

NEW WITH
POWER
LED

oerthli[®]
S W I T Z E R L A N D



Faros[™]
MAKING THE DIFFERENCE
WITH THE NEW 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

PERFECTION TO THE CORE

Using its innovative developments and high-quality products, Oertli is continuously setting new standards in cataract, vitrectomy 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.

So as to ensure perfect processes and outcomes, Oertli surgical platforms and their corresponding instruments form a closed surgical system. Each instrument is compatible with all Oertli surgical devices, provided that the relevant function is available.

It goes without saying that Oertli is consistently committed to quality in its instruments, handpieces, tips and auxiliaries. Instruments are developed in Berneck, Switzerland, and manufactured with maximum precision, to ensure surgeons can totally rely on their tools.



Christoph Bosshard
CEO

Thomas Bosshard
Head of Marketing & Sales

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FAROS™ – EFFICIENT AND HIGHLY EFFECTIVE

The Faros surgical platform enables eye surgery of the highest level while remaining easily operable and intuitively controllable at any time. The compact Faros is either available as a device for anterior segment surgery or as a combined system for anterior and posterior segment surgery. The unique SPEEP pump makes both flow and vacuum easily controllable, which boasts unsurpassable fluidics as a result. The precise flow control of the peristaltic pump renders the surgeon's work easier and safer than before. The easyPhaco technology results in unprecedented chamber stability. The HF capsulotomy tip provides for an amazingly simple capsulorhexis. The innovative Continuous Flow Cutter ensures traction-free vitreous body removal while the new Power LED light source provides 45% more light power in the posterior segment. Moreover, the Faros also contains an integrated HFDS application for glaucoma surgery.

**Make the difference –
with Faros by Oertli.**

Vitrectomy	●
Glaucoma	●
Cataract	●



FAROS™ – ALL ADVANTAGES AT A GLANCE

Available as an anterior platform or as a combined anterior/posterior platform

Cutting-edge dual-pump system with flow and vacuum control

SPEEP pump for precise manoeuvres

Power LED with 45% more light output and enhanced control range

Proven easyPhaco technology, based on physics

Unique capsulotomy function

NEW

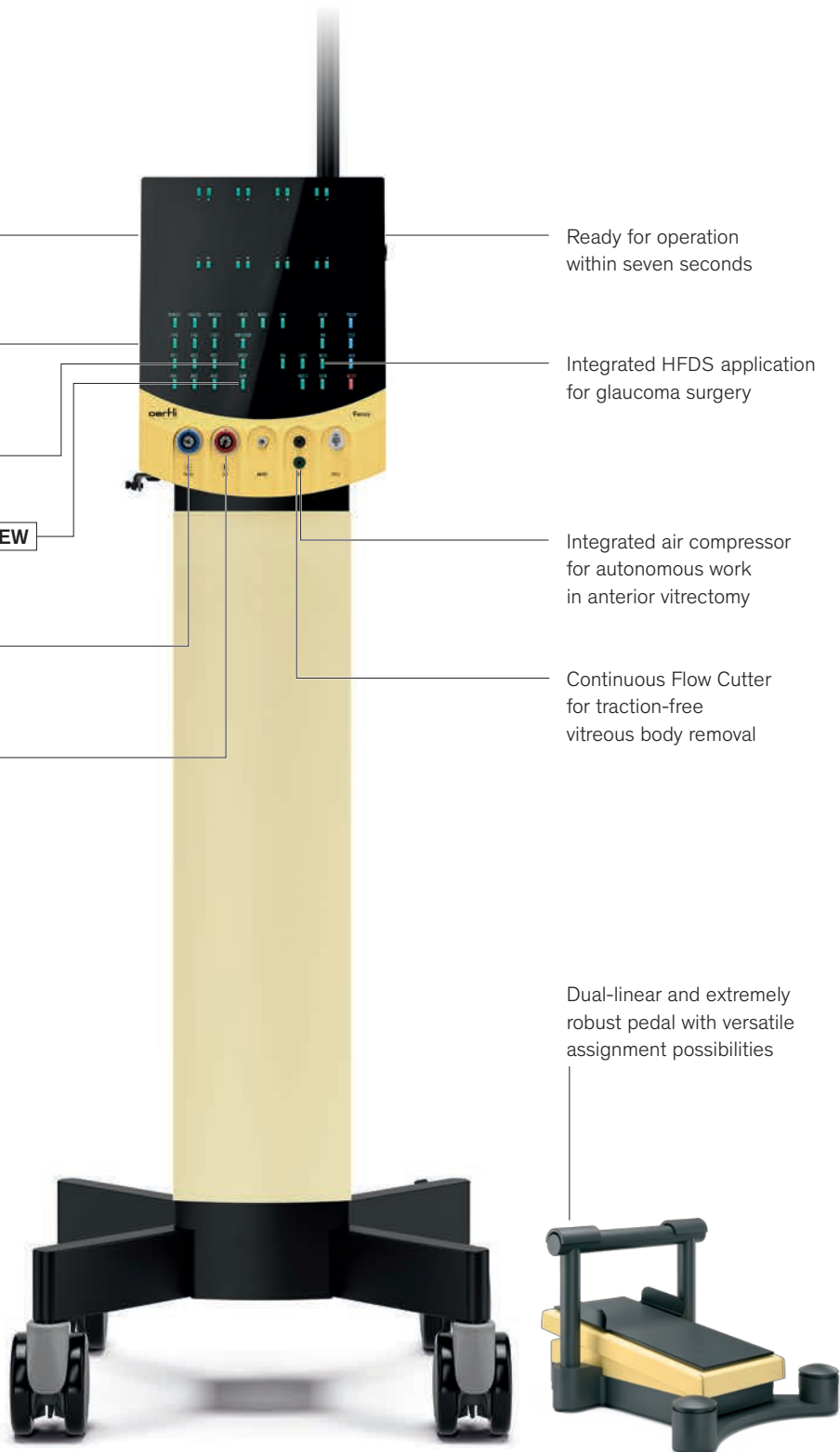
Ready for operation within seven seconds

Integrated HFDS application for glaucoma surgery

Integrated air compressor for autonomous work in anterior vitrectomy

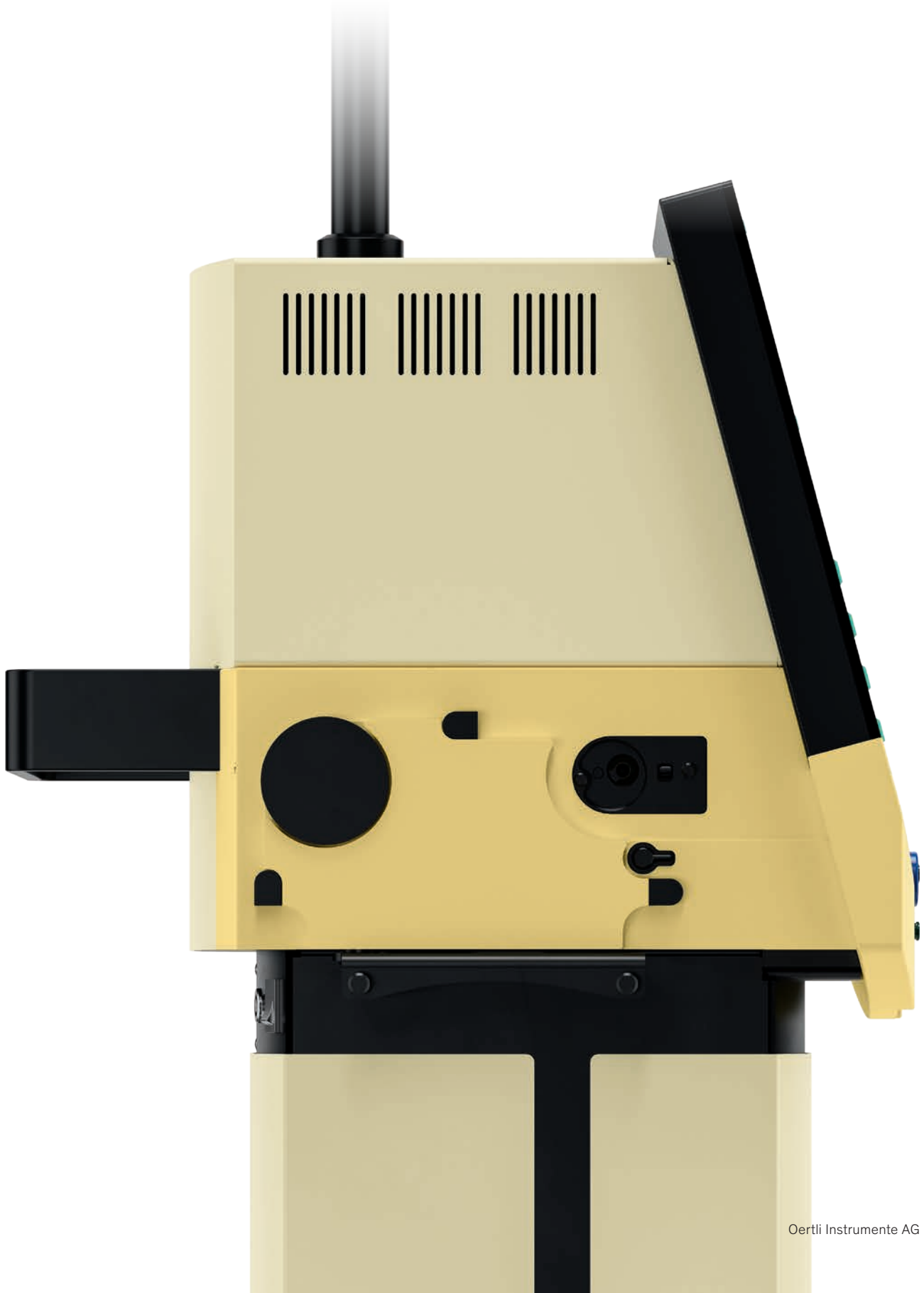
Continuous Flow Cutter for traction-free vitreous body removal

Dual-linear and extremely robust pedal with versatile assignment possibilities



FLUIDIC SYSTEM

FLUIDICS AND DUAL-PUMP SYSTEM



The Faros by Oertli is an efficient and highly effective surgical platform for cataract, vitrectomy and glaucoma surgery. The device boasts precision, versatility, innovative technology, user convenience and an incredibly compact design.

Fluidics based on physics – perfection in use

Oertli has established itself as an innovative leader in using fluidics based on physics in eye surgery. Surely, the impressive fluidics system is also one of the key elements in the Faros – responsible for the high-performance of this platform. It uses the laws of physics in a unique way and is therefore not subject to complicated electronics and a sensory system prone to error. The perfect flow control of the peristaltic principle enables the finest degree of control and absolute precision.

SPEEP – Speed and Precision

The unique pump innovation by Oertli is at your disposal now! The SPEEP pump* offers you more efficiency and precision in your anterior or posterior surgery through its precise control of flow and vacuum. With the SPEEP pump, you are given a highly effective tool for even easier, safer and more efficient work in your daily surgical routine.

SPEEP combines the advantages of a flow-controlled peristaltic pump with the sportiness of a Venturi pump. With the SPEEP pump, both flow and vacuum can be controlled independently of each other. This results in the desired mastery over fluidics and takes efficiency and safety to a new level. You will experience complete control, whether required for speedy nucleus preparation or fine capsule polishing.

SPEEP Pump

The term SPEEP is composed of «Speed» and «Precision». The SPEEP pump relies on the principle of the peristaltic pump. Both the flow and the vacuum can be regulated independently of each other, which allows precise control of holdability regardless of the type of tissue. The direct response and acoustic feedback during occlusion ensure safe and stress-free work while maximising efficiency.



FAST, SAFE AND INTUITIVE

The Faros multifunctional surgical platform for cutting-edge eye surgery is an excellently developed highlight of surgical technology. Yet, complex technology does not have to go hand in hand with difficult operation. On the contrary: The Faros boasts a consistently clear overview and utmost user convenience. Everything is clearly and easily readable. Most connections are located at the front, the tubing suspension is simple and logical. This renders operation comfortable, understandable and safe for the surgeon and OR staff alike. Moreover, the surgical platform is ready for action incredibly quickly: After switching the system on, it is ready for operation within seven seconds. This speeds up preparation for surgery and results in a clearly enhanced performance and an efficiency that saves both time and costs.

Connections

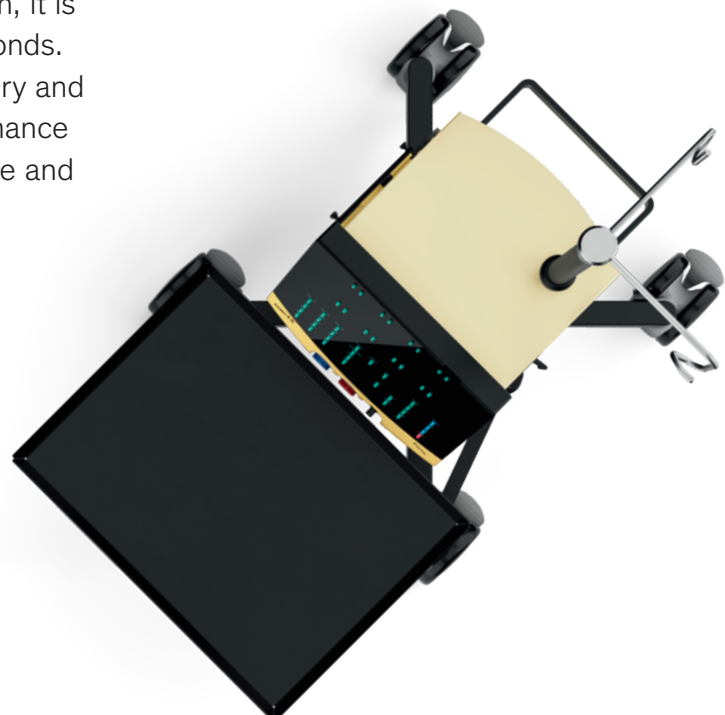
Most instrument connections are easily accessible from the front. This way, preparation for surgery is additionally facilitated and accelerated.

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 at any 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. Made of robust metal and processed with highest precision, the pedal absorbs the surgeon's commands instantaneously and with a great deal of sensitivity.

Dual-linear perfection

In the Faros foot pedal, the dual-linear control becomes apparent in its most intelligent form. The pedal opens up new ways of keeping total control and perfect attunement to the surgeon's wishes and requirements. 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
- Classic cable connection for reliable data transfer



VITRECTOMY SURGERY

FAROS™ IN VITRECTOMY SURGERY



The compact Faros high-performance device sets new benchmarks in vitrectomy surgery in terms of functionality and quality. The Caliburn trocar systems create ideal access and ensure smooth cuts and excellent wound-tightness. The new Power LED technology provides peak light conditions. The pneumatic Continuous Flow Cutter enables continuous flow and ideal portioning of the vitreous body for removal.

CALIBURN™ TROCAR SYSTEMS

Unmatched sharpness and precision

In vitrectomy with the Faros, the Caliburn trocar system ensures precise work with exceptionally sharp instruments. The lance-shaped blade is characterised by strong piercing and cutting force. The razor-sharp Caliburn blade reduces the penetration force and results in a perfect cutting geometry in the sclera. The slim tunnel incision allows for superior postoperative wound tightness and thus rapid wound healing.

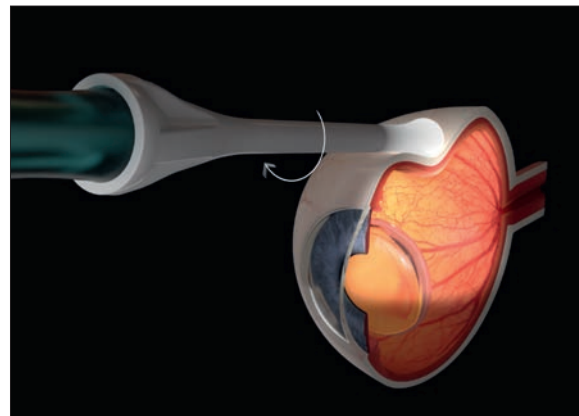
The trocar with integrated closure membrane prevents the leakage of BSS, air and oil, resulting in constant IOP throughout the entire surgery. Thanks to its excellent holdability and perfect shaft length, the Caliburn trocar offers safety and comfort.

Advantages of the Caliburn™ trocar systems

- Convincing postoperative wound tightness
 - Unique surface finishes for even smoother cuts
 - Smooth insertion of the trocar
 - Integrated, double-slotted sealing membrane for constant IOP during surgery
 - Patented infusion tube with snap lock for increased flexibility
-



GOODLIGHT™ WITH POWER LED



More brightness and homogeneity for even greater safety

Thanks to the new Power LED, the light output in the Faros has been increased by an additional 45 percent – for perfect illumination and visualisation during all manoeuvres, extending to the periphery.

The Faros Power LED light source provides superb homogeneous illumination thanks to its cutting-edge LED technology. The newly enhanced control range can be combined perfectly with the 3D microscope for low lumens.

Advantages of the GoodLight™ with Power LED

- Latest Power LED technology for homogeneous illumination and high durability
- Power LED with 45% more light output¹
- Increased patient safety as a result of decreased photo-toxic exposure on account of lower setting options²
- Enhanced control range for low lumens, perfect combination with 3D microscope
- Extremely homogeneous illumination and high-resolution contrast viewing
- Precise and comfortable Comfort Connector to all endo illuminators

Transscleral illumination made easy

Oertli's ViPer illuminated scleral indenter enables simultaneous indenting and transscleral illumination during interventions in the posterior eye segment. The ViPer is quickly and easily attached to the endo illuminators, it improves visibility and greatly facilitates work in the periphery.

Advantages of ViPer illuminated scleral indenter

- 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

TRUE FLOW CONTROL™

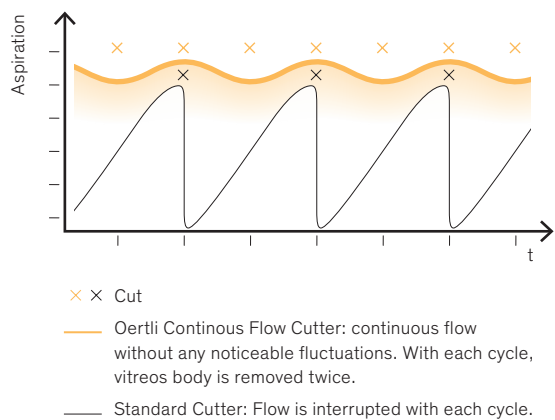
Continuous Flow Cutter

With its fluidics concept that makes excellent use of physics and fluidics, Oertli has led flow and vacuum control to perfection. Thanks to True Flow Control, you can finely tune the flow with the dual-linear foot pedal in an incredibly subtle way – resulting in impressive precision and a high occlusion vacuum.

In vitreoretinal surgery, Oertli has already set standards with its dual-pneumatic drive that boasts great cutting force and traction-free high-speed cutting. Next, the Oertli Continuous Flow Cutter was a significant quantum leap. The continuous flow cutting concept allows for continuous flow without any fluctuation. While with a standard cutter, the flow is interrupted with every cut, the Continuous Flow Cutter ensures traction-free and precise flow as well as rapid aspiration and ideal portioning of the vitreous body for removal. The SPEEP pump with new fluidics make flow and vacuum a dynamic yet directly controllable tool for unimaginably precise and efficient vitreoretinal surgery.

Advantages of Continuous Flow Cutter

- Oertli's fluidic concept works with physics – additional software manipulations are no longer necessary
- The Continuous Flow Cutter for 100% continuous flow
- Perfect portioning in the vitreous body removal process
- Highest degree of efficiency in central vitrectomy
- Maximum precision and safety in the periphery
- Perfect precision in all manoeuvres





GLAUCOMA SURGERY

FAROS™ IN GLAUCOMA SURGERY

In operative treatment of glaucoma, the Faros has created significant added value in micro-invasive glaucoma surgery (MIGS). High Frequency Deep Sclerotomy (HFDS) ensures excellent long-term results and has an extremely low complication rate, and short intervention time.

HFDS™

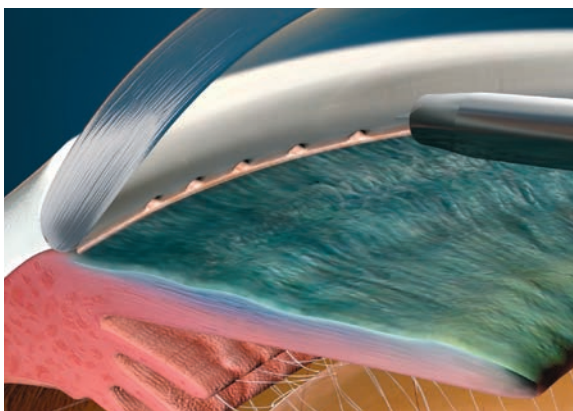
High Frequency Deep Sclerotomy™

HFDS is short for *High Frequency Deep Sclerotomy*. In micro-invasive glaucoma surgery (MIGS) HFDS creates a direct access from the anterior chamber to the Schlemm's canal, and further to the sclera. This way, the outflow resistance of the trabecular meshwork is significantly reduced. The abee glaucoma tip is led through a paracenteses of 1.2 mm and places six small sclerotomy bags in the iridocorneal angle by means of high frequency diathermy output. This enables a better outflow of aqueous fluid.

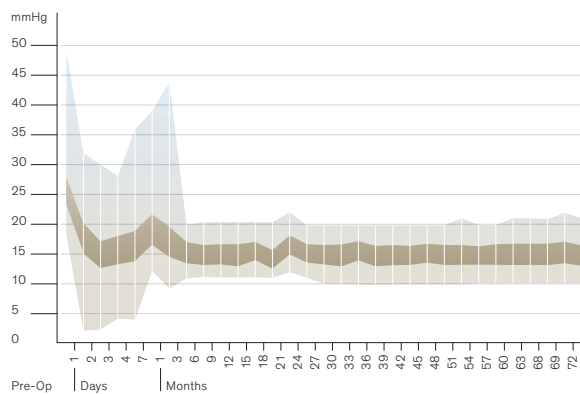
HFDS can be applied individually or in combination with cataract surgery. It is characterized by a very short intervention time. Bleb formation (filtration into the subconjunctival space) as well as fibroblast movement to the sclerotomy are effectively prevented. Neither will there be a corneal scar. Oertli's High Frequency Deep Sclerotomy ab interno boasts superb long-time results. An intervention with HFDS can be repeated if required.

Advantages of HFDS

- Ideal in combination with cataract surgery or as individual application
- Very short intervention time
- Excellent long-term results
- No bleb-formation, no corneal scars
- Surgery can be repeated
- Very low complication rate



Excellent long time results (72 months) after performed HFDS procedure*



*Bojan Pajic: Long-term Results of a Novel Minimally Invasive High Frequency Deep Sclerotomy Ab Interno Surgical Procedure for Glaucoma, European Ophthalmic Review, Volume 6, Issue 1, Spring 2012, ISSN 1756-1795

CATARACT SURGERY

FAROS™ IN CATARACT SURGERY

The Faros makes cataract surgery incredibly fast, safe and calm. Phaco has become even more precise and efficient thanks to easyPhaco. Capsulorhexis has gained a very gentle and careful alternative with HF capsulotomy. And, in glaucoma and vitreoretinal surgery, the Faros offers decisive advantages and superb features.

HF CAPSULOTOMY

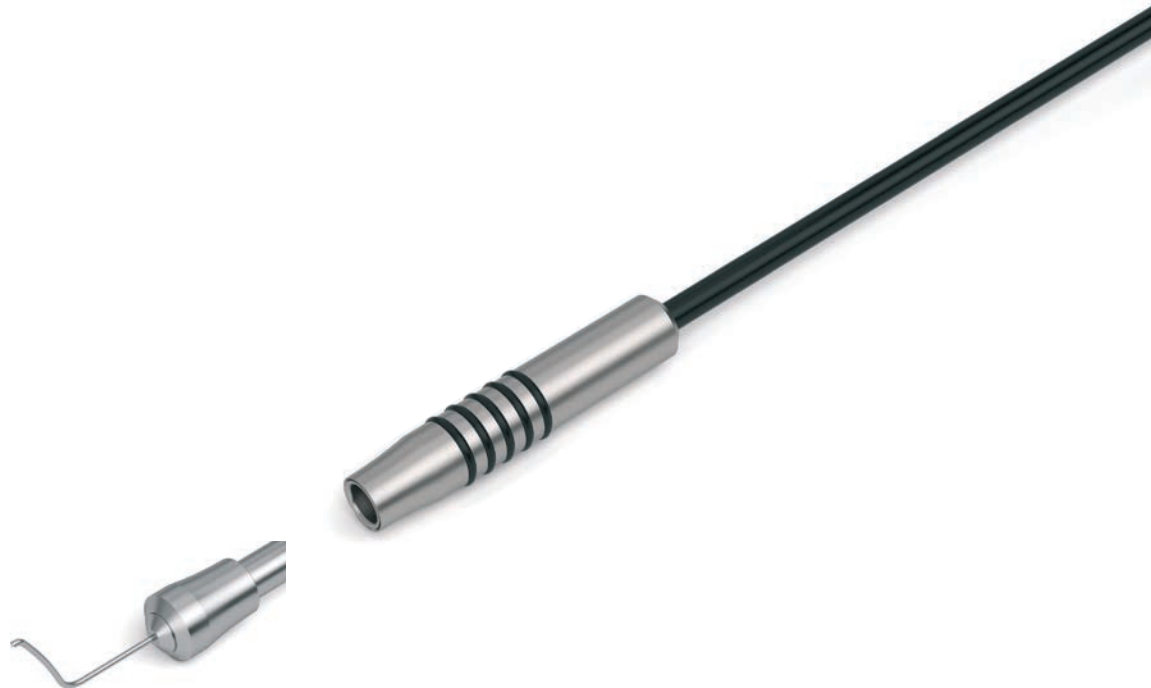
HF Capsulotomy

Since its launch in 1991, high-frequency capsulotomy has proven itself in hundred thousand of cases as the ideal method for opening lens capsules. By using high-frequency energy, the capsule bag can be melted very easily – totally without any of the usual tearing with forceps and needle. Gently sliding over tissues, and even under the iris using the capsulotomy tip and giving out diathermy power suffices. The capsule edge thus created meets the highest requirements – both intra-operatively and in the long run.

HF capsulotomy is particularly suited for indications such as no fundus reflex, hypermature cataract, traumatic cataract, intumescent cataract, and juvenile cataract. Even in the case of a narrow pupil, a rhexis that is out of control or rhexis phimosis, HF capsulotomy ensures the best results.

Advantages of HF capsulotomy

- Particularly gentle alternative to capsulorhexis
 - Melting of capsule bag without any tearing with forceps or needle
 - Extremely fine and directly controllable dosing of HF energy
 - Remarkably safe in difficult cases
-



EASYPHACO®

easyPhaco®

By making use of fluidics technology, easyPhaco enables immediate aspiration of the lens material and ensures perfect followability. The unique design of the tips ensure unsurpassed chamber stability, while at the same time, incredibly high holdability can be felt. Aspiration of fragments runs efficiently and without any repulsions. The focussed axial output of ultrasound energy ensures 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.

New easyPhaco® handpiece

The new easyPhaco handpiece offers surgeons optimized phaco performance over the entire product lifetime as well as more user comfort.

No compromises in phaco emulsification

The new piezo crystals ensure optimized phaco performance* over the entire product lifetime.

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®

- Unsurpassed chamber stability
 - Perfect followability thanks to precise flow control
 - Focussed axial output of ultrasound energy
 - Direct and gentle transmission of power to the tip
 - Efficient fragment aspiration without repulsion
 - Available from 1.6 mm up to 2.8 mm
-

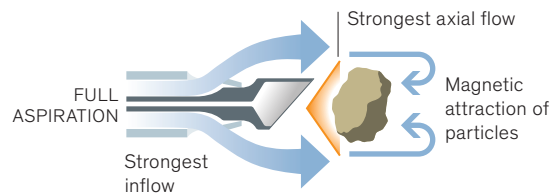


*internal wetlab measurements with aged handpieces, Oertli data on file.

EASYPHACO® TECHNOLOGY

No turbulence

The high vacuum setting of easyPhaco and a wide infusion path create a strong, axially directed flow. The result: no turbulence, no floating fragments, magnetic attraction of material and perfect followability.



No repulsion

The high vacuum setting of easyPhaco and the optimised bevel of the easyPhaco tip lock fragments firmly to the tip mouth with magnetic holdability, strong enough to prevent repulsion.



No laterally radiating energy

US energy is applied axially and totally absorbed within the high vacuum locked core material. This way repulsions can be effectively prevented.



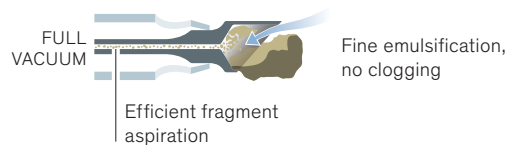
Perfect emulsification

High vacuum locking and optimised tip design provide superb coupling of US energy to the core material. Energy transfer to the core material is increased by a factor of 6. Hard and mature nuclei create no problems.



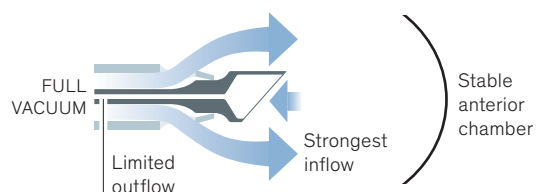
Efficient fragment aspiration

Finely emulsified nuclear particles are smoothly aspirated by high vacuum through the capillary aspiration channel. No risk of clogging.



No surge

Upon occlusion break, the capillary aspiration channel resists a sudden liquid flow while the wide infusion path provides constant IOP. The infusion capacity is 7 times higher than the aspiration volume. The AC remains almost unconditionally stable.



Phako Modulation

Faros offers four different performance modulation types that can be used in combination with easyPhaco or any other phaco technique. The ideal fluidics-support with easyPhaco reduces ultrasound application to a minimum in any case. Even with the traditional linear control, very short phaco time duration is achieved.

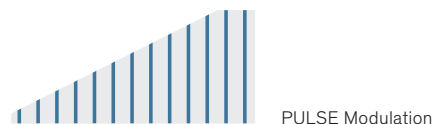
Continuous Linear

The standard method is very efficient. The surgeons have to adjust the power output themselves. The phaco power output corresponds to the pedal deflection.



PULSE Modulation

Reduces the ultrasound energy delivered. Pulse frequency (up to 40Hz) and cooling factor can be selected as desired and independently of the pedal setting. Pulse output corresponds to the pedal position.



BURST Modulation

The BURST modulation reduces the emitted ultrasound energy. The duration and intensity of the bursts (packages of energy pulses) are freely selectable and independent to the pedal position. The pause between the bursts is controlled by the pedal. The more the pedal is pressed, the shorter the pauses become.



IRRIGATION / ASPIRATION HF DIATHERMY

I/A with Safety Design

Oertli I/A instruments make irrigation and aspiration even safer than before. The Quick Tips with Safety Design have an extended shaft length, to enable better sub-incisional access. The reduced aspiration opening creates better occlusion power, increases safety during aspiration and provides for optimum stability of the anterior chamber. The well-thought-out positioning of the aspiration opening prevents unintentional gripping of the capsule bag. Especially in combined application with the SPEEP pump, Quick Tips offer the highest degree of safety.

Advantages of I/A with Safety Design

- Absolutely stable anterior chamber
- Easy sub-incisional accessibility
- Occlusion achieved quickly
- High safety standard during capsule cleaning
- Highly efficient in combination with SPEEP pump
- Available from 1.6 mm up to 2.8 mm

HF bipolar diathermy

The pioneering control systems of the surgical platforms by Oertli allow for extremely fine and directly controllable dosing of HF energy, optimally designed for proven applications in bipolar technology. Tips with their well-thought-out geometry and choice of material truly make diathermy to an instrument of precision. Even at low output, the high-frequency diathermy by Oertli creates an extraordinary effect. High-quality titanium hand pieces and innovative tips ensure both precision and safety.

Advantages of HF bipolar diathermy

- A function for various applications. Oertli capsulotomy, HFDS, endo diathermy, macro diathermy, diathermy forceps
- Fine and directly controllable dosing of HF energy
- High-quality hand pieces of titanium
- Tips with well-thought-out geometry and high-quality materials
- High efficiency already at a low power output



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
- Individual programmable for 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

- NEW:** Goodlight 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 are present in the whole world and gear ourselves towards the international market, in our hearts, we will always remain an independent family business with a good backbone, strong roots, solid financing and active 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.

Information on trademark protection

Oertli®, CataRhex 3®, easyPhaco®, easyTip®, SPEEP®, HFDS® as well as the Oertli logo are registered trademarks of Oertli Instrumente AG.

Faros®, OS 4®, DirectAccess®, Caliburn®, ParaProg®, True Flow Control™ and GoodLight LED™ are trademarks of Oertli Instrumente AG.

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



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

MAKING THE
DIFFERENCE
IN SWITZERLAND





As a Swiss family-owned company with a long tradition, we focus on what is important: 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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