oertli®
SWITZERLAND

Faros™
MAKING THE DIFFERENCE WITH POWER LED

EYE SURGERY. SWISS MADE.

MAKING THE DIFFERENCE WITH MAINTAINED PATIENT SAFETY

« As an existing Faros user I'm astounded what a step forward is achieved with the new Faros generation. With its new SPEEP pump, I'm able to increase my efficiency level again while reducing phaco energy and maintaining a safe environment at all time. The eyes of my patient truly look happy the next day. »

Dr. Frank Sachers
Augenzentrum Bahnhof Basel, Switzerland

Customer feedback, statements, opinions and recommendations (summarised as testimonials) relate to the persons depicted. Results may vary and may possibly not be representative of other people's experiences. Testimonials are provided voluntarily and are not paid for. The testimonials reflect the experiences of the users, but the specific results and experiences are unique and individual for each user.

SWISS QUALITY DOWN TO THE LAST DETAIL

Using its innovative developments and high-quality products, Oertli is continuously setting new standards in cataract, vitreoretinal and glaucoma surgery. Oertli's surgical platforms, technologies and instruments allow surgeons and OR personnel to perform surgeries in a safer, easier and more efficient way providing better results for patients.

To ensure smooth workflows and results, the surgical platforms from Oertli and the corresponding instruments form a closed surgical system. Every instrument is compatible with all Oertli surgical devices, provided that the relevant function is available.

Of course, Oertli is consistently committed to the quality of its instruments, handpieces, tips and auxiliaries. The product portfolio is developed in Berneck, Switzerland, and manufactured under Swiss quality standards.

Christoph Bosshard
Co-CEO

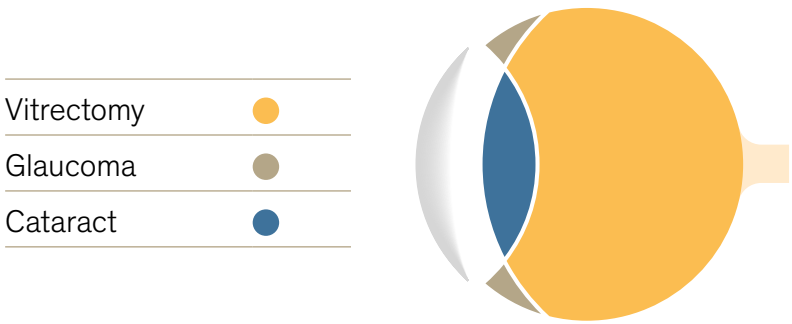
Thomas Bosshard
Co-CEO

CONTENT

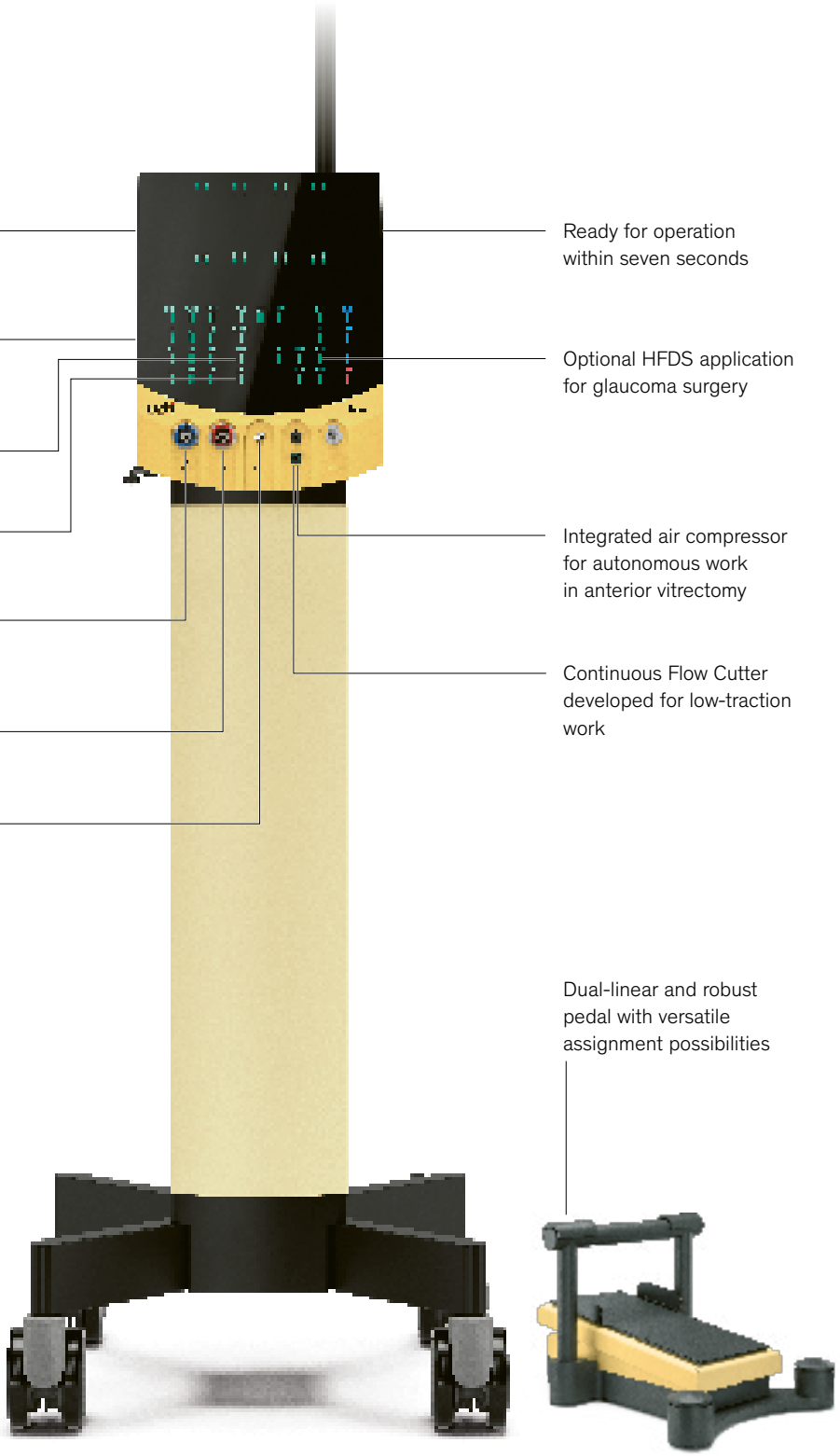
FAROS™ – EFFICIENT AND HIGHLY EFFECTIVE

The compact Faros is optionally available as a device for the anterior segment or as a combined system for both the anterior and posterior segments. The unique SPEEP pump provides control over both vacuum and flow. The easyPhaco technology was developed for safe and efficient phacoemulsification. In countless cases, the HF capsulotomy tip is the ideal method for simple capsulorhexis. The pneumatically driven Continuous Flow Cutter was developed for low-traction work in the periphery and the Power LED light source features state-of-the-art technology. The Faros also includes an integrated HFDS application for glaucoma surgery if required.

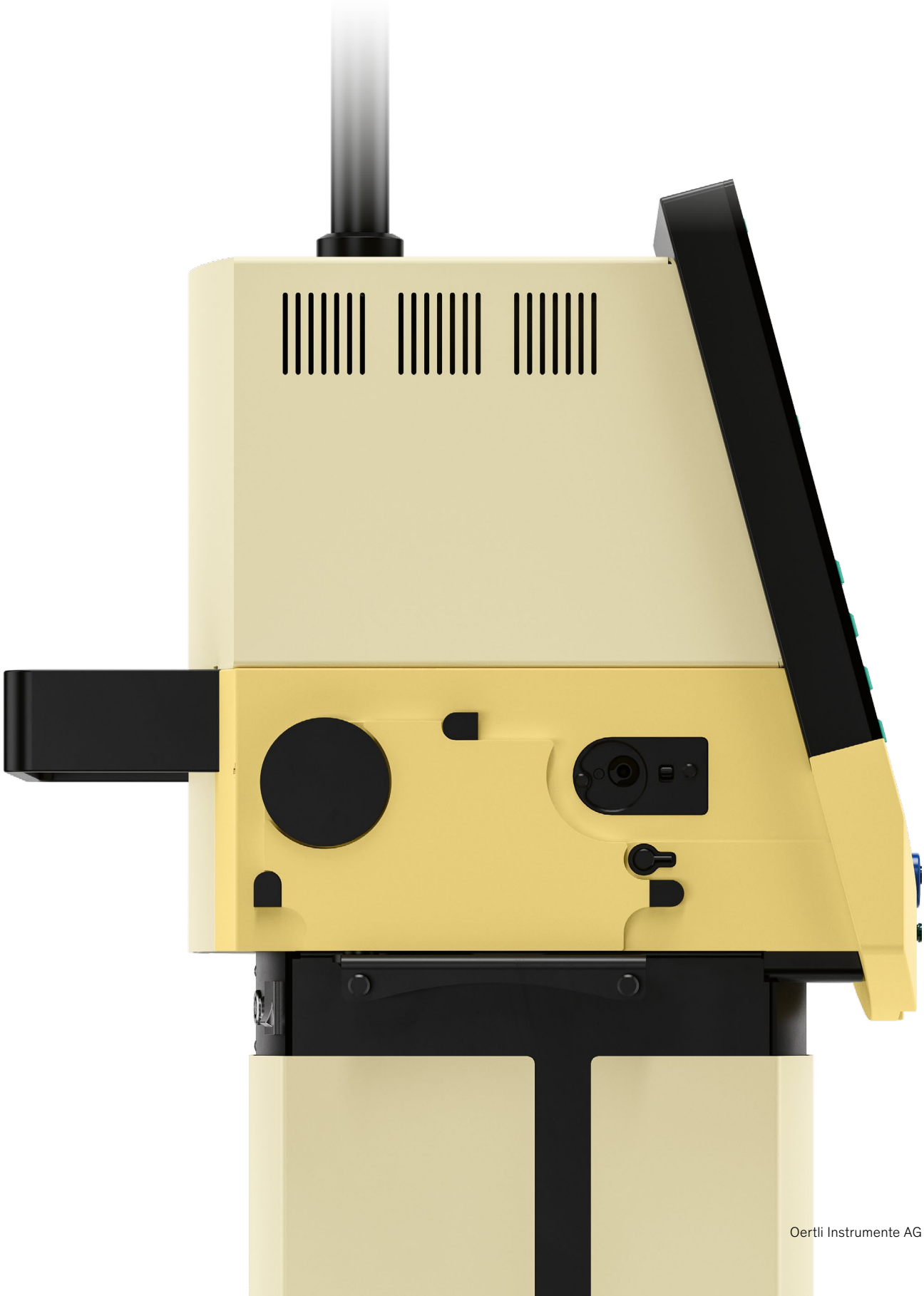
Make the difference – with Faros by Oertli.



FAROS™ – ALL ADVANTAGES AT A GLANCE



FLUIDICS AND DUAL-PUMP SYSTEM



The Faros from Oertli is the efficient surgical platform for cataract, retina and glaucoma surgery. The device impresses with its ease of use, enclosed in a compact design.

SPEEP – Speed and precision
The unique pump innovation from Oertli. The SPEEP pump uses the same principle as a peristaltic pump* to control the flow. With SPEEP the vacuum can also be controlled using the foot pedal. This enables precise control of the holding force generated right at the instrument opening.

How does the SPEEP pump work?
SPEEP combines the advantages of a flow-controlled peristaltic pump with the responsiveness of a vacuum-controlled venturi pump.

The SPEEP pump allows both the flow and the vacuum to be controlled independently of each other. The foot pedal not only allows aspiration and release but also gives the surgeon complete control when holding and manipulating fragments and tissue. SPEEP continues to control the vacuum even under occlusion.

What are the benefits of the SPEEP pump?
With challenging cases such as floppy iris syndrome or zonular weakness, precise control of the fluidics is essential.

Thanks to the independent settings for flow and vacuum, SPEEP generates dosable holdability at the instrument opening – giving surgeons complete control.

Fluidics: Unique 2-pump system

→ Unique SPEEP pump – for manual control of the holdability regardless of the type of tissue

→ Pump responds immediately and directly – facilitating precise and fine manoeuvering directly at the tissue

→ Independent control of flow and vacuum – developed for safe work with maximum control

*Modulation based on the principle of a Peristaltic pump

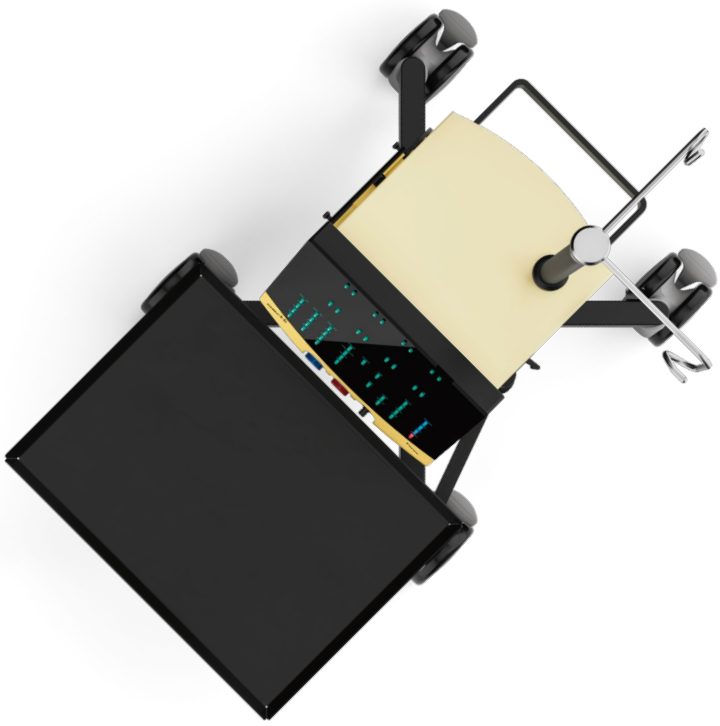
FAST, SAFE AND INTUITIVE

The Faros excels with its ease of use to make operation comfortable and safe for both the OR staff and the surgeon. The surgical platform is also exceptionally quick to start up: the system is ready to use within seven seconds after being switched on.

Connections
Most instrument connections are easily accessible from the front to make preparation for surgery both simple and efficient.

Control panel
The light and clearly readable displays of the control field give precise information on operating values and settings. The logically arranged control buttons are always allocated the same functions that can be activated instantaneously by button pressure. The various functions are individually set for each surgeon and surgical technique in the ParaProg background menu. Programming is possible for up to 50 surgeons.

Instrument table
The optional instrument table (40 × 30 cm) can be fixed in the desired position. If it is not used, the table can be folded sideways quickly and easily.



THE POWERFUL PEDAL

The dual-linear foot pedal is the versatile control unit of the Faros. Manufactured from robust metal and precisely finished, the pedal responds to the surgeon's commands without delay.

Dual-linear versatility
The pedal lends the surgeon control and can be customised to the surgeon's wishes and needs. Many different functions, for example shifting of functions (change of pump, light, air) and adjustment of the bottle height, etc. can be allocated to the auxiliary buttons.

- → Dual-linear pedal
- → Compact and protected against short-term flooding
- → Individually programmable for up to 50 surgeons
- → Four auxiliary buttons for versatile assignment possibilities
- → Cable connection for a delay-free transmission of commands

FAROS™ IN VITRECTOMY SURGERY

In its role as a compact surgical device, the Faros focuses on functionality and quality in vitreoretinal surgery. The Caliburn Trocar Systems are distinguished by their high penetration force and the Power LED light source impresses with its considerable light output. The pneumatic Continuous Flow Cutter ensures low-traction work on the retina.

CALIBURN™ TROCAR SYSTEMS

Sharp and precise

In vitrectomy, the Caliburn Trocar System ensures precise work with the sharpest instruments. The lance-shaped blade is distinguished by its high penetration and cutting force. The razor-sharp Caliburn blade reduces the penetration force and leads to an optimal cutting geometry in the sclera. The thin tunnel incision enhances postoperative wound closure.

The trocar with integrated self-sealing membran prevents the leakage of BSS, air and oil, resulting in a constant IOP. With its holdability and optimal shaft length, the Caliburn trocar offers both safety and convenience.

Advantages of the Caliburn™ Trocar Systems

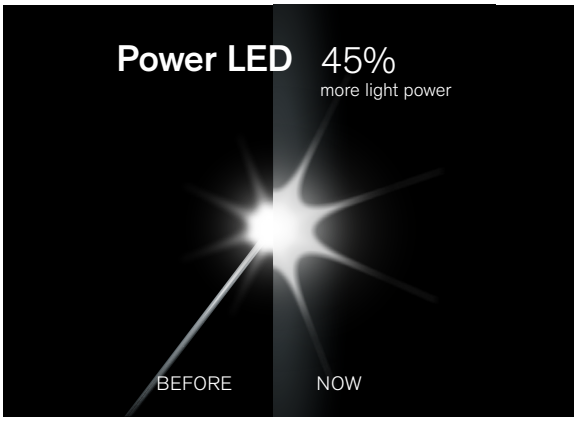
→ Postoperative wound closure

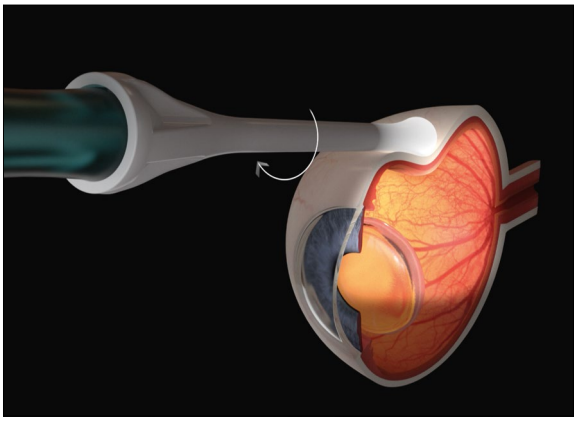
→ Easy and smooth insertion of the trocar

→ Integrated, double-slotted sealing membrane for constant IOP during surgery

→ Patented infusion tube with snap lock for better flexibility

MORE LIGHT WITH POWER LED





Brighter, more homogeneous and safer

Thanks to the Power LED light source, the light output is up to 45 per cent greater than the previous generations.

The Faros has a double light source that provides homogeneous illumination and high durability thanks to its latest Power LED technology. The wide control range is an ideal combination with 3D microscopes, especially in case of low lumens.

Advantages of Power LED

→ Power LED technology with double light source for homogeneous illumination and a long service life

→ Power LED with up to 45% more light output[1]

→ Power LED Plus with free choice of colour, yellow and blue can be mixed as desired on the glass touch screen

→ Increased patient safety due to lower phototoxic stress thanks to lower setting options[2]

→ Expanded control range at low lumens, ideal combination with 3D microscope

→ Comfort Connector to all endo illuminators

Transscleral illumination made easy

The ViPer illuminated scleral indentor from Oertli enables simultaneous indenting and transscleral illumination during interventions in the posterior segment. The ViPer can be attached quickly and easily to the endo illuminator to improve visibility and simplify work in the periphery.

Advantages of ViPer illuminated scleral indantor

→ Simultaneous indenting and illumination enables autonomous work

→ Improved visibility of the retinal periphery

→ Glare-free work without back-scattered light thanks to semi-transparent material

→ Homogenous illumination of indented tissues

→ Excellent mobility on the globe thanks to smooth material surface

→ Suitable for all Oertli endo illuminators

References

1 Compared to previous generation with 27G and 25G endo illuminators at 100% intensity in lumen

2 Compared to the previous generation with 25G endo illuminators panorama at low lumen with 5% intensity, working distance 15 mm

CONTINUOUS FLOW CUTTER

Enjoy low-traction work

Unlike conventional guillotine cutters with their open and closed positions, the opening of the Continuous Flow Cutter remains open at all times. A 0.1 mm wide double-edged blade cuts forwards and backwards, doubling the number of vitreous body portions per cycle. This can shorten the time needed for vitreous body removal while enabling high cutting speeds with continuous aspiration, even with small gauge sizes.

Discovery of the pneumatic push-pull principle
Oertli made an international breakthrough in vitreoretinal surgery with its invention of the first vitrectomy cutter in 1971. The push-pull principle for pneumatic cutters is another discovery by Oertli. The pneumatic push-pull principle uses the pneumatic force for both the forward and the backward movement. This generates a continuously high cutting force in both directions and eliminates the hysteresis associated with spring-driven systems that results from their limited physical conditions.

Duty cycle? Not an issue
The duty cycle is obsolete because the port is always open. Oertli fluidics uses the physical principle to full advantage. The unique SPEEP pump combines the best properties of the peristaltic and venturi pumps because flow and vacuum can be controlled at the same time. This gives surgeons full control over aspiration and ensures precision for modern vitreoretinal surgery.

Cutting close to the tissue
The minimal distance of 0.17 mm (27G) between the port opening and the surface enables the surgeon to work closely at the tissue, enabling precise manoeuvring at the retina.

Advantages of the Continuous Flow Cutter

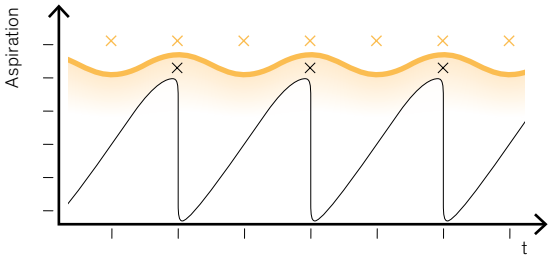
→ Continuously open port generates less traction on the retina[1]

→ Full control over aspiration thanks to the unique SPEEP pump[2,3]

→ Minimal distance between port opening and surface for close cutting to tissue

→ Constant cutting force with up to 10,000 cpm thanks to 100% quality control[4]

→ High-speed cutting using the pneumatic push-pull principle discovered by Oertli



× × Cut

Oertli Continous Flow Cutter: continuous flow without any noticeable fluctuations. With each cycle, vitreos body is removed twice.

Standard Cutter: Flow is interrupted with each cycle.

Oertli data on file
1 Compared to the previous generation of the SPS cutter
2 SPEEP pump with preset maximum flow rate
3 Modulation based on the principle of a peristaltic pump
4 100% final check with the cutting test

FAROS™ IN GLAUCOMA SURGERY

For surgical treatment of glaucoma, Faros generates appreciable added value in microinvasive glaucoma surgery (MIGS). High-Frequency Deep Sclerotomy (HFDS) has a low rate of complications and delivers promising long-term results even with a shorter procedure.

HFDS®

Rapidly applied, long-term success

HFDS stands for *High-Frequency Deep Sclerotomy.* In micro-invasive glaucoma surgery (MIGS), HFDS provides direct access from the anterior chamber to the Schlemm's canal and further into the sclera. The outflow resistance of the trabecular meshwork is thus significantly reduced. The HFDS glaucoma tip is inserted through a 1.2-mm paracentesis and uses high-frequency diathermy delivery to place six small sclerotomy pockets in the iridocorneal angle, which provide an improved outflow of the aqueous humour.

HFDS can be used alone but can also be ideally combined with cataract surgery and is distinguished by a very short procedure time. Bleb formation (filtration into the subconjunctival space) is avoided, as is fibroblast migration to the sclerotomy, plus there is no corneal scar. High-frequency deep sclerotomy ab interno from Oertli delivers promising long-term results. If needed, a procedure with HFDS can also be repeated.

Advantages of HFDS

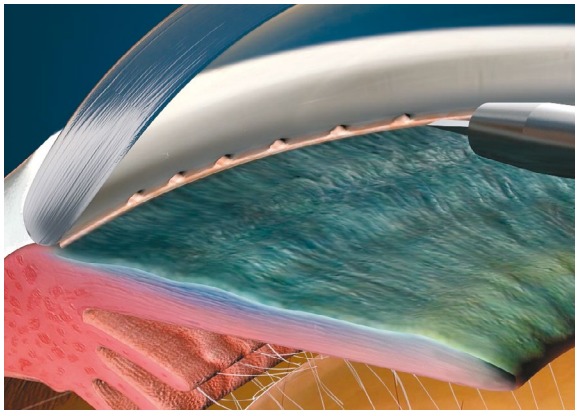
→ Implant-free micro-invasive glaucoma surgery [20]

→ Promising long-term results with a stable and long-term reduction in IOP and AGM [2]

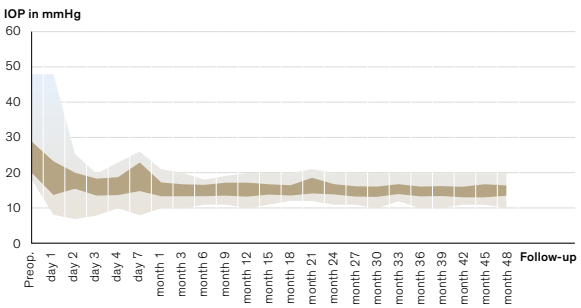
→ Short procedure time with high safety profile [2, 8, 14]

→ Combined with cataract surgery or a stand-alone application

HFDS glaucoma tip



Outstanding long-term results (48 months) after HFDS procedure [2]



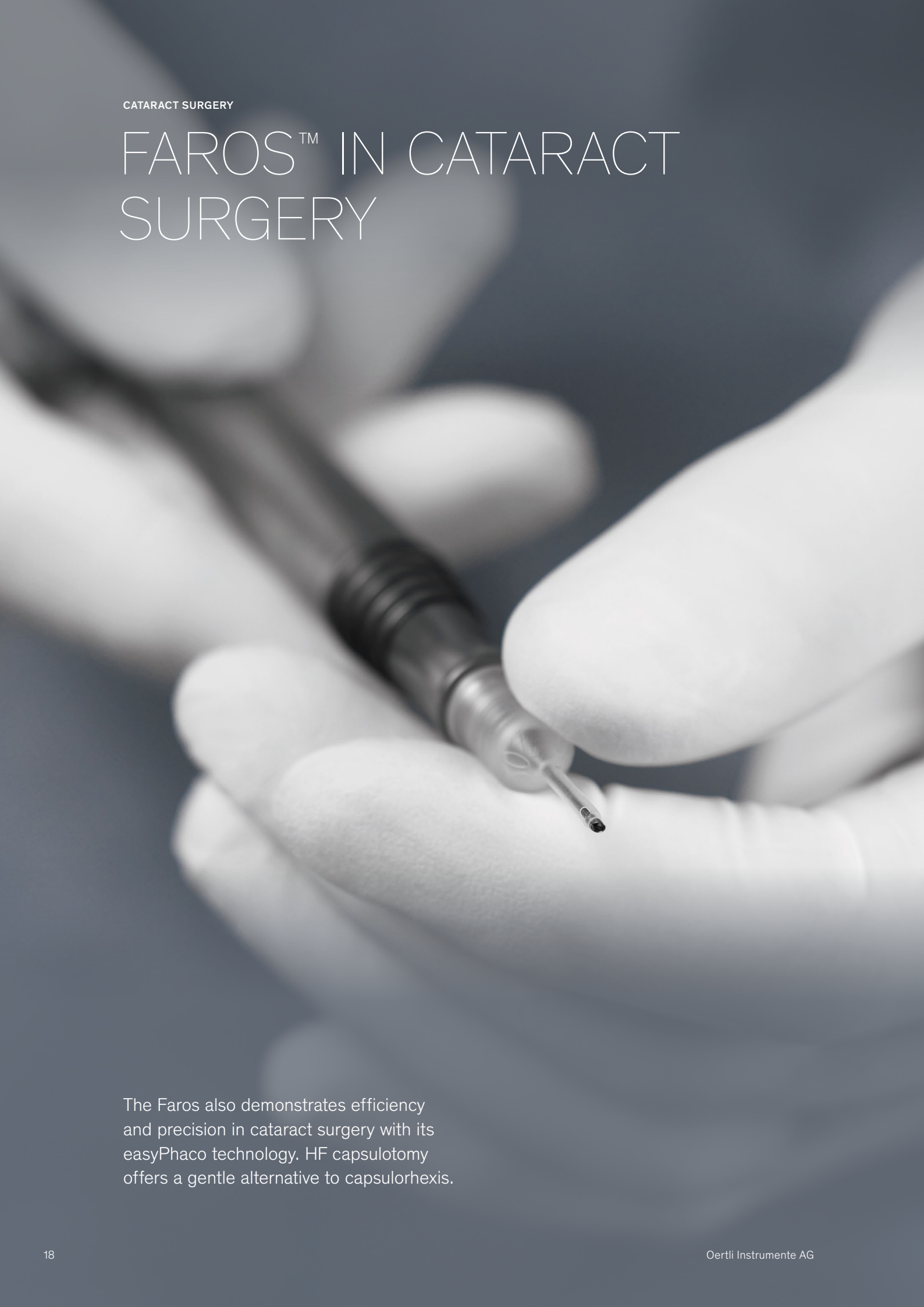
[2] B. Pajic, B. Pajic-Eggspuehler, and I. Haefliger, «New minimally invasive, deep sclerotomy ab-interno surgical procedure for glaucoma, six years of follow-up,» Journal of glaucoma, vol. 20, no. 2, pp. 109–114, 2011, doi: 10.1097/IJG.0b013e3181dddf31.

[8] B. Pajic, Z. Cvejic, K. Mansouri, M. Resan, and R. Allemann, «High-Frequency Deep Sclerotomy, A Minimal Invasive Ab-interno Glaucoma Procedure Combined with Cataract Surgery: Physical Properties and Clinical Outcome,» Applied Sciences, vol. 10, no. 1, p. 218, 2020, doi: 10.3390/app10010218.

[14] Kaweh Mansouri, M.D., M.P.H., A Multicenter Prospective Study of High-Frequency Deep Sclerotomy (HFDS) in Open-Angle Glaucoma: 3-Year Outcomes: Manuskript; UNPUBLISHED DATA.

[20] Aleksandar Pavlovic, Ab-Interno Deep Sclerotomy in Eight Simple Steps. [Online]. Available: https://www.oertli-instruments.com/downloads/glaukom/crst_september_2017_ab-interno_deep_sclerotomy_in_eight_simple_steps.pdf

FAROS™ IN CATARACT SURGERY



The Faros also demonstrates efficiency and precision in cataract surgery with its easyPhaco technology. HF capsulotomy offers a gentle alternative to capsulorhexis.

HIGH-FREQUENCY CAPSULOTOMY

High-frequency capsulotomy

Since its launch in 1991, high-frequency capsulotomy has proven to be the ideal method for opening the lens capsule in uncountable cases. The use of high-frequency energy melts the capsular bag – entirely without the usual tearing by forceps or needles. It is sufficient to gently slide the capsulotomy tip over tissues, even under the iris, while dosing the diathermy energy. The resulting capsular edge conforms to the current standard – both during surgery and over the long term.

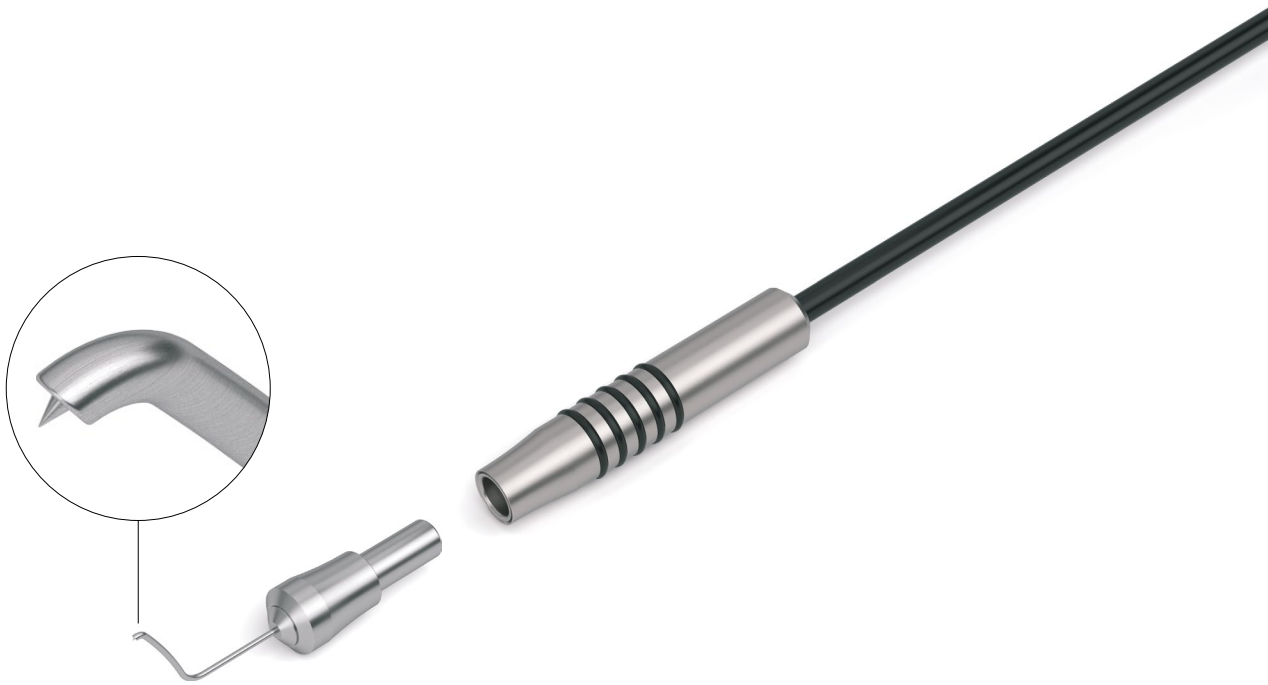
HF capsulotomy is suitable for indications such as a lack of fundus reflex, hypermature cataract, traumatic cataract, intumescent cataract and juvenile cataract. Even with narrow pupils, out-of-control rhexis or rhexis phimosis, HF capsulotomy delivers reliable outcomes.

Advantages of HF capsulotomy

→ Gentle alternative to capsulorhexis

→ Melting the capsular bag without tearing with forceps or needles

→ Fine and directly controlled dosing of the HF energy



EASYPHACO®

easyPhaco® – Fluidics based on physics

Thanks to the use of the fluidics technology and the precise flow control, easyPhaco enables immediate aspiration of the lens material for perfect followability. The unique design of the tips ensures unmatched chamber stability while simultaneously providing very high holdability. The fragments are aspirated efficiently and without repulsion. The focused axial delivery of the ultrasound energy guarantees targeted emulsification directly into the lens fragment. And, because the Oertli easyPhaco handpiece is equipped with six Piezo crystals, the transmission of power to the tip happens in a direct and gentle way with less heat development.

easyPhaco® handpiece
The easyPhaco handpiece offers the surgeon optimised phaco performance* for the entire lifetime of the product as well as greater user comfort.

No compromises for phacoemulsification
The piezo crystals ensure optimised phaco performance* for the entire lifetime of the product.

The shortened cable length promises more user comfort thanks to less weight and additional space savings in processing and storage (standard sterilization container).

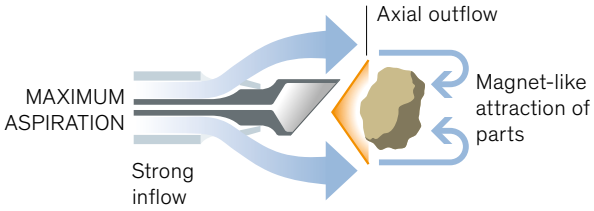
Advantages of easyPhaco®

→ easyPhaco technology, developed for safe and efficient emulsification
→ Fragment followability and holdability thanks to the Oertli fluidics concept
→ U/S energy absorbed by the occluded fragments
→ Smooth fragment aspiration without clogging
→ Stable anterior chamber
→ Available from 1.6 mm to 2.8 mm incisions

*Internal wet lab measurements with aged handpieces, Oertli data on file

EASYPHACO® TECHNOLOGY

Direct fragment followability
The high vacuum setting and the wide infusion path of the easyTips create a direct flow to the tip. This results in a magnet-like attraction of the fragments.

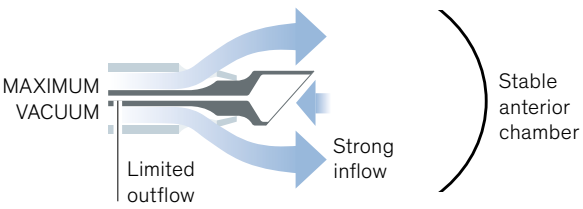


Strong fragment holdability
The easyTip's unique bevel of the tip opening has been designed to hold fragments firmly at the tip. Thanks to the high vacuum created, fragments are no longer repelled.

U/S energy absorbed by the occluded fragments
Thanks to the strong holdability and the longitudinal movements of the easyTips, ultrasound is axially directed to the occluded fragments.

Smooth fragment aspiration
Following an occlusion break, the capillary aspiration path of the easyTips provides continuous aspiration. The high vacuum setting prevents clogging, and fragments are smoothly aspirated.

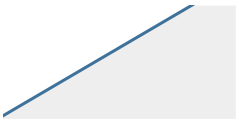
Stable anterior chamber
A seven times higher infusion capacity favours constant intraocular pressure.



Phako Modulation

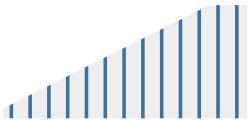
The Faros offers three types of power modulation that can be used with easyPhaco.

Continuous Linear
The surgeons have to adjust the power output themselves. The phaco power output corresponds to the pedal deflection.



Continuous linear

PULSE Modulation
PULSE modulation reduces energy consumption as it reduces the amount of U/S emitted per time compared to continuous linear phaco control. Power is controlled via the pedal.



PULSE Modulation

BURST Modulation
BURST modulation reduces the amount of U/S emitted per time compared to continuous linear phaco control. The duration and intensity of the bursts (packages of energy pulses) are freely selectable and independent of the pedal position. The pause between bursts is controlled with the pedal. The greater the pressure on the pedal, the shorter the pauses.

Burst Modulation

IRRIGATION / ASPIRATION HF DIATHERMY

I / A with Safety Design

The Quick Tips with Safety Design feature an extended shaft for improved subincisional access. The small aspiration port results in better occludability and ensures a stable anterior chamber. The well-considered position of the aspiration port is intended to prevent unintended grasping of the capsular bag.

Advantages of I / A with Safety Design

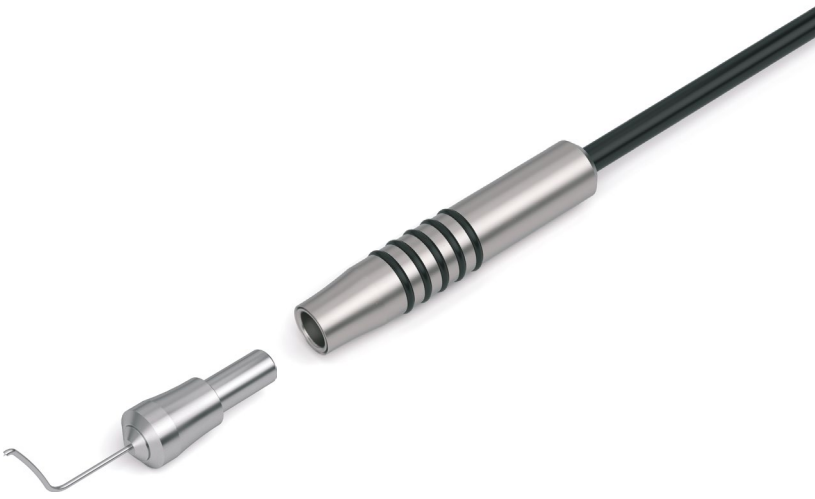
→ Developed to ensure stable anterior chamber conditions
→ Long shaft for subincisional access
→ Rapid occludability
→ Ideal when combined with the SPEEP pump
→ Available from 1.6 mm to 2.8 mm

HF bipolar diathermy

The bipolar diathermy function of the OS 4 offers various application options. These include the unique capsulotomy technique (page 25), the HFDS procedure for MIGS surgery (page 23) as well as the diathermy forceps. Handpieces as well as the easy to attach tips are manufactured from high-quality titanium.

Advantages of HF bipolar diathermy

→ A single function for several applications: Oertli capsulotomy, HFDS, diathermy forceps
→ Fine and controlled dosing of HF energy
→ High-quality titanium handpieces and tips



MODULE BUILD UP

FAROS™ – PERFORMANCE SPECTRUM

System

Fluidics system

→ Peristaltic pump
→ SPEEP pump
→ Gravity infusion, electric pole drive
→ Tubing system with integrated closed pressure sensor
→ Auto venting
→ Limitable reflux
→ Pre-op, self-testing and reset functions

Operation

→ Control panel with glass cover, indicator lights and silicon buttons
→ Dual-linear multifunctional pedal
→ Wireless remote control
→ Can be programmed individually for up to 50 surgeons
→ Audio signals

Pedal

→ Wired
→ User-specific assignment
→ Dual-linear or linear
→ Reflux function

Anterior segment

HF function

→ Capsulotomy
→ HFDS ab interno MIGS glaucoma surgery
→ Conjunctiva coaptation
→ Macro diathermy

Phaco function

→ Three programme memories with DirectAccess
→ Ultrasound phaco with auto tuning
→ U/S phaco hand piece with six piezo crystals
→ Linear, PULSE, BURST and CMP
→ easyPhaco, CO-MICS and MICS technology
→ Dual-linear phaco
→ Phaco power override
→ Occlusion mode

I/A function

→ Three programme memories with DirectAccess
→ Vacuum override function
→ Continuous irrigation

Anterior vitrectomy

→ Three programme memories with DirectAccess
→ Dual pneumatic guillotine cutter
→ Linear 0 up to 2400 cuts a minute
→ Single cut
→ Irrigation / Aspiration / Cut
→ Irrigation / Cut / Aspiration
→ Integrated compressor for autonomous work

Posterior segment

Endo Illumination

→ Power LED light source
→ Anti-glare panorama illumination
→ Filter-free exit

Vitrectomy

→ Three programme memories with DirectAccess
→ Pneumatically driven Continuous Flow Cutter
→ Linear, fixed or progressive, 0 up to 10,000 cuts a minute
→ Single cut
→ Endo phaco

Air

→ Electric pump
→ Fluid / air exchange
→ Constant pressure control with compensation reservoir
→ Three programme memories with DirectAccess
→ Alarm function

Visco

→ Injection
→ Extraction
→ Linear pedal control

HF function

→ Endo diathermy

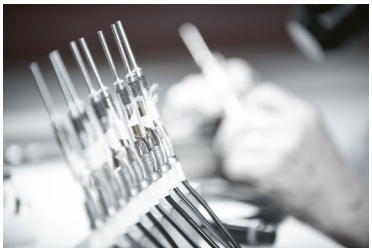
MAKING THE DIFFERENCE IN EYE SURGERY

Oertli makes the difference. With its excellent surgical devices and instruments that make surgical interventions safer, easier and more efficient. With lasting innovations and new technology that have long-term impact on ophthalmology. With superb service and real added value for surgeons and OR personnel. And, in its consistent pursuit to accomplish the very best for customers, users and patients.

Setting standards
The name Oertli stands for Swiss quality of the highest precision and reliability. We develop and produce our products exclusively in Switzerland, in the St.Gall Rhine Valley. Thanks to this, we can rely on excellently trained employees and a dynamic environment and have the quality and conditions of our products under our own control.

In the course of its company history, Oertli has developed numerous innovations that have had a sustainable impact on eye surgery. Such success, however, does not make us slow down – on the contrary. We spend every day refreshing our research spirit making sure our innovative thirst will have new challenges again and again.

Although we have an international presence, at heart we remain an independent family-run business with a fighting spirit, deep roots, solid financing and authentic teamwork. Anyone who works for Oertli does so with great commitment and motivation. As everyone gives their best, we can position ourselves on the market with great confidence. On this basis, we make the difference – for eye surgery, for our customers, and for patients.



Distribution network

Oertli commits itself to the Berneck location in Switzerland. It is here that ideas and innovations come to exist, and here that our devices and instruments are developed and manufactured. To ensure our products can be used in the whole world, we rely either on our own distribution companies or independent distribution partners, depending on the relevant region. In every case, our ophthalmology customers throughout the world can count on competent and reliable contact persons. They offer excellent on-site service, can inform and advise you on our entire product range and have been perfectly trained for work with our products.

MAKING THE DIFFERENCE WITH SERVICE AND EXPERTISE

« I expect speed, expertise and an excellent service from the suppliers of my surgical equipment. The Oertli employees combine all these skills with a warm friendliness. »

Dr. Florian Sutter
Augenklinik Herisau and Appenzell, Switzerland

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MAKING THE DIFFERENCE IN SWITZERLAND

As a Swiss family-managed company with a long tradition, we focus on what counts: quality, reliability, safety, innovation and the needs of our customers.

We make the difference – for you and your patients.

EYE SURGERY. SWISS MADE.

Surgical platforms

OS 4™

Faros™

CataRhex 3®

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