

Ultrasonic surgery

POWERFULLY RESPONSIVE, MINIMALLY INVASIVE

Enhancing your workflows
through innovation

piezotome
cube



-350 BC
FORCEPS

Mentioned 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

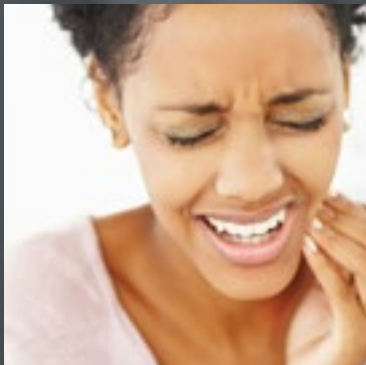
2019

FOR THE FIRST TIME,
PIEZOELECTRIC SURGERY IS
POWERFUL ENOUGH
TO CARRY OUT EXTRACTIONS
AT THE SAME SPEED¹
AS ROTARY INSTRUMENTS!



ROTATIVE INSTRUMENT VS CUBE TECHNOLOGY

SAME DURATION⁽¹⁾



Immediate destruction of bone



Mandatory flap



Post-operative pain duration
2 days¹



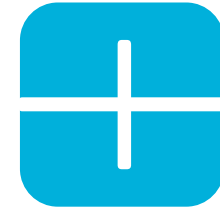
Risk of damaging soft tissues¹



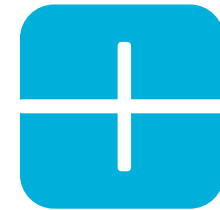
Physically taxing⁸



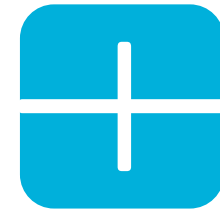
Dreaded by patients



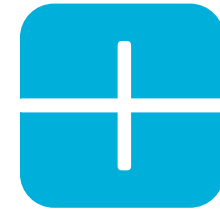
Socket preservation⁹



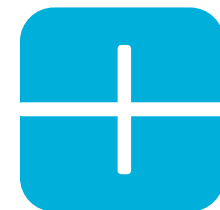
Safe for soft tissues



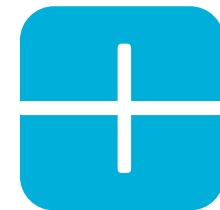
Recommended for immediate
implant placement



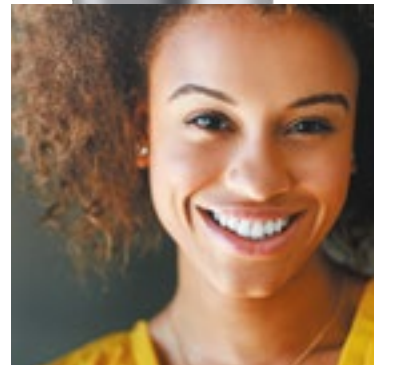
No force needed



50% less pain & swelling²



98% less analgesics intake¹



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 REFERENCE³

“ The new gold standard in dentistry⁴ ”
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

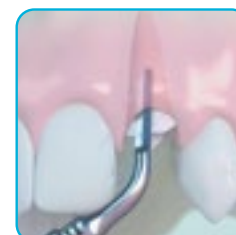
- New automatic power control for smooth and effortless cut
- Easy bone access thanks to exclusive tips designs



VISIBILITY

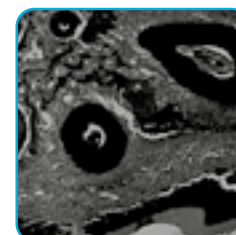
- Stable irrigation flow
- Cavitation spray: microbubbles releasing oxygen limiting the bleeding (hemostatic effect)

POST-OPERATIVE



SUPERIOR OUTCOMES

- Reduced pain
- Less analgesics
- Limited edema



GREAT HEALING

- Predictable
- Fast recovery
- Bone densification

GIVE POWER TO YOUR KNOW-HOW

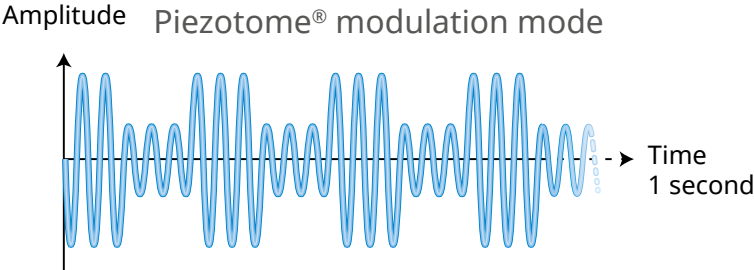
NEUTRON TECHNOLOGY

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

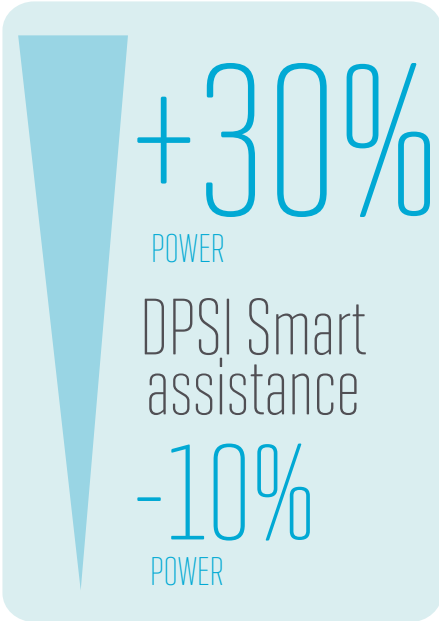
Automatic frequency adjustment from 28 to 36kHz according to every tip shape and weight
 ▶ Maximal performance for each procedure

COMFORT

POWER

Automatic power regulation depending on the resistance encountered
 ▶ Continuous vibration even in dense bone

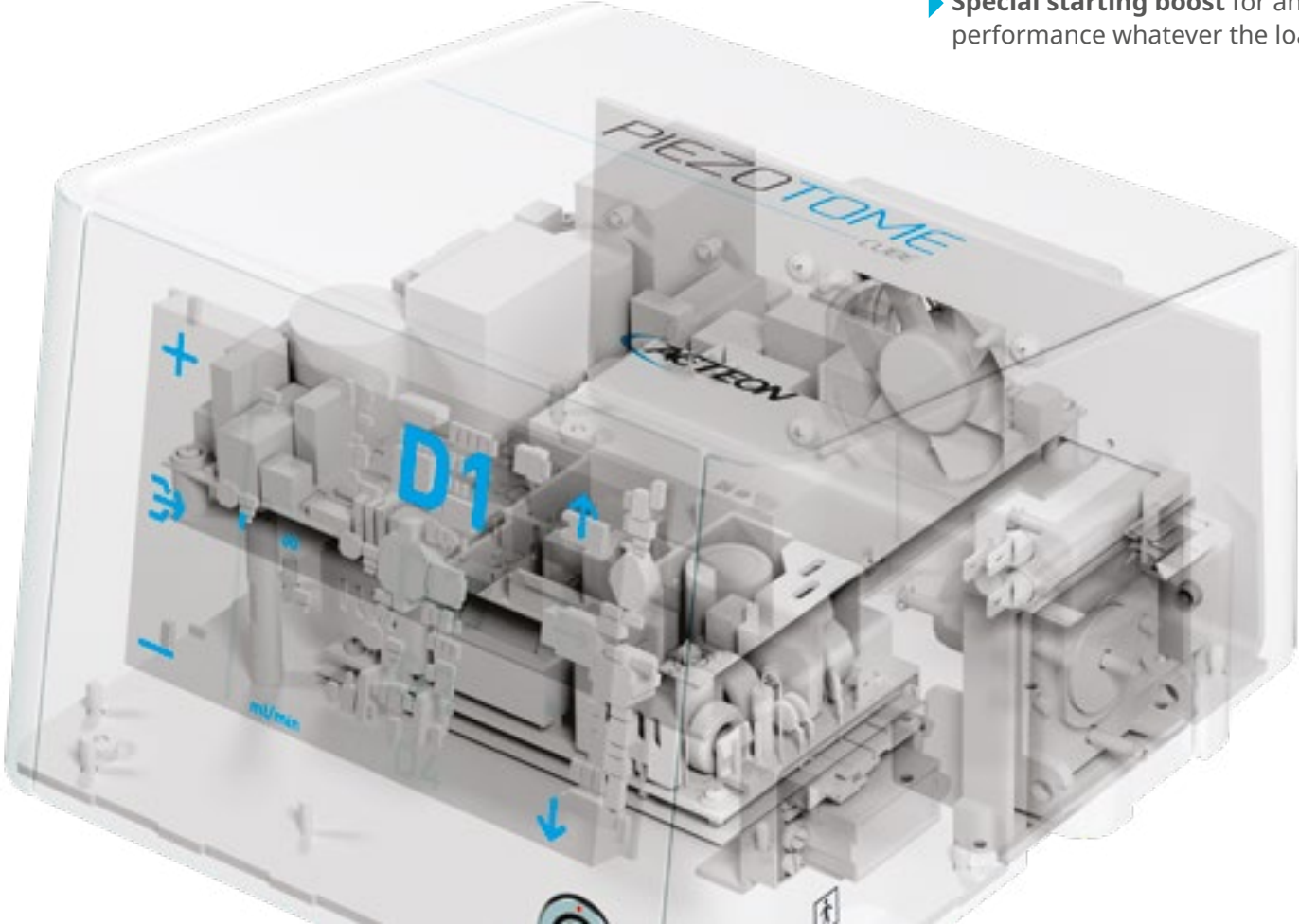
NATURALLY INTUITIVE



DPSI 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
Extraction II Kit
Syndesmotomy
 For maximum bone preservation
 LC1 II, LC2 II (x2),
 LC2L II, LC2R II, Ninja® II
 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
Bone Surgery II Kit
Osteotomy/
Osteoplasty
 Clean and thin cut
 for maximal bone
 volume
 BS1S II, BS2L II, BS2RII,
 BS4 II, BS5 II, BS6 II 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
Crest Splitting II Kit
 Rapid and minimally
 invasive technique
 for controlled expansion
 CS1 II, CS2 II, CS3 II,
 CS4 II, CS5 II, CS6 II 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
Sinus Lift II Kit
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
Intralift II Kit
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
Piezocision II Kit
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.

FOR GENTLE EXTRACTIONS

Extraction



SYNDESMOTOMY: ANTERIOR AREA

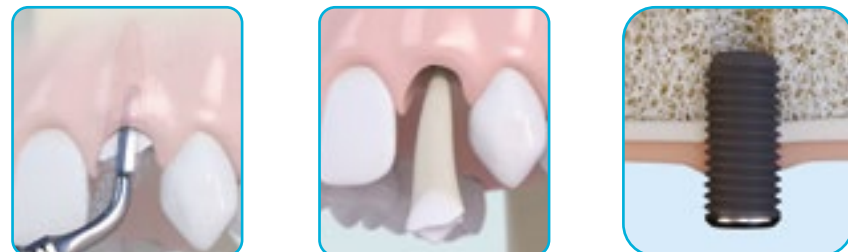
- ▶ **LC1**
Ultrasonic periosteal intended for syndesmotomy and periradicular osteotomy.
- ▶ **LC2**
Tip, particularly slim, allows access to the tight spaces between the root and the alveolar bone.

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.



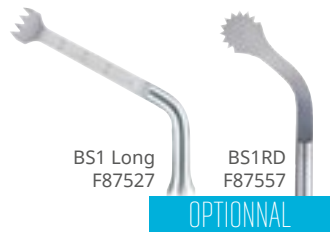
THINNESS AND SECURITY

BoneSurgery



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.
- ▶ **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 recommended for osteoplasty.



EASY & CONTROLLED TECHNIQUE

MINIMAL INCISIONS

CrestSplitting

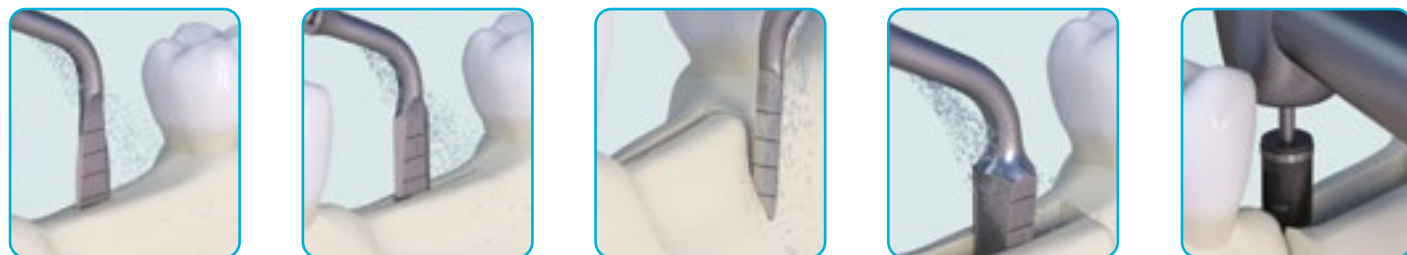


OSTEOTOMY

- ▶ **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.



PiezoCision



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 visible 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

FOR AN UNMATCHED VISIBILITY

IntraLift



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.



SinusLift



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

SIMPLY INDISPENSABLE

CrownExtension

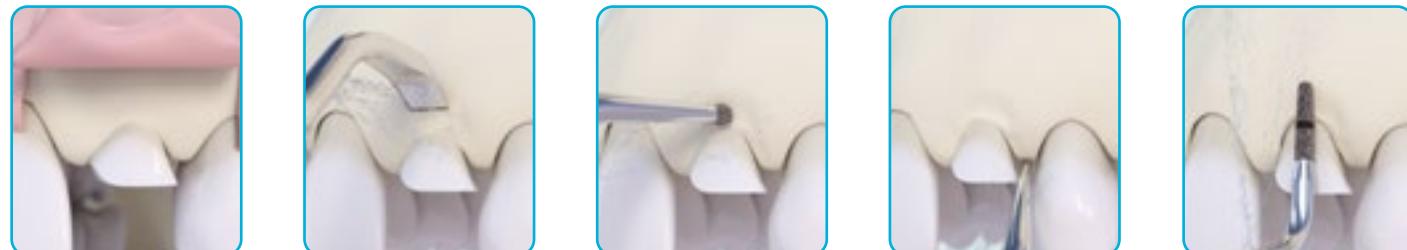


OSTEOPLASTY

- ▶ **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.



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

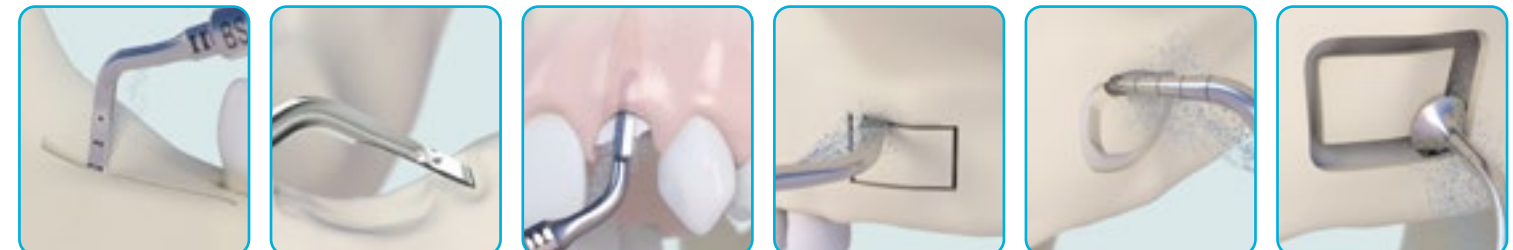
- ▶ **SL1**
Diamond-coated tip for vestibular bone window cut and for attenuation of sharp angles.

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.





SATELEC

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