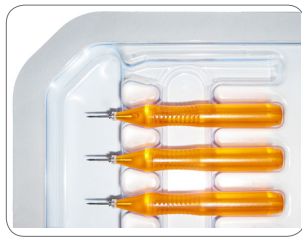


# TROCAR SET ONE STEP (MICROINCISION SYSTEMS) 23G & 25G

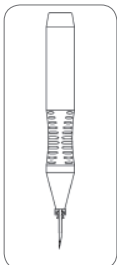
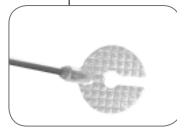
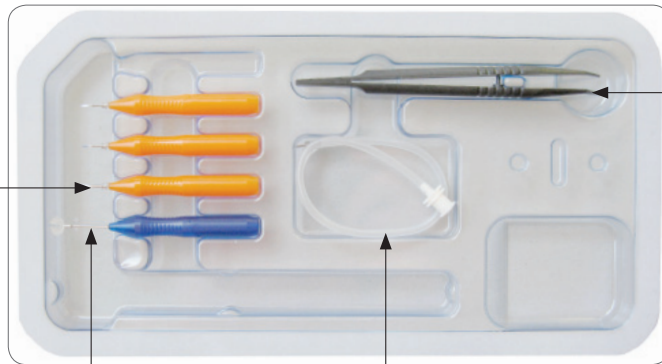
**TCS 230, TCS 231, TCS 232, TCS 250, TCS 251, TCS 252**

EN ISO 13485 / Class IIa /  0124

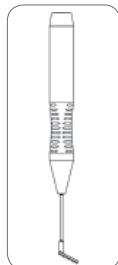
The Bürki Trocar Sets consisting of the following components and characteristics (see figure below)



Version with MVR blade



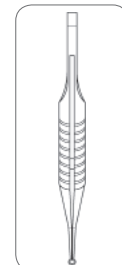
3 of Scleral or MVR blades with trocar and silicon valves or titanium plugs



Blue Incision Template for a safe incisional positioning

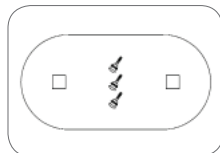


Infusion Terminal

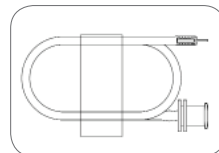


Forceps with circled claws for safe and exact trocar positioning

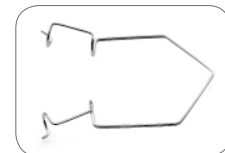
### Options



3 of Titanium plugs



Infusion terminal for silicon oil



eye speculum

Optional accessories are also available for your personal applications

### Technical information

23G / 25G

Specifies the outer diameter needed for micro surgical instruments use during the vitrectomy surgery.

Packaging

Minimum quantity one dispenser box containing 8 trocar sets.  
Economical transport box containing 6 dispenser boxes with 8 trocar sets.

Product Features	TCS 230	TCS 231	TCS 232	TCS 250	TCS 251	TCS 252
• Single use / no risk of cross contamination	●	●	●	●	●	●
• Trocar system for one - step technique	●	●	●	●	●	●
• Template for a safe incisional positioning	●	●	●	●	●	●
• Forceps with circled claws for safe and exact trocar positioning	●	●	●	●	●	●
• Double packed in blister and pouch	●	●	●	●	●	●
• Sterilized by gamma rays	●	●	●	●	●	●
• Color - coded Handles	●	●	●	●	●	●
• Self sealing Silicon valve cap	●	●	○	●	●	○
• Titanium plug	○	○	●	○	○	●
• "Swiss micro finish" Scleral blade with orange handle	●	○	○	●	○	○
• Super sharp MVR blade with transparent orange handle	○	●	●	○	●	●
• Single items on request available individually double packed in blister and pouch (see samples below)	●	●	●	●	●	●



Sample: Scleral blade



Sample: MVR blade



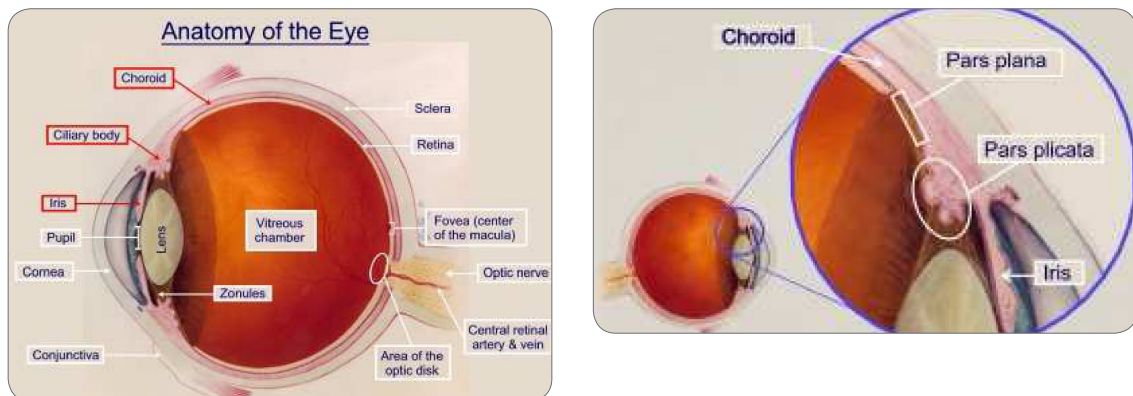
Sample: Incision Template

## Medical & surgical information

### Clinical use; trans pars plana vitrectomy

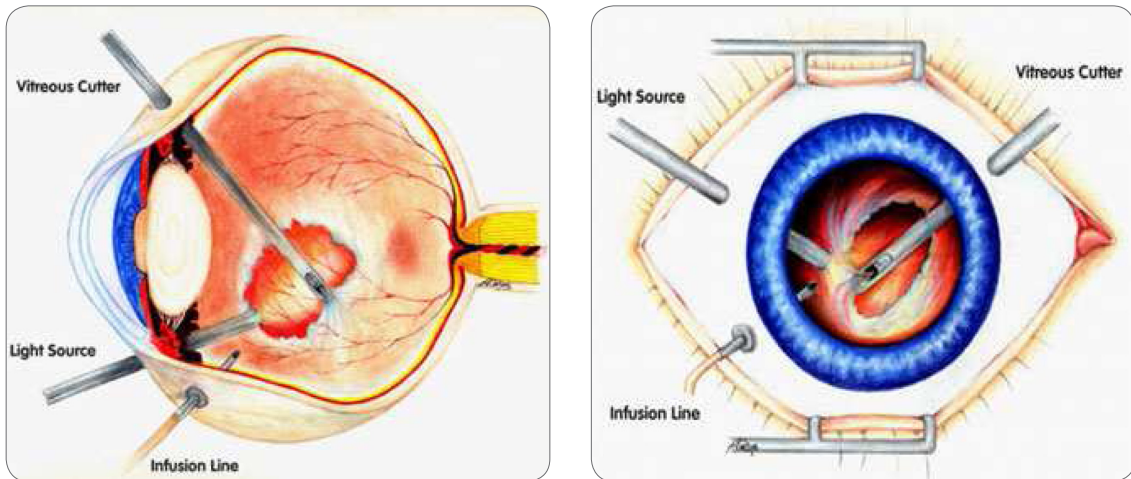
Vitrectomy is a microsurgical procedure in ocular surgery in which specialized instruments and techniques are used to treat vitreoretinal disorders. The initial step in this procedure is usually the placement of ports through very small incisions in the eye wall to the vitreous chamber (sclerotomy). Usually three ports are placed in this way: One for infusion, one for high intensity fiberoptic light sources to illuminate the vitreous chamber during surgery, and one for microsurgical instruments. The removal of the vitreous gel is achieved by miniature handheld cutting devices (vitrectomy probes), and by replacing the vitreous gel with special saline solutions. Although vitrectomy procedures are sometimes performed through incisions made near the front of the eye, most vitreoretinal surgeons enter the eye ball through an incision in the area of the "pars plana" (see figures below). This is an area of the ciliary body, which is divisible into two parts: the pars plana and the pars plicata anteriorly. The pars plana area is adjacent to the end of the retina and lacks of big vessels. Entering the eye through this location avoids damage to the retina and the lens.

(source: <http://www.vrmny.com/pe/vitrectomy.html>, 25.10.2011).



**Figure:** Anatomy of the eye and pars plana region

(sources: <http://www.uveitis.org/kids/EYE-brary/article5.htm>, [www.uveitis.org/patient/glossary/m\\_s.html](http://www.uveitis.org/patient/glossary/m_s.html), 27.10.2011)



**Figure:** Instruments entering the eye through the pars plana.

Left: Vitreous gel is being removed.

Right: Surgeon's view during vitrectomy

(sources: <http://www.vrmny.com/images/tppv2.jpg>, <http://www.vrmny.com/images/vitrectomy.jpg>, 25.10.2011)

By using the template, the location of the incision is defined. The blade (MVR or scleral) is introduced into the sclera in the pars plana region to place the cannula. The trocar is held by the forceps, which have circled claws, to support safe handling. The blade is extracted; the cap or plug stays outside and covers the incision. Usually, three ports are placed in this way, one for light source, one for infusion and one for microsurgical instruments. A notch at the connecting end of the infusion terminal avoids release of the hose.

### Risks & warnings

Vitrectomy is generally related to the risk of post-operative endophthalmitis, hypotony, retinal detachment, mechanical trauma and, very rarely, detachment of trocar components. These risks can be considered to be known to the ophthalmic surgeon.

The advantages of using smaller-diameter instruments include improved wound healing and less post-operative pain.

We refer to the Instruction for use (attached to every box);

- Trocars are to be used only by qualified professionals
- The manufacturer shall not be liable for any injury or damage suffered by a patient due to use of the product

In summary, it can be stated that vitreoretinal surgery with 23-Gauge and 25-Gauge instruments, trocars and ports is associated with a favourable risk-benefit-profile.

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