kai medical

KKM KNIFE & SIDEPORT KNIFE TRAPEZOID

Ophthalmic Knife for Transconjunctival Single-Plane Sclerocorneal Incisions

Comment from Our Product Development Supervisor

Transconjunctival single-plane sclerocorneal incision is a new method of wound creation for cataract surgery. It is simple, but superior in safety and less burdensome for patients. KKM Knife is developed to achieve this incision with superior precision, and facilitate making this incision with safety even for novice surgeons.

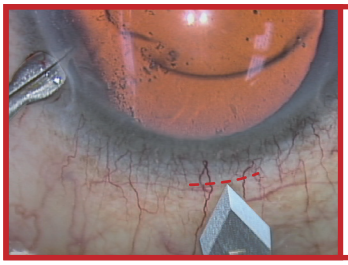
First with this KKM knife, it is easy to change the direction of incision after cutting into the sclerocornea, then to the direction of corneal stroma. By this change, the risk of early perforation is minimized, and the incision into the anterior chamber will be made after adequately cutting through the corneal stroma. When entering into anterior chamber, do not point the knife down excessively; otherwise, the inner incision edge becomes triangular, compromising the self-sealing ability of the wound. So that, the knife perforates into the anterior chamber as if you are moving the knife forward parallel to the iris or slightly upward. Such delicate maneuver of changing the direction of cutting is made easy by KKM knife. Moreover, inner incision edge can be slightly narrower when you do not let the knife enter completely into the anterior chamber, which reduces the leak and prevents the incidence of conjunctival chemosis.

In addition, Sideport Knife Trapezoid can create the ideal trapezoidal incision with short incision distance. It reduces the risk of damaging anterior capsule or iris even in the eyes with shallow anterior chamber, and minimizes the amount of infusion fluid to leak. When used in combination with KKM knife, Sideport Knife Trapezoid enables your surgery to become safe and less invasive.

Tetsuro Oshika, MD
Professor & Chairman

Department of Ophthalmology,
Faculty of Medicine,
University of Tsukuba

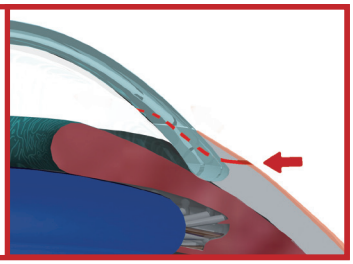
Procedure for Transconjunctival Single-Plane Sclerocorneal Incisions

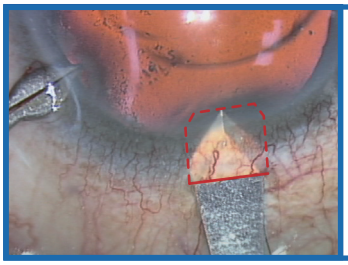


Step 1

• Stabilizing the globe
Using the forceps held by left hand, pierce into the paracentesis to rotate the globe downward, and maintain this position.

• Initiate incision at conjunctiva
Initiate incision by KKM knife at the conjunctiva 0.5 mm from the limbus.

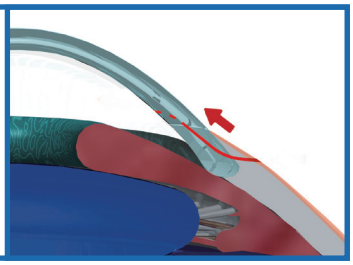


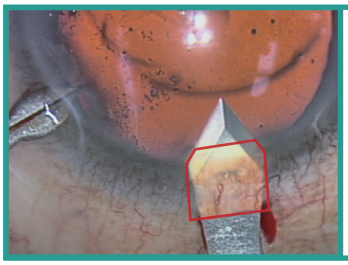


Step 2

• Move forward the knife to create incision through sclera
Move KKM knife forward through sclera with caution not to perforate early.

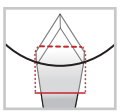
• Proceed the incision into the cornea
Until the KKM knife fully reaches the corneal stroma (until the line on the knife reached the external valve) continue the incision as if going upward (cutting toward above) following the cornea's curve.

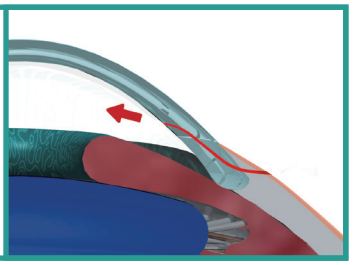


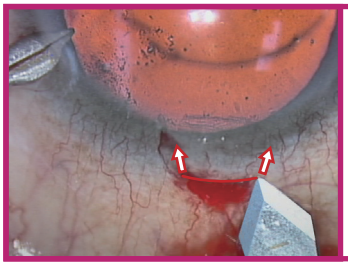


Step 3

• Perforate into anterior chamber
Perforate into anterior chamber by pointing the KKM knife slightly downward. (Do not overly point down when making this incision.) Enter the anterior chamber as if moving forward while maintaining the knife parallel to the iris or slightly moving above. Then, the inner edge of the incision would be formed as a straight line. By preventing the knife to enter completely into the anterior chamber, the inner incision edge can be slightly narrower, which reduces the leak and prevents the incidence of conjunctival chemosis.

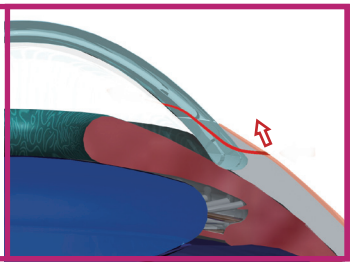






Step 4

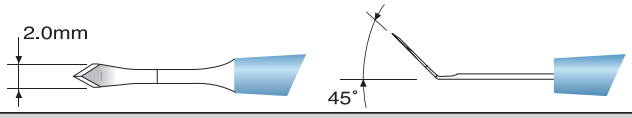
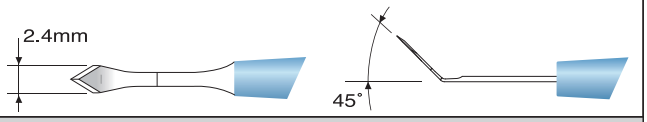
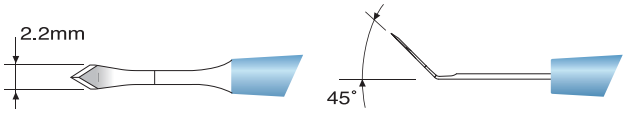
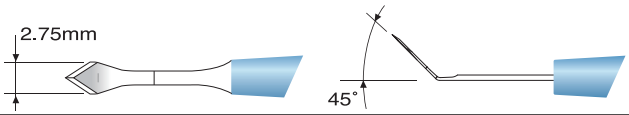
• Make small incision on both sides of conjunctival incision
(to prevent conjunctival chemosis)
At the right and left end of conjunctival incision, cut the tissue upward as if leaving the Tenon's capsule on sclera's side. This procedure enables the irrigation fluid to escape from the sides of the incision, and prevents the irrigation fluid to enter the subconjunctival area. You may make these incision by conjunctival scissors.



We pursue the safety in medical procedures and QOL for people.

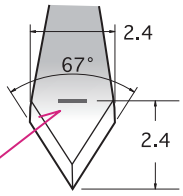
KKM KNIVES

Ophthalmic Knife for Transconjunctival Single-Plane Sclerocorneal Incisions

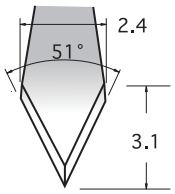
KKM-20M	w=2.0mm	Double Bevel	KKM-24M	w=2.4mm	Double Bevel
					
KKM-22M	**w=2.2mm**	**Double Bevel**	**KKM-275M**	**w=2.75mm**	**Double Bevel**
					

Square Incision

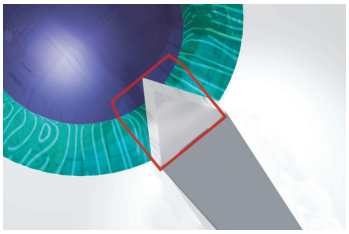
The knife is designed to prevent the inner edge, the inner valve, of the incision to be triangular by making its tip the more obtuse-angle shape. Guiding line is placed at the same length from the tip as the width of the knife, to assist the formation of square incision.



KKM-24M

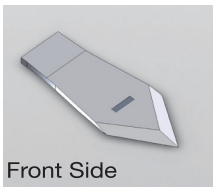


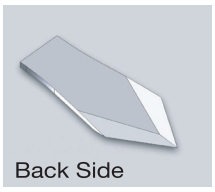
Our standard product
SLU-24AGF

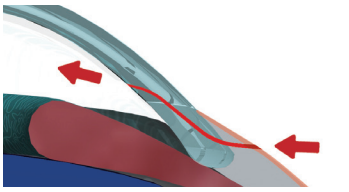


Ideal Incision Tract

The knife has bi-bevel edge, with the back side bevels have gradual change in the width. These design help make “upward” incision following the curve of cornea until the knife reaches the corneal stroma, and ease the forward move parallel to the iris (slightly upward) when perforating into the anterior chamber.



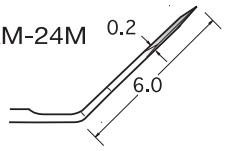




Improved Maneuverability

The angle is made at 2 mm closer from the tip, improving the maneuverability when approaching from the above (especially useful for those patients with short palpebral fissures.) Additionally, the increased thickness of the knife decreased the flexion of the instruments, which contributes in improving controllability of the knife.
KKM Knife is about three times more unpliable than our conventional slit knife.

KKM-24M



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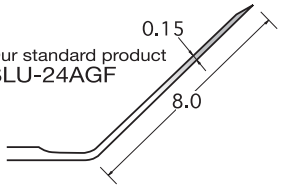
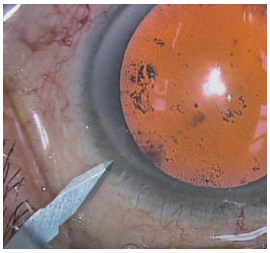
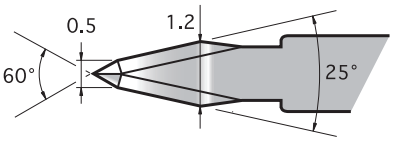
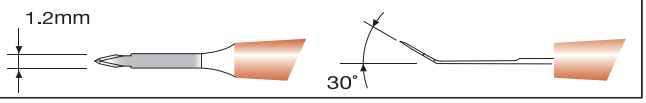


SIDEPORT KNIFE TRAPEZOID

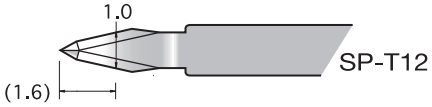


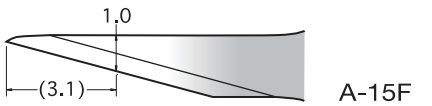


SP-T12	w=1.2mm
	

Suitable for Eyes with Shallow Anterior Chambers

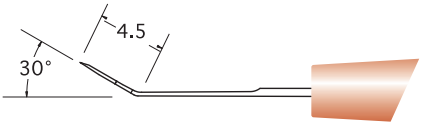
Compared to the 15 degree or 22.5 degree straight knives, Sideport Knife Trapezoid can create trapezoidal incision with short incision distance.
It minimizes the risk of damaging nucleus and especially effective to the patients with shallow anterior chambers. Also, the incision size can be adjusted by the depth of penetration, and it is easy to enlarge the incision with the sufficient length of the blades on both sides.





Improved Maneuverability

It is angled at 30 degree, and the head is compact. These features make penetration into the eyes at the ideal angle possible even for the patients with deep set eyes or narrow palbebral fissures.



Product specifications may change without notice.

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CE 0197

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