I- Presentation of the ID3 :

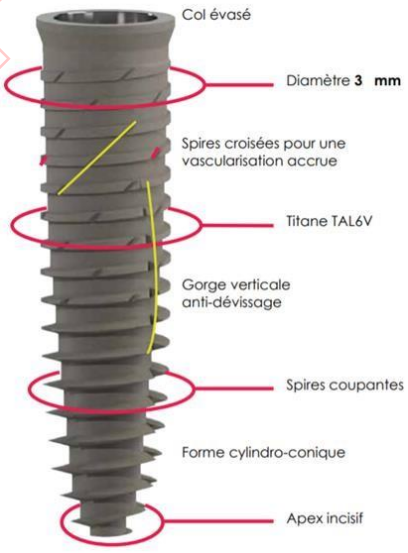
The ID3 implant is a narrow implant with a **diameter of 3 mm** (*platform diameter 3.1 mm) and is* part of the IDI implant range. It is manufactured from **Grade V titanium alloy and** is subjected to heat and a surface treatment including **sandblasting and etching**.

The ID3 has a **cylindro-conical** shape and has **a 2.5° morse taper that** is **perfectly sealed.** It features 6 repositioning cams for indexing and can accommodate with all types of restorations.

Its flared neck and design were thought for a use in cases of **reduced mesio-distal space** at the anterior level. This makes it possible to avoid, in certain situations, the need for bone grafts.

Characteristics of the ID3 implant :

- Cylindro-conical shape.
- Vertical anti-unscrewing spiral.
- Crossed spirals for increasing vascularization.
- Sharp spirals.
- Incisive apex.
- Anchoring due to cams.



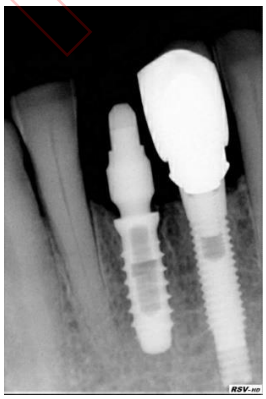
Its main functions are :

- Efficient biological integration.
- And a simplified management of the aesthetics thanks to its sub-crestal positioning.

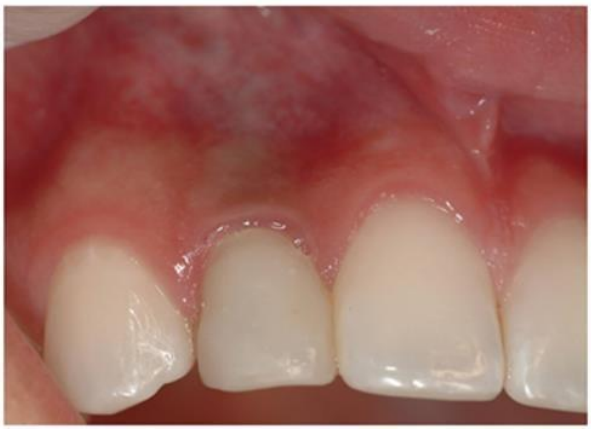
ID3 implants are sterilized with **25 kGy** Gamma radiation and are double-packaged.

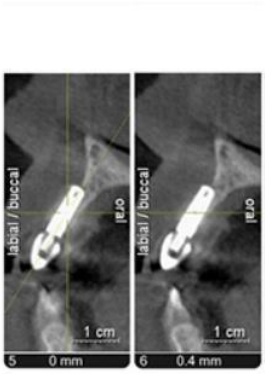
II- Advantages of the ID3 :

1. In contrast to standard implants, **the ID3 is particularly suitable for a use in** cases with limited space, which is often the case in the upper lateral incisor and mandibular incisor regions.

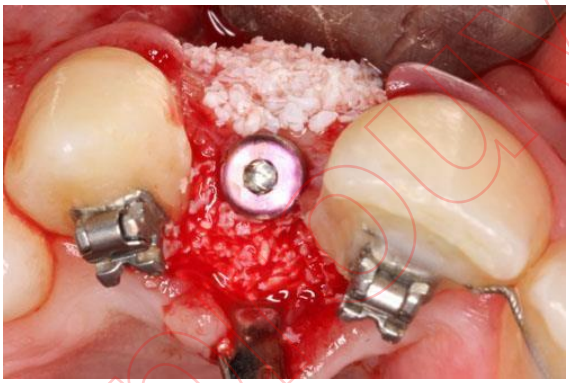


2. Placement of standard implants in a narrow mesio-distal space can damage adjacent teeth or lead to interproximal bone loss. In addition, the small vestibulo-lingual space in these areas may result in exposure of the implant surface and threads.

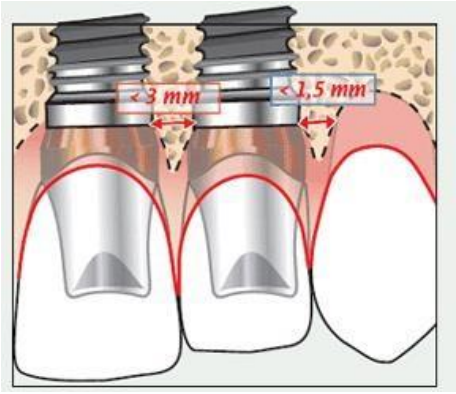




Bone augmentation aims to give volume to the bone capital to allow the placement of standard diameter implants, but it is invasive and longer. Orthodontic treatment adds the risk of root resorption, which must be taken into account when planning the treatment.



3. **The ID3** was developed to meet the expectations of practitioners when MD and VL space is insufficient, and allows to respect the minimum **implant-implant (3 mm)** and **implant-tooth (1.5 mm)** distances.



4. Thanks to its morphology, the **ID3** implant offers practitioners the possibility to perform **the extraction and immediate implantation**

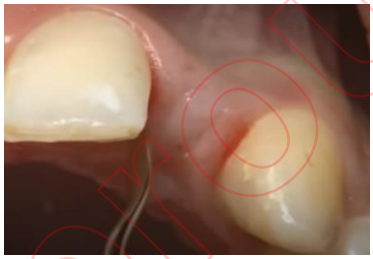
technique while ensuring sufficient primary stability whatever the type of bone. **The ID3** can also be **loaded immediately** provided that it is at least **12 mm long** and **is placed anteriorly** (the tightening torque must be at least **35 N.cm**) [1].

III- Surgical Protocol :

Implant surgical procedures always begin with detailed preparation that requires a review of the patient's medical records, including medical and dental history, X-rays, and surgical guides made by the practitioner.

The surgeon must have a surgical plan and strategy that encompasses anesthesia, operative time, instrumentation, postoperative management and prosthetic time. The practitioner will follow the following chronology:

- **Anaesthesia**



- **Exposure of the implant site**

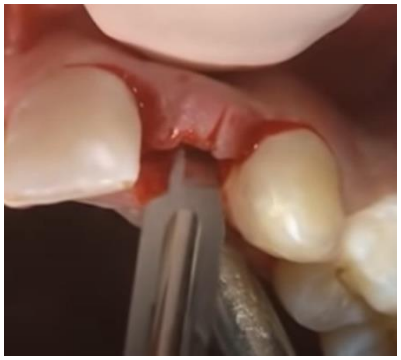
Surgical exposure of the implant site can be performed by several methods (with or without flap, in one or two stages, etc...) and may include, if the surgery is flap surgery, crestal, marginal and vertical discharge incisions.
Note : Flapless surgery may be indicated when adequate keratinized tissue is available on a well-formed ridge. It is less traumatic to the soft tissue.

In patients with good bone morphology and well-formed papilla, flapless surgery may provide the best postoperative esthetics. In flapless surgery, the implant and healing abutment are placed in a single session.

Note : it is recommended to do a training to master the flapless technique.

[1] Immediate loading on 3.0 mm narrow implants : a prospective multi- center study with 2- year follow- up Hess ; G.Trimpou ; S.Leziy

Where a flap is required, the incision must be designed to allow sufficient soft tissue release for a better access to implant placement.



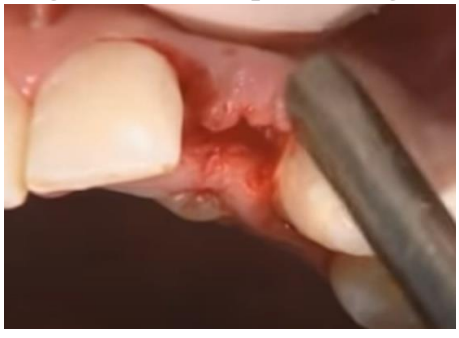
Such an incision design is usually required when better access and visualization of the underlying bone is needed and when additional procedures such as bone or soft tissue grafting will be performed at the time of implant placement.

- **Implant placement**

1. Removal of the flap

A clean and complete deep incision facilitates the most atraumatic possible detachment of the muccoperiosteal flap. The flap is delicately lifted to maintain the integrity of the periosteum.
Once the vestibular flap is detached, the same procedure is performed on the palatal or lingual flap to visualize the width of the crest.

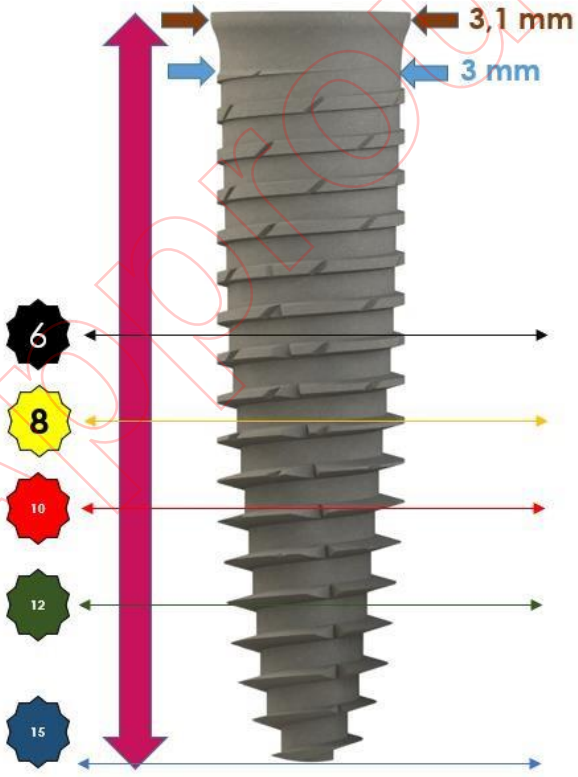
Note : Lingual flap detachment is minimal in order to provide an anchor point for the vestibular flap suture and to avoid damage to an adjacent anatomical structure.
A retractor can then be positioned against the bone inside the flap, allowing a good visualization of the surgical site and protecting the integrity of the flap.



2. Preparation of the osteotomy :

- IDI offers its users a wide range of **ID3** implants for a variety of clinical situations, as shown in the following table :

Reference	Length (mm)	Cervical diameter (mm)	Platform diameter (mm)
IDC0630	6	3	3.1
IDC0830	8	3	3.1
IDC1030	10	3	3.1
IDC1230	12	3	3.1
IDC1530	15	3	3.1



On each implant outer package there is a color-coded tablet corresponding to the length of the implant. This color code correlates with the color code of the TURBO drills® for **ID3** implants :

- **6 mm** long (*gray color*).
- **8 mm** long (*yellow color*).
- **10 mm** long (*red color*).

- **12 mm** long (*green color*).
- **15 mm** long (*blue color*).

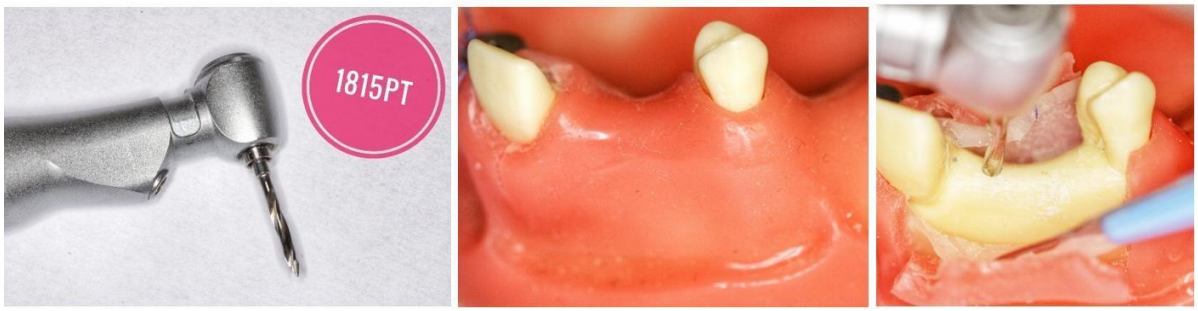
-When drilling for the placement of an **ID3** implant, it is necessary to keep in mind some information so that it is carried out in the best conditions:

- Use of the **ID3 kit** adapted to the ID3 implant.

-This kit includes :

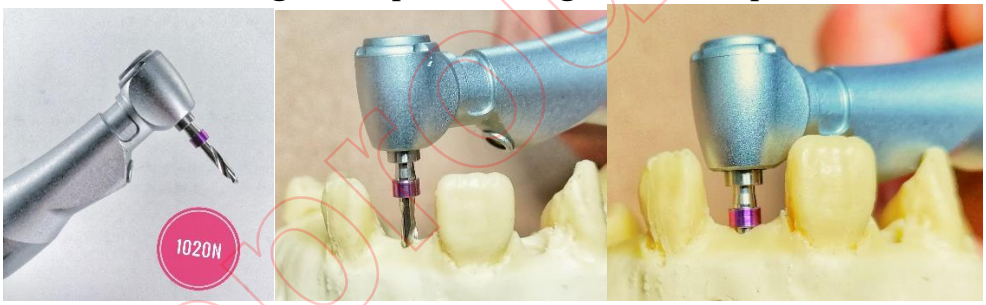
- A pointer drill, part number **1518PT**, which must be used with abundant irrigation before starting the drilling sequence. It is used to mark the implant site through the cortical bone to avoid

displacement of the intermediate cylindro-conical drills. It is 1.8mm in diameter and 15mm long with depth marking.



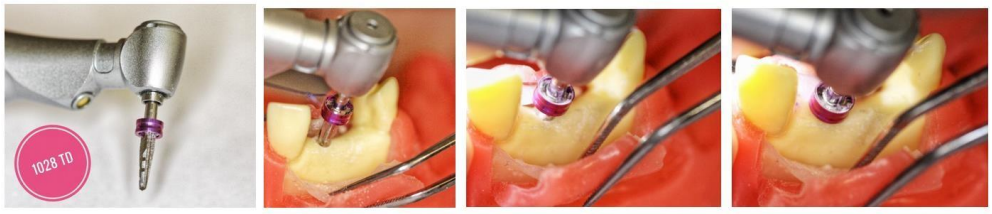
650 tr/mn sous forte irrigation

- **5 intermediate drills** of **2 mm** diameter (with **5** different lengths: ***6mm, 8mm, 10mm, 12mm and 15mm***). They are used at **650 rpm** with abundant irrigation up to the length of the implant.



650 tr/mn sous forte irrigation

- **5 terminal TURBO drills** of **2.8 mm** diameter (with **5** different lengths: ***6mm, 8mm, 10mm, 12mm and 15mm***). They are used at **1500 rpm** up to the length of the implant with abundant irrigation.

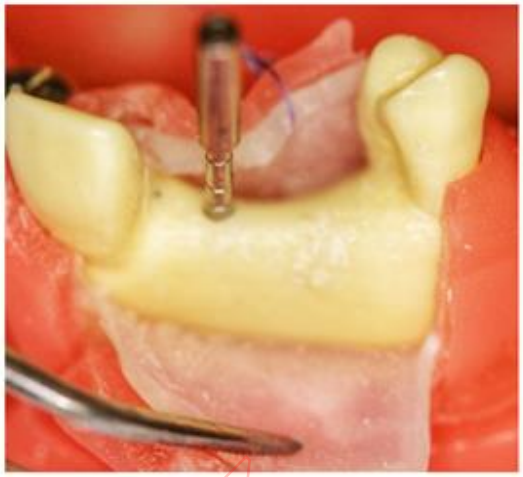


1500 tr/mn sous forte irrigation

Note : For a D4 bone, and to have a good primary stability, use only the intermediate drills for the placement of an **ID3** implant.

- After the last drilling, the alveolus must be rinsed thoroughly with tobramycin, diluted with saline, prior to implant placement.
- Drills must be used with reciprocating movement.
- The drills should be applied intermittently for a few seconds and then removed, allowing the site to be irrigated with blood and the bone debris to be removed from the drill.
- The healing screw (reference **P**, **Q** or **O**) or closing cap (reference **0112**) must be soaked in tobramycin (75mg) diluted in 20 cl saline before placement (they must be screwed in at **5 N.cm** with a screwdriver of reference **0116 (long), 0016 (short) or M116 (meduim)**).
- The implant must be placed 1 mm subcrestally.
- Drills should be replaced after 20 uses or when their cutting capacity decreases. Worn drills should be decontaminated or treated as « Waste from Care Activities at Risk of Infection ». It should be noted that drills that are used in D1 bone should not be reused due to the high wear and tear they have undergone.

After drilling with the intermediate drills, a surgical guide instrument **ref 428 (diameter side 2 mm)** is used to check the orientation. The use of this instrument allows the surgeon to evaluate the position, spacing and angulation of the current osteotomy. It also allows the surgeon to evaluate the alignment of the drilling axis with respect to the antagonist teeth and with respect to any other implant site prepared during the same procedure.

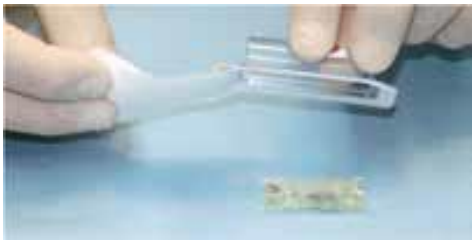


The same instrument **(2.8 mm diameter)** allows the same checks to be performed after the use of the **2.8 mm diameter terminal drills**.

3. Implant placement

Once the osteotomy is completed, the implant is inserted without irrigation with a rotation speed of about **25 rpm** while following the following steps:

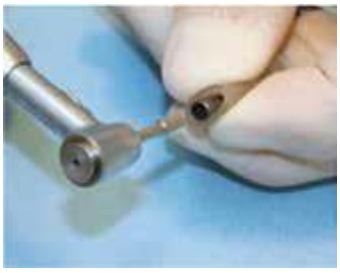
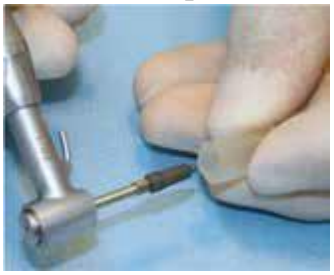
- Remove the packaged implant from its packaging.



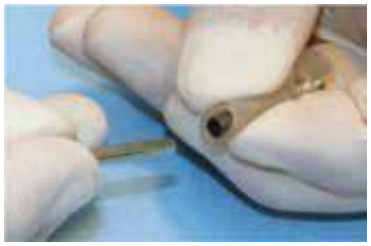
- Remove the cap from the bottle containing the implant.

- Set the implant motor speed to **25 rpm** and the placement torque to **25 N. cm.**

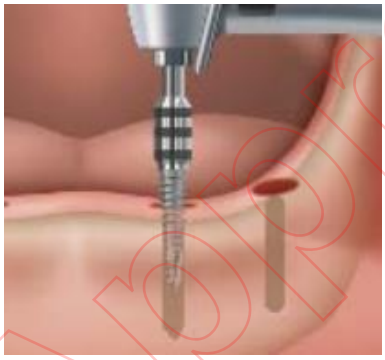
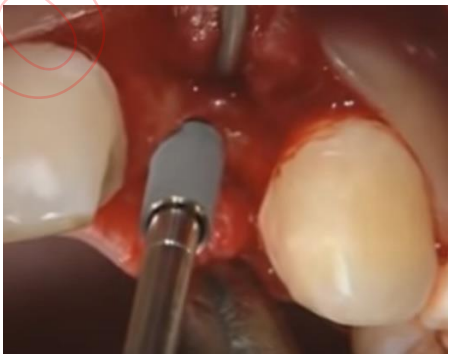
- Place the implant holder part numbers **1136 or 1036** (short or long) in the handpiece.
- Position the implant holder on the implant connector and check that it is fully engaged if the placement is done with a hand-piece.

- Otherwise, use the implant holder of reference **0036 or 0136** (short or long) if the placement is done manually.



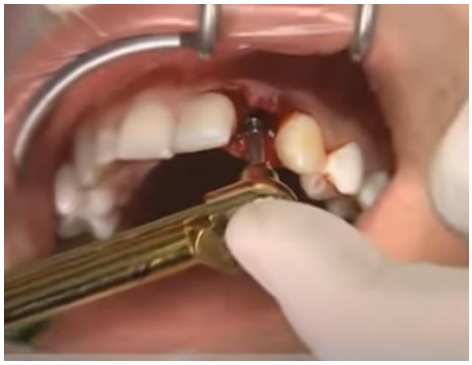

- Bring the implant to the mouth, place it in the osteotomy and screw it in.

- Avoid abrupt movements and/or contact with external objects as this may dislodge the implant from the implant holder.

Disclaimer : Discard and do not use an implant that has been in contact with a non-sterile area and replace it with a new sterile implant.

- When the motor stops the screwdriving, use the implant holder part no. **0036 or 0136** (short or long) on the ratchet part no. **415**.



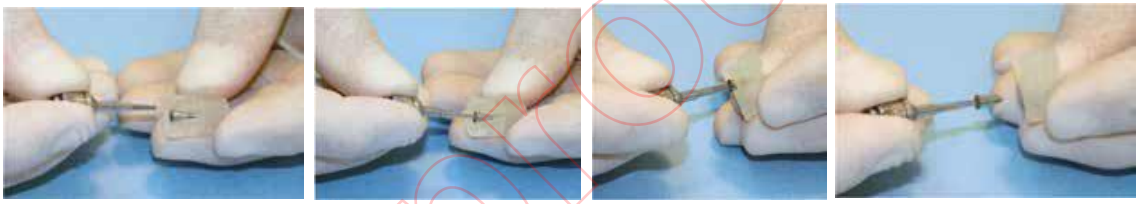
- Position the implant holder on the implant connector and check that it is fully engaged. Slowly click the implant to the desired depth.

Important : the tightening torque should not exceed **40 N.cm**.

4. Placement of the covering or healing screw :

A. Placement of the cover cap :

If a two-stage implant placement is chosen, a cover screw of reference **0112** must be placed and screwed in at **5 N. cm** either manually using the reference instruments **0016, 0116 or M116** or with the a hand-piece using the reference instruments **1016 or 1116 (short or long).**



It is important that the surgeon ensures that the cover screw is completely and securely attached to the implant platform before suturing the flap to prevent bone or soft tissue growth between the screw and the implant.

B. Placement of the healing screw :

The healing screws are placed at the end of the implant placement surgery in a one-stage surgical approach or after the flap has been removed and the cover screw unscrewed in a two-stage surgical approach.

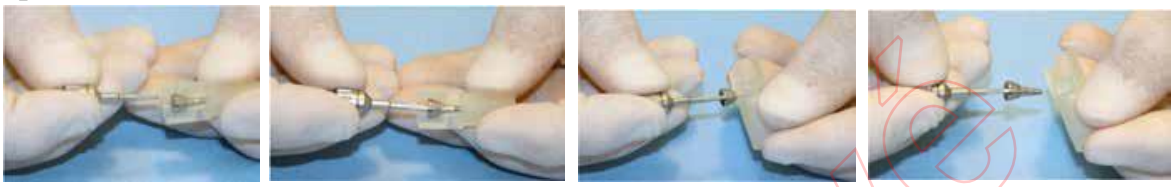
It is screwed into the implant at **5 N. cm** either manually using the **0016, 0116 or M116 instruments** or with the hand-piece using the **1016 or 1116** instruments (short or long), making sure that no tissue is trapped underneath.

It is a conically shaped intra-implant screw that allows trans-gingival access to the implant platform.

The height of the abutment used must be determined by the thickness of the tissue present. IDI offers the following healing screws that are suitable for ID3 implants :

Reference	Bottom Ø (mm)	Ø high (mm)	Height (mm)
P	3,2	4,2	3,7
Q	3,2	4,2	6
O	3	3,6	5

The healing screw should protrude 1-2 mm above the gingival tissue to prevent tissue growth above the screw that would complicate subsequent prosthetic steps.

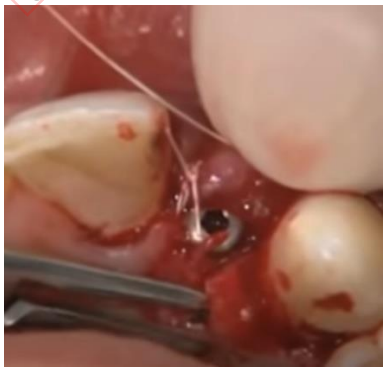


Important : Before the healing screw or the cover screw is screwed in, the inner part of the implant is washed with Chlorhexidine or Betadine.

It is important to allow sufficient soft tissue healing after the healing screws have been inserted before taking impressions for the final prosthesis (4 months in the mandible and 6 months in the maxilla).

5. Reposition and suture the flap

The result of soft tissue healing depends on the precision of the flap repositioning and the sutures of the wound margins.
Loose or poorly done sutures are a source of infectious complications or interfere with first-line healing.



6. Postoperative management

A postoperative radiograph must be taken to evaluate the position of each placed implant in relation to adjacent structures. The radiograph must also be taken to ensure that the cover screw or healing screw is in place.

Patients should receive analgesics for postoperative pain control.

Prosthetic protocol :

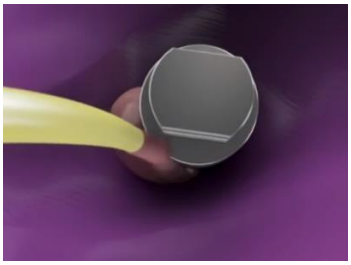
1. After placing the implants in place, **the impression copings** will be connected to the **ID3** implants according to the type of impression to be made :

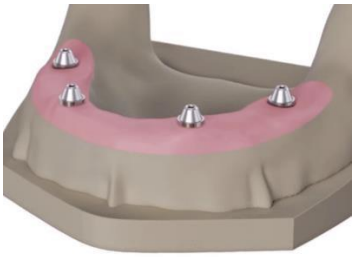
- For an open impression, the reference impression coping **203** is used.

- For a closed impression, the reference impression coping **203F** is used.

- For a digital impression : the scanbody **SB3** is used.

2. Screw these copings into the mouth with a **screwdriver** and check their fit with an X-ray: no gaps should be visible between implants and copings.
3. Reposition the stabilized impression tray in the mouth and check for interference with the impression copings.
4. Take the impression with medium viscosity silicone.
5. Remove excess material from the screw heads of the impression copings before setting (if an open impression has been made).
6. Unscrew the impression copings once the setting reaction has been completed (if an open impression has been made).
7. Disinsert the impression.
8. Replace **the healing screws.**
9. Screw **the IDC3** reference **implant analogs ID3** to their impression copings using countertorque.
10. The impression is then disinfected. It is sent to the laboratory together with the antagonist model.
11. The impression is cast in plaster.





12. A false gingiva is materialized, and the models are mounted on an articulator.
13. Depending on the clinical situation, the appropriate prosthetic component is selected:

Reference	Transgingival height (mm)	Angulation (degrees)
C30001P	1,5	0
C30003Q	3	0
C30151P	1,5	15
C30153Q	3	15
C30231P	1,5	23
C30233Q	3	23

Important : since these are abutments with a real Morse taper, it is necessary to use abutment extractors to be able to remove them :

- **For anterior restorations:** use the **EX16L** reference long extractor.
- **For posterior restorations,** the short reference extractor **EX16C** is used.