IT'S TIME FOR ATRAUMATIC EXTRACTIONS

PIEZOTOME CUBE

EN

ACTEON

-350 BC
FORCEPS

Mentionned by Aristotle in approx -350 BC, forceps introduce the beginning of extraction.

- Destruction of the socket
- Can cause fracture
- Force demanding
- Requires crown access

1875
ROTARY INSTRUMENT

Dental rotating motors allowed a diminution of the force needed and an easier access compared to forceps.

- Destruction of the alveolar bone
- Mandatory flap
- Delayed implant placement
- Post-operative complications

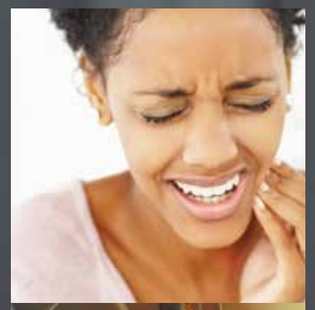
2019

FOR THE FIRST TIME, PIEZOELECTRIC SURGERY IS POWERFUL ENOUGH TO CARRY OUT EXTRACTIONS AT THE SAME SPEED[1] AS ROTARY INSTRUMENTS!

ROTATIVE INSTRUMENT VS CUBE TECHNOLOGY

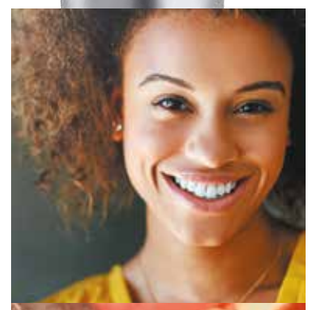
SAME DURATION[1]

- Immediate destruction of bone —
- Mandatory flap —
- Post-operative pain duration 2 days [1] —
- Risk of damaging soft tissues [1] —
- Physically taxing [8] —
- Dreaded by patients —



Dr. Jeffrey Brooks, DMD, USA

- \+ Socket preservation [9]
- \+ Safe for soft tissues
- \+ Recommended for immediate implant placement
- \+ No force needed
- \+ 50% less pain & swelling [2]
- \+ 98% less analgesics intake [1]



Dr. Jeffrey Brooks, DMD, USA

EXTRACTION BECOMES ATRAUMATIC WORLDWIDE

Maintain integrity of the extraction site and the 4 bony walls around followed by immediate implant placement
Dr. Jeffrey H. Brooks, D.M.D, USA

For me as an oral surgeon, the Cube has been an absolute game changer. In a world where gimmicks and promises often come first, this is a solution that has delivered above and beyond what I could have imagined. It now finds use in a growing number of cases where it saves time, improves patient experience and has expanded the complexity of treatment options we can provide.
Dr. Sami Stagnell, BDS MFDS(RCSEd) MSc MFGDP(UK) AKC MOralSurg(RCSEng|Ed) AFFMLM, England

Root elevation after a root section (Ninja® tip) and root extraction (LC2 tip)
Pr. Francis Louise, France

GIVE THE BEST TO YOUR PATIENTS!

No surgical flap was raised keeping the periosteum intact in line with atraumatic extraction protocol
Dr. Adam Kimowitz, DMD, USA

Initial syndesmotomy of the impacted third molar
Dr. Federico Berton, Italy

100% flapless extraction with Piezo

“I practice a 100% flapless extraction with the Piezo in all of my extractions! Root canals, curved roots, ankylosed teeth, implants...a scalpell you won´t see on my surgical tray. That´s only possible with Piezotome surgery!”

Dr. med. dent. Marcel Wainwright

First time is best time , atraumatic extraction give us an opportunity to save the alveolar bone to place our implant in right 3D position

The site is ready to receive the implant saving buccal plate and soft tissue

“Saving bone and soft tissue is the main factors for immediate implant placement after extraction, the implantology trend these days is to reduce post-operative pain, and improve pre implant tissue quality , Piezotome Cube is helping me to achieve that.”

Dr. Majed Abu Arqub Periodontist specialist, Jordan

DELIVER COMPASSIONATE CARE & EXPAND YOUR EXPERTISE

CHOOSE THE REFERENCE [3]

“ The new gold standard in dentistry[4] ”

v.Prof. Dr. Dr. A. Troedhan (Austria)

GIVE VALUE TO YOUR TREATMENTS

“ Piezotome® has made my surgeries more predictable, easier, faster and significantly less traumatic which also helped increase the number of patients I have. Both surgeons and patients do benefit equally. ”

Pr. Dr. Marcel Wainwright (Sweden)

“ Piezotome® surgery is superior in atraumaticity and soft-tissue safety (...)
No lesions of the mandible nerve were detected with Piezotome® surgery.[1] ”

GIVE THE BEST TO YOUR PATIENTS

“ 86% of the patients were observed with no postsurgical swelling and 87% no postsurgical pain.[6] ”

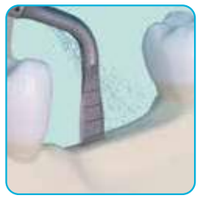
“ My patients can get back to work the day after surgery! ”

Pr. Dr. Marcel Wainwright (Sweden)

INTRA-OPERATIVE

SAFETY

- Cutting selectivity: soft tissues are preserved (nerves, membranes and arteries)
- Intraosseous temperature under control



PRECISION

- Fine and consistent cut on all types of bone
- Minimal bone loss for less invasive procedure

COMFORT

- New automatic power control for smooth and effortless cut
- Easy bone access thanks to exclusive tips designs

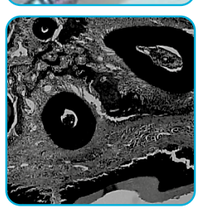
VISIBILITY

- Stable irrigation flow
- Cavitation spray: microbubbles releasing oxygen limiting the bleeding (hemostatic effect)

POST-OPERATIVE

SUPERIOR OUTCOMES

- Reduced pain
- Less analgesics
- Limited edema



GREAT HEALING

- Predictable
- Fast recovery
- Bone densification

GIVE POWER TO YOUR KNOW-HOW

NEWTRON TECHNOLOGY

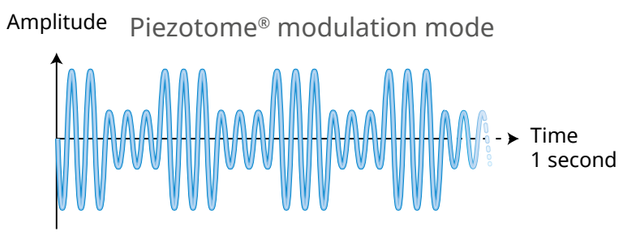
ACTEON® Piezotome® ultrasonic power generators are piloted by the patented **Newtron® technology**. The advanced electronics, the handpiece and the tips are perfectly tuned introducing maximal performance and unique clinical benefits, to tackle each surgery serenely.

PRESERVATION

MODULATION

Alternation between high and low amplitude

- Soft tissue preservation with better tissue recovering and cells regeneration



EFFICACY

FREQUENCY

Automatic frequency adjustment from 28 to 36kHz according to every tip shape and weight

- Maximal performance for each procedure

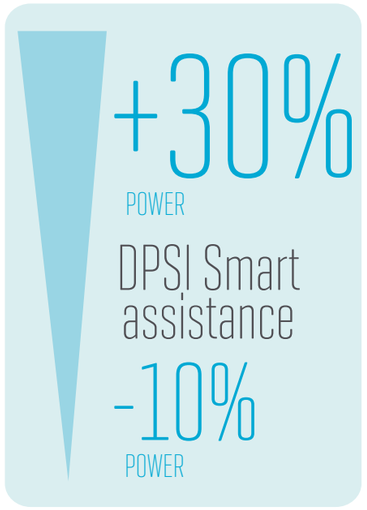
COMFORT

POWER

Automatic power regulation depending on the resistance encountered

- Continuous vibration even in dense bone

NATURALLY INTUITIVE



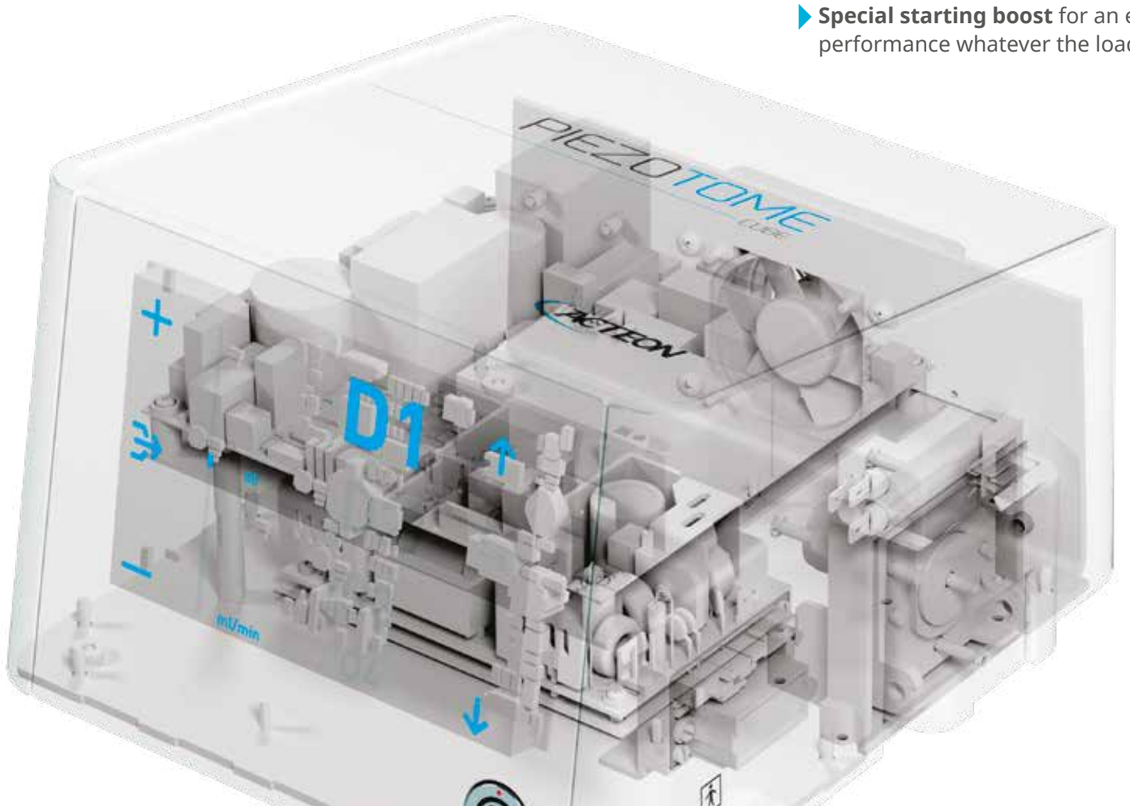
Dynamic Power System Inside
POWER INTUITIVELY ADAPTED FOR MAXIMUM EFFICIENCY & SAFETY

According to the resistance encountered, the D.P.S.I. smart assistance will:

- Increase **+30%** the power, improving cutting performance
- Decrease **-10%** the power, to be even safer on soft tissues

WITH THE D.P.S.I., GET

- **The most advanced Newtron® technology** with continuous monitoring of major criteria (pressure applied, tips designs and bone density)
- **Immediate power responsiveness**
- **Special starting boost** for an effortless cutting performance whatever the load applied



ACTEON® MAKES THE DIFFERENCE

CUBE LED HANDPIECE

Upgraded conception based on ACTEON®
6 ceramic rings
- More power than ever

Lighter with perfectly balanced design
- Natural gesture, rotation free for less hand fatigue

Full white color LED ring (100,000 Lux)
- Great tissue distinction and posterior areas visibility

TIPS

Many exclusive designs
- Clinical versatility

Strengthened by surface treatment
- Excellent durability

FAST ASSEMBLY
TORQUE WRENCH

- Saves precious time
- Robust stainless steel dynamometric wrench

TOTAL ADAPTABILITY

Autoclavable handpiece holder with 2 positions protecting from accidental fall:
- "Clip" table
- "On" table

ABSOLUTE CONTROL

Weighted multifunctional footswitch

MAKE IT EASY

- **PERISTALTIC PUMP**
  - Fast and intuitive insertion of the irrigation line in the pump
  - Small size and robust
  - Precise adjustment (ml/min) and regular flow rate reaching the tip's end
- **EXTERNAL IRRIGATION LINE**
  - Extend the handpiece lifetime
  - Immediate visual control throughout the procedure
  - Provide complete sterile work and ease maintenance
  - Autoclavable or single use delivered sterile

DURABILITY

Piezotome® Cube accessories are designed, with robust and durable materials like stainless steel, limiting the use of plastic.
A willingness of ACTEON® to offer you a clinical accompaniment over the years.

STERILISATION
CONSCIENTIOUSNESS

- Easy maintenance
- Direct access to all parts
- Meeting hygiene constraints

SECURE & BROADEN YOUR SCOPE IN SURGERY

Extraction

Syndesmotomy
For maximum bone preservation
LC1, LC2 (x2), LC2L, LC2R, Ninja® tips
Ref. F87546

Widening the ligamentary space. LC tips separate the tooth from its attachment system for a rapid extraction, with less luxation, keeping intact the alveolar bone edge.

F87540: EXTRACTION Pack (*An Extraction II kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)*

BoneSurgery

Osteotomy/ Osteoplasty
Clean and thin cut for maximal bone volume
BS1S, BS2L, BS2R, BS4, BS5, BS6 tips
Ref. F87509

Performing bone graft, allows cutting, excising and remodeling bone structures reducing the risk of soft tissue lesions.

F87500: BONE SURGERY Pack (*A Bone Surgery II kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)*

CrestSplitting

Rapid and minimally invasive technique for controlled expansion
CS1, CS2, CS3, CS4, CS5, CS6 tips
Ref. F87567

The increasing tips thickness allows a smooth crest expansion limiting the risk of bone fracture.

F87560: CREST SPLITTING Pack (A CS kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)

SinusLift

Lateral Sinus Lift
Unbeatable comfort: selective and hemostatic cut
SL1, SL2, SL3, SL4, SL5 tips
Ref. F87519

A thin cut performed without effort, limiting any risk of sinus membrane perforation or antral artery damage.

F87510: SINUS LIFT Pack (A SL II kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)

IntraLift

Crestal Sinus Lift
Minimally invasive surgery for smooth sinus floor fracture
TKW1, TKW2, TKW3, TKW4, TKW5 tips
Ref. F87536

Sinus lift by the crestal approach: the IntraLift Kit makes it possible to perform non invasive surgery in full safety.

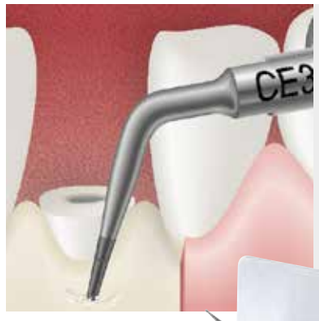
F87530: Intralift™ Pack (A Intralift™ II kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench

PiezoCision

Accelerated Orthodontic Surgery
Minimal incisions, minimally invasive
PZ1, PZ2L, PZ2R, PZ3 tips
Ref. F87576

Treatment of malocclusions by ultrasonic corticotomies for a quicker and minimally invasive surgery, flapless or sutureless. Bone stimulated by micro-incisions accelerates tooth movement, the treatment is 3 to 4 times faster.*

F87570: Piezocision™ Pack (A Piezocision™ kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)

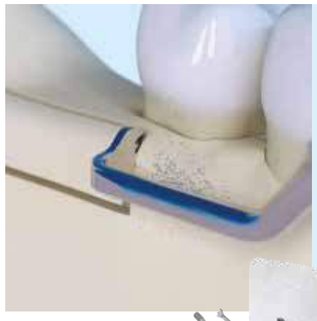


CrownExtension

Crown Lengthening
Incomparable precision and accessibility
BS6, CE1, CE2, CE3 tips
Ref. F87554

Completely innocuous to the gingiva guaranteeing the integrity of bone and adjacent teeth.

F87550: CROWN EXTENSION Pack (A CE II kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)



Essential

The 6 fundamental ACTEON® tips
BS1S, BS4, SL1, SL2, SL3, LC2 tips
Ref. F87528

Kit delivered with the following references: F50510, F50100

For osteotomy, osteoplasty, extraction and lateral sinus lift.

F87529: ESSENTIAL Pack (*An Essential kit, a sterilization box, a Piezotome® LED handpiece and its autoclavable cord, a dynamometric wrench)*

All kits are delivered with an autoclavable metal support and an universal wrench.

*Sebaoun JD, Surmenian J, Ferguson DJ, Dibart S. Acceleration of orthodontic tooth movement following selective alveolar decortication: biological rationale and outcome of an innovative tissue engineering technique. *International Orthodontics*. 2008;6:235-249.

FOR GENTLE EXTRACTIONS

Extraction

LC1 F87507 | LC2 F87542 | LC2L F87543 | LC2R F87544 | NINJA® F87545

SYNDESMOTOMY: ANTERIOR AREA

LC1
Ultrasonic periotome intended for syndesmotomy and periradicular osteotomy.

LC2
Tip, particularly slim, allows access to the tight spaces between the root and the alveolar bone.

SYNDESMOTOMY: POSTERIOR AREA

LC2L
Left-oriented at 45° tip facilitates access to the posterior areas.

LC2R
Right-oriented at 45° tip facilitates access to the posterior areas.

ODONTOTOMY - ROOT SECTION

Ninja®
Saw-tooth tip particularly efficient for hemisections and root amputations.

THINNESS AND SECURITY

BoneSurgery

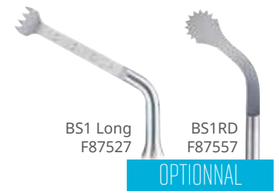
BS1S F87525 | BS2L F87502 | BS2R F87503 | BS4 F87504 | BS5 F87505 | BS6 F87506

OSTEOTOMY - BONE HARVESTING

BS1S (Slim)
9mm saw intended for the in-depth cutting of very dense cortical bones.

BS2L
Left-oriented bone saw used for cutting the ramus cortical bone.

BS2R
Right-oriented bone saw used for cutting the ramus cortical bone.



BS1 Long F87527 | BS1RD F87557

OPTIONNAL

BS1RD (not included in the kit)
Rounded saw, large 280° active surface

BS1L (Long) (not included in the kit)
15mm saw facilitating ramus bone grafting.

OSTEOTOMY

BS5
Flat scalpel for fine osteotomies.

OSTEOPLASTY

BS4
Circular scalpel for osteoplasty and harvesting of bone particles or chips.

BS6
Curved scalpel particularly recom-mended for osteoplasty.

EASY & CONTROLLED TECHNIQUE

CrestSplitting

CS1 F87561 | CS2 F87562 | CS3 F87563 | CS4 F87564 | CS5 F87565 | CS6 F87566

OSTEOTOMY

- **CS1**
  Fine tip dedicated to pilot osteotomy up to 8mm of depth.
- **CS2**
  Tip dedicated to the second osteotomy up to 8mm of depth.
- **CS3**
  Scalpel used for the discharges incisions in mesial and distal sides, up to 8mm of depth.

EXPANSION

- **CS4**
  Conical tip for bone expansion. Tip thickness: 1.80mm at 8mm.
- **CS5**
  Conical tip for bone expansion. Tip thickness: 2.75mm at 8mm.
- **CS6**
  Conical tip for bone expansion. Tip thickness: 3.75mm at 8mm.

MINIMAL INCISIONS

PiezoCision

PZ1 F87571 | PZ2L F87572 | PZ2R F87573 | PZ3 F87574

OSTEOTOMY

- **PZ1**
  Anterior corticotomies.
- **PZ2L**
  Lateral corticotomies on patient's right vestibular arch. To be used with pendulum motion.
- **PZ2R**
  Lateral corticotomies on patient's left vestibular arch. To be used with pendulum motion.
- **PZ3**
  Anterior corticotomies for root proximity concerns.

The 3mm necessary decortication depth is visile on each tip by a laser marking.

Piezocision™ technique is the combination of:
- micro-surgical incisions performed with Piezotome® powered ultrasonic generators, by ACTEON®,
- bone densification,
- orthodontic tooth movement.

INDICATIONS

- Class I malocclusions with moderate to severe crowding (non-extraction)
- Correction of deep bite
- Selected class II malocclusions
- Rapid adult orthodontic treatment
- Rapid intrusion and extrusion of teeth

FAST, SAFE AND MINIMALLY INVASIVE

IntraLift

TKW1 F87531 | TKW2 F87532 | TKW3 F87533 | TKW4 F87534 | TKW5 F87535

OSTEOTOMY - PILOT DRILLING

TKW1
Conical and diamond-coated tip for pilot drilling in very dense cortical bone (Ø 1.35mm).

OSTEOTOMY - SECONDARY DRILLING

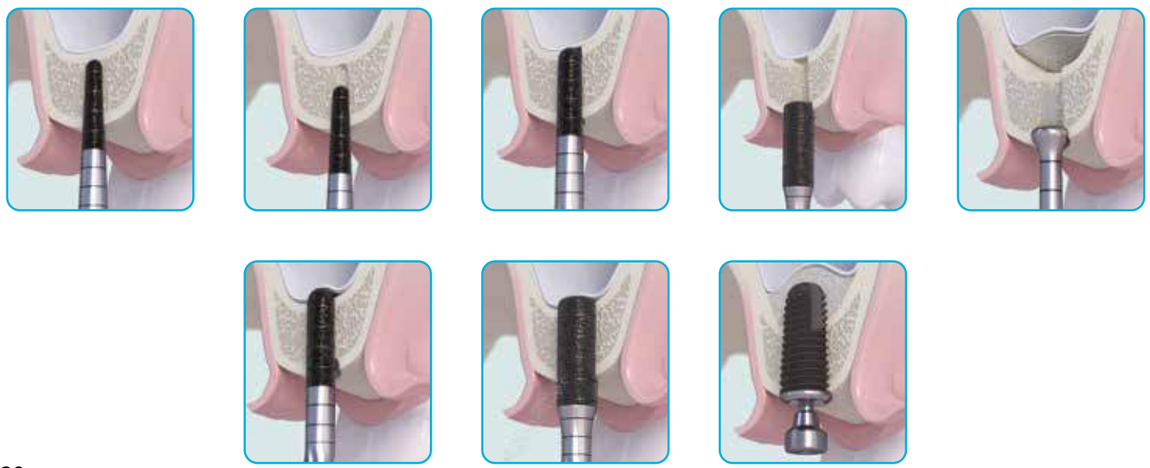
TKW2
Cylindrical and diamond-coated tip dedicated for drilling and fracturing the sinus floor (Ø 2.1mm).

TKW3
Cylindrical tip dedicated to drill and widen the access canal to sinus membrane (Ø 2.35mm).

TKW4
Cylindrical and diamond-coated tip intended for the receptacle preparation and widening the access canal to the sinus membrane (Ø 2.8mm).

MEMBRANE DETACHMENT (ELEVATION)

TKW5
Tip Ø 3mm to be placed in the receptacle preparation for sinus membrane elevation by crestal approach.



FOR AN UNMATCHED VISIBILITY

SinusLift

SL1 F87511 | SL2 F87512 | SL3 F87513 | SL4 F87514 | SL5 F87515

VESTIBULAR BONE WINDOW CUT

OSTEOTOMY

SL1
Diamond-coated tip for vestibular bone window cut and for attenuation of sharp angles.

OSTEOPLASTY

SL2
Diamond-coated ball tip for smoothing the vestibular bone window and precise osteoplasty.

MEMBRANE DETACHMENT

SL3
Plateau tip served for sinus membrane elevation on the window's edges.

SL4
Spatula served for sinus membrane elevation inside the sinus.

SL5
Spatula used for sinus membrane elevation inside the sinus and for disengagement of anatomical structures.

PRECISION & ACCESSIBILITY

CrownExtension

OSTEOPLASTY

- **BS6**
  Curved scalpel particularly effective for substantial osseous reshaping.

- **CE1**
  Diamond-coated spherical tip (Ø 1.75mm) designed for osteoplasty in oral and palatal zones.

- **CE2**
  Diamond-coated spherical tip (Ø 1.20mm) designed for osteoplasty in interproximal zones.

OSTEOECTOMY - OSTEOPLASTY

- **CE3**
  For a fast restoration of the biologic width (laser mark placed at 3mm).

  Used perpendicularly or parallel to the bone, this tip is designed for ostectomies of the tooth-supporting bone in interproximal and oral (vestibular) and palatal periradicular zones.

SIMPLY INDISPENSABLE

Essential

OSTEOTOMY

- **BS1S (Slim)**
  9mm saw intended for the in-depth cutting of very dense cortical bones.

OSTEOPLASTY

- **BS4**
  Circular scalpel for osteoplasty and harvesting of bone particles or chips.

SYNDESMOTOMY

- **LC2**
  Tip, particularly slim, allows access to the tight spaces between the root and the alveolar bone.

LATERAL SINUS LIFT

OSTEOTOMY

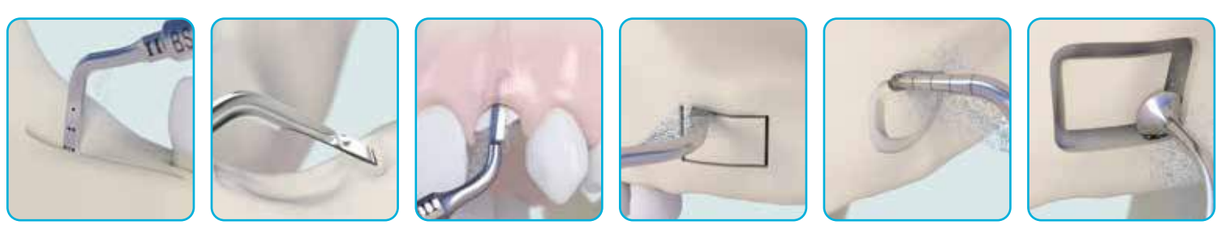
- **SL1**
  Diamond-coated tip for vestibular bone window cut and for attenuation of sharp angles.

OSTEOPLASTY

- **SL2**
  Diamond-coated ball tip for smoothing the vestibular bone window and precise osteoplasty.

MEMBRANE DETACHMENT

- **SL3**
  Plateau tip served for sinus membrane elevation on the window's edges.



Watch our Youtube channel:
ACTEON®

PEFC 10-31-1118

www.acteongroup.com

EQUIPMENT DELIVRED WITH

- 1 CUBE LED handpiece
- 1 Essential kit (BS1S, BS4, LC2, SL1, SL2, SL3)
- 1 dynamometric wrench
- 1 multifunction footswitch
- 1 irrigation bracket
- 1 handpiece holder
- 2 autoclavable irrigation lines
- 5 autoclave irrigation clips
- 15 sterile perforators

UNIT DIMENSIONS & WEIGHT

- Length 251 x Height 160 x Depth 271mm
- Weight: 3.5kg

FOOTSWITCH DIMENSIONS & WEIGHT

- Length 173 x Height 140 x Depth 176mm
- Weight: 1kg

1. Troedhan A, Kurrek A, Wainwright M. Ultrasonic Piezotome surgery: it is a benefit for our patients and does it extend surgery time? A retrospective comparative study on the removal of 100 impacted mandibular 3rdmolars. *Open Journal of Stomatology*. 2011;1:179-184

2. Shanghai Kou QiangYi Xue. Comparative study of complications among routine method, high speed turbine handpiece and piezosurgery device after extraction of impacted wisdom teeth. *Shanghai Journal of Stomatology*. 2012 Apr;21(2):208-10.

3. The most sold device according to «Global and Chinese Dental Surgical Ultrasonic Generator Industry», 2010-2020 Market Research Report" published by Prof Research, 2015

4. Troedhan A, Tarek Mahmoud Z. Is piezoelectric surgery the new gold-standard in oral surgery and implantology. *Smile Dental Journal*. 2016;11(4)

5. Troedhan A, Kurrek A, Wainwright M, ISchlichting I,Fischak-Treitl B, Ladentrog M. The transcrestal hydrodynamic ultrasonic cavitational sinuslift: results of a 2-year prospective multicentre study on 404 patients, 446 sinuslift sites and 637 inserted implants. *Open Journal of Stomatology*. 2013;3

6. v. Prof. Dr. Dr. Troedhan. EAO congress, ACTEON® Symposium. The Piezotome enabled flapless vertical alveolar crest-split and horizontal distraction. 2016

7. Reside J, Everett E, Padilla R, Arce R, Miguez P, Brodala N, De Kok I, Nares S. In vivo assessment of bone healing following Piezotome ultrasonic instrumentation. *Clinical Implant Dentistry and Related Research*. 2013 June

8. Cicciù M, Bramanti E, Signorino F, Cicciù A, Sortino F. Experimental study on strength evaluation applied for teeth extraction: An in vivo study. Open Dental J. 2013;7:20-26. Published online 2013 Mar 8

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Class IIa medical device - CE 0459 (GMED)
For professional dental use only
Manufacturer: SATELEC® - France
Read carefully the instructions for use available on www.satelec.com/documents
Piezotome® Cube: Ultrasonic control console for intraoral surgery
Updated on: 02/2020

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