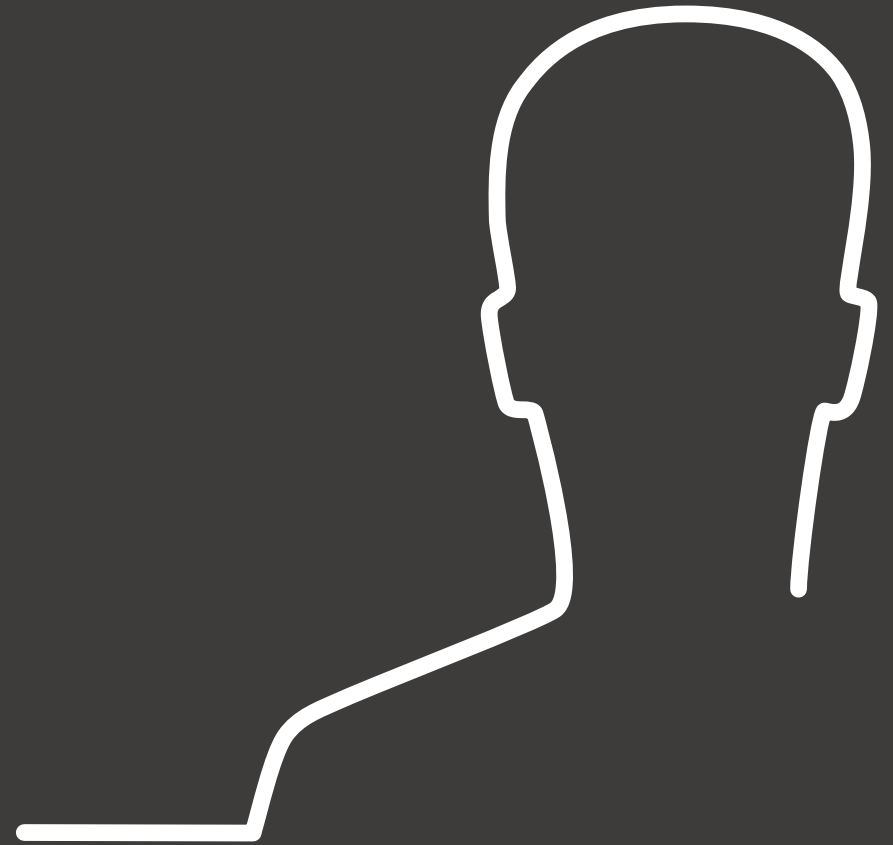




→ PIEZOSURGERY®
CRANIOFACIAL EXCELLENCE



→ EXPERIENCE EXCELLENCE: CHOOSE PIEZOSURGERY® IMPROVES CRANIOFACIAL SURGERY

→ YOUR CHALLENGES ARE COMPLEX. MECTRON CAN HELP YOU.

We understand that as a clinician, you seek technological solutions to accompany your expertise, that will allow you to optimize workflow, while ultimately providing your patients with the best postoperative results.


After performing extensive research on clinician needs and the challenges presented by traditional instrumentation, we developed a solution to provide you with increased safety, precision and surgical performance.

The PIEZOSURGERY® *plus* promotes ease of use and precise handling during osteotomies, with reduced trauma to adjacent soft tissue, improved bone healing, reduced pain, swelling and edema promoting better healing and an overall reduction in the length of hospitalization stays for patients¹⁰.

The expansive postoperative benefits of PIEZOSURGERY® have been experienced by distinguished surgeons in over 80 countries across our globe.



CRANIOFACIAL
EXCELLENCE 



Surgical procedures requiring the opening, removal, or remodeling of bone are supported by PIEZOSURGERY®.

→ CLINICAL INDICATIONS

Surgical fields of application:

- Orthognatic Surgery
- Head and Neck Surgery
- Orbital Surgery
- Rhinoplasty

→ WHAT OUR USERS THINK



Piezosurgery allows us to move towards minimally invasive maxillary surgery, extending our indications for Le Fort III osteotomies, with less morbidity and probably shorter surgical time as we avoid the coronal approach.

Prof Lauwers F., Oral and Maxillofacial surgeon, Toulouse (France)

The learning curve in my opinion is very fast. For segmentation of fibula flap is a useful instrument and today I can't do it without Piezosurgery.

Prof Tarsitano A., Oral and Maxillofacial surgeon, Bologna (Italy)

I would recommend Piezosurgery for any surgeon who wants to create clearly defined cuts, narrow the width of those cuts, control the depth of the incision, and potentially reduce the risk of complication for the patient.

Prof MacKay S., ENT surgeon, Wollongong (Australia)

With Piezosurgery you always have a perfectly clear operating field. Minor bleeding stops quickly, providing excellent visibility, a distinct advantage, in my opinion, when performing orbital surgery.

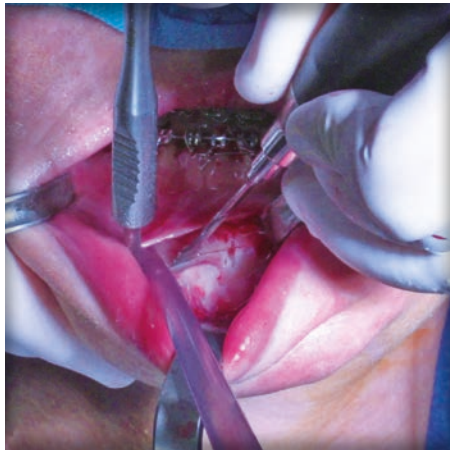
Prof Dr med Pitz S., Ophthalmologist surgeon, Frankfurt (Germany)

Studies have actually shown benefits to using piezosurgery in rhinoplasty and in my practice I've also seen other benefits to using this in rhinoplasty which include decreased irregularities increased, precision reduced revision rate and better hemostasis.

Dr Moubayed S., Plastic surgeon, Montréal (Québec)



→ EXPERIENCE ORTHOGNATIC SURGERY



→ ADVANTAGES OVER TRADITIONAL TOOLS

- Safer for adjacent nerves and vessels
- High cutting precision and control ³
- Better reconstruction ^{4,6}
- Less post-operative pain and edema
- Better and faster bone healing

“ The aim of this study was to find out if piezoelectric surgery can be more comfortable for patients having orthognathic surgery. [...] Those who had piezosurgery had significantly less pain at the three-day follow up ($p = 0.035$). There was a significant difference in cutaneous sensitivity only for the right side of the upper lip and only at the one-day follow-up. We conclude that piezoelectric surgery offers some advantages in lessening swelling and the perception of pain after orthognathic surgery. ”



→ CORRECTION OF SKELETAL DYSMORPHOLOGIES (BSSO, LE FORT I, GENIOPLASTY)



Precision in cutting mineralized tissue while preserving nerves, blood vessels, and soft tissues ensuring maximum control and safety in proximity to the inferior alveolar nerve and maxillary arteries.

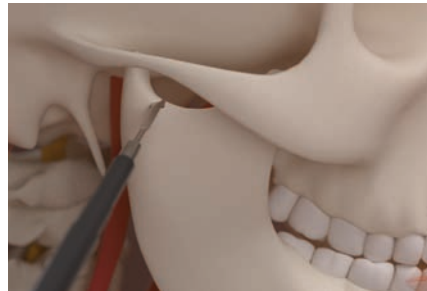
Recommended inserts:

- MT4-10+ • MT1412+

Additional inserts:

- MT4-20+ • MT1-10 • MT1520+

→ TEMPORO-MANDIBULAR JOINT DISORDERS (TMJ)



Precision in cutting mineralized tissue while preserving nerves, blood vessels, and soft tissues ensuring maximum control and safety around the facial nerve, maxillary vessels, TMJ capsule, and surrounding ligaments.

Recommended inserts:

- MT8-20L • MT1520+

Additional inserts:

- MT1412+ • MT9-13

→ SURGICALLY ASSISTED RAPID PALATAL EXPANSION (SARPE)



Precision in cutting mineralized tissue while preserving nerves, blood vessels, and soft tissues ensuring maximum control and safety around the nasal and palatal mucosa, maxillary vessels, and surrounding anatomical structures.

Recommended inserts:

- MT1412+ • MT1520+

Additional inserts:

- MT15-10 • MT9-13

→ MANDIBULAR ANGLE OSTECTOMY



Precision in bone cutting ensuring exceptional surgical predictability of the osteotomy lines and reduced post-operative edema.

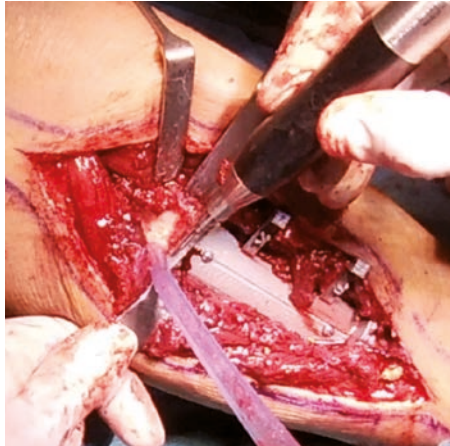
Recommended inserts:

- MT2L-4 • MT2R-4 • MT1412+

Additional inserts:

- MT11L-10 • MT11R-10 • MT9-13

→ EXPERIENCE HEAD AND NECK SURGERY



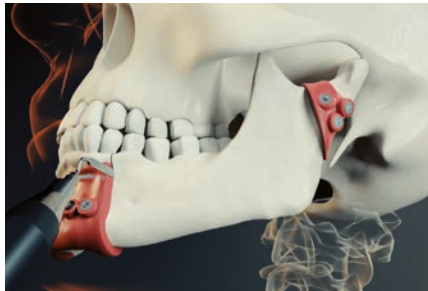
→ ADVANTAGES OVER TRADITIONAL TOOLS

- Safer for adjacent soft tissues⁵
- Less heat generation in comparison to drills²
- Increased surgical control and flexibility in bone cutting³
- Better and faster bone healing due to absence of bone necrosis^{2,7}
- Cleaner cuts that help prevent the spread of tumor tissue^{1,7}
- Extreme precision for the exact removal of the cancerous bone^{1,7}

“ Fibular bone segmentation, using a cutting guide and a piezoelectric saw, can be safely performed. Performing piezoelectric osteotomies, the surgeon achieves better procedural control and increases the precision of bone segmentation. The use of a cutting guide and piezoelectric saw significantly reduce the risk of damaging the vascular bundle that runs along the bone. The continuity of the periosteum was preserved and the vascular bundle was not dissected off or protected during the osteotomy. The fact that microvascular failure of the vascularised bone segments was absent in this series, including when the segment's length was very short, is consistent with the hypothesis of less thermal and mechanical damage after osteotomies with piezosurgery compared with traditional saw damage. ”



→ MANDIBULOTOMY AND MANDIBULECTOMY/ MAXILLECTOMY



A precise, safe and efficient way to cut and border Mandibular and maxillary tumor bone, with reduced risk of tumor spreading compared to rotating tools^{1,7}.

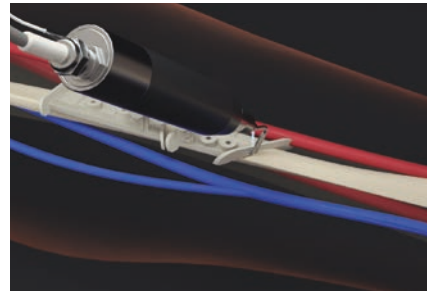
Recommended inserts:

- MT4-10+ • MT1412+ • MT1520+

Additional inserts:

- MT4-20+ • MT1-10 • MT1-20 • MT9-13

→ OSTEOTOMIES FOR HARVESTING AND REMODELLING



Safe and efficient bone correction even in the most difficult areas, ensuring improved bone fusion due to the absence of heat and minimized bone loss.

Recommended inserts:

- MT4-10+ • MT1412+ • MT1520+

Additional inserts:

- MT4-20+ • MT15-10 • MT9-13

→ FRONTAL SINUS OPENING - EXTERNAL APPROACH



Safety and precision of frontal sinus craniotomy, with improved aesthetic outcomes and easier repositioning of the bone flap.

Recommended inserts:

- MT4-10+ • MT1412+ • MT1520+

Additional inserts:

- MT4-20+ • MT15-10 • MT9-13

→ DRILLING HOLES FOR PLATES AND CUTTING GUIDES



Precision and safety in drilling, possibility to use one single device for all the surgical steps.

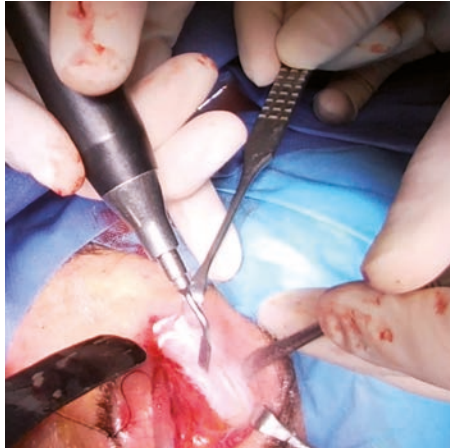
Recommended inserts:

- MD2-08 • MD2-10

Additional inserts:

- MD3-14 • MD3-18

→ EXPERIENCE ORBITAL SURGERY



→ ADVANTAGES OVER TRADITIONAL TOOLS

- Safer for vascular structures, dura and nerves ^{5,9}
- High cutting precision and control ³
- Easier and better reconstruction ^{4,6}
- Less need to distract soft tissues ⁵

“ Different minimally invasive surgical approaches to the orbit allow individualized bone resection to reduce proptosis and decompress the optic nerve in patients with Graves' orbitopathy (GO). [...] The application of piezosurgery in orbital decompression is more suitable than an oscillation saw due to superior cutting properties such as less damage to surrounding soft tissue or a thinner cutting groove. ”



→ OSTEOTOMIES OF ORBITAL BONES



Minimized risk of CSF leaks and orbital damage. Improved aesthetics, preservation of fixation materials, and avoidance of substitutes through precise cutting. Reduced heat enhances ossification with implants.

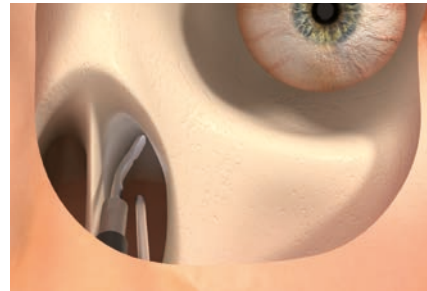
Recommended inserts:

- MT4-20+ • MT1412+ • MT1520+

Additional inserts:

- MT4-10+ • MT1-10 • MT1-20 • MT9-13

→ ORBITAL DECOMPRESSION



Preserves bone vitality and ensures a clear surgical field. Enables precise bone removal, minimizes trauma, and enhances safety near critical structures. Reduces swelling, accelerates recovery, and improves postoperative outcomes.

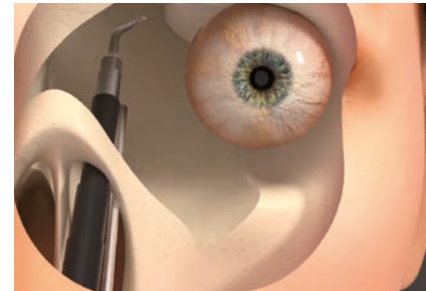
Recommended insert:

- MP6L

Additional insert:

- MP5L

→ OPTIC NERVE DECOMPRESSION



Minimized risk to the optic nerve and precise cutting near critical structures. This minimizes the need for bone grafts or synthetic implants traditionally used to reconstruct the orbital wall, while promoting natural bone healing through enhanced ossification.

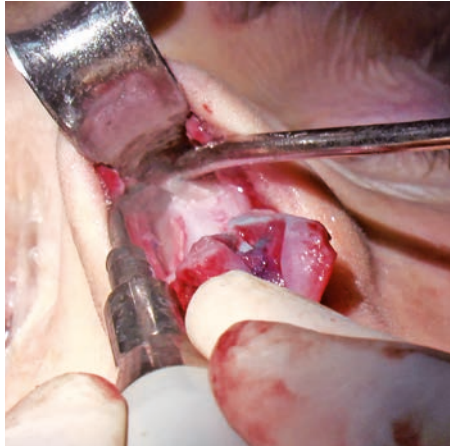
Recommended insert:

- MP5L

Additional insert:

- MP4+

→ EXPERIENCE RHINOPLASTY



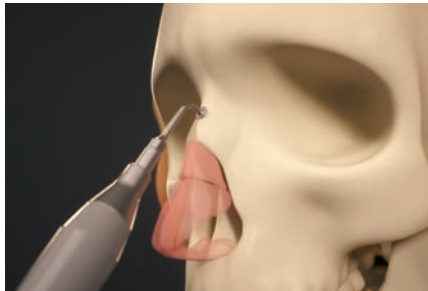
→ ADVANTAGES OVER TRADITIONAL TOOLS

- High precision and control of bone management³
- Better reconstruction^{4,6}
- Less invasive approach

“ In bone modelling procedures, such as hump removal, osteotomy and bony fixations, PEI (Piezoelectric instrumentation) was evaluated as being superior to conventional instruments. Intraoperative bleeding was reduced, which led to reduced facial swelling and/or bruising. Postoperative pain assessment showed no or only mild pain in two thirds of the patients. ”



→ HUMP TAKEDOWN AND DORSUM MODELING



Progressive correction of bone irregularities and controlled gentle rasping of the nasal dorsum.

Recommended insert:
• MP0745

Additional inserts:
• MP1 • MF1 • MF2 • MF4

→ LATERAL OSTEOTOMY OF NASAL BONE

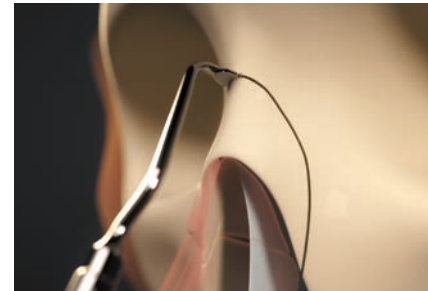


Atraumatic & precise: prevents nasal mucosa or periosteum lacerations, spares soft tissue and cartilage; prevents radiating fracture lines.

Recommended insert:
• MT9-13

Additional inserts:
• UNIVR • MT2R-4 • MT2L-4

→ TRANSVERSE OSTEOTOMY OF NASAL BONE

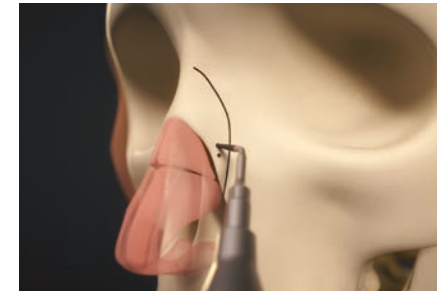


Curved design enables precise action in confined spaces.

Recommended insert:
• MT1204

Additional inserts:
• MT9-13 • MT2R-4 • MT2L-4

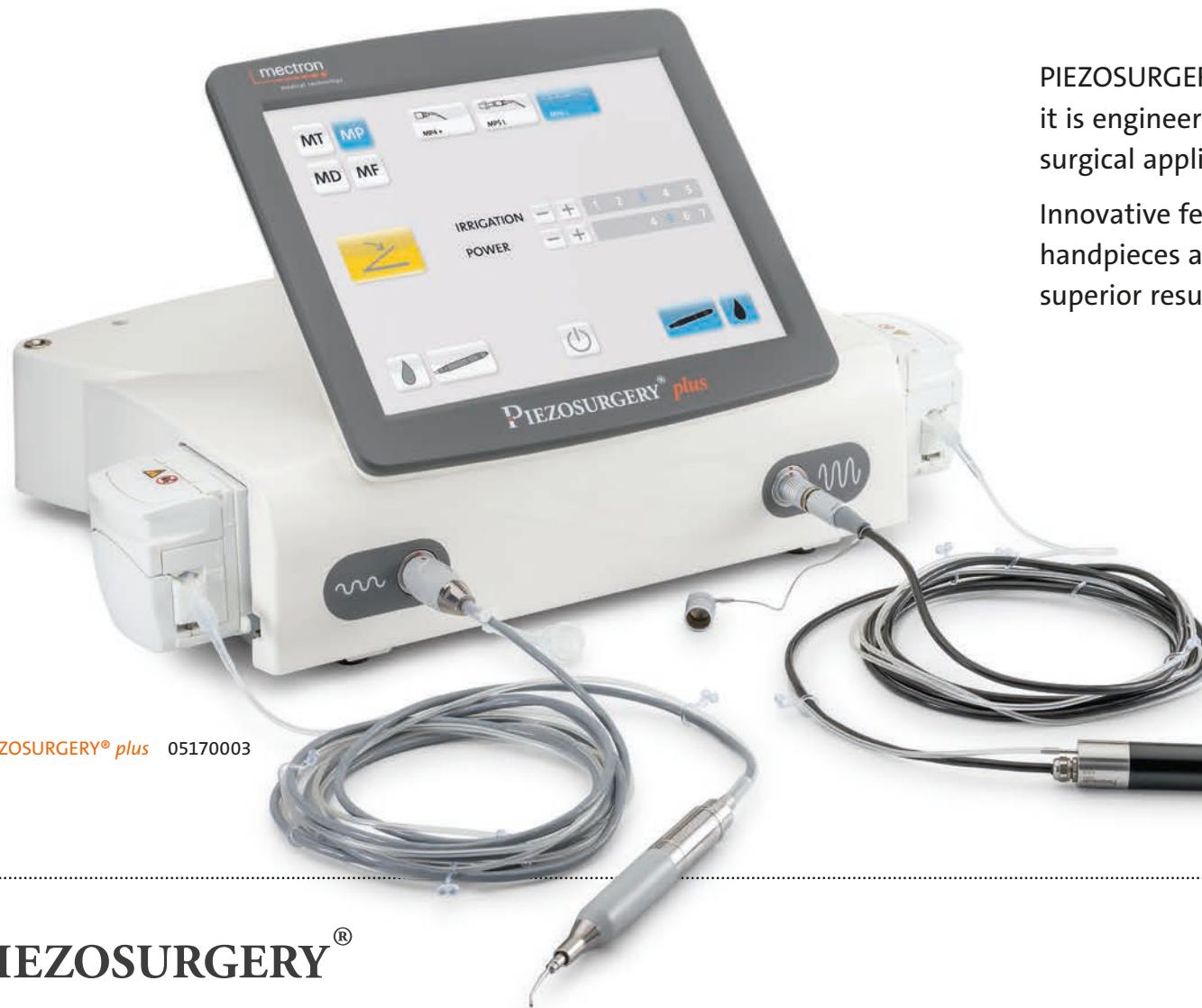
→ DRILLING OF SEPTUM FOR SUTURE FIXATION



The finest and angled insert for insertion in limited space; Ideal for perforating nasal bones as well as ethmoid lamina splints.

Recommended insert:
• MF4

→ PIEZOSURGERY® *devices* – EXCELLENCE IN BONE SURGERY



PIEZOSURGERY® *plus* is the complete device:
it is engineered to support an expansive range of
surgical applications.

Innovative features, including two independent
handpieces and channels, provide you with
superior results for every surgery.

→ COMPLETE

- Power joins precision in two handpieces
- High efficiency
- Cutting-edge technology



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device scan the QR code
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PIEZOSURGERY® *flex* is the essential device:
with its perfect control, precision and ease of use it
is your perfect start into a new era of bone surgery.

→ ESSENTIAL

- Control joins precision in one handpiece
- Compact and portable
- Easy to use



Discover the wide range
of medical PIEZOSURGERY®
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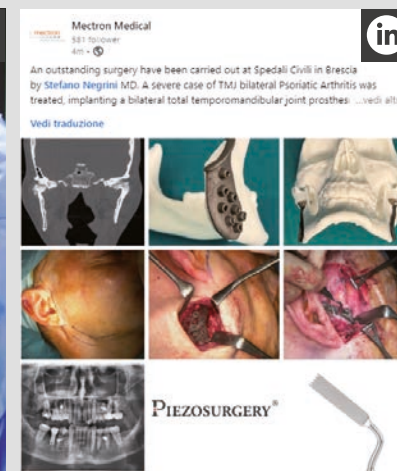
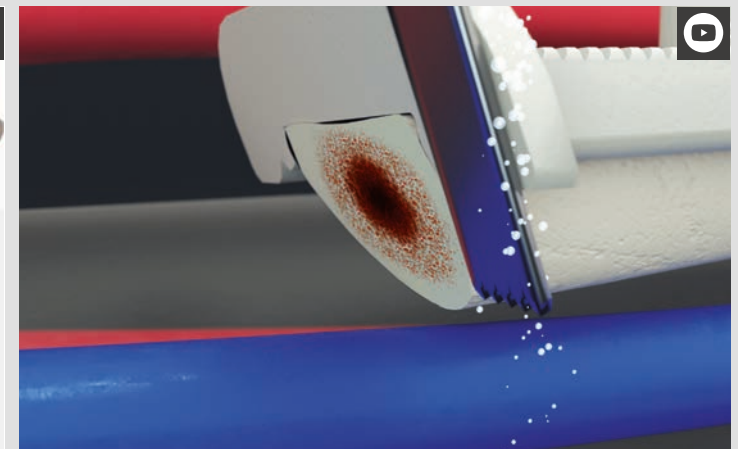
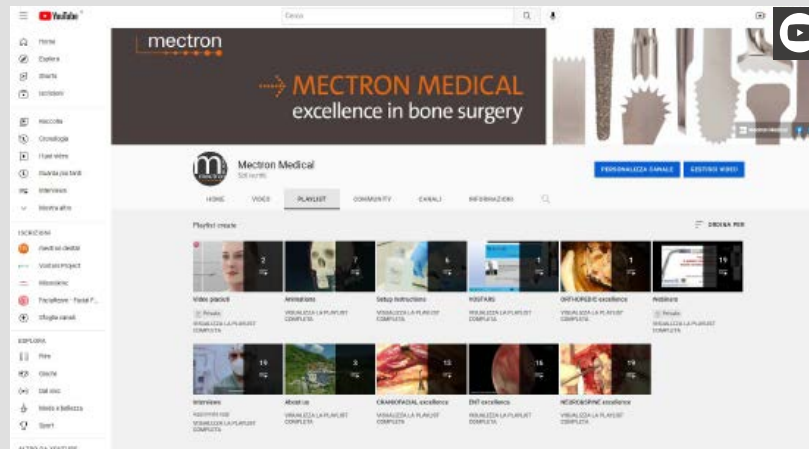


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