The industry’s first dynamic epikeratome for improved ophthalmological surgery outcomes
The Epi-Clear™ device is the first dynamic epikeratome for flapless corneal epithelium removal. The multi-blade polymer device, primarily intended for refractive surgery and keratoconus treatment, enables surgeons to perform flapless epithelium surface removal by gently sweeping the epithelial surface. The Epi-Clear™ device simultaneously collects discarded epithelial cells into the bowl-shaped tip for safe removal from the site. Complete epithelium removal takes only 8 seconds per eye and generates highly reproducible results.

Epi-Clear™ is the ideal surgical tool for:

- Refractive surgery
- Keratoconus
- Refractive surgery enhancements
- Recurrent corneal erosion

Safer epithelium removal

When using the Epi-Clear™ device for the EBK™ (Epi-Bowman’s Keratectomy) procedure, Bowman’s layer remains completely intact. The resulting treatment bed has distinct and clear borders, free of cell residue. The epithelium grows back naturally and completely.

Patient comfort

The Epi-Clear™ tip gently removes only the epithelium. This ensures that recovery is short and patients can return to their daily routine quickly.

Reduces post-operative complications

The procedure requires no incision or flap, and protects the integrity of the cornea and stroma. The risk of corneal haze, associated with existing surface ablation procedures, is minimal due to the clean, smooth periphery of the treatment bed. Also, the risk of ectasia and higher order aberrations (HOA) is greatly reduced.

Ideal optical conditions for precise refractory correction

The Epi-Clear™ device leaves the ideal treatment bed for the excimer laser. The surface is of uniform height, free of any epithelial cell residue or scarring and Bowman’s layer remains completely smooth, which allows the laser correction to be more precise with no deviations.

The ultimate surgery tool for a fast, sterile procedure

The Epi-Clear™ device consists of a multiple-use, ergonomically-designed stainless steel handle and a single-use dispenser cassette, made from recyclable materials, with two multi-blade sterile tips. Each cassette is intended for single use for both eyes. The special curve on the handle allows convenient loading and extraction of the tip, with no need for physical contact during the entire procedure.

- Safe - Leaves Bowman’s layer intact
- Fast - Complete epithelium removal in only 8 seconds
- Precise - Leaves the tissue smooth, with no epithelial cell residue
- Accurate - Creates optimal optical conditions for the laser procedure
- Simple - Results are highly reproducible
- Less traumatic - Epithelium completely heals, no damage to epithelial nerves, no scarring
- Patient comfort - Short recovery time and less pain
“EBK™ allows me to offer my patients safety, comfort and convenience. The Epi-Clear™ device felt natural in my hand. I believe I have found the ultimate surgical tool.”
David Ben Nisan, M.D.
Assuta Medical Center, Israel

Breakthrough technology and unique patented design
The Epi-Clear™ patented device was designed using innovative polymer biocompatibility to construct a multi-blade configuration. The unique configuration allows surgeons to sweep the dynamic epikeratome across the cornea. The edge of one blade forms an epithelial fold, while the other blade gently peels the epithelium and draws it into the receptacle for complete removal from the site without coming into contact at all with Bowman’s layer. Once Bowman’s layer is reached, further peeling is no longer possible. The bowl-shaped polymer double blades gently sweep away the epithelium and contain discarded epithelial cells for safe and complete removal from the treatment bed.

The Epi-Clear™ Unique Patented Design
- Ergonomic multi-use stainless steel handle
- Special curve allowing convenient insertion & extraction of the tip
- Multiple blades to safely remove the epithelium
- Unique single-use design ensures complete sterility
- Epithelium cell receptacle

EBK™ with Epi-Clear removes the epithelium layer by layer, simultaneously collects cell residue and leaves Bowman’s layer intact

“Finally, after so many years of experience in refractive surgery, EBK™ allows me the ability to create a perfect laser treatment bed.”
Matzliah Tayeb, M.D.
Clalit Medical Center, Israel

A new standard of care
EBK™ (Epi-Bowman’s Keratectomy), using the Epi-Clear™ dynamic epikeratome, is the only procedure that removes the epithelium layer by layer, leaving Bowman’s layer completely intact and creating clear and graduated borders for enhanced healing. EBK™, using the Epi-Clear™ dynamic epikeratome, is introducing a new standard of care, in line with renewed interest in safer surface ablation procedures.

EBK™ lowers risk of haze, ectasia, HOAs and astigmatism. It is suitable for patients with thin corneas and completely preserves corneal biomechanical integrity. By creating a smoother and superior treatment bed free of residue, EBK™ allows more precise refractive correction, reduces post-op pain and allows a faster recovery.

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David Ben Nisan, M.D.
Assuta Medical Center, Israel

EBK™ with Epi-Clear removes the epithelium layer by layer, simultaneously collects cell residue and leaves Bowman’s layer intact

The EBK™ procedure is completely sterile, with no physical contact needed during the entire procedure.
Back to Basics: Revisiting Advanced Surface Ablation

Safety first

Despite great strides in laser-assisted refractive correction, follow-up data has shown that LASIK corneal flap procedures present significant patient safety issues. This has triggered renewed interest in traditional advanced surface ablation (ASA) procedures, such as PRK, that require no corneal flap. It is widely known that post-op complications are dramatically reduced with surface ablation, and for patients with even mildly irregular corneal topographies, surface ablation is the preferred approach.

The balance between patient comfort and safety

The challenge lies in performing the procedure as superficially as possible, from a biomechanical standpoint, and avoiding damage to the epithelium to reduce painful wound healing. The answer is an approach that removes the epithelium in such a way as to produce painless, natural recovery, while leaving the stroma untouched and Bowman’s layer intact. Epi-Bowman’s Keratectomy (EBK™), with the Epi-Clear™ dynamic epi-keratome takes surface ablation to this new level in safety, precision and performance.

About Orca Surgical

Orca Surgical develops pioneering solutions for ophthalmologic surgery focused on the cornea. The company is uniquely positioned to lead the market toward adopting safer procedures such as EBK™. Orca Surgical is expanding the options for patients who can benefit from safer ophthalmological surgery.

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