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

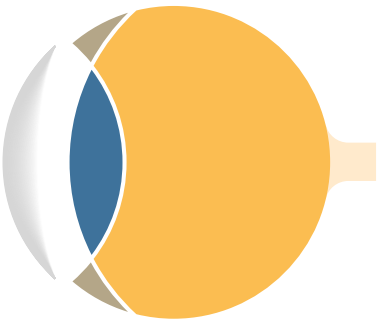
CONTENT

FAROS™ – EFFICIENT AND POWERFUL

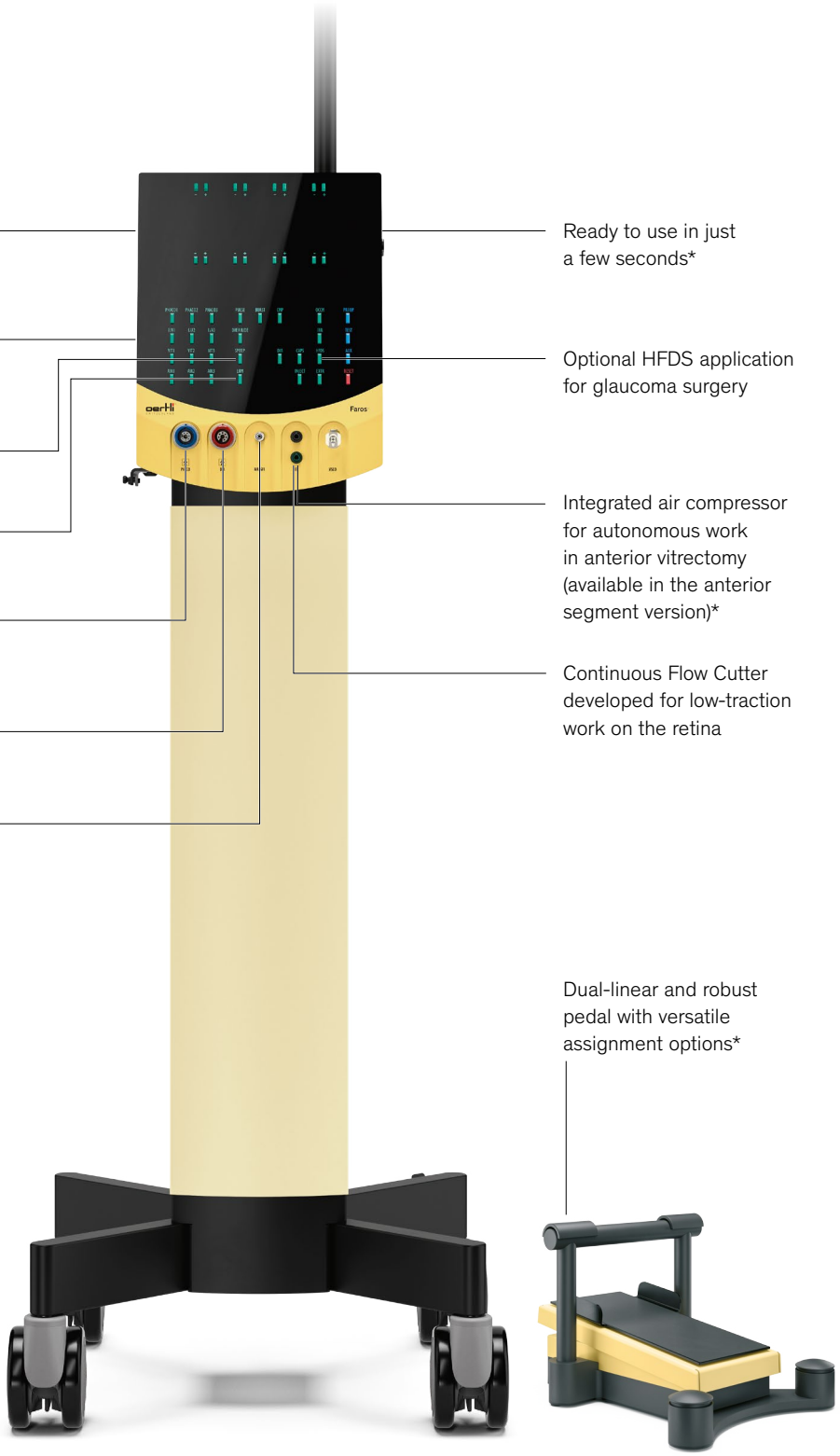
The compact Faros is optionally available as a device for the anterior segment or as a combined system for both the anterior and posterior segments. The unique SPEEP pump provides control over both vacuum and flow*. The easyPhaco technology is developed for safe and efficient phacoemulsification. The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

Make the difference – with Faros by Oertli.

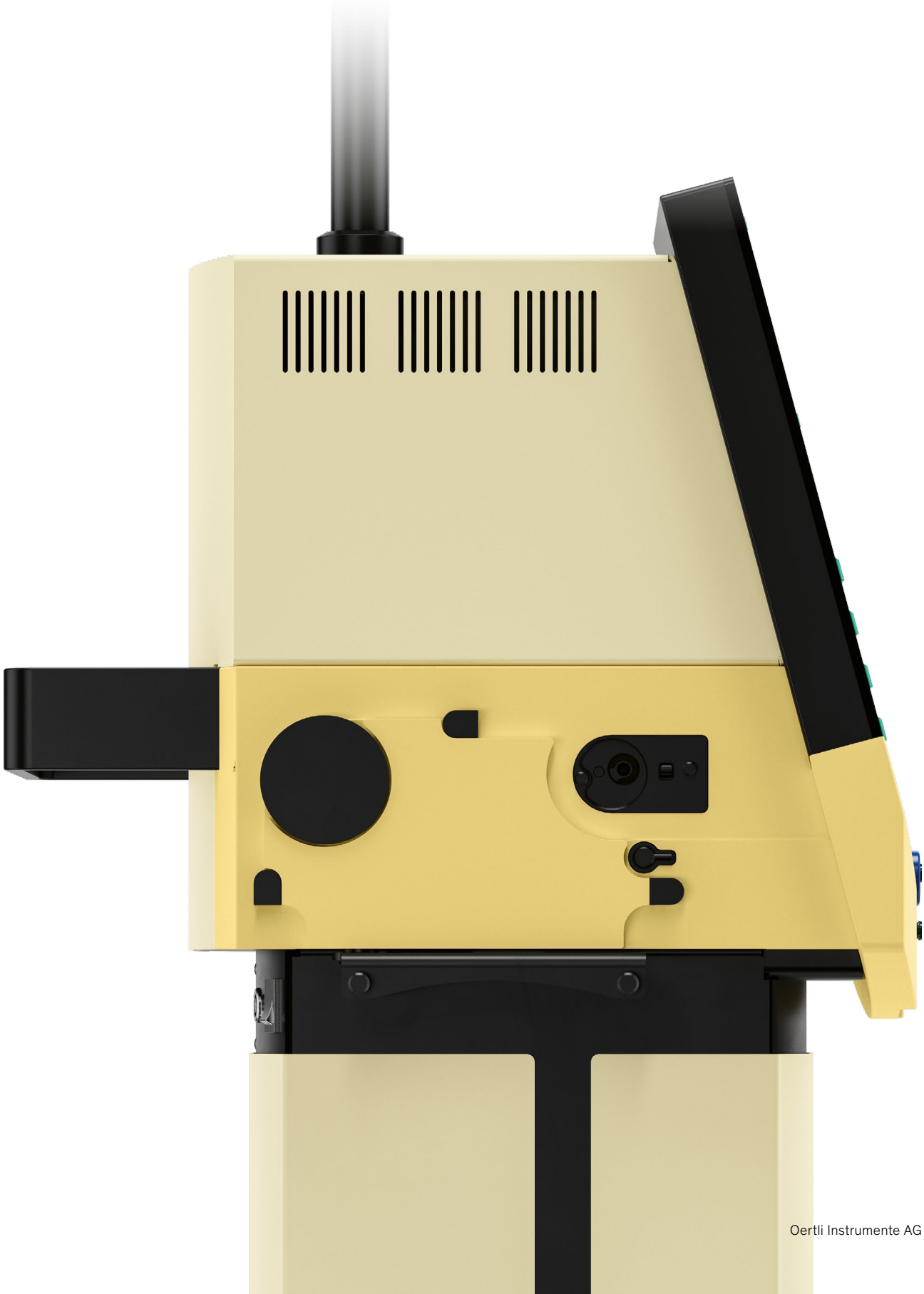
Vitrectomy	●
Glaucoma	●
Cataract	●



FAROS™ – ALL ADVANTAGES AT A GLANCE



FLUIDICS AND DUAL-PUMP SYSTEM



The Faros from Oertli is an efficient and powerful surgical platform for cataract, vitreoretinal and glaucoma surgery. The device impresses with its ease of use, enclosed in an extremely 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 holdability generated right at the instrument opening*.

How does the SPEEP pump work?
SPEEP combines the advantages of a flow-controlled peristaltic pump with the sportiness 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 and gives the surgeon control*.

Fluidics: Unique 2-pump system

→ Unique SPEEP pump – for manual control of the holdability regardless of the tissue type*
→ Pump responds immediately and directly – facilitating precise and fine manoeuvres right 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

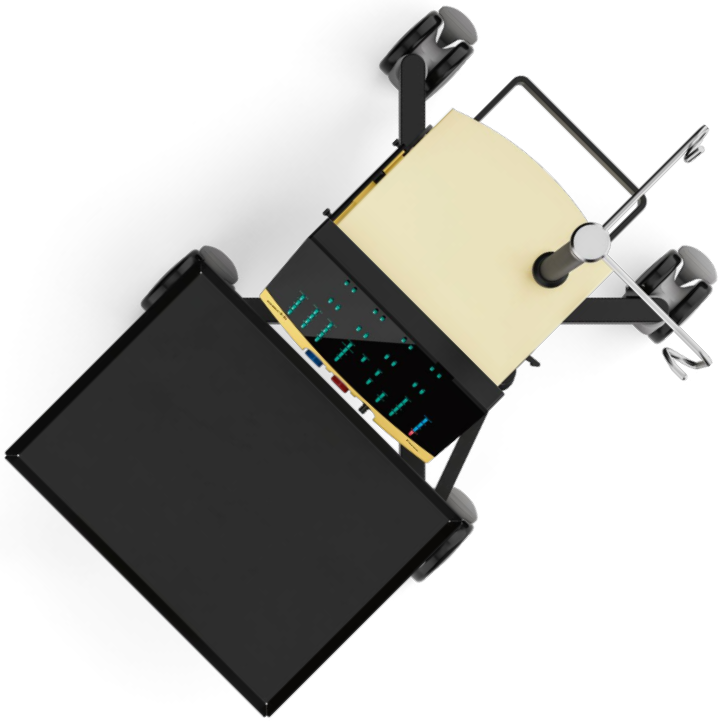
FAST, SAFE AND INTUITIVE

Faros excels with its ease of use, making its operation comfortable and safe for both the OR personnel and the surgeon. The surgical platform is also quick to start up: the system is ready to use just a few seconds after being switched on*.

Connections
Most instrument connections can be easily accessed from the front to make preparation for surgery both simple and efficient.

Control panel
The displays on the control panel are clear and easy to read and give precise information about surgical values and settings. The control buttons are arranged clearly and are always allocated to the same function that is activated promptly when a button is pressed. The ParaProg has various functions that can be customised for each surgeon and surgical technique. Up to 50 surgeons can be programmed to use the device*.

Instrument table
The optional instrument table (40 × 30 cm) can be fixed in the desired position. When not needed, the table can be quickly and easily folded to the side.



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 gives the surgeon control and can be customised to the surgeon's preferences and needs. The auxiliary buttons can have various allocations, such as changing between functions, pumps, light/air and changing the bottle height.

- → Dual-linear pedal
- → Protected against brief flooding*
- → Can be programmed individually for up to 50 surgeons*
- → Four auxiliary buttons for various assignment options
- → Cable connection for delay-free transmission of commands*

FAROS™ IN VITRECTOMY

As a compact surgical device, the Faros focuses on functionality in vitreoretinal surgery. The pneumatically driven Continuous Flow Cutter is developed for low-traction work on the retina and the Power LED light source is fitted with the latest technology.

CALIBURN™ TROCAR SYSTEMS

High cutting force and holdability

Thanks to the lance-shaped blade, the Caliburn Trocar System has a high cutting force and consequently reduces the penetration force into the sclera[1]. The optimal blade geometry creates an incision into the sclera with a low penetration force for the trocar, meaning insertion is easy [1]. Reliable holdability in the incision is also ensured during surgery*.

Additionally, the integrated self-sealing membrane prevents the leakage of BSS, air and oil, which helps to maintain the IOP*. The patented snap lock enables the infusion tube to be securely connected and flexibly reconnected within the trocar system*. Thanks to the thin tunnel incision by the lance-shaped blade, there is good postoperative wound closure*.

Advantages of the Caliburn™ Trocar Systems

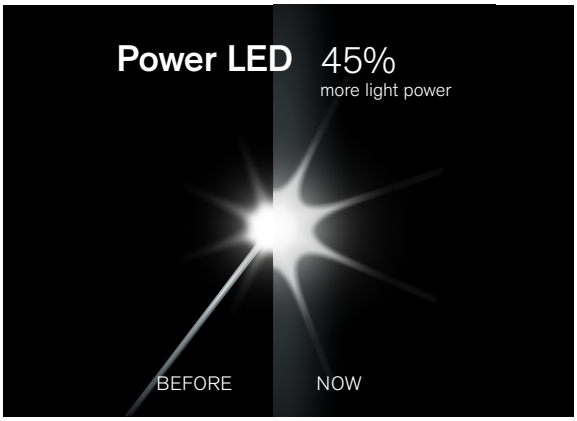
→ Postoperative wound closure*

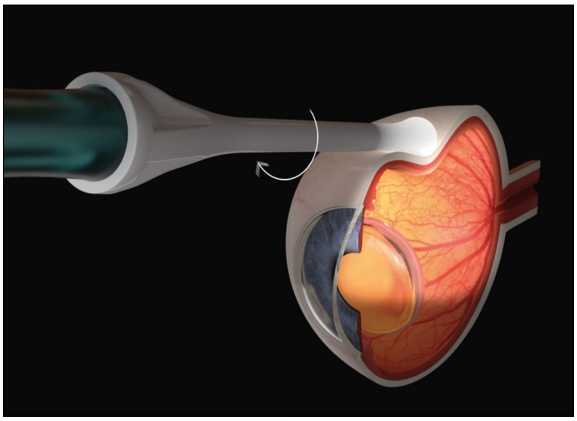
→ Easy and smooth insertion of the trocar[1]

→ Integrated self-sealing membrane to maintain IOP*

→ Flexibly reconnect the infusion tube with the patented snap lock*

MORE LIGHT WITH POWER LED





Bright, homogeneous and safe

Thanks to the Power LED light source, the light output is up to 45 per cent greater than the previous device generation[3].

The Faros is equipped with a Power LED light source that has a long service life thanks to latest LED technology. The wide control range is an ideal combination with 3D microscopes, especially at low lumens*.

Advantages of Power LED

→ Power LED technology for a long service life*
→ Power LED with up to 45% more light output[3]
→ Patient safety thanks to minimal phototoxic exposure with the low setting options[4]
→ Wide control range at low lumens, ideal combination with a 3D microscope *
→ Comfort Connector to all endo illuminators

Transscleral illumination

The ViPer illuminated scleral indentor is used to indent the globe and simultaneously provide transscleral illumination for posterior segment interventions. Rapidly and easily attached to the endo illuminator*, the ViPer simplifies working in the periphery[13]*.

Advantages of ViPer illuminated scleral indantor

→ Simultaneous indenting and illumination allows the surgeon to work autonomously
→ Easy visualization of the retina during peripheral vitreous body removal*
→ Homogeneous illumination of the indented tissue*
→ Mobility on the globe thanks to the smooth surface of the material*
→ Can be attached to all Oertli endo illuminators (20G to 27G)

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.

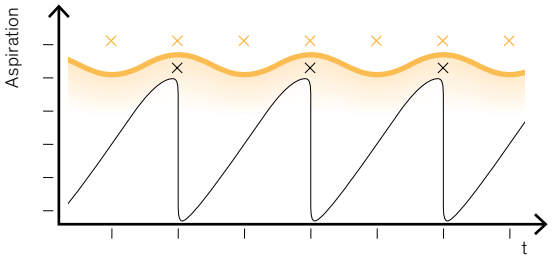
Discovery of the pneumatic push-pull principle
Oertli made an international breakthrough in vitreoretinal surgery with its invention of the first vitrectomy cutter in 1971. The push-pull principle for pneumatic cutters is another discovery by Oertli. The pneumatic push-pull principle uses the pneumatic 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 provides control over both vacuum and flow*. 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[5]
- → Full control over aspiration thanks to the unique SPEEP pump[6]
- → 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[7]
- → 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.

FAROS™ IN GLAUCOMA SURGERY

In the treatment of glaucoma, the HFDS ab interno MIGS procedure from Oertli delivers promising long-term results[9]. The High Frequency Deep Sclerotomy (HFDS) results in a low complication rate and promising long-term outcomes in spite of the short intervention time[10 11 12].

HFDS®

Rapidly applied, long-term results

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 short procedure time[10 11 12]. 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[9]. If needed, a procedure with HFDS can also be repeated.

Advantages of HFDS

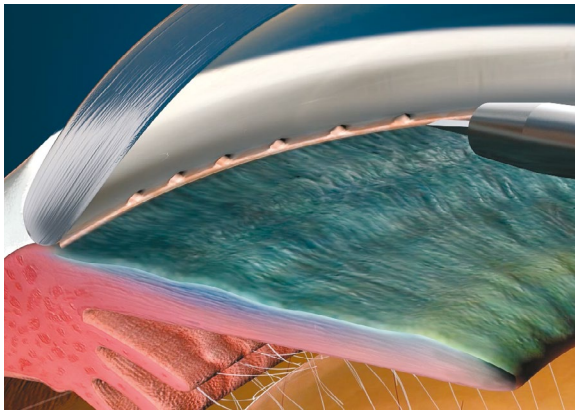
→ Implant-free micro-invasive glaucoma surgery[8]

→ Convincing long-term results with a stable and long-term reduction in IOP and AGM[9]

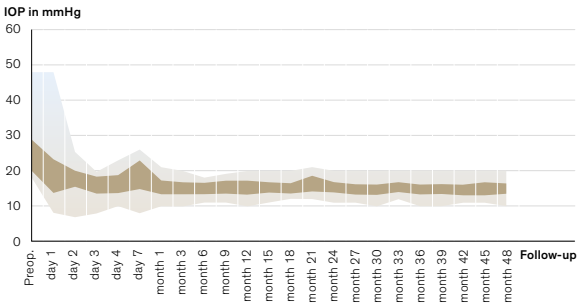
→ Short procedure time with high safety profile[10 11 12]

→ Combined with cataract surgery or a stand-alone application

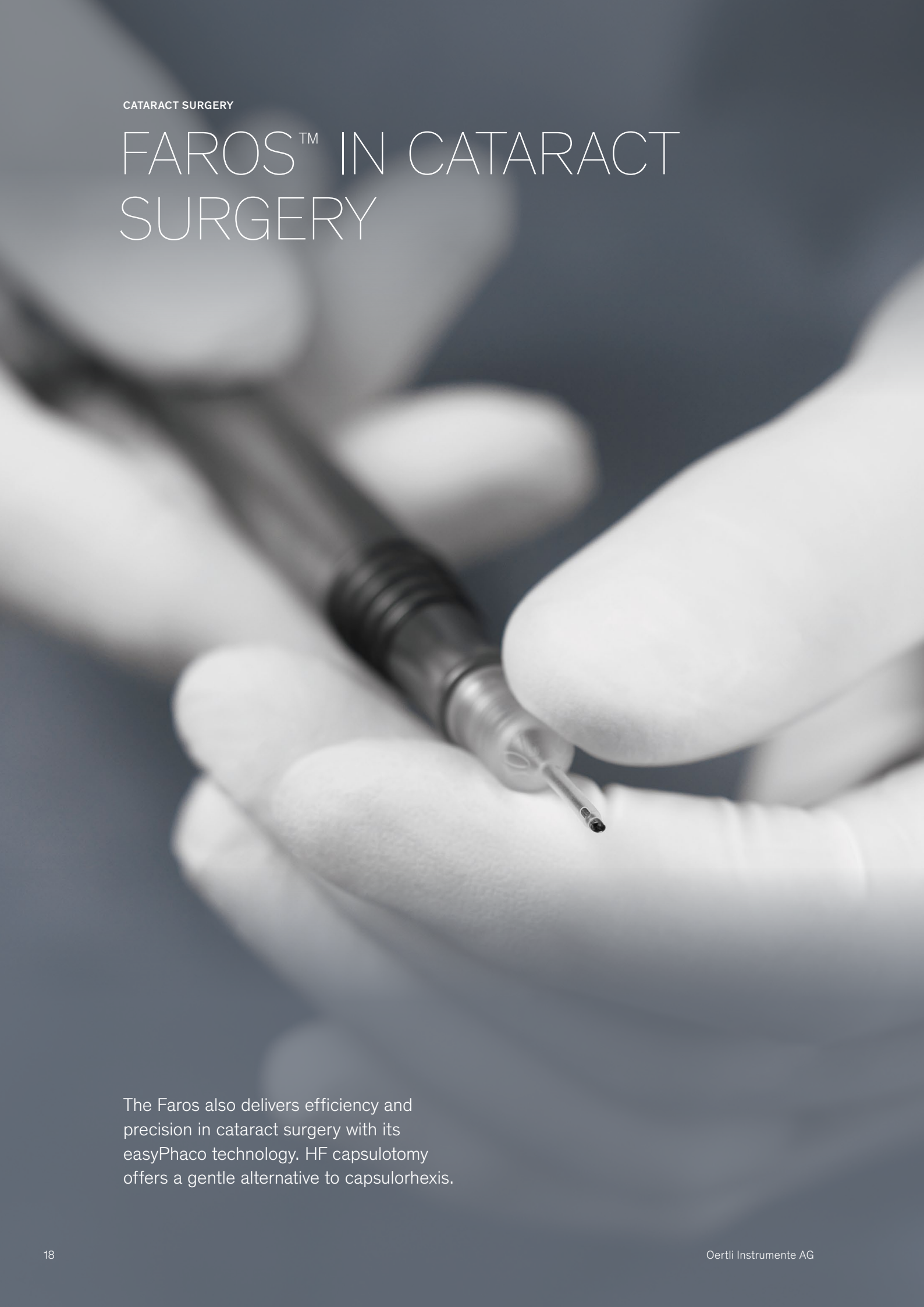
HFDS glaucoma tip



Convincing long-term results (48 months) after HFDS procedure[9]



FAROS™ IN CATARACT SURGERY



The Faros also delivers 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.

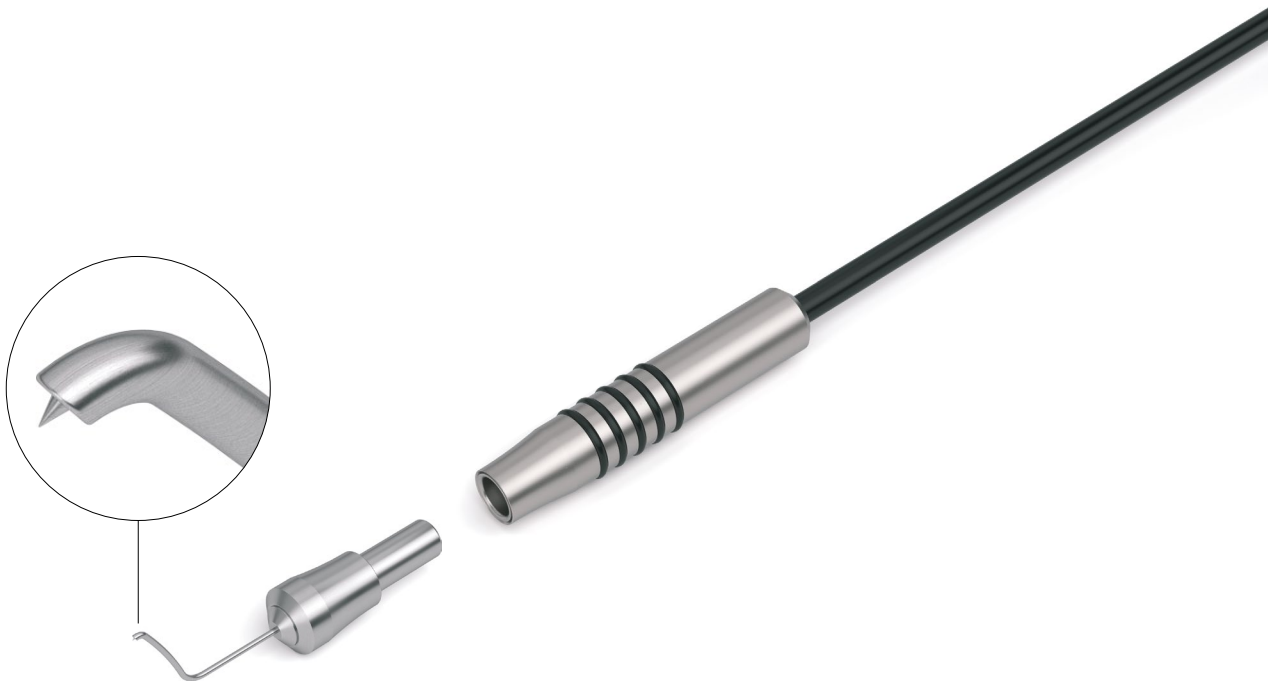
HF capsulotomy is suitable for indications such as a lack of fundus reflex, hypermature cataract, traumatic cataract, intumescent cataract and juvenile cataract. Even with narrow pupils, out-of-control rhexis or rhexis phimosis, HF capsulotomy delivers reliable outcomes.

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

The easyPhaco technology is developed for safe and efficient phacoemulsification. Thanks to Oertli's unique fluidics concept, easyPhaco allows direct control over fragments and ensures a high holdability*. The occluded fragments absorb the ultrasound energy and are then efficiently aspirated with no clogging*. The infusion capacity is several times higher than the aspiration, enabling the intraocular pressure to be maintained for a stable anterior chamber[2].

easyPhaco® handpiece
With an external diameter of 13 mm, an internal infusion line and a low weight of 42 grams, the titanium easyPhaco handpiece has set the standard since 2002. The handpiece has six piezo crystals. The five rubber rings on the handpiece make it comfortable to hold.

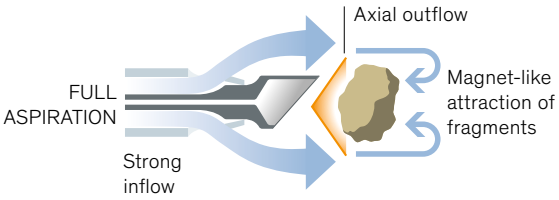
easyTips phaco tips
The angled easyTip opening has been designed to hold fragments firmly at the tip*. Thanks to the high vacuum created, the fragments are efficiently aspirated*. The single-use easyTips are supplied with an irrigation sleeve, a test chamber and a phaco and emergency key. The easyTip range includes six different tips: from CO-MICS (1.6 mm) up to 3.2 mm incisions.

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[2]
→ Available from 1.6 mm to 3.2 mm incisions

EASYPHACO® TECHNOLOGY

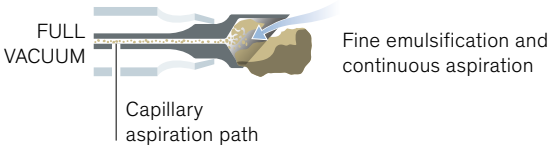
Direct fragment followability
The high vacuum setting and the wide infusion path of the easyTips create a direct flow to the tip. This results in a magnet-like attraction of the fragments*.



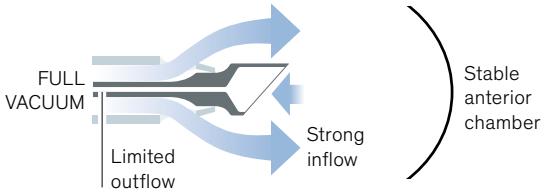
Strong fragment holdability
The angled easyTip opening has been designed to hold fragments firmly at the tip*.

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

Smooth fragment aspiration
Following an occlusion break, the capillary aspiration path of the easyTips provides continuous aspiration. Thanks to the high vacuum created, the fragments are efficiently aspirated*.



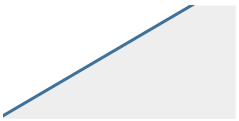
Stable anterior chamber
The infusion capacity is several times higher than the aspiration, enabling the intraocular pressure to be maintained for a stable anterior chamber[2].



Phako Modulation

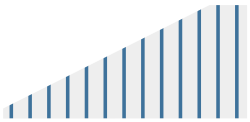
The Faros offers three types of power modulation that can be used with easyPhaco.

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

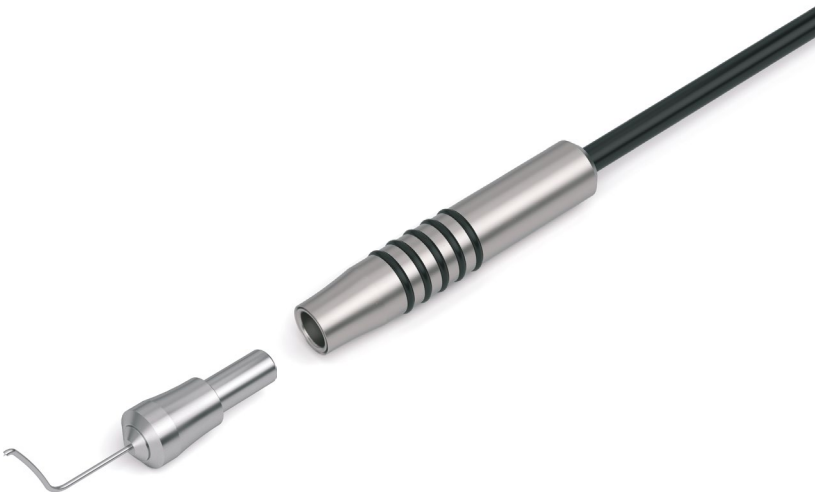
→ Developed to ensure stable anterior chamber conditions
→ Long shaft for subincisional access
→ Rapid occludability
→ Ideal when combined with the SPEEP pump
→ Available from 1.6 mm to 2.8 mm

HF bipolar diathermy

The bipolar diathermy function of the Faros offers a number of applications such as the unique capsulotomy (page 25), the HFDS procedure for MIGS surgery (page 23) and the diathermy forceps. Handpieces and the easy-to-attach tips are manufactured from high-quality titanium.

Advantages of HF bipolar diathermy

→ One 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

→ 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

→ Fluid / air exchange

→ Constant pressure control with compensation reservoir

Visco

→ Injection

→ Extraction

→ Linear pedal control

HF function

→ Endo diathermy

MAKING THE DIFFERENCE IN EYE SURGERY

Oertli makes the difference. With surgical devices, instruments, and consumables of high quality, aimed at making the surgical process safer, simpler, and more efficient. With sustainable innovations and new technologies to shape ophthalmology for decades to come. With superb service provision and significant added value for surgeons and OR personnel. And with our continuous striving to achieve the best for our customers, users and patients.

Setting benchmarks
The name Oertli is synonymous with Swiss quality, highest precision and the reliability. We develop and produce our products exclusively at our site in the St Gallen Rhine Valley in Switzerland. Not only does this allow us to rely on expertly trained staff and a dynamic environment, we always have complete control over the quality and properties of our products.

Throughout the history of the company, Oertli has developed many innovations that have shaped eye surgery for the long term. We are not content to rest on our laurels – instead, our successes drive us further. Every day we work hard to maintain our vibrant research spirit and provide our innovative hunger with new avenues to explore.

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 at Oertli does so with great commitment and motivation. Because everyone gives their best and applies their whole range of talents, we can successfully position ourselves with confidence. Based on this solid foundation, we make the difference – for eye surgery, for our customers, for patients.

Distribution network

Oertli makes a firm commitment to its site in Berneck, Switzerland. Here is where we generate ideas and develop innovations, where our devices, instruments and consumables are developed and produced. So that our products can be used globally, we rely on our own distribution companies or independent distribution partners depending on the region.

In every case, our ophthalmology customers around the world can rely on expert contact partners. They provide excellent service on site, can advise about our entire product range and are perfectly trained in the use of 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

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.

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.

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2 With the settings recommended on www.oertli-instruments.com

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

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

5 Compared to the previous generation of the SPS cutter

6 SPEEP pump with preset maximum flow rate

7 100% final check with the cutting test

8 Aleksandar Pavlovic, Ab-Interno Deep Sclerotomy in Eight Simple Steps

9 Glaucoma: the silent thief of sight," The Lamp, vol. 52, no. 8, p. 15, 1995

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12 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)

13 Compared to unilluminated, assisted indenting

Surgical platforms

OS 4™

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