

MEDICEL'S DMEK INJECTORS

for safe implantation of grafts during
Descemet Membrane Endothelial Keratoplasty



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SWISS TECHNOLOGY FOR SURGERY



ENDOJECTTM

BY PROF. DR. F. KRUSE

Medicel introduces the first CE approved injector specifically designed for the safe implantation of grafts during Descemet membrane endothelial keratoplasty.

Until now, doctors have had to use classical cataract inserters off-label in order to implant the graft during DMEK. With the ENDOJECTTM and GÜELL DMEK injectors, surgeons now have access to fully CE approved injectors designed specifically for this purpose.

Does ENDOJECTTM have an impact on endothelial cell loss?

Injecting a DMEK graft using an ENDOJECTTM causes only a minor amount of endothelial cell loss¹. In a comparative study using a modified Jones tube versus a MEDICEL VISCOJECTTM 2.2, the amount of cell loss did not correlate with the injector used². The materials used for the MEDICEL VISCOJECTTM 2.2 are the same biocompatible and high-quality materials used for the ENDOJECTTM.

The cartridge material and manufacturing method allow for the thin-walled cartridge used in the ENDOJECTTM. The thinner wall thickness compared to glass tubes allows for a smaller outer diameter, with the same inner diameter, of glass tubes.

¹ Roessler K et al. (2014), Experimental evaluation of a novel injector for the implantation of Descemet's membrane into the anterior chamber during DMEK, ARVO 2014 Poster

² Schallhorn et al. (2016), Quantification and Patterns of Endothelial Cell Loss Due to Eye Bank Preparation and Injector Method in Descemet Membrane Endothelial Keratoplasty Tissues. Cornea, 2016 Mar;35(3):377-82.

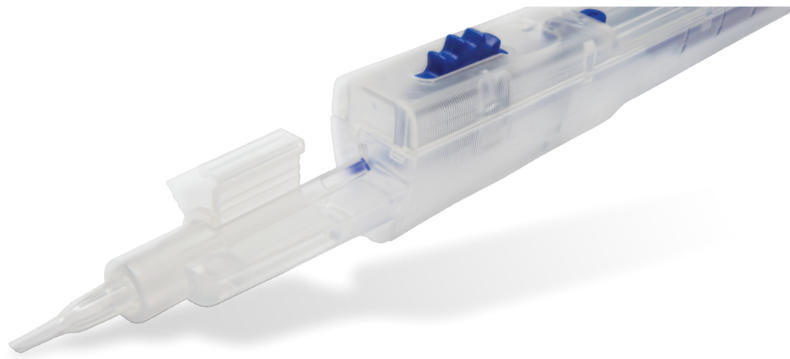
Which incision size is ideal for the ENDOJECTTM?

The suitable incision size to introduce the ENDOJECTTM tip completely is 2.5mm. Only surgeons comfortable with injecting the graft while introducing the ENDOJECTTM tip should use a smaller incision size.

Can DMEK grafts be stored in ENDOJECTTM?

In order to allow for secured transport, the ENDOJECTTM is not designed to fix the DMEK graft in position. However, storage of tri-folded DMEK grafts in MEDICEL VISCOJECTTM 2.2 cartridges, manufactured out of same components, showed a limited impact on endothelial cell loss when analysed³.

³ Parekh M et al. (2016), Preloaded Tissues for Descemet Membrane Endothelial Keratoplasty. Am J Ophthalmol. 2016 Jun;166:120-5.



GÜELL DMEK INJECTOR

BY DR. J. GÜELL

This new DMEK injector is based on the design of ERGOJECT™, Medice's state-of-the-art IOL injector.

Developed and implemented in cooperation with José Güell, MD.

One-Handed Control

ERGOJECT™ combines the best features of previous concepts: control of a screw injector and one-handed usability of push inserters. This is the first fully single-use injector with an integrated micro-gear that minimises force necessary for fingertip movement.



Ergonomic Injection

With intuitive handling comparable to a pen, ERGOJECT™ is designed to be used in a relaxed hand position. The enhanced grip ensures the secure positioning in a surgeons' hand. The hand positioning is close to the distal end, which allows for increased control during injection.



Incision Size of 2.2mm

What advantage do Medice's DMEK Injectors have over injectors with glass tubes?

Glass tubes require larger incisions. Larger incisions can cause a higher amount of surgical-induced astigmatism.

Medice's DMEK injector cartridges can be inserted farther than the middle of the cornea, which makes it easier to place the graft.

Injecting glass tubes requires a high amount of fluid to flush the graft into the anterior chamber. This increased anterior pressure could cause a backflush while removing the glass tube from the incision, likely forcing the graft out of the anterior chamber. Furthermore, the risk of flushing the graft out of the glass tube while preparing the glass tube for injection is high.

ENDOJECT™ Injector Set, sterile

| ITEM CODE | PRODUCT NAME | INCISION SIZE | SALES UNIT |
|-----------|----------------------------|---------------|------------|
| EJ2200 | ENDOJECT™ 2.2 Injector Set | 2.5mm | Box of 1 |

GÜELL DMEK Injector Set, sterile

| ITEM CODE | PRODUCT NAME | INCISION SIZE | SALES UNIT |
|-----------|-----------------------------|---------------|------------|
| DK2200 | GÜELL DMEK 2.2 Injector Set | 2.2mm | Box of 1 |