bonus:

- ✓ Single-use heads and rings facilitate compliance with ASCRS guidelines which recommend not using flash sterilization
- ✓ Eliminates sterilization and maintenance
- ✓ Lower initial investment costs
- ✓ More rapid patient turnover, leading to greater efficiency



The most economical platform for SBK:

- ✓ Limited capital investment and cost per surgery
- ✓ Make your own comparisons between the One Use-Plus and a femtosecond laser in terms of capital investment, disposables per patient, and annual maintenance.

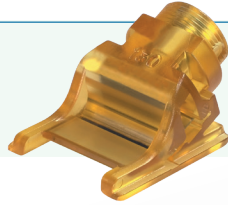
Product references

One Use-Plus handpiece



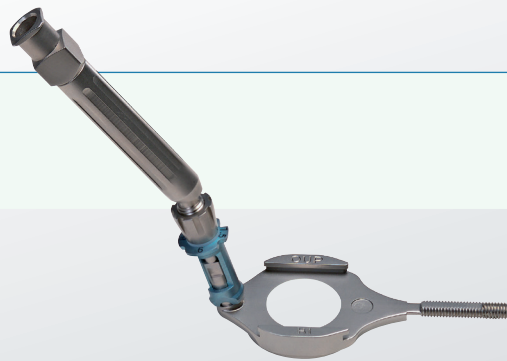
19345

One Use-Plus – heads 90/130
Box of 10 units



19393/90
19393/130

One Use-Plus: metallic reusable suction rings



19391/-1
19391/0



19391/1
19391/2
19391/3

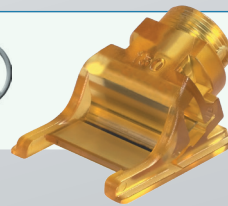
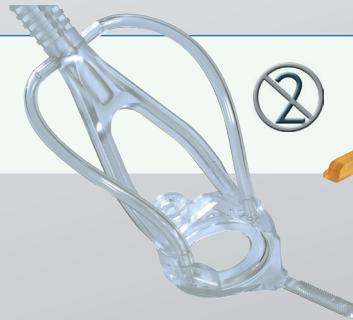


19519/-1



19391/1/OV
19391/2/OV
19391/3/OV

One Use-Plus: single-use plastic suction rings
& heads
Box of 10 units



19336/XX
19337/XX
19354/XXX

XX = 90 - 130
XXX = 110 - 130

| | #19345 | #22519514 | #22519513 | #19391/0 | #19391/1 | #19391/2 | #19391/3 |
|-------|--------|-----------|-----------|----------|----------|----------|----------|
| SETM | ✓ | ✓ | ✓ | - | - | - | - |
| SETM9 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

SETM: ONE USE-PLUS Set

Set containing the One Use-Plus microkeratome for LASIK surgery:

- One Use-Plus handpiece: #19345
- storage box for One Use-Plus microkeratome: #22519514
- sterilization box for One Use-Plus suction rings : #22519513

SETM9: ONE USE-PLUS Set (Metal Rings)

Set containing the One Use-Plus microkeratome for LASIK surgery with 4 reusable metallic suction rings:

- One Use-Plus handpiece: #19345
- storage box for One Use-Plus microkeratome: #22519514
- sterilization box for One Use-Plus suction rings: #22519513
- One Use-Plus reusable suction ring, size 0: #19391/0
- One Use-Plus reusable suction ring, size +1: #19391/1
- One Use-Plus reusable suction ring, size +2: #19391/2
- One Use-Plus reusable suction ring, size +3: #19391/3

Bibliography

1. Xu et al. Dry eye after Small Incision Lenticule Extraction and LASIK for myopia. *J Refract Surg.* 2014;30(3):186-190.
2. Chen et al. Anterior segment optical coherence tomography measurement of flap thickness after myopic LASIK using the Moria One Use-Plus microkeratome. *J Refract Surg.* 2010;26(6):403-410.
3. Lian et al. Correlation analysis and corneal flap thickness changes among Moria SBK, 90 and 110 microkeratome in LASIK. *Chin Ophthalmic Res.* 2010;28(12):1158-1161.
4. Du et al. Flap thickness variation with 3 types of microkeratome heads. *J Cataract Refract Surg.* 2011;37(1):144-148.
5. Sun et al. Comparisons of morphologic characteristics between thin-flap LASIK and SBK. *Int J Ophthalmol.* 2012;5(2):338-342.
6. Zhang et al. Confocal comparison of corneal nerve regeneration and keratocyte reaction between FS-LASIK, OUP-SBK, and conventional LASIK. *Invest Ophthalmol Vis Sci.* 2012;53:5536-5544.
7. Zhai et al. Comparison of the flaps made by femtosecond laser and automated keratomes for Sub-Bowman Keratomileusis. *Chin Med J.* 2013;126(13):2440-2444.
8. Zhang et al. Comparison of corneal flap thickness using a FS200 femtosecond laser and a Moria SBK microkeratome. *Int J Ophthalmol.* 2014;7(2):273-277.
9. Al-Thomali TA. Reproducibility of flap thickness in Sub-Bowman Keratomileusis using a mechanical microkeratome. *J Cataract Refract Surg.* 2014;40(11):1828-1833.
10. Mimouni et al. Factors affecting laser in situ keratomileusis flap thickness: comparison of 2 microkeratome heads. *J Cataract Refract Surg.* 2015; 41(2):348-353.
11. Xu et al. The impact of flap creation methods for Sub-Bowman's Keratomileusis (SBK) on the central thickness of Bowman's layer. *PLoS ONE* 2015;10(5):e0124996.
12. Katz et al. Flap-induced astigmatism in eyes with sphere myopia correction: superior hinge using a rotating microkeratome versus nasal hinge using a linear microkeratome. *J Cataract Refract Surg.* 2015;41(6):1160-1167.
13. Duffey RJ. Moria One Use-Plus SBK microkeratome: predictably thin, smooth, planar flaps for faster visual recovery. Paper presented during the 26th annual meeting of European Society of Cataract and Refractive Surgery; Sept 13-17, 2008; Berlin, Germany.
14. Falcon et al. Safety of the automated microkeratome for Sub-Bowman's Keratomileusis on the flat cornea. *French J Ophthalmol.* 2016;39(2):202-209.
15. Gauthier-Fournet et al. Six-month outcomes after high hyperopia correction using Laser-Assisted In Situ Keratomileusis with a large ablation zone. *Cornea* 2019;38(9):1147-1153.
16. Kasetsuwan et al. Comparison of performances of femtosecond laser and microkeratome for thin-flap Laser In Situ Keratomileusis. *Lasers Surg Med.* 2016;48(6):596-601.
17. Friehmann et al. Risk factors for epithelial ingrowth following microkeratome-assisted LASIK. *J Refract Surg.* 2018;34(2):100-105.
18. Pokroy et al. Myopic laser in situ keratomileusis retreatment: incidence and associations. *J Cataract Refract Surg.* 2016;42(10):1408-1414.
19. Mimouni et al. Risk factors for re-treatment following hyperopic LASIK. *J Refract Surg.* 2018;34(5):316-320.
20. Hassanin et al. Changes in corneal wavefront aberrations and asphericity following optimized LASIK ablation in moderate to highly myopic eyes. *J Applied Sci Res.* 2013;9(3):2404-2410.
21. McAlinden et al. Comparison of Higher Order Aberrations after LASIK and LASEK for myopia. *J Refract Surg.* 2010;26(1):45-51.
22. McAlinden et al. The change in internal aberrations following myopic corneal laser refractive surgery. *Graefes Arch Clin Exp Ophthalmol.* 2011;249(5):775-781.
23. Malhotra et al. Higher Order Aberrations and visual outcomes in Wavefront-Optimized Sub-Bowman Keratomileusis: flap creation using femtosecond laser versus mechanical microkeratome. *Asia Pac J Ophthalmol.* 2015;4(4):197-203.
24. Wang et al. Intraocular straylight after thin-flap LASIK with a femtosecond laser versus a mechanical microkeratome. *J Refract Surg.* 2013;29(8):534-539.
25. Orrù et al. Prion seeds distribute throughout the eyes of sporadic Creutzfeldt-Jakob disease patients. *mBio* 2018;9:e02095-18.
26. Chen et al. Ocular manifestations of a hospitalised patient with confirmed 2019 novel coronavirus disease. *Br J Ophthalmol.* 2020;104(6):748-751.
27. Kumar et al. Presence of viral RNA of SARS-CoV-2 in conjunctival swab specimens of COVID-19 patients. *Indian J Ophthalmol.* 2020;68(6):1015-1017.

To obtain more information

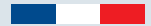
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