

# The adjustable trephine: an innovation by Moria

Master your PK and DALK procedures



# A PRECISION TECHNOLOGY FOR PK AND DALK

# **Penetrating Keratoplasty...**

Penetrating Keratoplasty (PK) is a worldwide corneal transplant procedure. Visual recovery after PK depends on several factors such as the trephination technique which requires to be as much accurate and uniform as possible<sup>1</sup>. In addition, the depth incision must be sufficiently controlled to avoid perforating and damaging the underlying iris and crystalline lens.

To that end, come and discover our adjustable trephine: vertical, accurate and uniform incision are the key words.

# **Deep Anterior Lamellar Keratoplasty...**

Deep Anterior Lamellar Keratoplasty (DALK) is aimed at replacing the anterior part of the cornea while preserving the patient's healthy endothelium. Despite its clinical assets, the lack of standardization of DALK sometimes prevents the surgeons to perform this technique<sup>2,3</sup>.

Indeed, the main difficulty of this technique is to incise the cornea at an accurate depth to identify afterwards the cleavage plan and separate the Descemet's membrane from stroma<sup>4,5</sup>. 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 INCISION

# **PRECISION**

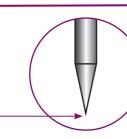
# A precise and centered positioning...

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**

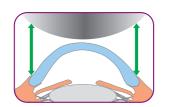
A vertical cut...

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 incision...

Thanks to a limbal suction with a wide vacuum surface

# UNIQUE: AN ADJUSTABLE PRESET DEPTH SETTING

### ACCURACY

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

Thanks to an incision range from superficial to very deep: >1200 μm with 50-μm increments

### **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<sup>3,6</sup>...

Limiting the trephination depth allows:

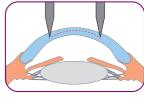
- to avoid penetrating the anterior chamber<sup>4,7</sup>
- to facilitate the pneumatic dissection to separate Descemet's membrane from stroma<sup>3,4,6,7</sup>

### CONTROL AND SECURITY

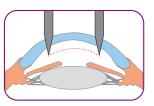
### An optimized PK...

Thanks to a unique stopper to limit blade descent depth:

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



An optimized DALK\*



An optimized PK\*

\* thanks to a precise setting of the blade descent

# REFERENCES: THE ADJUSTABLE TREPHINE

References	Incision 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





### **BIBLIOGRAPHY**

- 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
- 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
- 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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