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I U X T A



B&B DENTAL
IMPLANT COMPANY



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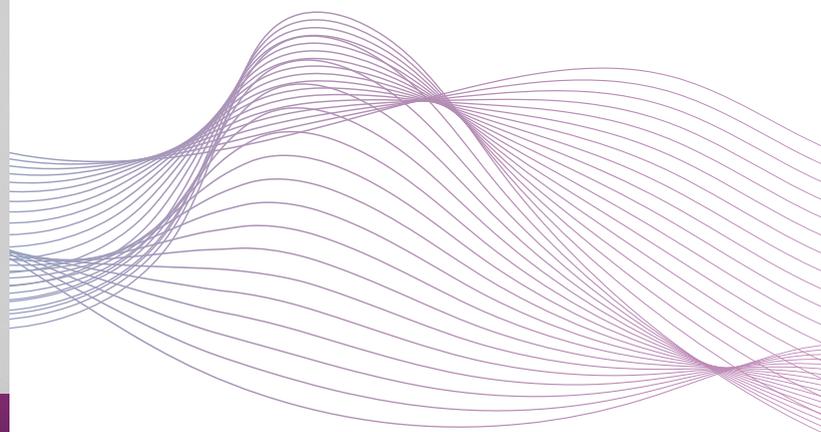
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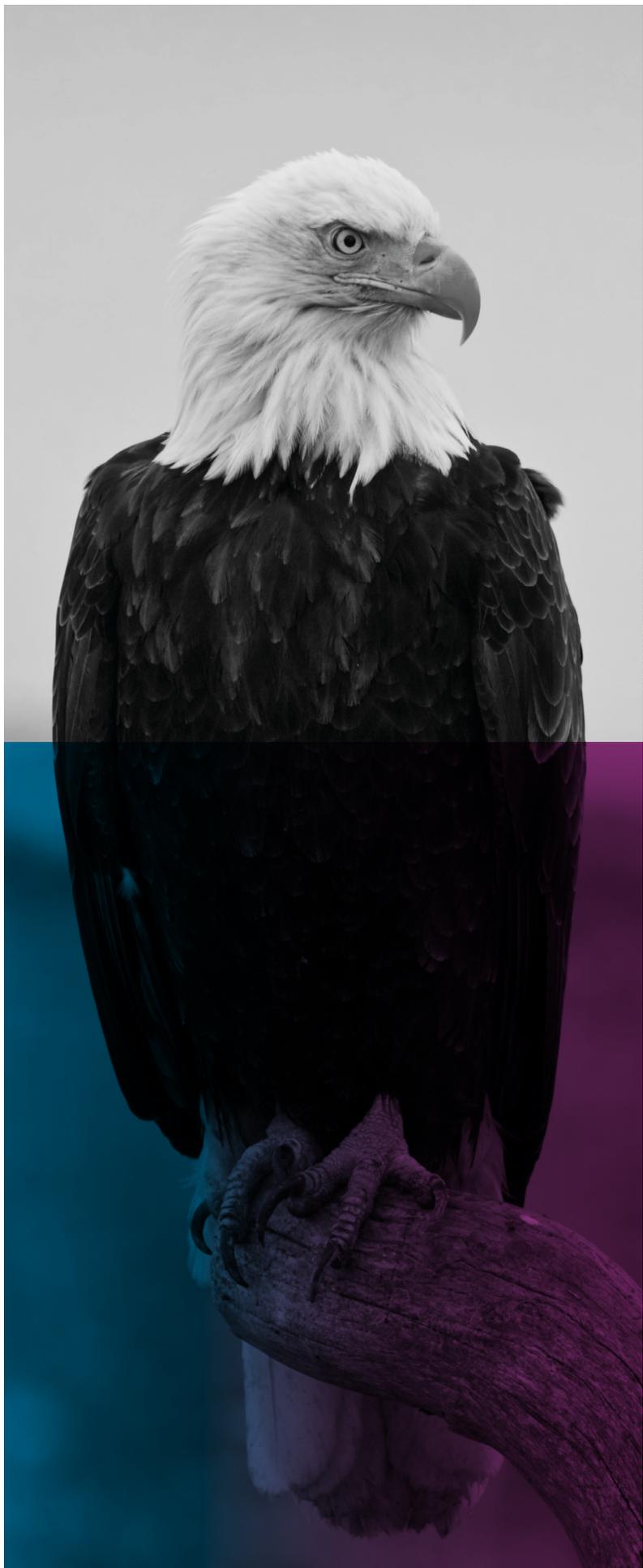
IUXTA- OSSEOUS IMPLANTS IUXTA-OSSEI



Iuxta implants are customized medical devices, that is, made to measure dental implants that are produced via laser melting and customized based on the patient's clinical needs.

Unlike classical and more well-known endosseous implants, the Iuxta implants are positioned subperiosteally, they are placed by taking advantage of the morphology of the bone structure and subsequently fixed to the bone with the use of osteosynthesis screws.

This solution is considered by the clinician in order to resolve rehabilitation cases in patients who suffer from severe bone atrophy and who consequently cannot be treated with classical implant surgery. Moreover, these patients can rarely undergo such extensive and complex regenerative procedures: these operations entail very long recovery times and they do not have acceptable guarantees of success.



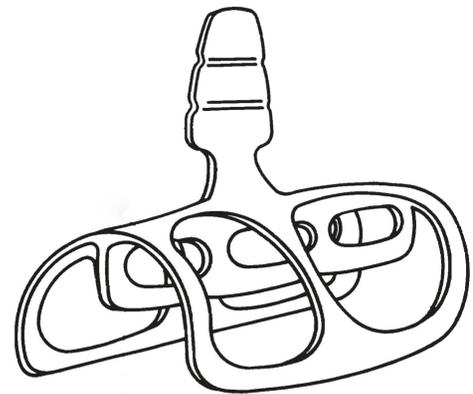
EVOLUTION OF THE SYSTEM

YESTERDAY

The luxta or subperiosteal implants were introduced at the beginning of the 1940s by Gustav Dahl and subsequently re-examined in 1946 by Norman Goldberg and Aaron Gerschkoff. In the 1960s and 70s they began to practice the first procedures consistently and to introduce the first protocols. Skeletonization of the bone segment was carried out in order to detect the imprint and transfer the information onto volumes and the anatomical conformation.

The flaps were then sutured while the laboratory manufactured the metal structure by lost wax casting. If possible, within 12 hours, the patient was called back to the studio, put under anaesthesia, the flaps were reopened and the grid was adapted and positioned. This was done by also making use of the potential undercuts and searching for the best possible stability.

After suturing they would pass onto the prosthetics with single-phase abutments and a temporary one in resin.



The probabilities of success of these implants were low both in the long and short term, and this resulted in their total or partial removal.

The main reasons for their failure were:

- misfitting, that is, an imprecise adjustment of the conformation of the structures against the bone, that provoked micro-movements responsible for rarefactions once they were subjected to prosthetic loading.
- quality and density of the bone together with the failure to assess the pressure generated by the supportive surface.
- exposure of the areas adjacent to the abutments, which would often be remedied with a rotation flap.
- the metal and fusion method could cause unpredictable hypersensitivity. The lost-wax casting could also result in lack of homogeneity and weakness of the structure.

In time, and for these reasons, the technique was eventually abandoned.

TODAY

In the implant surgery sector, digitalization and the advent of planning and design software have promoted the development of devices and techniques that significantly improve diagnosis, treatment and instruments.

Thanks to digital technology, to the predictability and precision of the results, to the optimization of materials and methods, the strong limitations of the past regarding feasibility have been overcome and today the luxta implants represent an effective and cutting-edge solution in the implantology sector.

In detail, they have become problem-solving devices in clinical cases where patients suffer from severe bone atrophy, when classical implantology is no longer an option.



Today luxta implants are effective products because:

- they represent a suitable clinical solution in clinical cases with severe bone atrophy that would otherwise not be treatable
- they are completely customizable: they are tailor-made digitally and then printed via laser melting in complete accordance with the patient's bone conformation
- the high-resolution diagnosis instruments, the planning and the 3D printing guarantee great precision
- fixing with osteosynthesis screws guarantees the stability of the luxta structure
- patients avoid resorting to long regenerative procedures which do not guarantee success.
- they allow for immediate loading and long-lasting rehabilitation
- they allow for aesthetic and functional results to be achieved in complex clinical cases

Note that this method is currently approved in the USA by the FDA (Food & Drug Administration).

WORKFLOW

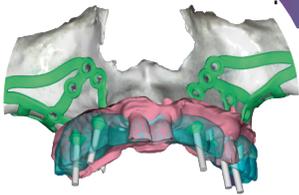


DATA COLLECTION

The tomographic imaging of the patient is essential for creating the luxta implants. During the examination, the patient wears a dedicated radiological guide that allows for matching during the design phase of the implant that is prosthetically guided. The acquired DICOM files are sent to the B&B Dental team, who checks the feasibility of the project.

DURA-VIT IUXTA DIGITAL DESIGN

The grids are designed with the help of dedicated software in accordance with the patient's anatomy, by studying prosthesis loads. The project is shared with the dentist who can make necessary changes before production takes place.



luxta implants are manufactured from medical grade 5 titanium by laser melting to ensure high biocompatibility, purity and microstructural homogeneity, and ensure mechanical strength.



SLM PRINTING

luxta grids are cleaned and decontaminated in automatic ultrasound machines in a controlled atmosphere in cleanrooms. All production cycles are monitored and registered to ensure product traceability in compliance with the most stringent regulations.



PROCESSING AND SHIPPING

Surgery is performed under local anaesthesia or conscious sedation. B&B Dental can provide a temporary restoration in PMMA [acrylic], to be positioned while waiting for tissues to heal completely.



SURGERY

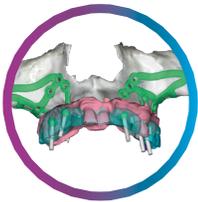
WORKFLOW



1

DATA COLLECTION

Performing a high-resolution tomographic (CBCT) examination with 0.2 mm cross-sectional area is essential for the realization of an luxta implant design. The acquisition volume must contain all anatomical structures necessary for the design. In particular, a FOV of 14x14 cm is recommended for the upper area so that the zygomatic arch is clearly evident. During the examination, it is important to place the radiological template or, even better, a duplicate of the prosthesis with radiopaque markers in the patient's mouth. The resulting file will be saved in DICOM format so that it can be read by most segmentation software. The 3D model can then be printed and a clear and accurate image obtained. This will be followed by a double scan, just as during a normal guided surgery case, and matching. Alternatively, you can send all the necessary documentation and data to B&B Dental who will make the design for you.



2

DIGITAL DESIGN

From this received data, the B&B Dental Team can proceed with the next steps, analysing:

- The DICOM files (Analysis of structure and bone conformation)
- STL files Master model (View of soft tissue and possible residual teeth)
- STL files model with radiological template (View of prosthesis size and matching).

These data allow the team to correctly create a project with the help of CAD programmes, so as to assess the thickness and morphology of the luxta implant, the form and the diameters of the holes for the osteosynthesis screws, the emergency profile of the prosthetic abutments and the type of these:

- single stage abutments standard for cementation
- conometric abutments
- two stage abutments (MUAs) [Multi-unit abutments].



3

SLM PRINTING (SINTER LASER MELTING)

Once the design phase is complete, B&B Dental will send the file with the digital project via email to the clinician for written approval, obtained via the filling in of a specific form, without which production cannot be started (the form can be downloaded online). During this phase, certain processing techniques may be requested, such as a temporary implant in PMMA.

luxta implants are produced via SLM technology, a highly-advanced method that creates the implants via titanium micro powders: grids are formed with fused titanium layer by layer, thus avoiding any inaccuracies.



4

PROCESSING AND SHIPPING

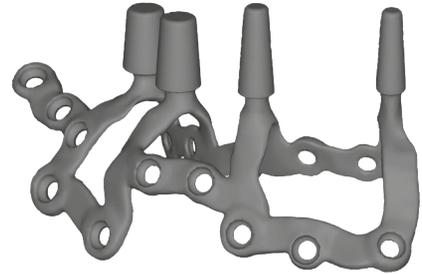
The luxta implant is monitored and sent to a clean room for cleaning and decontamination operations in a controlled atmosphere and via saturated steam. Packaging is also performed in a clean room. All the production processes are meticulously verified by the quality management system and registered, to guarantee traceability in compliance with the most stringent regulations in force. The sterilization of the sealed envelope containing the luxta implant must be performed by the clinic performing the procedure.

IMPLANTS

PROSTHETIC OPTIONS

▶ SINGLE-STAGE ABUTMENTS FOR CEMENTATION

All abutments used on luxta implants are rectified by a 5-axis bur, guaranteeing reproducible geometries and mathematics, thus avoiding potential errors that could occur during the manual processing phase.



▶ TWO-STAGE ABUTMENTS FOR SCREW-RETAINED PROSTHESIS (MUA)

As per the single-stage abutments for cementation, these abutments for the screw-retained prosthesis are checked by a 5-axis bur. These abutments precisely reproduce the shape of classic abutments for screw-retained prosthesis, that is, MUA. The locking screw on the abutments is bigger compared to classical ones by 1.4 times.



▶ CYLINDRICAL ABUTMENTS WITH CONICAL COUPLING MORSE TAPER

The cylindrical abutment with conical coupling morse taper favours healing of soft tissue and allows for the use of all rotational abutments that permit a screw-retained, cemented and conometric prosthesis to be created.



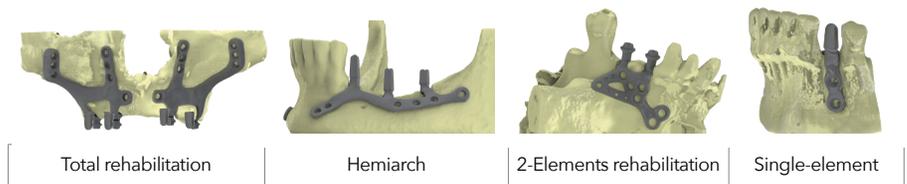
▶ IUXTA-MUA

Iuxta mua with a diameter of 2.5 mm represents an absolute innovation in the field of iuxta-osseous implantology because they allow even small amounts of bone to be used vertically, anchoring with Cono Morse coupling to the cylindrical-conical abutments. This coupling ensures better stability of the luxta implant because anchoring occurs both superiorly and laterally.



GRID OPTIONS

During the creation of the project it is important to decide the type and dimension of the luxta implant, based on the 3D radiographic images and on the agreed prosthesis rehabilitation of the patient by the clinician.

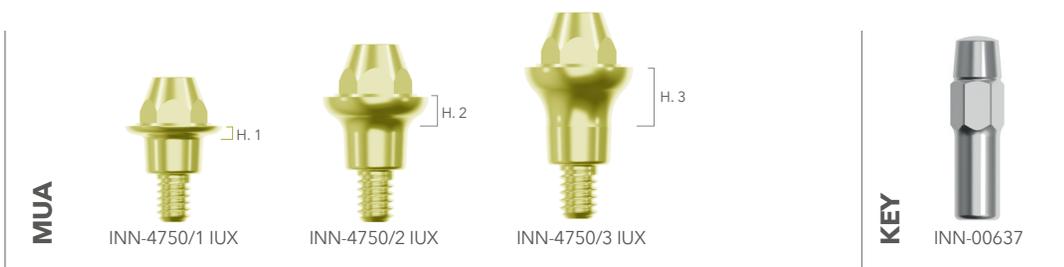


TOOLS AND ACCESSORIES

DRILLS AND ACCESSORIES

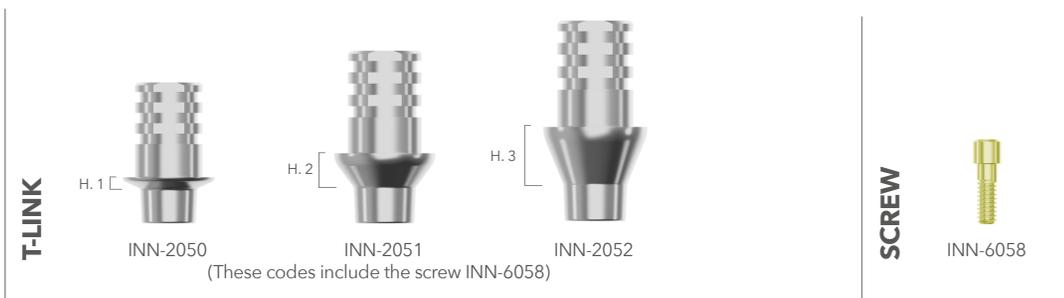
STRAIGHT MULTI-USE ABUTMENT

Straight multi-use abutments should be screwed directly to the IUXTA implant via the abutments using a multi-use driver (manual or with the aid of a ratchet). These abutments work in conical coupling.



TI-LINK 3P/EV/WIDE

These are titanium components used primarily for digitally cemented prosthesis. These abutments work in conical coupling.



SCAN

The scan is a component used to take impressions with digital intraoral scanners. The scanbody is to be connected directly to the implant.



TIGHTENING:
Recommended
tightening : 25 Ncm

IMPORTANT NOTE

B&B Dental libraries are required for the use of these components. You will find the libraries for the software in the "downloads" section of our website. Contact us for further support.

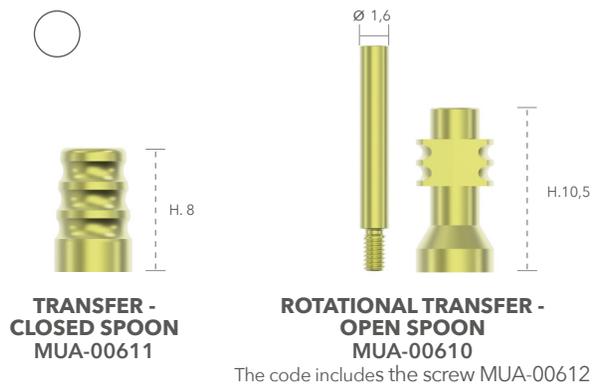
MUA ANALOGUE

Analogues reproduce the position of the implant connection within the model, they must be carefully placed on the transfers inside the impression before proceeding with cast pouring.



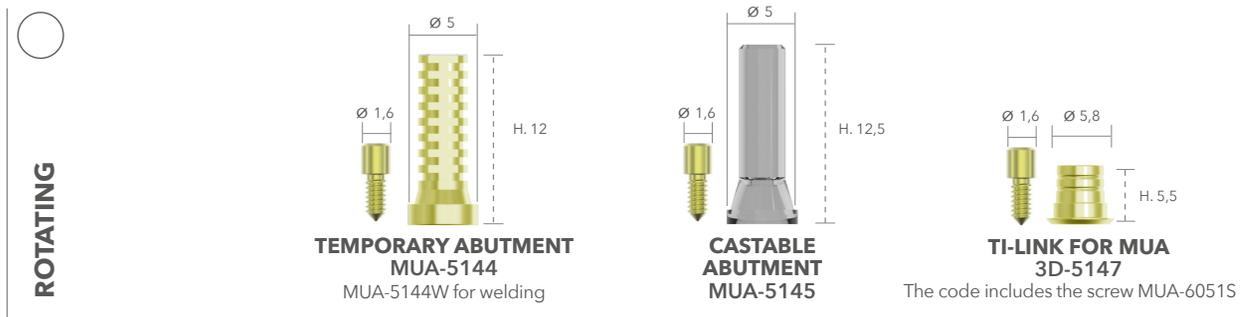
MUA TRANSFER

The transfer is screwed onto the MUA for precise position adjustment during the impression taking step.



MUA ABUTMENTS

These abutments must be fixed onto the MUA to build structures. Two versions are available: rotating, non-rotating. The non-rotating abutment can be used in single solutions.



HEALING SCREW MUA

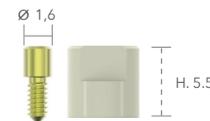
This is used in the patient's healing phase to protect the MUA abutment until the prosthesis is applied.



HEALING SCREW
MUA-6030

SCAN MUA

The MUA scan is a device that takes impressions by means of intraoral scanners.



SCAN
SCAN-MUA-16
The code includes the screw MUA-6051S with \varnothing 1,6

ROTATIONAL ABUTMENTS FOR CONICAL MORSE TAPER

The rotational conical abutments are fixed via a locking screw to the coupling cone and can be used both when cementing and screwing.



**DRILLS FOR OSTEOTOMY
DRILLS FOR FIXING SCREWS**

The kit contains all of the drills for preparing the bone and the drills for creating entry holes for inserting the fixing screws.

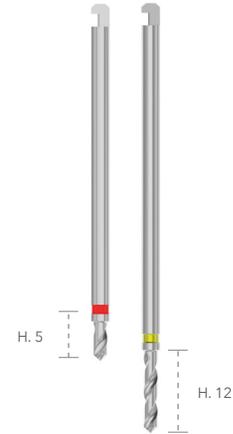


IMPORTANT NOTE
Add 0.5 mm to the drill length when considering the angled cutting tip.

**CONTRA-ANGLE
DRILLS
1.7 - 2.0**



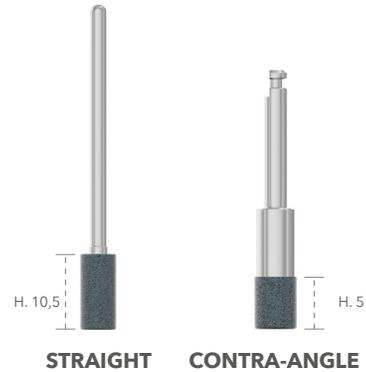
**DRILLS FOR STRAIGHT
HANDPIECE
1.2 - 0.5**



**LANCE
DRILL**



OSTEOTOME



SCREWDRIVER

The screwdriver present in the kit allows one to exert adequate force in order to position the screws. The head of the screwdriver presents a cross-shaped attachment so it can be used to insert both the fixing screws and the osteosynthesis ones.



EXTRACTOR

The extraction key is used to disengage the prosthetic components used for taper coupling from the implant.



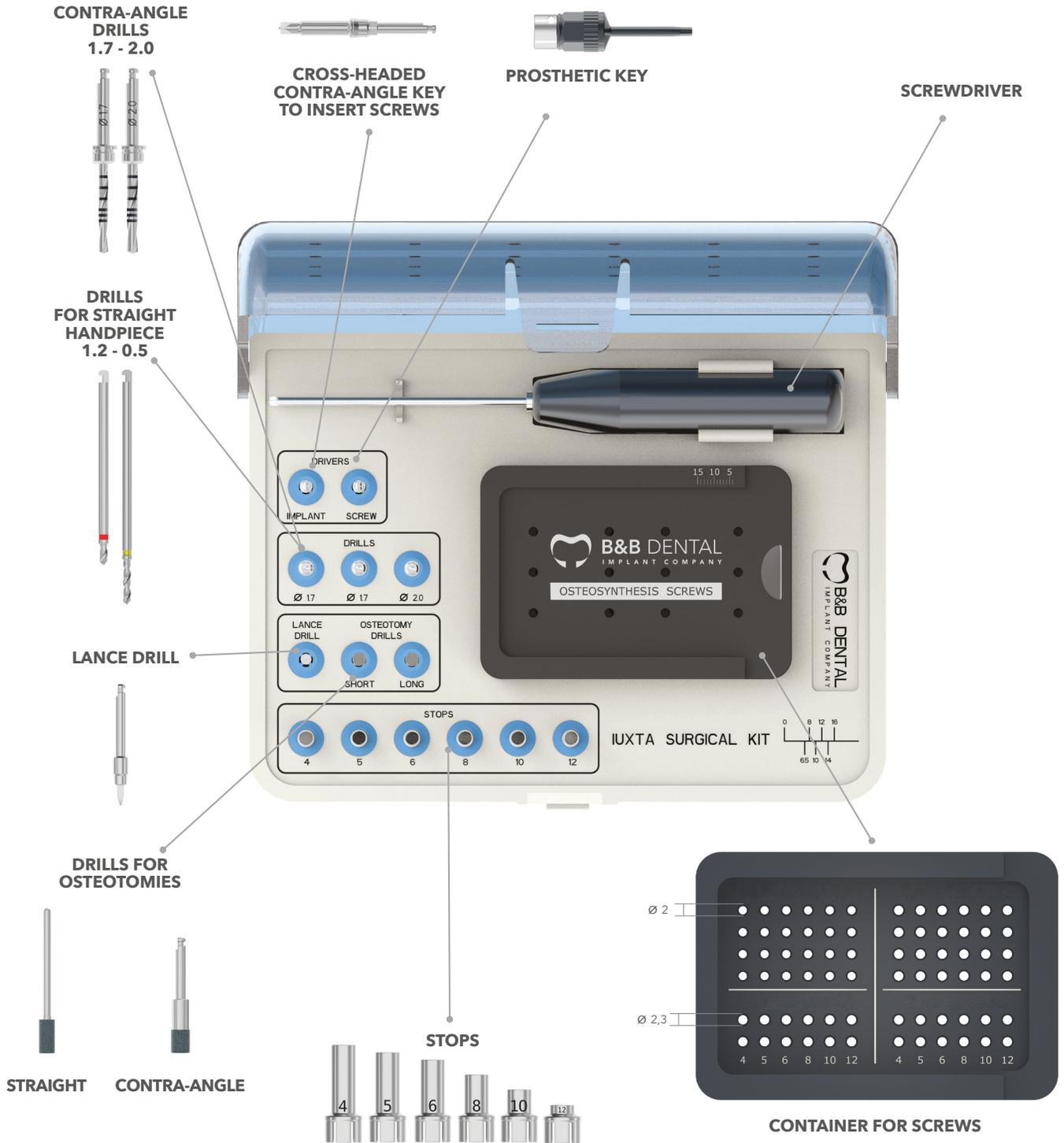
IMPORTANT NOTE
Product not included in kit, it can be purchased separately.

**EXTRACTOR KEY FOR IUXTA SYSTEM
INN-6162**

IUXTA SURGICAL KIT

Ergonomic and intuitive, the kit contains all the instruments needed to correctly perform an Iuxta surgical procedure in line with the protocols dictated by B&B Dental.

REF. SUB-00090SC



FIXING SCREWS

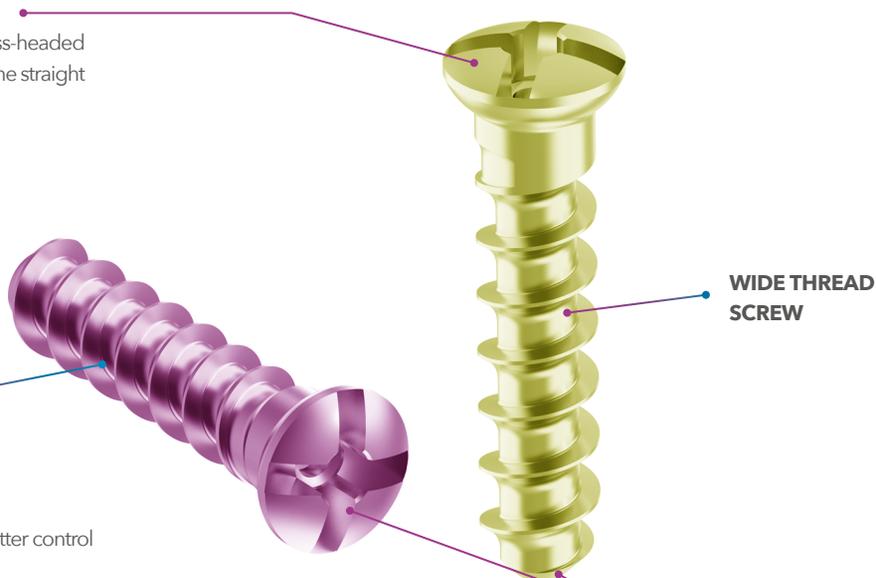
The medical grade 5 titanium fixing screws are available in two diameters: Ø 2 and Ø 2.3. These screws, for fixation, require preparation with appropriate drills with defined diameters.

CROSS-HEADED

- Can be used with the cross-headed contra-angle wrenches or the straight screwdriver
- Easy and stable

THREAD CUTTING SCREW

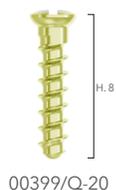
- Sharp thread provides better control during insertion
- Easy placement
- High primary stability



WIDE THREAD SCREW

DIFFERENT COLOURED HEADS
for easy identification of the diameter

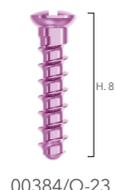
DIAMETER 2



Screw Ø 2	H. 3	00381/Q-20
Screw Ø 2	H. 4	00396/Q-20
Screw Ø 2	H. 5	00397/Q-20
Screw Ø 2	H. 6	00398/Q-20
Screw Ø 2	H. 8	00399/Q-20
Screw Ø 2	H. 10	00389/Q-20
Screw Ø 2	H. 12	00388/Q-20



DIAMETER 2.3



Screw Ø 2.3	H. 3	00380/Q-23
Screw Ø 2.3	H. 4	00387/Q-23
Screw Ø 2.3	H. 5	00386/Q-23
Screw Ø 2.3	H. 6	00385/Q-23
Screw Ø 2.3	H. 8	00384/Q-23
Screw Ø 2.3	H. 10	00382/Q-23
Screw Ø 2.3	H. 12	00383/Q-23



IMPORTANT NOTE

Two screws in each package.



B&B DENTAL DIGITAL SUPPORT

Even in the prosthetic field, B&B Dental supports dentists in all of their projects by providing two valid services for design and creation.



A software for guided surgery that can be downloaded from the B&B Dental website and that is clear, user-friendly, suitable for any device and allows you to view CBCTs, convert DICOM files to STL and plan your cases, leaving you with the freedom to work independently but facilitating sharing information with our technicians before finalising a project.



We guide you in all stages of treatment, because thanks to the equipment at our centre we can prepare the prostheses according to the purposes and with the materials you want.



CONTACTS

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