

Breathtaking

CataRhex 3[®]

oerli[®]
SWITZERLAND





CataRhex  [®]

Strong, Beautiful, Unique – For You



No Limits

Maintaining and restoring eyesight is the noble task of ophthalmological surgery. Millions of people are waiting for it. It is therefore our goal to make cutting-edge, tested and proven cataract and glaucoma surgery accessible to everyone everywhere. CataRhex 3® has brought us tremendously close to our mission! CataRhex 3® gives you independence and safety in your work in any situation. And you remain in control of costs at all times.



Breathtaking and Unique

Friendliness and simplicity are the first striking features you notice about CataRhex 3® – but never underestimate its power! Requiring remarkably little space, CataRhex 3® provides the full functionality of a large unit as well as unprecedented reliability. Owning this device and working with it is simply a pleasure.







Newly designed from scratch without compromising on an excellent track record

15 years of operating and market experience as well as insights gained from millions of surgeries by thousands of surgeons throughout the world provide the background to this 3rd generation CataRhex device. The best eye-surgical technology for everyone – portable and payable!

A device which requires very little space is essential to surgeons! CataRhex 3® is truly portable. This is the main priority of the concept. The second priority is to offer all functions expected from a cutting-edge cataract and glaucoma surgery device – without compromise.

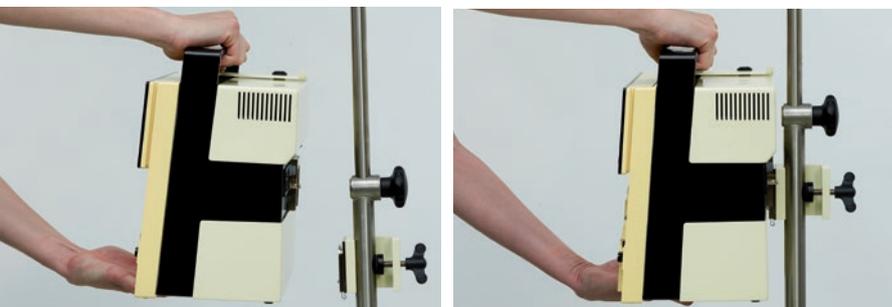
This results in endless advantages. CataRhex 3® requires no space; it is attached to the IV pole! This means that CataRhex 3® can easily be moved and, thanks to connection and control elements accessible from the front, it can also be placed in an optimal way. CataRhex 3® can be combined with all Oertli® surgical instruments, including the particularly ergonomic TITANO® line and all sterile single-use products.

The Simpler Solution – Very Convincing

CataRhex 3® is so easy to operate that very little training is needed. Thanks to the multifunctional pedal, less assistance is required. The fantastic pump system makes operating faster and the stability of the fluidics system makes bottle height adjustments superfluous.

A More Intelligent Concept – Truly Portable

Weighing as little as 5 kg, CataRhex 3® is truly portable. Being small and light means additional comfort for you and provides extra mobility and flexibility. When transporting the device, the device, including pedal and instruments, easily fits into any pilot case. During operation, it can be attached to any IV pole. At the same time, it is robust and reliably works with voltages from 100 to 240 V in any environment.



Intelligent Technology

Never has there been so much intelligence, technology and efficiency in so small a device. CataRhex 3® works with direct and reliable processor control of the latest generation. The clever physics concept of the fluidics system enables safe and efficient work even at very high settings. Thanks to easyPhaco®, accurately controllable ultrasound is available for every degree of hardness. The device is controlled by DirectAccess®: the small cassette with integrated pressure sensor enables total sterility. The integrated HFDS® glaucoma function now enables combined MIGS.

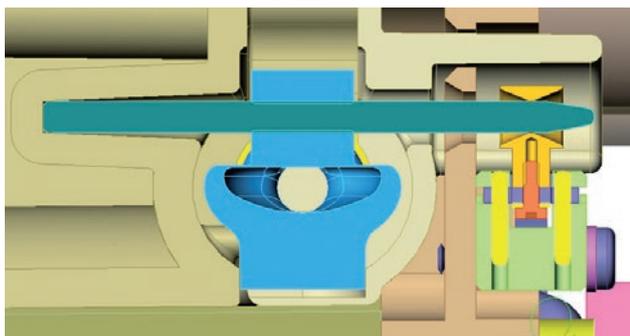
CataRhex 3® is the third generation of a highly reliable success device. Though tried and tested in millions of surgical procedures, it has been improved yet again. The entire processor and electronic technology is even faster and more efficient, the control panel is larger and provides more information and the flow control has been made even more precise. An integrated compressor enables operation of the Twinac dual pneumatic cutter. The innovative CortexMode™ brings unprecedented precision and efficiency with cortex removals and capsule cleaning. HFDS® ab interno paves the way for efficient MIGS. CataRhex 3® can take on any large unit and always wins when it comes to efficiency and cost-effectiveness. An anterior segment device of the latest generation which includes the following functions:

- Irrigation/aspiration
- Continuous irrigation
- CortexMode™
- easyPhaco® technology
- Multimode phaco
- Occlusion mode phaco
- CMP Cool Microincision Phaco
- Sub2 mm Microincision surgery
- Precise vitrectomy
- Bipolar diathermy
- RF capsulotomy
- HFDS® ab interno glaucoma surgery
- Femto lens aspiration

Fantastic Fluidics

Fluidics is the secret for both the precision and power of the CataRhex 3® device with I/A (CortexMode™), easyPhaco® and vitrectomy. Flow can be controlled in steps of 0.1 ml. The device loves high setting values! easyPhaco® offers unprecedented chamber stability in any situation. In the CortexMode™, the vacuum can immediately be built up and the flow can nevertheless be precisely controlled. And the tried and tested vacuum sensor that has been integrated into the tubing system monitors everything reliably and without delay.

Patent-registered sensor principle





Fast, Efficient, Safe

Thanks to „embedded technology“ CataRhex 3® needs no windows or PC operating system. As a result, software malfunctions are completely eliminated and enormous speed and reliability are guaranteed. The integrated USB interface enables device updates at any time. Efficient processors survey and control the device functions hundreds of times per second in accordance with the commands and instructions given!

Programmable in No Time, Ready at Once

The entire scope of performance of the CataRhex 3® device is individually at the disposal of 20 different surgeons. Everyone has their own memories and can determine their own pre-settings in the background by means of ParaProg®. All surgical steps can thus be individually adjusted and can be retrieved by pressing the button. This means that CataRhex 3® is always ready without any lengthy start-up and / or setting procedures. Even following a power cut, everything is ready for action again after only 5 seconds.

- Particularly easy DirectAccess® operating surface with immediate access to all functions
- Value setting by pressing the button during operation
- Retrieving multi-mode programmes by pressing the button or the pedal
- A clearly presented control panel ensures fast handling
- Learning how to operate the device hardly requires any effort at all

Anterior Vitrectomy, also via Pars Plana!

The pneumatic Twinac cutter works from a precise single cut up to the efficient high speed use with 1200 cuts per minute, precisely in accordance with pedal commands. The compressor is located in the inside of the CataRhex 3® device. A pressure air connection is not required!

20G, 23G and 25G are at your disposal; sterile, for single-use application and always sharp.

With the Caliburn® PMS system, anterior vitrectomies can also be made transconjunctivally with access via the Pars Plana.



For Comfortable and Precise Handling

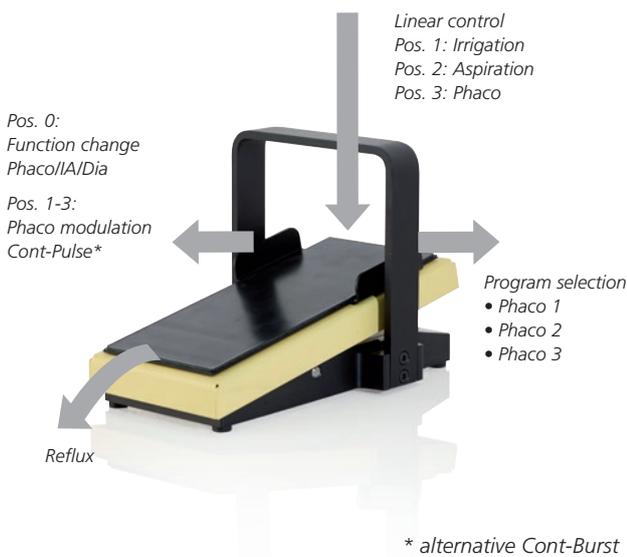
Light displays radiate through the dark glass of the control panel providing precise information on operating values and settings. Adjust your settings with command keys that have a pleasant feel to them. The DirectAccess® surface makes menu navigation superfluous. One precise click and CataRhex 3® is in the required operation mode. There is a gentle, light and precise feel to the multifunctional pedal. Move it with your foot to execute a number of different commands. Fluidics and instruments respond precisely and without delay to your foot pedal commands given – a great advantage in modern cataract surgery.



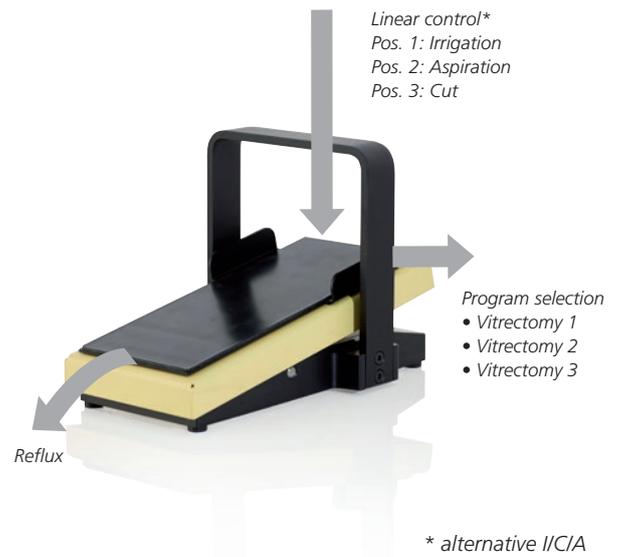
- All instruments with their unmistakable coding are plugged in from the front
- The sterile tubing set is inserted from the front
- The surgeon can move the pedal into optimal position
- The deflectable control panel allows good visibility for both surgeon and OR nurses
- Switching between operations requires very little time and movements
- The ergonomic and cleverly thought-out control panel ensures safety

Each of the well positioned and easily recognisable control panel keys is always allocated to the same function, which is immediately activated by a click on the key. There is no faster and clearer way. This is the principle of DirectAccess®. Various functions are individually stored for up to twenty surgeons and their operating techniques in the ParaProg® background programme. The surgeons or their assistants can store their preferred settings at any time by pressing the button.

Example of pedal setting: phaco linear



Example of pedal setting: vitrectomy linear



CataRhex 3® Control Pedal

There are four scopes of movement for fine linear control of all instruments, for retrieving information from the memories and for switching functions on and off. The pedal is waterproof, requires very little space, weighs only 2.6 kg, can be moved with the foot and guarantees fatigue-free handling.

The CataRhex 3® multifunctional pedal enables comprehensive and precise control with simple foot movements.



Discover the Magic of easyPhaco®!

Fluidics on! Let the elaborate fluidics concept of the Oertli system work for you! Even though it sounds implausible – Oertli easyPhaco® Technology brings to you unprecedented chamber stability, perfect emulsification and efficient fragment aspiration. And all of this without the undesired side effects hitherto caused by high vacuum. Intelligent and drastically improved fluidics properties – Oertli easyPhaco® Technology brings visible and noticeable advantages:

- no turbulence and efficient aspiration without repulsion of fragments
- concentrated axial ultrasound energy delivery for perfect emulsification
- no vacuum surge thanks to a capillary aspiration path



easyTip® CO-MICS

Ideal for 1.6-1.8 mm incisions.

Absolutely astigmatism-neutral sub2mm surgery without making any compromises in regard to efficiency and chamber stability. Work with a vacuum of 350 mmHg and 30 ml flow.

easyTip® 2.2 mm

Ideal for 2.2-2.4 mm incisions.

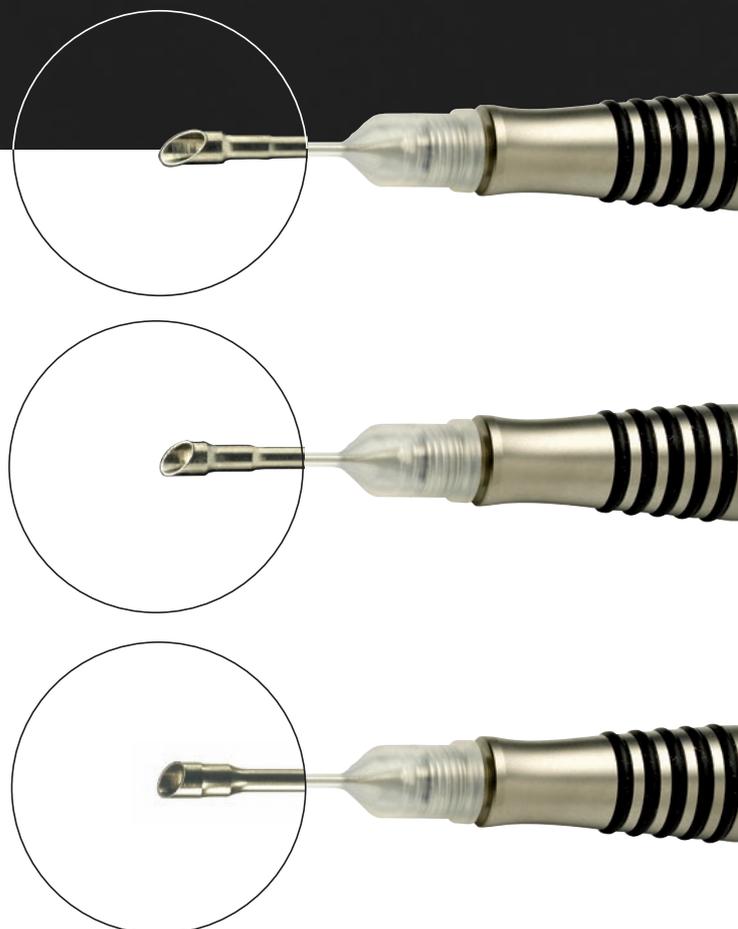
Turn the vacuum on to 600 mmHg and 50 ml flow and enjoy absolute chamber stability and efficient emulsification.

easyTip® 2.8 mm

Ideal for 2.8-3.2 mm incisions.

Work with maximum vacuum and flow and do not worry about the height of the bottle. You can emulsify even the hardest nuclei without any problems or clogging.

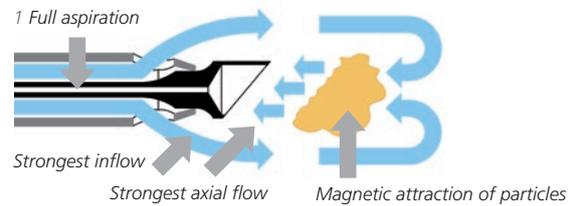
easyPhaco® is a development of Oertli R&D in scientific cooperation with Prof. Rupert Menapace, Vienna.



easyPhaco® Technology

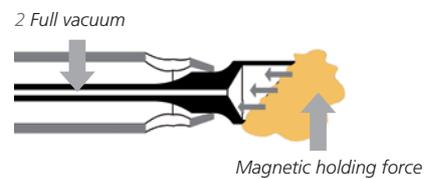
1 No Turbulence

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.



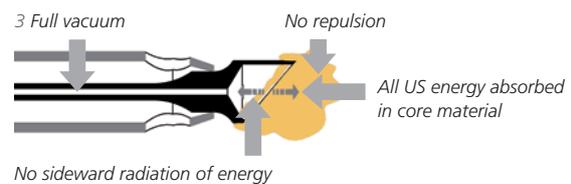
2 No Repulsion

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.



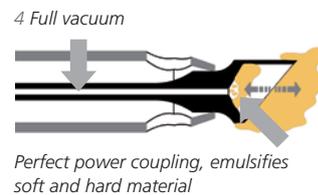
3 No Laterally Radiating Energy

US energy is applied axially and totally absorbed within the high vacuum locked core material.



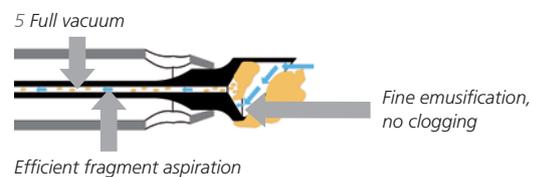
4 Perfect Emulsification

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.



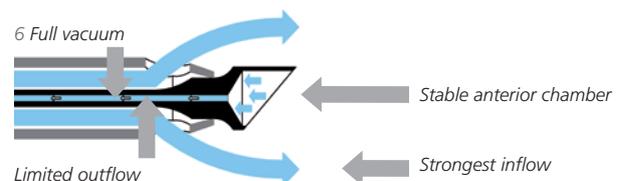
5 Efficient Fragment Aspiration

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



6 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.



Phaco Modulation

CataRhex 3® 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.



Continuous linear

PULSE modulation

BURST modulation

* PULSE modulation is recommended for lowest energy consumption.

Femto Aspiration

The femto laser promises to take over a number of operational steps in cataract surgery in the future – simply marvellous! There is only one exception: aspiration of nucleus and cortex and polishing the capsule. This is where CataRhex 3® is at its best! easyPhaco® high fluidics settings and burst mode make phaco energy for the aspiration of pre-fragmented nuclei go down up to zero, they provide tremendous speed and keep the capsule low. With CortexMode™, execution of the demanding cleaning procedure of the capsule following femto application is especially safe, thorough and efficient. CataRhex 3® is the best partner for every femto laser!



Bipolar Functions: More than Simply Diathermy

Microincision surgery also requires a modern bipolar function. Oertli® has been a pioneer in this field since 1973. CataRhex 3® offers the latest developments:

- Linear macro-haemostasis
- Coaptation of the conjunctiva
- RF capsulotomy
- HFDS® ab interno MIGS glaucoma surgery

Klöti RF Capsulotomy: Safety for Difficult Cases

Few talk about it, many use it! Despite capsulorhexis and means of capsule staining, the Klöti RF capsulotomy is always a welcome method that has proven its efficiency in hundreds of thousands of cases since 1991. For RF capsulotomy melts the capsular bag. There is no tearing with forceps or needle. Simply gliding over the tissues with the capsulotomy tip is enough. Even under the iris! Long clinical experience has shown that the characteristics of the emerging edge of the capsule meet all requirements, intra-operative and long-term. Essential indications for RF capsulotomy are:

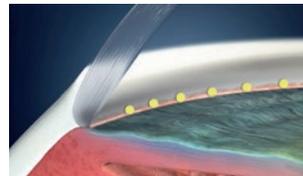
- No fundus reflex
- Hypermature cataract
- Traumatic cataract
- Intumescent cataract
- Juvenile cataract
- Narrow pupil
- Rhexis phimosis



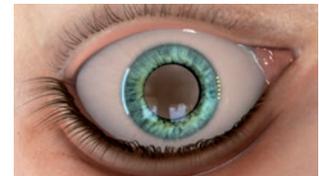
HFDS® ab interno MIGS Technology

With this High Frequency Deep Sclerotomy ab interno method direct access can be established from the anterior chamber to Schlemm's canal and further to the sclera, whereby the effluent flow resistance of the trabecular network is avoided. The bipolar abee® ab interno tip is put through the paracentesis (1.2 mm) and by means of diathermy six sclerotomy pockets (0.3 x 0.6 mm) are formed through the trabecular network and the Schlemm's canal.

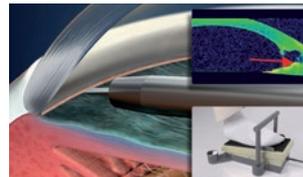
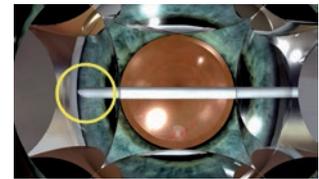
- Ideal in combination with cataract surgery
- Has been used for over 10 years
- Excellent long-term results (72 months)
- Requires a gonioscopic lense
- No bleb formation
- Operation can be repeated (no conjunctiva scars)
- Very short intervention time



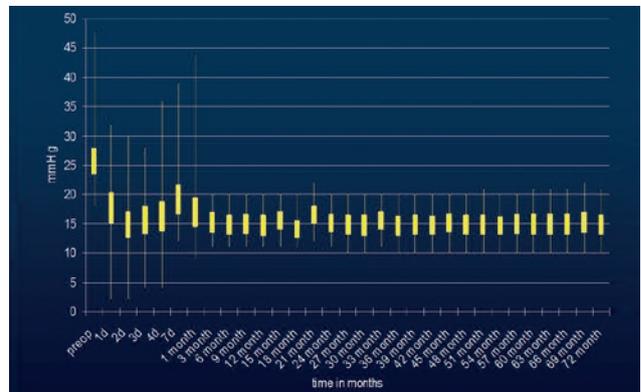
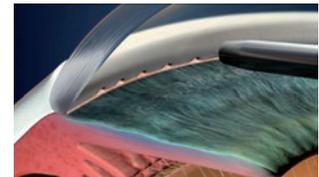
Point of application



Position of abee® tip



How to set the pockets



Primary open-angle glaucoma average level of IOP

Literature

Pallas G, Pajic B. 1999: Die Skleralthalamektomie (STE): Stabile post-operative Augendruckregulierung beim Offenwinkel- und Kapselhäutchenglaukom. Klein Monatsbl Augenheilk 2000; 216:256-260

Pajic B, Pallas G, Gerding H, Böhnke M.: A novel technique of ab interno glaucoma surgery: follow-up results after 24 months. Graefes Arch Clin Exp Ophthalmol 2005 Jul; 19:1-6

Pajic B.: High-Frequency Deep Sclerotomy, Cataract & Refractive Surgery Today, October 2011



Module Build-up

Fluidics System

- Peristaltic pump system
- Tubing system with integrated enclosed pressure sensor
- Auto venting
- Back flow can be limited

Operation

- Control panel with glass cover, transparent illuminating displays and silicone keys
- Linear multifunctional pedal
- Individual programming with ParaProg® for 20 surgeons
- Self-test and preop function
- Audio signal

I/A Function

- 2 programme memories with DirectAccess®
- Vacuum-override function
- Continuous irrigation
- CortexMode™

Phaco Function

- 3 programme memories with DirectAccess®
- Ultrasound phaco with auto tuning
- Hexadisq® handpiece with 6 piezo plates
- Linear, PULSE, BURST and panel mode
- Occlusion mode
- easyPhaco®, CO-MICS and MICS technology

Anterior Segment Vitrectomy

- 3 programme memories
- Twinac dual pneumatic guillotine cutter
- 20G, 23G, 25G
- Linear 30 to 1200 cuts/minute
- Single cut
- Irrigation/aspiration/cut
- Irrigation/cut/aspiration

Bipolar functions

- Macro-diathermy
- Conjunctiva coaptation
- RF capsulotomy
- HFDS® ab interno MIGS Technology



www.oertli-catarhex3.com



Disclaimer

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