



Find all our products  
on [piezotome.com](http://piezotome.com)

SATELEC®

These medical devices are manufactured according to current regulations and standards (IEC 60601-1) and according to certified ISO 13485 Quality Management System.



PIEZOTOME SOLO  
PIEZOTOME 2  
IMPLANTCENTER 2  
SERVOTOME

**The perfect alliance  
Power & Safety**

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# PIEZO-ULTRASONIC SURGERY

*The future of Oral surgery and implantology*

Dear colleagues,

The introduction of powerful and well-engineered piezo-ultrasonic devices and working tips has opened up completely new paths and surgical techniques for implantologists, Oral Maxillofacial Surgeons, and surgeons in other specialties for the management of hard and soft tissue.

Piezo-ultrasonic surgery offers atraumatic surgery (something laser once promised) a never before seen ease and precision in surgical procedures, and an almost blood-free operative field. Some additional benefits include faster healing with significantly less swelling, pain and complications.

In addition to completely new atraumatic surgical protocols, the ultrasonics themselves also induce a more rapid onset of healing and faster healing.

Ultrasonic surgery helps implantologists and patients in private practice avoid augmentative surgery that, in the past, could only be performed in a hospital setting. Surgical techniques such as vertical and horizontal expansion of the alveolar crest and sinus elevation which failed in the past because of deficient tools, can now be performed successfully and predictably with reduced time, costs, and post-operative pain.

Like all new technology, ultrasonic surgery requires thorough and comprehensive training. The procedures for piezo-ultrasonic surgery differ in principle from the procedures with rotary instruments and should not be used in a similar fashion. It is therefore recommended to study on the physical principles of ultrasound and all its effects (controlled and modulated vibrations, cavitation effect) before using the device for the first time and to complete a certified piezo-ultrasonic surgery course.



With that in mind, I wish you much success in the new age of piezo-ultrasonic surgery!

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President of the International Academy for Ultrasonic Surgery and Implantology - [www.iausi.org](http://www.iausi.org)  
Member of the TKW Research Group - [www.perfectsmileandface.com/TKW.html](http://www.perfectsmileandface.com/TKW.html)

# POWERFUL ULTRASONICS SURGERY BY ACTEON®

ACTEON® surgical units are highly reliable tools, specially designed to meet everyone's priority of improving patient care.

Their unmatched performance combined with the practitioner's clinical expertise paves the way for more precise, faster and painless pre-implant surgeries.

# POWERFUL ULTRASONICS

# ULTRASONICS CLINICAL BENEFITS

POWERFUL ULTRASONICS

## EVIDENCE BASED CLINICAL BENEFITS\*

### Safety



- ☐ Cutting selectivity
- ☐ Soft tissue preservation

### Minimal bone loss



- ☐ Fine and precise cut
- ☐ Minimally invasive

### Great comfort



- ☐ Smooth and effortless cut
- ☐ Increase tactile feel
- ☐ Easy bone access

### Postoperative



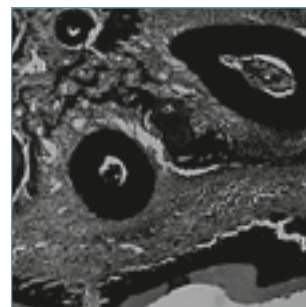
- ☐ Reduced pain
- ☐ Less analgesics
- ☐ Limited oedema

### Optimal visibility



- ☐ Cavitation: microbubbles releasing oxygen
- ☐ Hemostatic effect

### Superior healing



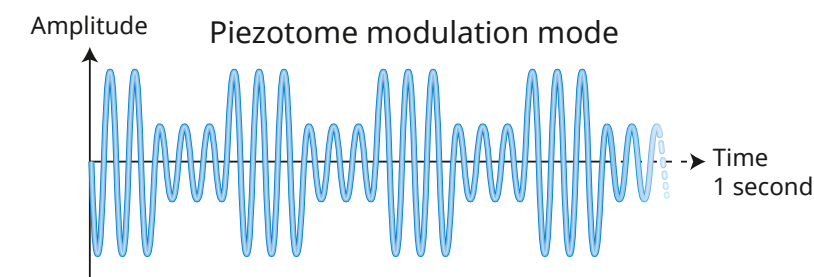
Histological section: Dr Serge Dibart

- ☐ Fast recovery
- ☐ Bone densification



## A SHARED VISION

*Technological know-how for great clinical benefits*



Due to the selected frequencies ranging between 28 and 36 kHz, in Piezosurgery mode, the tips are active on hard tissue, limiting the risk of soft tissue injury. The modulation of the piezoelectric signal (alternating between high and low intensity) enables the tissue to recover and the cells to regenerate in the best possible way.



#### \* ■ Compendium ULTRASONIC PIEZO SURGERY

■ In Vivo Assessment of Bone Healing following Piezosurgery® Ultrasonic Instrumentation, J. Reside, E. Everett, R. Padilla, R. Arce, P. Miguez, N. Brodala, I. De Kok, S. Nares, Clinical Implant Dentistry and Related research, June 2013.

■ Ultrasonic Piezosurgery® surgery: is it a benefit for our patients and does it extend surgery time? A retrospective comparative study on the removal of 100 impacted mandibular 3<sup>rd</sup> molar, A. Troedhan, A. Kurrek, M. Wainwright, Open Journal of Stomatology, 2011.

■ Piezosurgery® Clinical Booklet.

## UNIT, HANDPIECE AND TIPS ARE ONE

*ACTEON® Piezotome® ultrasonic power generators are piloted by Newtron® technology, patented electronics.*

### W PRESERVATION

#### Soft tissue preservation

- Security: non active on soft tissue (modulated piezo signal)

#### Bone preservation

- Highly precise cut
- Linear piezoelectric vibrations
- Controlled and regular tip amplitude

### W EFFICACY

#### Frequency adjustment

- Maximal performance of each tip
- Optimal and continuous efficiency whatever the load applied

#### Power regulation

- Constant performances even in dense bone
- Effortless cut without pressure

### W COMFORT

#### For both patient and practitioner

- Secure with effortless cut
- Better tactile sense
- Reduced post-operative pain

## ACTEON®, MAKES THE DIFFERENCE

*Unmatched performance, security and design to pave the way to more precise, faster and painless surgeries such as osteotomies, osteoplasties, sinus lift, crest expansion, extraction and much more.*

### PUMP BENEFITS

- Constant flow
- Quiet operation
- Easy insertion of the irrigation line



### POWERFUL HANDPIECE

- 6 ceramic rings
- Boosted handpiece
- No overheating



### SURGICAL TIPS

- Numerous exclusive tips
- Great longevity
- Surgical steel strengthened by surface treatment
- Excellent durability to sterilization cycles



# SIMPLY INDISPENSABLE

# PIEZOTOME SOLO

POWERFUL ULTRASONICS

## THE ESSENTIAL

*Piezotome® Solo, the best of ACTEON® technology in a compact device.  
It integrates the most powerful, reliable and safe components dedicated to ultrasonic pre-implant surgery.*

## Intuitive

The Piezotome® Solo is incredibly easy to use thanks to its straightforward settings.



Power setting



Irrigation



Purge



Memorization

## A complete offering

Unit delivered with handpiece and Essential kit.



Multifunction  
footswitch

LED or non LED  
handpiece available



Essential kit including  
6 fundamental tips: BS1S,  
BS4, LC2,  
SL1, SL2, SL3  
ref F87528

Experience power  
and simplicity in  
ultrasonic bone  
surgery



Piezotome® Mode

Experience - Power - Simplicity

## BEYOND PERFECTION

*With Piezotome® 2, take full advantage of ACTEON®'s ultrasonic expertise in dental as well as in surgical piezoelectric treatments.*

### PIEZOTOME® Mode

*Active on hard tissue, non-invasive on soft tissue*

- ☐ Osteotomies, Osteoplasties, Piezocision™
- ☐ Lateral and crestal sinus lift
- ☐ Crest expansion
- ☐ Syndesmotomy
- ☐ Crown lengthening

### NEWTRON® Mode

*A full, efficient and safe care range*

- ☐ Prophylaxis
- ☐ Periodontics
- ☐ Implant care
- ☐ Endodontics
- ☐ Conservative and restorative dentistry

## Saves more time than ever



- ☐ PiezoTouch™ : Progressive power regulation in Piezotome® and Newtron® modes
- ☐ Main functions are accessible by the foot
- ☐ Weighted down, stable and easy to move, thanks to its arch



- ☐ Large 5.7", operator-oriented touch-sensitive screen
- ☐ Direct access to all parameters
- ☐ Easy and storable settings



- ☐ Boosted: 6 ceramic rings
- ☐ Extra bright: 100,000 Lux
- ☐ Cold light: no overheating and better tissue distinction

ACTEON®'s ultrasonic expertise in dental and surgical treatments



## 2 modes available

**Piezotome®**  
Pre-implant bone surgery



**Newtron®**  
Dental tooth treatment



## THE ALLIANCE OF TECHNOLOGIES

*The Implant Center™ 2 combines, in a complete table-top unit, the most advanced ultrasonic and rotary technologies, ensuring total independence in increasingly diverse clinical areas.*



### Micro-motor LED

- ☐ Durable, precise and silent
- ☐ Fully sterilizable
- ☐ Corrosion resistant (induction)
- ☐ No lubrication needed

### Customizable

- ☐ Four pre-set easily customizable programs
- ☐ Intuitive settings can be quickly adjusted during surgery



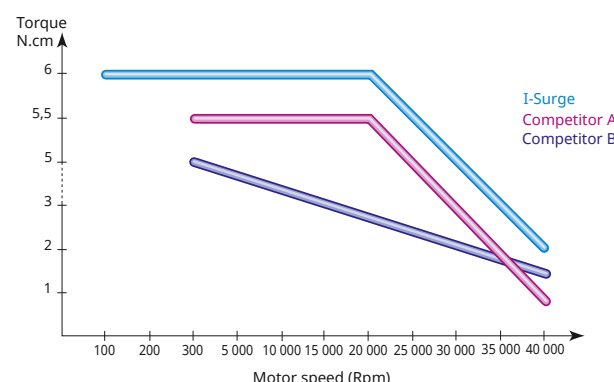
PiezoTouch™: progressive power regulation in Piezotome®, I-Surge™ and Newtron® modes

### Variety

- ☐ Compatible with all light and regular contra-angles on the market (E-type – ISO 3964 connection)
- ☐ High torque and wide speed range for all kinds of treatment
- ☐ Ready for implant, perio and endo contra-angles

### Stability

- ☐ Perfect balance between torque and speed for unmatched stability
- ☐ Maximum torque: 6Ncm up to 24,000Rpm
- ☐ Maximum torque at instrument end (20:1): 120Ncm
- ☐ Motor speed: 100 - 40,000Rpm



The alliance of technologies for fast and secure bone surgeries



## 3 modes of operation

**I-Surge™**  
Implantology motor



**Piezotome®**  
Pre-implant bone surgery



**Newtron®**  
Dental tooth treatment



# MANY EXCLUSIVE TIPS

POWERFUL ULTRASONICS

## INNOVATIVE AND BROAD TIP RANGE, WITH SHAPES ADAPTED TO CLINICAL CONDITIONS



### BONE SURGERY

#### Osteotomy/Osteoplasty

Clean and thin cut for maximal bone volume  
*BS1S, BS2L II, BS2R II, BS4 II, BS5 II, BS6 II tips*

*BS Kit: ref F87509*  
*BS Pack\*: ref F87500*



### CREST SPLITTING

Rapid and minimally invasive technique for controlled expansion  
*CS1 II, CS2 II, CS3 II, CS4 II, CS5 II, CS6 II tips*

*CS Kit: ref F87567*  
*CS Pack\*: ref F87560*



### INTRALIFT™

#### Crestal Sinus Lift

Minimally invasive surgery for smooth sinus floor fracture  
*TKW1 II, TKW2 II, TKW3 II, TKW4 II, TKW5 II tips*

*Intralift Kit: ref F87536*  
*Intralift Pack\*: ref F87530*



### EXTRACTION

#### Syndesmotomy

For maximum bone preservation  
*LC1 II, LC1-90° II, LC2 II, LC2L II, LC2R II, Ninja™ tips*

*Extraction Kit: ref F87546*  
*Extraction Pack\*: ref F87540*



### PIEZOCISION™

#### Accelerated Orthodontic Surgery

Minimal incisions, minimally invasive  
*PZ1, PZ2L, PZ2R, PZ3 tips*

*PZ Kit: ref F87576*  
*PZ Pack\*: ref F87570*



### SINUS LIFT

#### Lateral Sinus Lift

Unbeatable comfort:  
selective and hemostatic cut  
*SL1 II, SL2 II, SL3 II, SL4 II, SL5 II tips*

*SL Kit: ref F87519*  
*SL Pack\*: ref F87510*



### CROWN EXTENSION

#### Crown Lengthening

Incomparable precision and accessibility  
*BS6 II, CE1 II, CE2 II, CE3 II tips*

*CE Kit: ref F87554*  
*CE Pack\*: ref F87550*



### ESSENTIAL

The 6 fundamental ACTEON® Equipment tips  
*BS1S, BS4 II, SL1 II, SL2 II, SL3 II, LC2 II tips*

*Essential Kit: ref F87528*  
*Essential Pack\*: ref F87529*

\* Including: one sterilization box, one Piezotome® LED handpiece, one tips kit, one dynamometric wrench

# CLINICAL VERSATILITY



## BS1L

Long saw (15mm) intended for facilitating ramus grafts

ref F87527



## BS1 RD

Rounded saw, Large 280° active surface

ref F87557



## TKW6

Tip Ø 4.2mm for sinus membrane elevation recommended for combined techniques

ref F87538

## DENTAL TREATMENTS

Get access to nearly 80 different tooth treatment tips, with exclusive designs, alloys and coatings for clinical versatility.

## Newtron® Perio Pack

Including: one sterilization box, one Newtron® LED handpiece, one Newtron® Perio kit (H1, H2L, H2R, H3, H4L, H4R), one dynamometric wrench ref F87520

## Newtron® Pack

Without tip's kit - ref F87524



# ACCESSORIES

POWERFUL ULTRASONICS

## RELIABLE AND AUTOCLAVE RESISTANT

Durability comes with a good technical environment organization and an adapted cleaning, decontamination and sterilization process.

## Irrigation line

External extending the handpiece life  
2 irrigation lines available

- ☐ Autoclave (1line + 10 perforators - ref F57374), (line - ref E57374), (10 perforators - ref F57372)
- ☐ Single use delivered sterile (set of 10 - ref F57370)



## Perfect asepsis

- ☐ Easy accessories maintenance
- ☐ Easy access to all parts for disinfection



## Fast assembly system

- ☐ Robust stainless steel dynamometric wrench
- ☐ Saves precious time during surgery



ASSOCIATED DOCUMENTS



Be part of our Piezotome® training sessions and workshops. Numerous trainings are available in collaboration with dental associations. Check our website and contact ACTEON® worldwide.

|                                              | Piezotome® Solo                                                                                                                                                                                                          | Piezotome® Solo LED                                                                                                                                                                                                          | Piezotome® 2                                                                                                                                                                  | Implant Center™ 2                                                                                                                                                                                |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit features                                | Piezo ultrasonic surgery unit                                                                                                                                                                                            | Piezo ultrasonic surgery unit                                                                                                                                                                                                | Piezo ultrasonic surgery + dental treatment (Perio, endo, etc) unit                                                                                                           | Implantology motor + Piezo ultrasonic surgery + dental treatment (Perio, endo, etc) unit                                                                                                         |
| Equipment                                    | <b>Delivered with:</b><br>Handpiece,<br>Handpiece support,<br>Essential kit (6 tips),<br>Dynamometric wrench,<br>Multifunction footswitch,<br>Irrigation bracket,<br>2 autoclavable irrigation lines,<br>15 perforators. | <b>Delivered with:</b><br>LED Handpiece,<br>Handpiece support,<br>Essential kit (6 tips),<br>Dynamometric wrench,<br>Multifunction footswitch,<br>Irrigation bracket,<br>2 autoclavable irrigation lines,<br>15 perforators. | <b>Delivered with:</b><br>Multifunction and progressive footswitch,<br>2 irrigation brackets,<br>2 handpiece supports,<br>2 autoclavable irrigation lines,<br>30 perforators. | <b>Delivered with:</b><br>LED micromotor,<br>Multifunction and progressive footswitch,<br>2 irrigation brackets,<br>2 handpiece supports,<br>2 autoclavable irrigation lines,<br>30 perforators. |
| Unit dimensions (W x H x D and weight)       | 378 x 136 x 306mm<br>3.7kg                                                                                                                                                                                               | 378 x 136 x 306mm<br>3.7kg                                                                                                                                                                                                   | 473 x 150 x 340mm<br>5kg                                                                                                                                                      | 473 x 150 x 340mm<br>5kg                                                                                                                                                                         |
| Footswitch dimensions (W x H x D and weight) | 173 x 140 x 176mm<br>1kg                                                                                                                                                                                                 | 173 x 140 x 176mm<br>1kg                                                                                                                                                                                                     | 311 x 181 x 209mm<br>3.5kg                                                                                                                                                    | 311 x 181 x 209mm<br>3.5kg                                                                                                                                                                       |

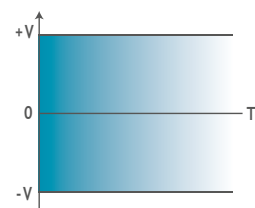
# PERFORM ORAL SURGERY ON SOFT TISSUE QUICKLY, PRECISELY AND SAFELY

D'Arsonval proved that high frequency currents above 100kHz have no harmful effects on humans. They will only have a thermal action. The section action is determined by the speed of heat produced which will induce cell vaporization. The coagulation action generates an electric discontinuous wave which will create less heat.

The current quality plays an important role on the cutting and coagulation effect. With more than 30 years of high frequency experience, ACTEON® develops efficient, secure, with unique features unit.

## Fully rectified and filtered

- Total respect of biological tissues:
  - A fine and even cut with no side effects
  - Good-quality healing

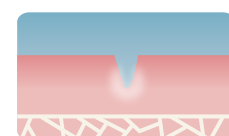


## Incision and coagulation

- The only high frequency scalpel on the market that enables incision depth and coagulation to be controlled separately
- Perfect control of treatment:
  - Limiting the risk of burning the tissues
  - Efficient control of bleeding allows excellent visibility of treatment area



Incision



Incision and coagulation

# ELECTROSURGERY

## INCISION & COAGULATION

**30 watts is enough for greater efficiency.**

### Technological performances

- ☐ Controlled power
- ☐ Reliable and reproducible setting
- ☐ Safer with maximal efficacy
- ☐ Less energy loss

*Controlled power for all electrosurgical applications*

- Incisions/Excisions
- Frenectomy
- Gingivoplasty
- Coagulation
- Abscess incision
- Exposure of impacted/retained teeth
- Gingivectomy
- Etc.

### Conductive bracelet



ACTEON®'s choice for a bracelet system is the best compromise for safety and convenience:

- ☐ Easy to install to enhance patient acceptance
- ☐ In direct contact with the patient's skin
- ☐ Easily disinfected
- ☐ Adjusted to a contact region with a low resistance
- ☐ Perfect size to avoid concentration of heat
- ☐ More security: in compliance with new standards

### Reliable and compact unit

- ☐ Very compact
- ☐ User-friendly for a fast setting up
- ☐ Only two potentiometers (incision and coagulation)
- ☐ Settings can be very finely adjusted according to the different types of tissues encountered

### Electrode holder

- ☐ Light and autoclavable
- ☐ Simple-to-mount electrodes
- ☐ The electrode is insulated by a sheath, only the active part is in contact with the soft tissue

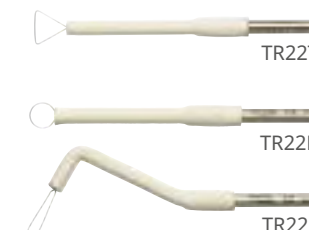


### Classification of electrodes according to their size and hemostatic capacity

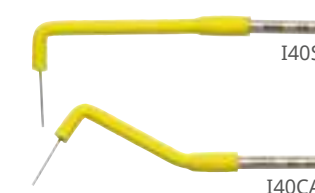
Incision  
Ø 0.22mm



Excision  
Ø 0.22mm



Coagulating incision  
Ø 0.40mm



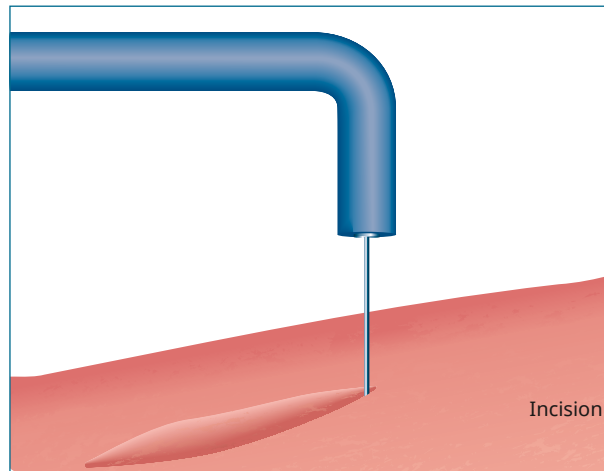
Fulguration and coagulation  
Ø 1mm / Ø 2.5mm / Ø 3.2mm



# TECHNIQUES OF USE

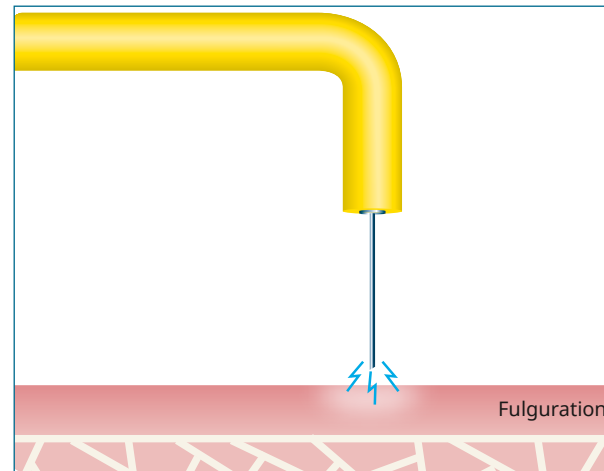
# CLINICAL CASES

ELECTROSURGERY



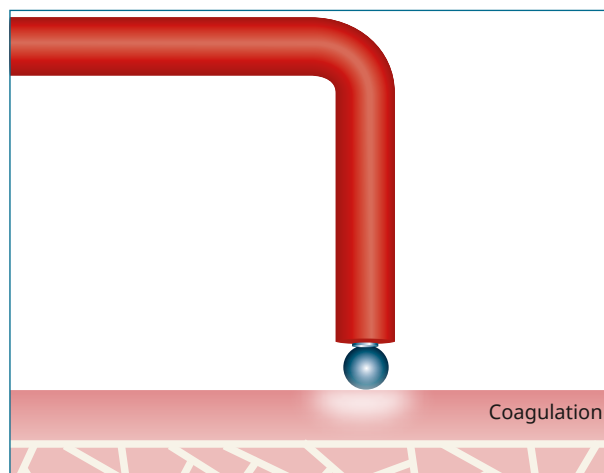
## Electrosection

Vaporizing the tissue with the active electrode makes it possible to cut quickly without damaging the edges of the incision.



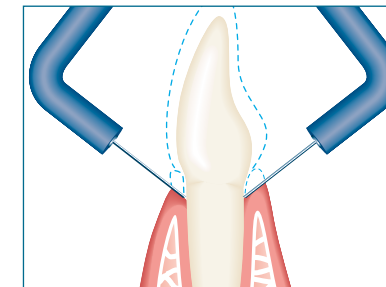
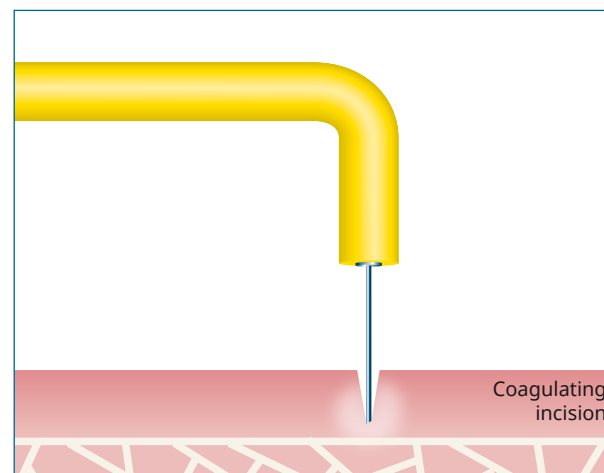
## Fulguration

Makes it possible to surface coagulate gingival tissue while protecting the underlying layer.



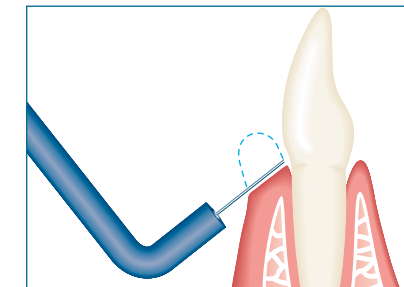
## Coagulation

Concentrating energy at the surface of a massive electrode makes it possible to diffuse the heat to the surrounding tissue and produce instantaneous hemostasis.



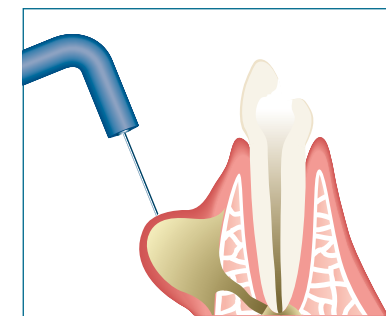
## Gingival Eviction

One of Servotome®'s best recommended uses; can easily be combined with the Expasyl® technique (ACTEON® Pharma).



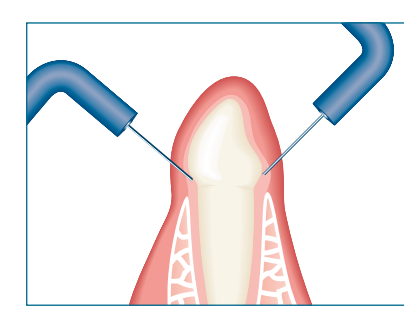
## Gingivectomy

For extremely precise tracing of the ideal gingival line.



## Abscess incision and drainage

Fast and deep treatment.



## Exposure of impacted tooth

Circular incision for a clean and successful exposure.

|                       | SURGICAL APPLICATION                              | ELECTRODE(S) RECOMMENDED |       |       |       |       |      |       |       |       |       |
|-----------------------|---------------------------------------------------|--------------------------|-------|-------|-------|-------|------|-------|-------|-------|-------|
|                       |                                                   | I22S                     | I22CA | TR22T | TR22R | TR22L | I40S | I40CA | FC10N | FC25B | FC32B |
| ORAL SURGERY          | Gingival eviction                                 | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Abscess incision and drainage                     | ■                        | ■     |       |       |       | ■    | ■     |       |       |       |
|                       | Exposure of impacted tooth - operculotomy         | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Removal of the pericoronal sac                    | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Hemostasis                                        |                          |       |       |       |       | ■    | ■     | ■     | ■     | ■     |
| RESTORATIVE DENTISTRY | Dental neck exposure                              | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Exposure of fractured root crown lengthening      | ■                        | ■     |       |       |       | ■    | ■     |       |       |       |
|                       | Elimination of hypertrophic gingiva               |                          |       | □     | □     | □     |      | ■     |       |       |       |
|                       | Widening of sulcus                                | ■                        | ■     |       |       |       | ■    | ■     | ■     |       |       |
|                       | Gingival modeling of edentulous crest             |                          |       | □     |       |       | ■    | ■     |       |       |       |
| ORTHODONTICS          | Exposure of impacted tooth                        | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Frenectomy                                        | ■                        | ■     |       |       |       | ■    | ■     |       |       |       |
|                       | Crown lengthening for brackets placement          | ■                        | ■     |       |       |       | ■    | ■     |       |       |       |
|                       | Elimination of hypertrophic gingiva               | ■                        | ■     | □     | □     | □     | ■    | ■     |       | ■     |       |
| OPERATORY DENTISTRY   | Preparation of cavity for inlay before impression |                          |       |       |       |       | ■    | ■     | ■     |       |       |
|                       | Frenectomy                                        | ■                        | ■     |       |       |       | ■    | ■     |       |       |       |
| PERIODONTICS          | Flap surgery                                      | ■                        | ■     |       |       |       |      |       |       |       |       |
|                       | Gingivectomy                                      | ■                        | ■     | □     | □     |       | ■    | ■     |       |       |       |
|                       | Gingivoplasty                                     | ■                        | ■     | □     | □     |       | ■    | ■     |       |       |       |
|                       | Stripping                                         | ■                        | ■     | □     | □     |       | ■    | ■     |       |       |       |