

Keratoplasty



The adjustable trephine: an innovation by Moria

Master your PK and DALK procedures





A precision technology from Moria for PK and DALK

Penetrating Keratoplasty...

Penetrating Keratoplasty (PK) is a worldwide corneal transplant procedure. The visual recovery after such a procedure depends on several factors such as the trephination technique which requires to be as much accurate and uniform as possible¹. In addition, the depth cut must be sufficiently controlled to avoid perforating and damaging the underlying iris and crystalline lens.

To this end, come and discover our adjustable trephine : **vertical, accurate and uniform cut are the key words.**

Deep Anterior Lamellar Keratoplasty...

DALK (Deep Anterior Lamellar Keratoplasty) is aimed at replacing the anterior part of the cornea while preserving the healthy endothelium of the patient. Despite its clinical assets, the lack of standardization of DALK sometimes prevents the surgeons to perform this technique^{2,3}. Indeed, the main difficulty of this technique is to cut the cornea at an accurate depth to identify afterwards the cleavage plan and separate the Descemet's membrane from stroma^{4,5}.

Our solution: an adjustable trephine allowing you to control with accuracy and ease the blade descent depth.

The adjustable trephine

A VERTICAL, ACCURATE AND UNIFORM CUT

UNIQUE: AN ADJUSTABLE PRESET DEPTH SETTING

PRECISION

A precise and centered positioning...

Thanks to a centration indicator onto the applanating plate:

- to properly position the trephine
- and therefore to avoid parallax errors

Landmarks for a correct positioning of stitches...

Thanks to 16 marking points to mark the cornea

VERTICALITY

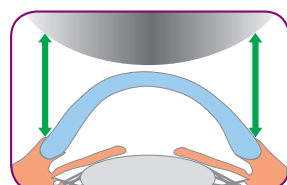
A vertical cut...

Thanks to a double beveled blade

ERGONOMIC

An easy grasping for an optimal positioning...

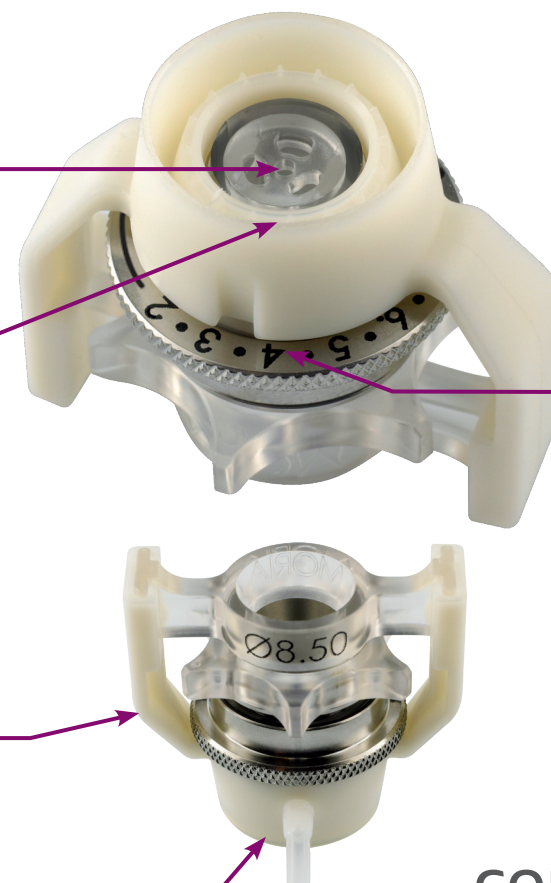
Thanks to two ergonomic handles



A SECURE HOLDING

An optimal holding for a precise cut...

Thanks to a limbal suction with a wide vacuum surface



PRECISION

A wide range of depths according to your need...

Thanks to a cutting range from superficial to very deep
(>1200 µm with 50-µm increment)

EASE OF USE

An easy setting of the blade descent...

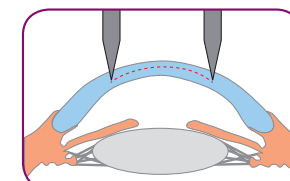
Thanks to its viewing window displaying the blade descent depth:
each number corresponds to a depth of blade descent

STANDARDIZATION

A standardized DALK easily accessible to all^{3,6}...

Limiting the trephination depth allows:

- to avoid penetrating the anterior chamber^{4,7}
- to facilitate the pneumatic dissection to separate Descemet's membrane from stroma^{3,4,6,7}



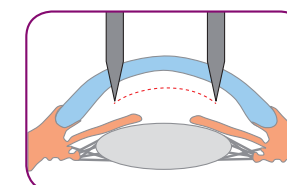
An optimized DALK*

CONTROL AND SECURITY

An optimized PK...

Thanks to a limbal suction with a wide vacuum surface:

- without having to refer to the aqueous humor squirt
- without the risk of damaging the iris and the lens



An optimized PK*

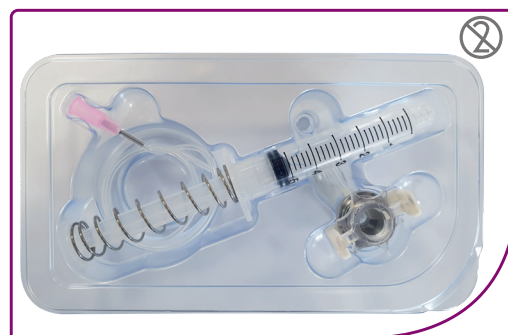
*thanks to a precise setting of the blade descent

References: the adjustable trephine

References	Cutting diameters
17202D600	6.00 mm
17202D650	6.50 mm
17202D675	6.75 mm
17202D700	7.00 mm
17202D725	7.25 mm
17202D750	7.50 mm
17202D775	7.75 mm
17202D800	8.00 mm
17202D825	8.25 mm
17202D850	8.50 mm
17202D900	9.00 mm
17202D950	9.50 mm
17202D1000	10.00 mm



One reference 17202DXXX
for 2 procedures: PK & DALK



References:

1. Moshirfar et al. Comparison of Hanna and Hessburg-Barron trephine and punch systems using histological, anterior segment optical coherence tomography, and elliptical curve fitting models. *Clin Ophthalmol.* 2011;5:1121-1125
2. Busin et al. Optimizing outcomes for keratoplasty in ectatic corneal disease. *Curr Opin Ophthalmol.* 2020;31(4):268-275
3. Busin et al. Deep trephination allows high rates of successful pneumatic dissection for DALK independent of surgical experience. *Cornea* 2019;38(5):645-647
4. Moshirfar et al. Accuracy of corneal trephination depth using the Moria single-use adjustable depth vacuum trephine system. *Clin Ophthalmol.* 2014;8:2391-2396
5. Anwar et al. Big-bubble technique to bare Descemet's membrane in anterior lamellar keratoplasty. *J Cataract Refract Surg.* 2002;28(3):398-403
6. Busin et al. Outcomes of air injection within 2 mm inside a deep trephination for Deep Anterior Lamellar Keratoplasty in eyes with keratoconus. *Am J Ophthalmol.* 2016;164:6-13
7. Busin et al. Peripheral intrastromal hydration facilitates safe, deep trephination in corneas of irregular thickness. *Cornea* 2020;39(2):207-209

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