### SURGICAL INSTRUMENTS





# Human Technology

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#### CLEANING AND STERILISATION OF BTI SURGICAL INSTRUMENTS......

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#### RIGHT-ANGLED SCREWDRIVER





This screwdriver consists of two components: the handpiece with reduction 1.2:1 and the handle that adapts to the handpiece. Turning the handle produces the rotation of the interchangeable screwdriver tips.

They can be used for inserting or removing screws or healing abutments.

The components of the handpiece are reinforced so that the application of torque does not deteriorate the splines; its special design enables it to be perfectly cleaned, lubricated and sterilised like any surgical handpiece.

It shall be the instrument to choose for unscrewing parts tightened with a high torque.

It is an essential instrument in both surgery and prosthetics when working in the rear sector, as it provides easy access and prevents the screwdriver accidentally being swallowed or inhaled.

It must never be used as a motorised counterangle.















#### PERIOSTEAL RASP







# MOLT CURETTE



#### PAPILLA ELEVATOR







# MOSQUITO FORCEPS



Multi-function forceps with curved tips, essential for clamping blood vessels, removing small apexes and gripping objects.





## ADSON FORCEPS



Length: 12.2 cm Forceps with tungsten carbide tips that are used in surgery for holding, securing, bringing together or compressing tissues, with minimum trauma.





### DE BAKEY DISSECTION FORCEPS

#### REF. **PDB**

Length: 14.5 cm Atraumatic forceps with tungsten carbide tips, used in surgery to secure soft tissue firmly without causing any harm.

TIP





## SURGICAL COMPASS





Precision instrument ideal for measuring and transferring intraoral distances.



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# SURGICAL RULER



indicated for verifying the opening of the compass and other applications.



#### PROBES



#### REF. **SPTIU**

Prosthodontic probe for measuring the depth of the soft tissue, necessary for selecting the height of the healing abutments or prosthetic components to be used. Depth marks at 1, 2, 3, 4 and 5 mm. The probe is inserted into the connection of Interna<sup>®</sup> implants for an immediate reading.

#### REF. SQR

Surgical probe designed to help with the preparation of the alveolus for the insertion of implants. It has an area for measuring the depth of the alveolus prepared with depth marks at 3, 5, 8.5, 10, 13 and 15 mm.

Its longitudinal body has a ruler for measuring up to 5.5 cm and a small square with a marked ruler to measure the distance between implants.





### SCISSORS FOR MICROSURGERY



### CURVED SCISSORS FOR MICROSURGERY



#### REF. TCMC

Length: 11.4 cm Curved scissors indicated for removing stitches, especially in rear areas of the maxillae where access is more difficult.





# TISSUE SCISSORS



Curved scissors for tissue, with one tungsten carbide blade, with a high cutting ability, and the other microserrated to secure the affected tissue accurately.



#### LONG SCISSORS FOR SURGERY





**Length:** 14.5 cm Curved scissors for tissue, with one tungsten carbide blade, with a high cutting ability, and the other microserrated to secure the affected tissue accurately.





### CASTROVIEJO NEEDLE HOLDER



Designed for sutures of 5-6 zeros.



#### MIRROR HANDLE AND MIRRORS



Length: 12 cm

Conventional mirror handle.

Flat mirror with a diameter of 24 mm / unit of sale: 12 units.





#### HANDLE AND BLADES FOR SCALPEL

Length: 15.3 cm Scalpel handle, for blades with conventional fixing no. 3.



#### MICROSCALPEL AND BLADES FOR MICROSURGERY





13.3 cm





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### FARABEUF SEPARATOR



Length: 11.5 cm Double lip and tissue separator. Two complementary units.





### LIP SEPARATOR



Designed for both upper and lower maxilla, particularly useful in edentulate patients.





## TISSUE SEPARATOR







# CIRCULAR SCALPEL 2



Length: 30 mm Indicated for use with the socket wrench as if it were a normal screwdriver. It is also possible to insert it into the right-angled screwdriver or handpiece.





### SINUS ELEVATION KIT



#### SINUS ELEVATION KIT





Kit of sinus membrane rasps, with different angles.





#### BONE COMPACTORS



Indicated for compacting bone around an implant post-extraction.



Length: 15.4 cm Ideal for compacting bone in a traumatic sinus elevation.





## SINUS ELEVATION KIT





Ideal for compacting bone in a traumatic sinus elevation.





#### FIBRIN SHAPER



Diameters: 4.5 and 5.1 cm For pushing and compacting the fibrin by means of perforations carried out with the front cutting drills at the crestal accesses. Diameter 4.5 and 5.1 mm. Depth marks: 5, 6, 8, 10 and 13 mm.





They can be used jointly with the BTI drills. When used with the motor with the CPI22HEX, they must not exceed a torque of 25 Ncm. Material: commercially pure titanium.

**BTI EXPANDERS** 

#### INDICATIONS

Crest expansion in bone type I, II and III. In both anterior and posterior areas in the superior maxilla or mandible. Bone compactation for placing implants in bone type IV in posterior areas of the maxilla or mandible.







# BTI COMPACTORS

The short compactors are specifically for the treatment of posterior areas of the upper maxilla and they are specially designed for patients with a limited oral opening.

They have depth marks at 8.5 mm, 10 mm and 11.5 mm.





#### KIT OF EXPANDERS BTI COMPACTORS



Set of Expanders and compactors



This consists of the long expanders and the four short compactors, with which all expansion and compactation can be resolved for all types of patients.





#### FORCEPS FOR BLOCK GRAFTS



Forceps designed to secure the block bone graft to the crest while accurately drilling the receiving cortical through the orifice. Enables screw-mounting without movements that hinder the entry of the screw.

Ideal for the superior maxilla.



#### FORCEPS FOR BLOCK GRAFTS ANGLED





Angled forceps for maintaining and screwmounting the block graft in the inferior maxilla.





#### PERIODONTAL RASP



#### GRACEY RASPS





The rasps can be used for scaling, debriding and root planing.

Specific for certain areas of the dental arch. Only the cutting edge of each blade is used, which has a cutting angle of 70°. The blade is curved on two planes and its design allows improved adaptation to the root surface.







## GRACEY RASPS



Length: 17 cm The rasps can be used for scaling, debriding and root planing.

Specific for certain areas of the dental arch. Only the cutting edge of each blade is used, which has a cutting angle of 70°. The blade is curved on two planes and its design allows improved adaptation to the root surface.



Length: 17 cm



### SURGICAL INSTRUMENTS While stocks last





# CHISELS



# CHISELS





Curved chisel, 6 mm wide, indicated for obtaining block grafts.





#### GRACEY RASPS



# BONE RASPS









## SCREW EXTRACTOR





Used to remove fractured screws and also as a rasp for incisors.





# GOUGES



Length: 14.2 cm Suitable for rectifying the alveolar crest. It is shaped like a scoop and is indicated for removing small bone particles.



**Length:** 15.2 cm Used as scissors, but most robust and suitable for rectifying the alveolar crest.





# SINUS ELEVATION KIT



Spatula for transporting the bone graft to the inside of the sinus.





#### HAMMER

#### REF. MAR

**Length:** 18 cm 220 GR. Hammer for obtaining block grafts, split or Summers elevation, with interchangeable Teflon head.



#### SURGICAL BOX





Indicated for preparing kits or sets of instruments, for example for removing stitches, microsurgery, etc.





#### BTI OSTEOTOMES

Set of osteotomes



REF. **OS15C** 

Set of osteotomes with box

Osteotomes **no. 1 and 2** are used to position implants in the superior maxilla in cases of narrow alveolar crests, producing a controlled expansion in cases of bone type II, III and IV. They are also used to initiate a sinus elevation with osteotomes. Their design with sharp points **no. 1 and 2** provide a lower resistance when inserting them into the bone crest, in cases of crestal expansion and

sinus elevation.

Nos. **3**, **4** and **5**, designed with a blunt tip can be used to compact bone in cases of bone type III and IV and for sinus elevation.

All the osteotomes are marked for the placement of implants of 8.5, 10, 13, 15 and 18 mm. Similarly, they have a mark at 4 mm, which is especially helpful for the sinus elevation technique. Manufactured from surgical stainless steel.

#### INDICATIONS

- · Crest expansion in superior maxilla, in bone type III.
- $\cdot$  Bone compactation in superior maxilla to place implants in bone type IV.
- $\cdot$  Atraumatic sinus elevation (Summers technique) with or without graft.



#### HANDLE AND MICROMIRROR





**Length:** 12.5 cm handle 16 cm micromirror + handle

> Mirror for microsurgery and area with limited access. Particularly indicated for sinus elevations and apicoectomies.

Micromirror handle





# ARKANSAS STONE



Sharpening stone foor scissors, rasps, etc.



#### NEEDLE HOLDER FOR MICROSURGERY



Length: 14.5 cm PAMC6: Special microsurgery needle holder for sutures of 6 zeros. PAMC7: For thread of 7 zeros.





# FIELD FORCEPS



Forceps for fixing the cut and determining the working surgical field.

BLADE





#### CIRCULAR SCALPEL



Indicated for insertion in the straight hand piece. Cut with Ø of 4 mm.





### FORCEPS FOR MICROSURGERY



Length: 15.6 cm Very thin forceps for microsurgery, with tungsten carbide tips.





### LIP SEPARATOR



Length: 21.3 cm Indicated for retracting the lips; Ideal for wisdom tooth extraction.



#### **CLEANING AND STERILISATION** OF BTI SURGICAL INSTRUMENTS



#### INTRODUCTION

All the surgical instruments are supplied clean and hermetically packaged, but not sterilised. Therefore, it is recommended to sterilise all instruments before use. The recommended sterilisation process is described below. Before being packaged, all instruments are coated with an oily liquid, particularly at articulations, hinges and threads. Before use it is considered to be necessary to carefully clean and rinse the instruments, to avoid complications such as stains, hardening of articulated parts, etc.

After using the instruments, clean and sterilise them according to the procedures described below.

#### PROCEDURE

Decontamination:

- 1. Cleaning and rinsing
- 2. Microbicide process (sterilisation)

#### MANUAL CLEANING

For the manual cleaning of surgical instruments; BTI recommends:

- Using protective gloves.
- Cleaning after each surgical use.

1. At the location where they are used, place the instruments on a tray and cover them with a towel moistened with distilled water at room temperature, to prevent blood or bodily fluids from drying before being decontaminated. They are later taken to the processing area.

2. Eliminate the largest impurities with a brush with bristles that are not too hard, moistened with tap water at room temperature.

3. Disassemble the instruments (if applicable).

4. Dip the instruments in a detergent with or without disinfectant effects capable of removing the impurities even in the most critical areas. Neutral detergent at a concentration and temperature recommended by the manufacturer. Rinse to remove the traces of detergent with tap water at room temperature.



#### **CLEANING AND STERILISATION** OF BTI SURGICAL INSTRUMENTS

5. Place the instruments in an ultrasonic bath with a solution of neutral detergent at the correct concentration and temperature, following the manufacturer's instructions. Rinse with distilled water at room temperature. The solution must be changed when turbidness or suspended particles are detected, as the impurities inhibit the cleaning action of the equipment.

Cleaning with ultrasound is not recommended for instruments with sharp or tungsten carbide parts.

6. Visual inspection.

7. Lubricate (if applicable) with a hydrosoluble lubricant solution. Do not use silicone or oil-based lubricants as they inhibit the subsequent sterilisation process.

8. Carefully dry the instruments manually. Use materials that do not shed fibres. Make sure that all the instruments are completely dry.

9. Assemble the instruments (if applicable).

During the same cleaning process instruments of different materials (chrome, aluminium, stainless steel) should never be mixed.

#### STEAM STERILISATION WITH PRE-VACUUM

Products in thermosealable bags

- Temperature: 132°C – 135°C; Exposure Time: 3-4 min.

When sterilising in autoclaves, instruments with closures and joints must never be closed (metal against metal) as they could break due to thermal expansion. In addition, the water would not be able to evaporate between the parts that are touching. The autoclave cycle must be allowed to finish, without interrupting the drying phase to avoid the risk of oxidation.

Selection of the packaging material (thermosealable bags) for steam sterilisation taking into account the following considerations:

- Appropriate material for the method and cycle.
- Strength of the packaging.
- Type of packaging.
- Integrity characteristics of the packaging required due to the design of the instruments.

The bags must be inserted into the steriliser with the paper up to aid evaporation, and be kept in the same position when removed from the steriliser to avoid the risk of the contents rusting.

It is important to ensure you do not sterilise any rusted instrument or material together with the rest of the apparatus, as this increases the risk of the others rusting during sterilisation.



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