PIEZOSURGERY® MEDICAL
SURGICAL INSERTS
PIEZOSURGERY® MEDICAL
THE WIDEST RANGE

PIEZOSURGERY® plus is the complete device: it comes with nearly every surgical possibility, from maxillofacial surgery to neurosurgery

→ COMPLETE
→ Power joins precision
→ High efficiency
→ High level technology
Piezosurgery® flex is the essential device: with its perfect control, precision and easy usability it is your perfect start into a new era of bone surgery.
SURGICAL INSERTS

MAXIMUM QUALITY

During surgery, an ultrasonic insert oscillates up to 36,000 times per second.

That’s why we use only medical grade stainless steel in the production of mectron inserts – and why every single ultrasonic insert has to pass 12 working steps before it is ready to bear our name.

→ THERMAL TREATMENTS

Confer raw surgical tips the necessary hardness, corrosion resistance and elastic response to vibration.

→ SHARPENING AND SURFACE COATING

A proprietary CNC 5-dimensions sharpening machine cuts with an accuracy of up to 0.1 μm. Depending on the surgical indication, specific surface treatments are made, which include diamond coating with diamonds of different granulometries.

→ MARKING

Each surgical insert is laser marked. The code is engraved on the shaft of the surgical tips for superior safety.

→ QUALITY CONTROL

Surgical inserts are individually checked throughout the manufacturing process. Checks range from dimensional control of the rough insert to visual inspection of final package.
SURGICAL INSERTS
MAXIMUM VARIETY

Osteotomy, Osteoplasty, Drilling, Finishing – PIEZOSURGERY® medical inserts cover a vast variety of surgical needs. And whatever your choice is, there is one thing they all have in common: they offer the best performance you will find in the market.

Surgery performed by: Prof. P.F. Nocini, Prof. D. Bertossi and Dr. M. Albanese, Unit of MaxilloFacial Surgery, University Hospital, Verona, Italy
SPINE SURGERY

- **Laminotomy**
  - Recommended
  - MT4-10 +

- **Laminectomy**
  - Optional
  - MT1-20
  - MT1-10

- **Open Door Laminoplasty**
  - Recommended
  - MT4-10 +

- **Open Door Laminoplasty**
  - Optional
  - MT1-20
  - MT1-10

- **Spine Surgery**
  - Recommended
  - MT1-20
  - MP4 +
# ENT SURGERY

## EAR

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recommended</th>
<th>Optional</th>
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<tbody>
<tr>
<td>ENDOSCOPIC EAR SURGERY</td>
<td>MP3 - a30</td>
<td>MP2</td>
</tr>
<tr>
<td>CLOSE CAVITY TECHNIQUE*</td>
<td>MP4 +</td>
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<tr>
<td>OPEN CAVITY TECHNIQUE (mastoidectomy)</td>
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<tr>
<td>DECOMPRESSION (facial nerve, endolymphatic sac)</td>
<td>MP3 - a30</td>
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<tr>
<td>DACRYOCYSTO-RHINOSTOMY</td>
<td>MP4 +</td>
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<tr>
<td>FRONTAL SINUS OPENING</td>
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*canalplasty, mastoidectomy, antrotomy, posterior tympanotomy.
# ONCOLOGY

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<tr>
<th>Procedure</th>
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<tr>
<td>SPHENOIDOTOMY</td>
<td>MP6 L</td>
<td>MP5 L</td>
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<td>DECOMPRESSION (orbit, optic nerve, internal carotid artery)</td>
<td>MT4-10 +</td>
<td>MT1-10</td>
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<tr>
<td>MANDIBLECTOMY</td>
<td>MT4-10 +</td>
<td>MT1-10</td>
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<tr>
<td>MANDIBULOTOMY</td>
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<td>MAXILLECTOMY</td>
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DECOMPRESSION (orbit, optic nerve, internal carotid artery)

SPHENOIDOTOMY

MANDIBLECTOMY

MANDIBULOTOMY

MAXILLECTOMY

ONCOLOGY
MAXILLOFACIAL SURGERY

ORTHOGNATHIC

→ BILATERAL SAGITTAL SPLIT OSTEOTOMY
  → RECOMMENDED
  MT4-10 +
→ LE FORT I OSTEOTOMY
  → RECOMMENDED
  MT4-10 +
→ CHIN OSTEOTOMY
  → RECOMMENDED
  MT4-10 +
→ RHINOPLASTY PERCUTANEOUS APPROACH
  → RECOMMENDED
  MT1S-10
→ CONDILECTOMY / EMINECTOMY
  → RECOMMENDED
  MT4-10 +
→ MANDIBULAR ANGLE OSTEOTOMY
  → RECOMMENDED
  MT2R-4
  MT2L-4

→ OPTIONAL
  UNIVR
  MT1-10
  MT1-20
  MT2R-4
  MT2L-4
  MP2
→ OPTIONAL
  MT1-10
  MT1-20
  MP2
→ OPTIONAL
  MT1-10
  MT1-20
→ OPTIONAL
  MT1-10
  MT1-20

RHINOPLASTY
PERCUTANEOUS
APPROACH
ORBIT

- **MAXILLARY SINUS LIFT TECHNIQUE**
  - RECOMMENDED
    - MP2
    - MF1
    - MF6
  - OPTIONAL
    - MF3

- **OSTEOTOMY CLOSE TO DELICATE STRUCTURES (nerve, vessels, dura mater)**
  - RECOMMENDED
    - MF1

- **EXTRACTION**
  - RECOMMENDED
    - MT3-8

- **LATERAL ORBITOTOMY**
  - RECOMMENDED
    - MT4-10 +

- **ORBITAL DECOMPRESSION**
  - RECOMMENDED
    - MT1-10

- **EXTRACTION**
  - RECOMMENDED
    - MT1-10
    - MP6 L
    - MT2R-4
    - MT2L-4
    - MP2
INTERPHALANGEAL JOINT ARTHRODESIS

INTERPHALANGEAL JOINT ARTHROPLASTIC

PHALANX CORRECTIVE OSTEOTOMY

--- RECOMMENDED

MT1S-10

--- OPTIONAL

MT1-10

--- RECOMMENDED

MT1S-10

--- OPTIONAL

MT1-10

MT1S-10

--- RECOMMENDED

MT1S-10

--- OPTIONAL

MT1-10

MT1S-10

--- OPTIONAL

MT1-10

--- OPTIONAL

MF2

MT1-10

MF2

MF4

MF5
WRIST SURGERY

- **CMC JOINT ARTHRODESIS**
  - Recommended
  - MT1-20

- **FOUR CORNER ARTHRODESIS**
  - Recommended
  - MT1S-10

- **EXOSTOSIS / OSTEOPHYTE EXCISION**
  - Recommended
  - MT1-10

- **RADIUS CORRECTIVE OSTEOTOMY**
  - Recommended
  - MT1S-10

- **TOTAL WRIST ARTHRODESIS**
  - Recommended
  - MT1S-10

- **EXOSTOSIS / OSTEOPTHYTE EXCISION**
  - Optional
  - MT1-10

- **RADIUS CORRECTIVE OSTEOTOMY**
  - Optional
  - MT1S-10

- **TOTAL WRIST ARTHRODESIS**
  - Optional
  - MT1S-10

- **RADIUS CORRECTIVE OSTEOTOMY**
  - Optional
  - MT1S-10

- **TOTAL WRIST ARTHRODESIS**
  - Optional
  - MT1S-10

- **RADIUS CORRECTIVE OSTEOTOMY**
  - Optional
  - MT1S-10

- **TOTAL WRIST ARTHRODESIS**
  - Optional
  - MT1S-10

- **RADIUS CORRECTIVE OSTEOTOMY**
  - Optional
  - MT1S-10
RECONSTRUCTIVE SURGERY

- CALVARIAN BONE GRAFTING
  - RECOMMENDED
    - MT1-10
  - OPTIMAL
    - MT1S-10
    - MP2
    - MF1

- INTRAORAL BONE GRAFTING
  - RECOMMENDED
    - MT1S-10
    - MT2R-4
    - MT2L-4
    - MP1
    - MF4
  - OPTIMAL
    - MT1-10
    - MP2

- RADIUS BONE GRAFTING
  - RECOMMENDED
    - MT1S-10
    - MP1
  - OPTIMAL
    - MT1-10
    - MP2

- ILIAC CREST BONE GRAFTING
  - RECOMMENDED
    - MT1S-10
    - MP1
  - OPTIMAL
    - MT1-10
    - MT4-10+

- FREE FIBULA FLAP BONE GRAFTING
  - RECOMMENDED
    - MT1S-10
  - OPTIMAL
    - MT1-10
    - MT4-10+
    - MP2
# DRILLING SURGICAL INSERTS

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<td>SCREW, Ø 2.0</td>
<td>RECOMMENDED</td>
<td>MD3-14 (Maxilla)</td>
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<td>SCREW, Ø 2.3</td>
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<td>MD3-16 (Mandible)</td>
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<td>SCREW, Ø 2.7</td>
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<td>SCREW, Ø 1.5</td>
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<td>SCREW, Ø 2.3</td>
<td>OPTIONAL</td>
<td>MD3-18</td>
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</table>
OSTEOTOMY SURGICAL INSERTS

**MT1-10**
Osteotomy microsaw
Operative length: 10 mm
Saw width: 4 mm
Saw thickness: 0.55 mm

**MT1S-10**
Osteotomy microsaw
Operative length: 10 mm
Saw width: 3 mm
Saw thickness: 0.35 mm

**MT1-20**
Osteotomy microsaw
Operative length: 20 mm
Saw width: 4 mm
Saw thickness: 0.6 mm

Surgery performed by: Prof. D. Scopelliti and Dr. O. Cipriani, Unit of MaxilloFacial Surgery, University Hospital La Sapienza, Rome, Italy
**UNIVR**
Round shape osteotomy microsaw
- Shank length: 30 mm
- Operative length: 5 mm
- Saw width: 4.5 mm
- Saw thickness: 0.5 mm

**MT2L-4**
Left angled microsaw
- Operative length: 4 mm
- Saw width: 4 mm
- Saw thickness: 0.6 mm

**MT2R-4**
Right angled microsaw
- Operative length: 4 mm
- Saw width: 4 mm
- Saw thickness: 0.6 mm

Surgery performed by: Dr. S. Stea and Dr. P. Biondi, Unit of MaxilloFacial Surgery, Maria Cecilia Hospital, Cotignola, Ravenna, Italy

Surgery performed by: Dr. P. Nordera, Unit of MaxilloFacial Surgery, San Bortolo Hospital, Vicenza, Italy
OSTEOTOMY SURGICAL INSERTS

- **MT3-8**
  - Osteotomy flat scalpel
  - Operative length: 8 mm
  - Scalpel width: 1.4 > 2 mm
  - Scalpel thickness: 0.5 mm

- **MT3-20**
  - Osteotomy flat scalpel
  - Operative length: 20 mm
  - Scalpel length: 10 mm
  - Scalpel width: 1.8 > 2.4 mm
  - Scalpel thickness: 0.6 mm

Surgery performed by: Prof. M.I. Rossello, Dr. E. Machi, Dr. E. Pamelin and Dr. A. Zoccolan, Unit of Hand Surgery, San Paolo Hospital, Savona, Italy
**MT4-10 +**
Osteotomy microsaw
Operative length: 10 mm
Saw width: 4 mm
Saw thickness: 0.55 mm

**MT5-10 L**
Long osteotomy microsaw
Operative length: 10 mm
Saw width: 3 mm
Saw thickness: 0.55 mm
Shank length: 106 mm

**MT5-10 L PARTS**
OSTEOPLASTY SURGICAL INSERTS

- **MP1**
  - Osteoplasty trapezoidal
  - Width at the top: 3 mm
  - Width at the bottom: 4 mm
  - Thickness: 0.8 mm

- **MP2**
  - Osteoplasty circular
  - Shank length: 15 mm
  - Ø 4 mm
  - Thickness: 0.8 mm

- **MP3-a30**
  - Osteoplasty circular scalpel
  - Shank length: 22 mm
  - Ø 2.4 mm
  - Scalpel angle: 30°

Surgery performed by: Prof. R. Bertolai, Unit of MaxilloFacial Surgery, CTO Hospital, Florence, Italy
**MP4 +**
Osteoplasty circular
Shank length: 10 mm
Ø 4 mm
Edge thickness: 0.33 mm

**MP5 L**
Long osteoplasty circular
Insert shank length: 10 mm
Ø 4 mm
Edge thickness: 0.33 mm
Shank length: 98 mm
OSTEOPLASTY SURGICAL INSERTS

MP6 L
Long osteoplasty trapezoidal
Insert shank length: 6 mm
Edge thickness: 0.28 mm
Scalpel angle: 45°
Shank length: 112 mm
### DRILLING SURGICAL INSERTS

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<td>MD3-16</td>
<td>1.6</td>
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<tr>
<td>MD3-18</td>
<td>1.8</td>
</tr>
</tbody>
</table>

**Micro-perforation sharp cylinder insert, Operative length: 12 mm**

Surgery performed by: Dr. L. Calabrese, Unit of Oral – Oropharyngeal Surgery, IEO Hospital, Milan, Italy
FINISHING SURGICAL INSERTS

**MF1**
Diamond flap scalpel
- Length: 4 mm
- Width: 2.9 mm
- Thickness: 1 mm

**MF2**
Diamond cylinder insert
- Operative length: 12 mm
- Ø 2.4 mm

**MF3**
Diamond ball insert
- Operative length: 9 mm
- Ø 1.7 mm

Surgery performed by: Prof. M.I. Rossello, Dr. E. Machi, Dr. E. Pamelin and Dr. A. Zoccolan, Unit of Hand Surgery, San Paolo Hospital, Savona, Italy
MF4
Diamond conic insert
Operative length: 10 mm
Ø 1.4 > 0.6 mm

MF5
Diamond truncated cone insert
Operative length: 20 mm
Ø 2.8 > 2.2 mm

MF6
Blunt cone compressor
Operative length: 15 mm
Ø 5 mm

Surgery performed by: Prof. R. Bertolai and Dr. C. Catelani, Unit of MaxilloFacial Surgery, CTO Hospital, Florence, Italy

Surgery performed by: Prof. T. Vercellotti, Genoa, Italy
PICTURE REFERENCES

Neurosurgery

Prof. G. Iannetti, University Hospital La Sapienza, Rome, Italy
Dr. M. Caldarelli, Gemelli Hospital, Rome, Italy
Prof. L. C. Clauser, Dr. M. Galiè, University Hospital, Ferrara, Italy
Dr. C. Guastella & Dr. M. Locatelli, Policlinic Hospital, Milan, Italy
Prof. L. Presutti, Policlinic Hospital, Modena, Italy

Spine Surgery

Dr. M. Dobran, Ospedali Riuniti Hospital, Ancona, Italy
Dr. F. Mussa, Meyer Hospital, Firenze, Italy
Dr. M. Dobran, Ospedali Riuniti Hospital, Ancona, Italy

ENT

Prof. L. Presutti, Policlinic Hospital, Modena, Italy
Prof. C. Modugno, Sant’Orsola Malpighi Hospital, Bologna, Italy
Dr. James Cinberg, USA
Prof. C. Modugno, Sant’Orsola Malpighi Hospital, Bologna, Italy
Prof. L. Presutti, Policlinic Hospital, Modena, Italy
Dr. F. Pagella, San Matteo Hospital, Pavia, Italy
PICTURE REFERENCES
## PRODUCTS

### ACCESSORIES

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### CONTAINERS FOR CLEANING AND STERILIZATION PROCEDURES

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*Torque wrench to tighten the inserts: M5: 10 l (03600009), MPS L (03610008), MP6 L (03610009)*
<table>
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<th>PIEZOSURGERY® plus 05170003</th>
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