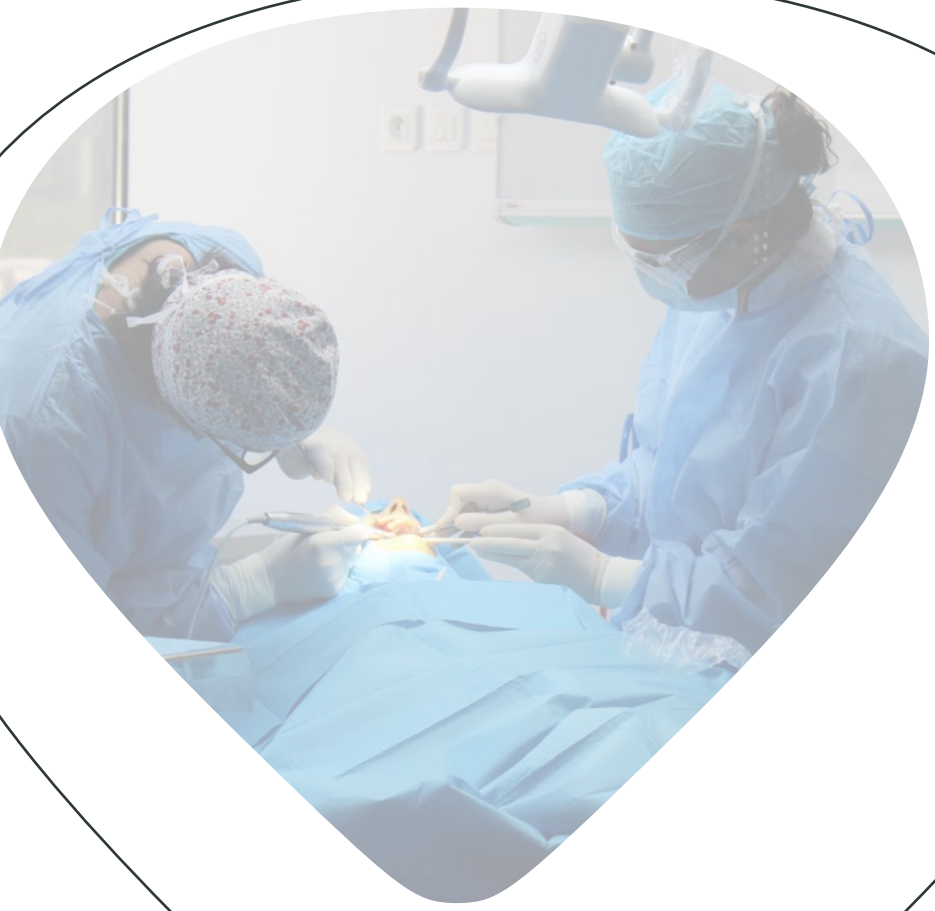
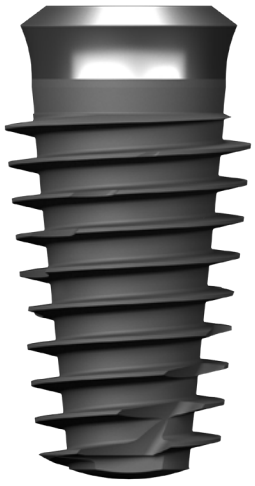
etk
A LYRA COMPANY





User manual

i bone G®

Surgery and Prosthesis

Editorial

With research and development experience since 1988 and clinical experience since 1992, **etk** has a proven track record in implant design confirmed by the invaluable assistance of internationally recognized research laboratories.

The design of our implants is based on the triple competence of a reactive team experienced in implantology:

- Technical and biomechanical competence of our engineers guarantees the durability of the components and their adaptation to oral applications through modern simulation methods.
- Biological and physiological competence of the associated laboratories validate the osseointegration capacity of our systems.
- Clinical and practical skills of our dentists and dental technicians ensure the ergonomics of our products, the rationalization of our protocols and the establishment of ranges adapted to the various clinical cases encountered.

The **ibone G** implant is also based on the most recent scientific advances in implant treatment, which gives it optimum anchoring power with a high bone attachment in the cortical area under the greatest stress.

In order to enable you to get the most out of the **ibone G** implant, we have produced this manual with the utmost professionalism and invite you to take a close look at it. The smallest detail is important and underscores all the more the difference between the amateur and the specialist.

Summary

For more information on implants etk,
we invite you to visit the following sites:
lyra.dental/implants and lyrashop.dental

Warning

The installation of the **etk** implants must be carried out by a practitioner previously trained in the techniques of implant dentistry, and under conditions of asepsis adapted to this type of intervention. The **etk** guarantee shall not apply in case of misuse of our products or lack of **training** on the part of the implant practitioner.

The following instructions will guide you through the various phases to be implemented for performing your implant treatments. They are accompanied by the most accurate advice possible, but cannot serve as "recipes", since each clinical case is unique. A very large number of factors act interdependently to achieve a successful implant treatment. It is up to the practitioner to know the key principles, and to draw on his or her clinical experience. On the other hand, the coordination between the prosthesis laboratory and the practitioner must be perfect so that the overall treatment plan is coherent. The practitioner remains solely responsible for his or her different choices and decisions regarding the feasibility of the treatment, implants, prosthetic parts and materials used, adjustments, etc.

The technical specifications and clinical advice contained in this manual are for guidance purposes only and shall not give rise to any claims. All the essential information is indicated in the manual supplied with the products.

We have taken particular care in the design and manufacture of our products; nevertheless we reserve the right to make changes or improvements resulting from new technical developments in our implant system. You will be notified of any changes that affect the operating procedure. Depending on the extent of these changes, a new manual may be provided. In fact, a publication date appears on the back of your user manual, and allows us to make sure that you always have the latest updates. You can find the current version of this manual on our website.

GENERAL **INFORMATION**

Indications for the IBONE G IMPLANT

The **ibone G** dental implant is intended to be used for the replacement of a dental root to support a fixed or mobile prosthesis and thus restore masticatory function. The **ibone G** dental implant is intended to be used in cases of single, partial or complete edentulism on the maxillary and/or mandibular arch (except in the presence of specific indications and contraindications, mentioned below). Dental **etk** implants can be used for delayed, immediate or early implantation after extraction or loss of a natural tooth. **etk** implants are intended, within the framework of their indications, as immediate restorations of partially or totally edentulous jaws.
Good primary stability and a suitable occlusal load are essential. The duration of the healing phase for delayed restorations is mentioned in the corresponding chapter. The prosthetic restorations used are single crowns, bridges and partial or complete dentures, bonded to the implants by the prosthetic components associated with the implant used.
On the following pages, you will find detailed information on the required bone volume, the spacing between two implants and the distance to the adjacent tooth for each implant.

- Lack of retention of a denture
- Instability of a denture
- Functional discomfort with dentures
- Psychological refusal to wear a denture
- Parafunctional habits that compromise the stability of a denture
- Location and inadequate number of residual abutments
- Absence of dental abutments to make a fixed prosthesis
- Single-tooth edentulism with healthy adjacent teeth preserved
- Dental agenesis
- Request for a conservative therapy (refusal of mutilation of healthy teeth)

It is a transmucosal implant designed to be inserted in a single surgical step; its characteristics give it superior primary stability so that early loading can be performed.

The conical shape of the **ibone G** implant makes it particularly suitable for:
- reduced mesiodistal spaces
- post-extraction surgery
- esthetic management in anterior areas
- implantation with immediate loading

The **ibone G** conical implant is very advantageous in post-extraction cases and particularly for D3-D4 type bones due to their wide coils.

Specific indications for 6 MM LONG IMPLANTS

Since the anchoring surface of these implants in the bone is reduced, they should only be used for the following indications:
- as implants to complement longer implants on a plural or complete restoration
- complete prosthetic supports, in the presence of a severely atrophied mandible
- on implant sites with a bone quality higher than D4 according to the Misch classification

Target population

All patients (male or female), whose growth is completed, requiring dental implant restoration and without any contraindications (see section "Implant Contraindications").

Users

The installation of implants must be carried out by a practitioner with a Doctor of Dental Surgery degree who has been trained in the uses and techniques of implant dentistry. All procedures must be performed according to the rules of dentistry and under aseptic and hygienic conditions appropriate for this type of procedure.

Guarantees

In the event of non-osseointegration, you should inform your sales consultant so that we can analyze the causes of this failure and take the necessary corrective action.
An exchange may be made in the event of a product defect; if the failure is the result of a poor analysis of the clinical case, an operating protocol not suitable for the case, use of worn drill bits ... or any reason other than the quality of our products, the guarantee shall not apply.

Packaging PARTS

Sterility & Rules of asepsis

▶ Most of our parts are delivered sterile, and therefore usable upon receipt. A control sticker indicates the effective sterility of the components on their packaging.
Sterility is guaranteed for 5 years (from the date of sterilization after complete packaging of our products). A standard expiration date is indicated on the label.
▶ Only intact packaging can guarantee the sealing and sterility of the products. Do not use implants whose packaging has been damaged or opened prematurely.
▶ Our products have been designed to be handled in such a way as to keep them sterile. It is therefore important to respect precise gestures so as not to compromise the conventional aseptic conditions of the implant practice.
▶ Parts and instruments delivered non-sterile and used for implant treatment must be decontaminated and, according to a validated process, sterilized by the dental practice.

	Sterile	Non-sterile
Implants	x	
Healing screw (supplied with the implant)	x	
Drill bits		x

Labels

Our implants are delivered with 1 main label and 2 peel-off labels clearly mentioning the brand, reference and batch number (i.e. 3 labels):

- 2 labels for the patient file of the practitioner who inserted the implants or the referring dentist.
- 1 label for the patient.

Manufacturing

Warning: see Instruction manual

Date of manufacture

To be used by

Refer to the user manual

REF
Product reference

LOT
Serial number

Keep away from light

Store in a dry place

CE 0459
Complies with the requirements of the European Medical Device Directive 93/42 EEC

Do not use if the packaging is damaged

STERILE R
Sterilization method using irradiation

Do not reuse

STERILIZE
Do not re-sterilize

Storing PARTS

Implants must be kept in a clean, dry and cool place.

Precautions FOR USE

- It is strongly recommended to have an inventory of implants to cover the main diameters, as well as the different lengths. It is essential to be able to correct the choice of implant during the operation, replace a soiled implant for any reason, insert an additional implant in some cases to ensure long-term treatment, etc.
- We recommend using a “parachute wire” on the instruments to prevent parts from accidentally falling down the patient's throat.
- It is imperative to prepare the receiving site with the instruments **etk** presented in this manual.

PRE-IMPLANTATION **STUDY**

It is necessary to assess the feasibility of the implant treatment, and determine the treatment plan.

Feasibility of implant TREATMENT

This study is based on various elements

- An accurate history based on a medical questionnaire filled in by the patient and collected by the practitioner.
- A clinical and methodical examination of the patient's mouth.
- Biological tests.
- A complete radiological file to determine the available bone volumes.
- Complete study models with both arches in occlusion.
- Implant treatment cannot be initiated until all of the patient's infectious sites have been completely sanitized.

Guide for choosingIMPLANTS

Available bone volume

In the mesiodistal plane

- Allow 2 mm between the coils of an implant and the adjacent natural teeth.
- Allow 3 mm between the coils of two adjacent implants.

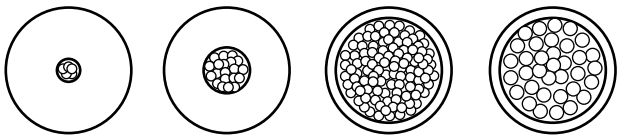
In the vestibular-palatal-lingual direction

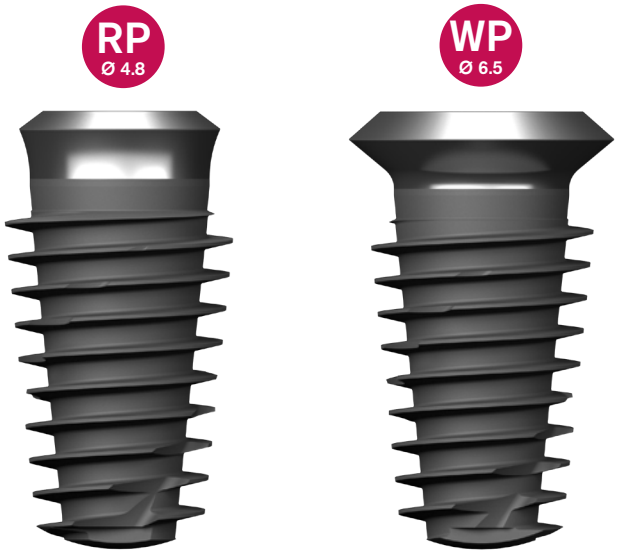
Leave, if possible, 1.5 to 2 mm of bone thickness around the vestibular, palatal and lingual surfaces.

	ibone G			
Ø body	● Ø 4.3			
platform	RP	RP	WP	WP
Ø coils	4.8	5.5		6.2

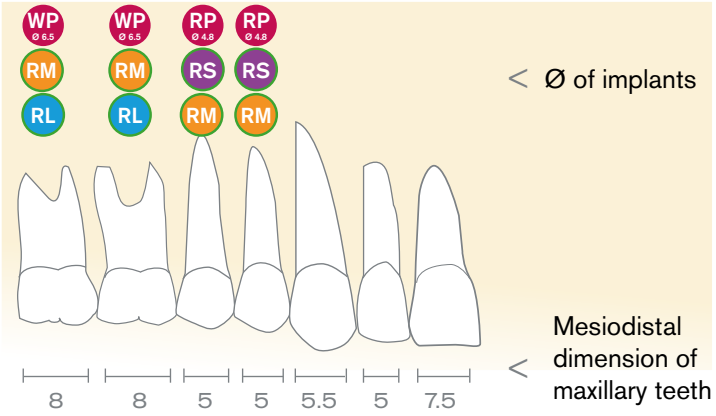
Bone density

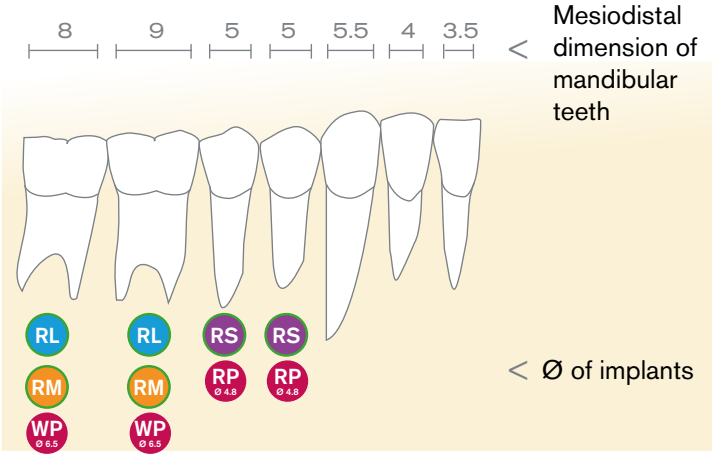
Consider the use of larger implants in low density bones to compensate for the loss of bone/implant contact surface due to cavities.





Maxillary

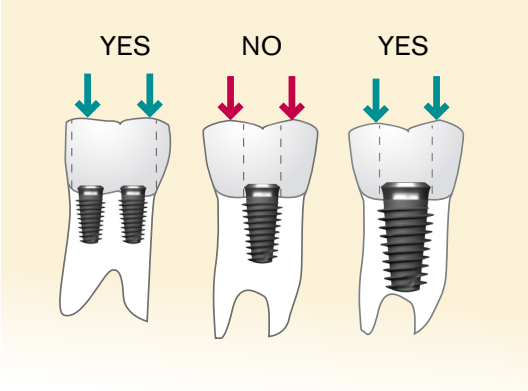




Mandible

Legend

RS	Ø4.3/4.8	RP Ø 4.8	
RM	Ø4.3/5.5	RP Ø 4.8	
RM	Ø4.3/5.5	WP Ø 6.5	
RL	Ø4.3/6.2	WP Ø 6.5	



Using THE SIMPLIFIED GUIDED SURGERY

The ibone G implant system is compatible with the use of a surgical guide made according to your patient's CT scan and physical or digital study models of the initial situation.
This guide can be made:

- At your practice, totally independently if you have a CBCT, planning software and a 3D printer.

- On our dedicated platform LYRAGUIDE where you select the level of support you need.

Advantages and importance OF THE SIMPLIFIED GUIDED SURGERY IN THE IBONE G DRILLING PROTOCOL

- Simplification of protocols and increased success of the surgical treatment by obtaining a better predictability of results, as the system is very reliable, which allows optimal positioning of the implants without any margin of error.

- Study of bone density, which will lead to strategic surgical and prosthetic choices: surgical sequence, number of implants, their position, their angulation, type of prosthesis, etc.

- Maximum exploitation of bone volume: no need for timid implantation.

- Calculation of the volumes to be grafted, which allows the choice of the donor site.

- Precise orientation of the implant in the mesiodistal and labio-lingual direction.

- Control of bone grafts, or even in some cases, reduction of graft indications by exploiting the remaining bone volume to the maximum.

- Allows perilous or difficult implantations: search for bicortical supports, lateralization of the implant path in relation to the dental nerve...

- A further step is taken in the case of flapless surgery, which greatly improves postoperative outcomes, thus saving time and providing substantial comfort for the patient.

- Possibility of combining the osseointegration period and post-extraction implantation in order to have minimum bone resorption with maximum precision.

- Increase patient-practitioner communication.

Implant PLANNING

Beyond the guided surgery, etk has developed a digital implant library available in many implant planning software programs to guide you in the selection of your implants.
Please contact your software provider for more information.

SURGICAL
PROCEDURE

Foreword

Warning

Treatment planning and inserting dental implants require taking specific considerations into account.

Inappropriate techniques in both implant placement and prosthetic restoration can result in implant failure and substantial loss of surrounding bone. Drilling procedures for implant placement use a specific drill depth measurement system and unique markers for each system.

The practitioner must consult the description of the measuring system specific to the product used in the corresponding manual before applying it to the patient. Each implant system HAS its own specific measuring characteristics. The surgeon must therefore be familiar with the measurement system used in order to be able to assess the appropriate safety margins in relation to adjacent anatomical structures. Inadequate measurements can cause permanent injury.

Each implant system has specific design features. The combination of incompatible components may result in mechanical failure, tissue damage, or unsatisfactory clinical and esthetic results.

For all implantsetk, the preparation of the implant site is carried out in 3 distinct phases:

1. Initial preparation of the implant site (bone marking and initial drilling)
2. Calibration of the implant site (boring and milling)
3. Insertion of the implant (gripping, screwing and protecting the connectors)

Precautions for use

For the entire surgical procedure, the following recommendations will be observed & followed:

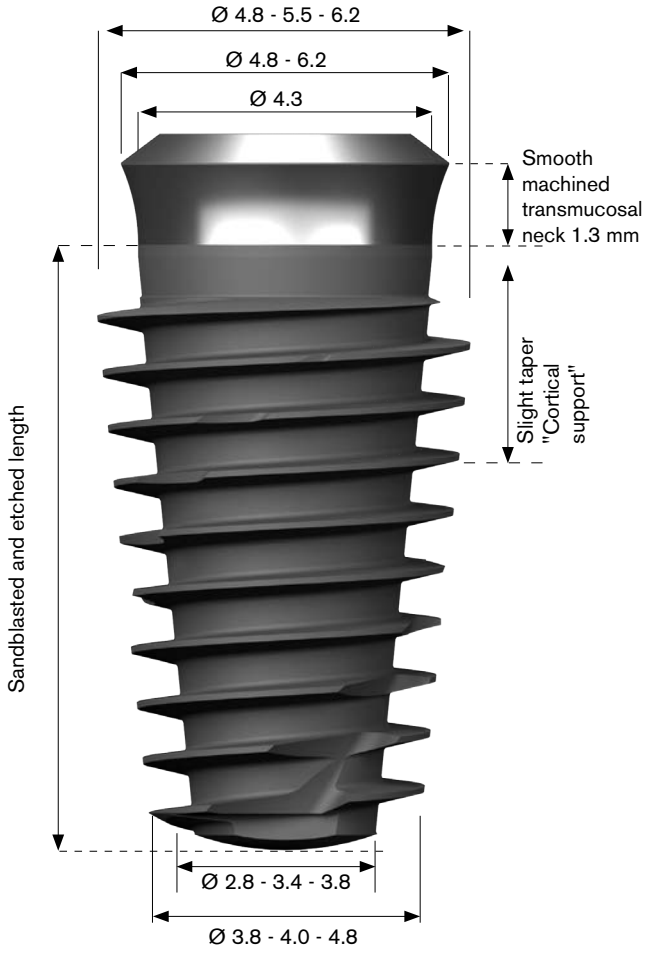
- Ensure that sufficient quantities of sterile implants and replacement instruments are available.
- All instruments must be sterile, complete, checked and functional, especially for measuring instruments (calibrated according to the manufacturers' recommendations) and sharp instruments must have a low level of wear: no more than 10 uses.
- All reusable products must be pre-disinfected, cleaned, decontaminated and sterilized.
- All disposable components supplied non-sterile must be cleaned, disinfected and sterilized before entering the patient's mouth. Use of a thermal disinfector and a class B autoclave is possible on components out of their original packaging in a suitable pouch according to the manufacturers' recommendations.
- In the case of plastic or ceramic components, always disinfect in a solution complying with standard EN 14 476 and preferably aldehyde-free.
- Any product delivered sterile (by gamma radiation) must never be re-sterilized and is for single use only.
- Respect sterile parts of packages when unpacking and place the contents on a sterile drape.
- Respect the expiration date of the product.
- For stainless steels, the use of sodium hypochlorite (bleach) is strictly forbidden: high risk of corrosion.
- Respect the different combinations of materials treated during cleaning and decontamination in order not to damage components or cause them to deteriorate.
- Detergent and disinfectant solutions must be of a neutral or low-alkaline pH.
- Any preparation of the implant site with cutting instruments rotating on a counter angle must be performed with abundant irrigation and cold sterile saline solution (NaCl).
- Observe the rotational speeds and/or torques indicated to limit the risk of tissue damage and device damage.
- Respect the recommended instrument sequences along with continuous monitoring of the implant depths and axes in accordance with the planned prosthetic restoration.
- Make sure to minimize thermal and surgical trauma and to eliminate any contaminants and sources of infection that could compromise osseointegration or the esthetic result.

IBONE G IMPLANT

Applications

The **ibone G** implant is intended for the treatment of partial or complete edentulism both in the maxilla and mandible. They allow implantation in the widest range of indications, especially for sites with either low bone density or reduced apical space. Post-extraction surgeries are also possible. The implants will be located in a juxta-crestal position, allowing the best possible esthetic restoration with adapted management of the biological width and the crestal rim.

Features



References

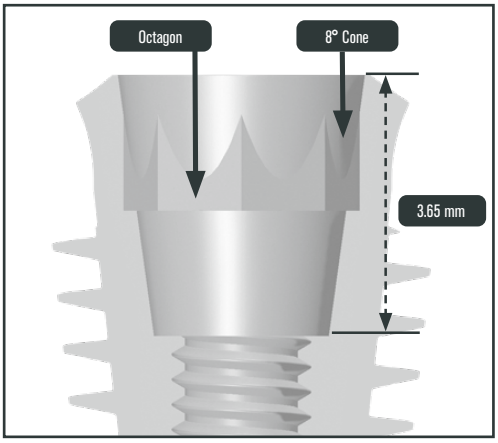
The implant is delivered with a cover screw.

Ø body implant	4.3			
Platform	RP		WP	
Length / Ø coils	4.8	5.5		6.2
6	IGR4348060	IGR4355060	IGW4355060	IGW4362060
8	IGR4348080	IGR4355080	IGW4355080	IGW4362080
10	IGR4348100	IGR4355100	IGW4355100	IGW4362100
12	IGR4348120	IGR4355120	IGW4355120	IGW4362120

Direct pick-up of implant using mandrel

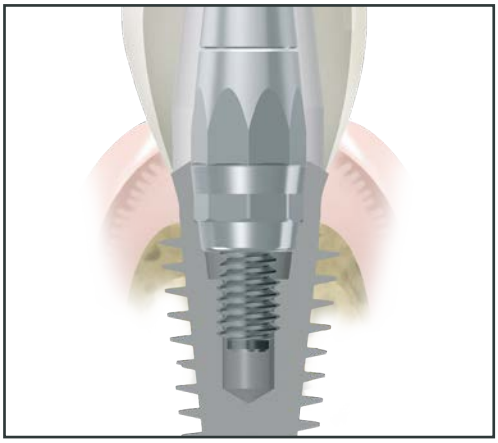
- Less handling in the mouth, less risk of accidental dropping of instruments, and more hygienic.
- Saves time during surgery.
- Facilitates visibility of the installation.
- Provides information on the gingival height.
- Facilitates visibility of the connection orientation.

Aesthetica+² compatibility



The **ibone G** implant with an internal conical connection (Morse taper type) with octagon, has a common prosthetic range with the **Aesthetica+²** implant.

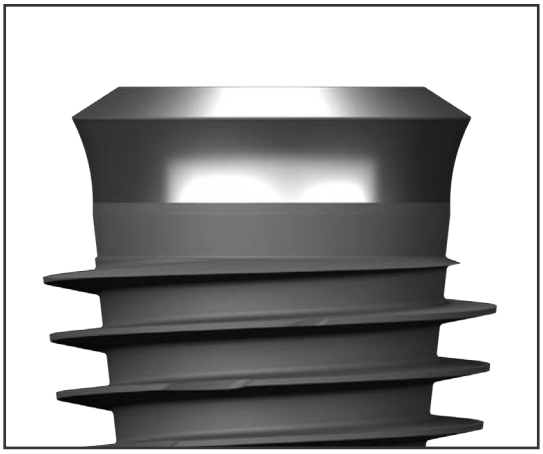
Sealing & stability



The internal conical connection guarantees the sealing of the prosthetic joint and the stability of the assembly (S. Dibart, M. Warbington, M. Fan Su, Z. Skobe). The connection also includes a hexagon for angular orientation of the prosthetic components. The significant depth of the connection (2.8 mm) and the quality of the adjustments provide superior stability to the assembly and prevent the risk of prosthetic unscrewing

The neck is tapered for guaranteed primary stability with cortical support

- Stabilization of the implant despite reduced apical bone density.
- Implant embedding control for optimal primary stability.



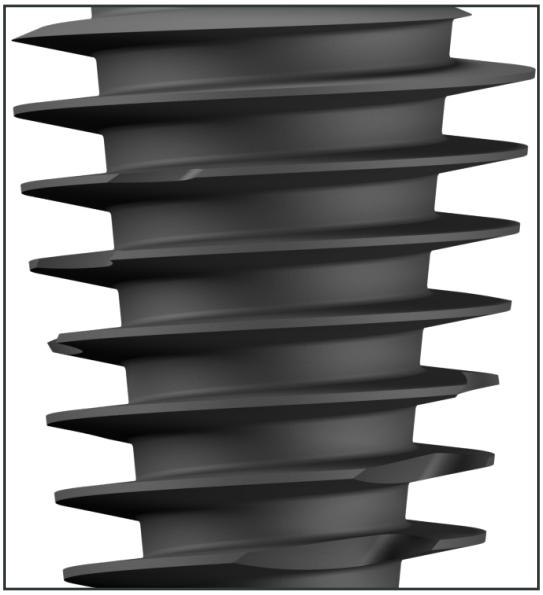
Transmucosal neck (1.3mm)

- Limits gingival manipulations.
- Promotes gingival healing.
- Optimal grip of hemidesmosomes via circular machined grooves on the neck.

Conical implant body

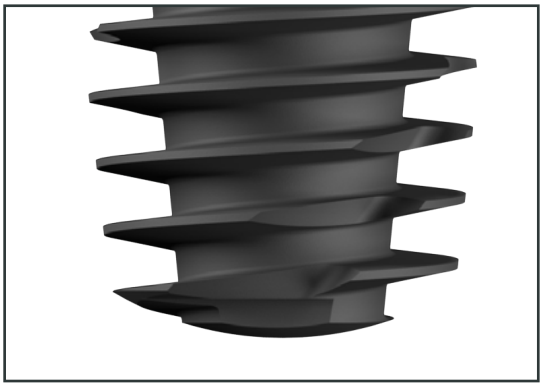
- Condenses the bone laterally in order to increase the primary stability of the implant.

The combination of a simple thread and coils selected according to bone density enables the ibone G implants to have optimal bone insertion.



Atraumatic and engaging apex

- A flute closer to the apex to improve the self-tapping effect of the coils.
- The threads start at the apex for a high self-tapping capacity of the implant and for a better apical grip.
- Safe for use in the sinus area.



THE KIT

There are two challenges with making implant sockets:

- Calibration **of** the sockets to achieve good primary stability of the implant, which is essential for osseointegration.
- Minimum **heating** to avoid any irreversible bone necrosis. Site preparation should be carried out under constant external irrigation with 0.9% sodium chloride solution.
- Obtaining a calibrated site guaranteeing a **proper seal**.
- Instruments are presented in their order of use, as indicated by color coding on the kit. Arrows indicate the main steps in each sequence.

WARNING

The prosthetic parts for the implants that you will insert before preparing the implant sockets should be chosen to position the implants as accurately as possible in the vertical direction (embedded level).

CAUTION

Beyond the quality of irrigation, it is also advisable to use drill bits whose cutting power has not been altered by excessive use.

Complete Kit FOR SURGERY

Réf. KI00

This kit offers all the instruments necessary to perform the surgical protocol and to manage all bone densities for all lengths and diameters of the ibone G implant.
The KI00 kit is a kit shared with the ibone E and ibone S implants.

CAUTION

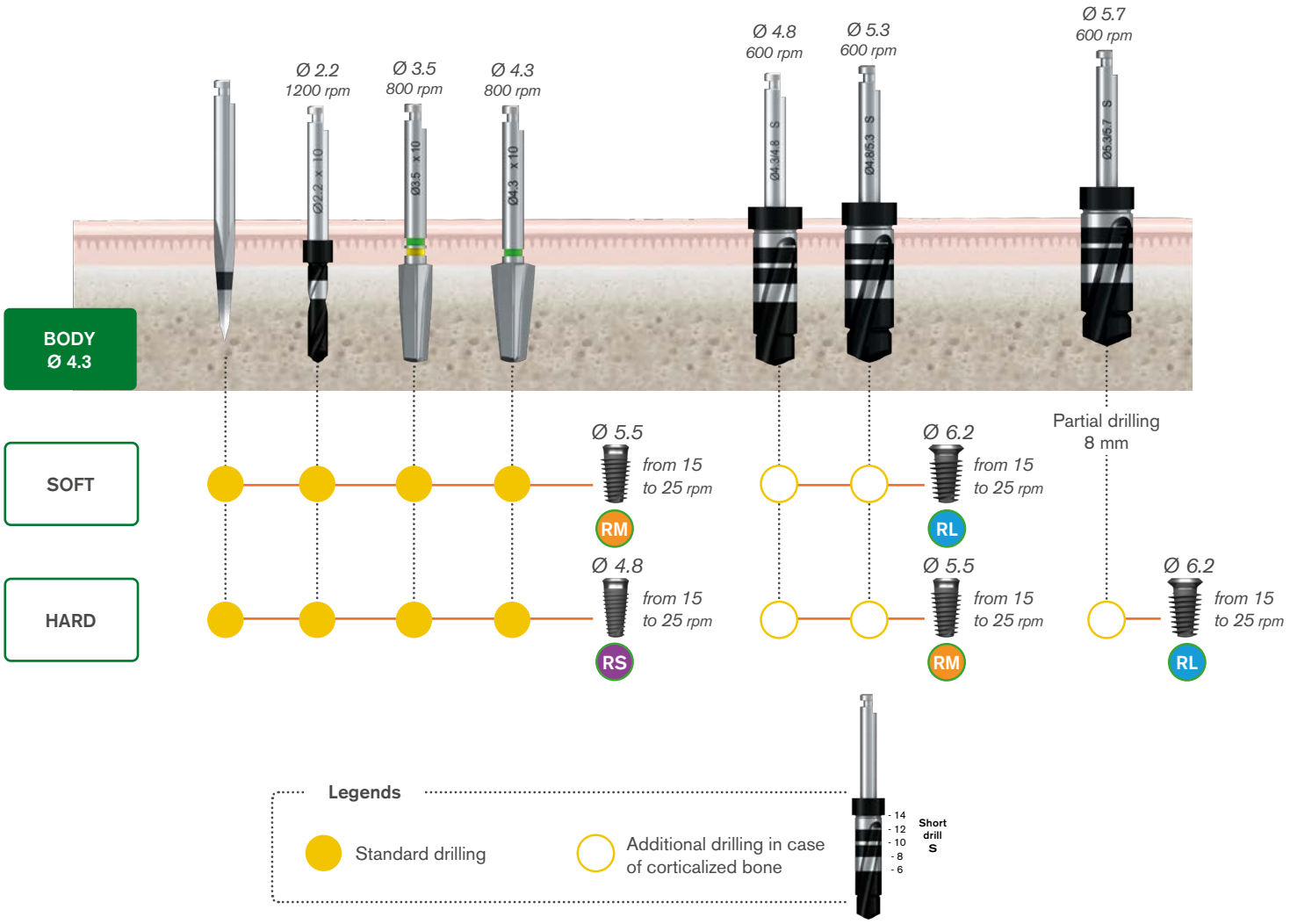
The KCIG kit must be ordered separately.

Contents:

- Needle drill bit Ø 2.2
- Initial drill bits Ø 2.2 lengths: 6, 8, 10, 12 and 14 mm
- Short length step drill bits 14: Ø 3.3, 3.8, 4.3, 4.8, 5.3 and 5.7
- Tapered drill bits Ø 3.5 lengths: 6, 8, 10, 12 and 14 mm
- Tapered drill bits Ø 4.3 lengths: 6, 8, 10 and 12 mm
- Depth probe Ø 2.2
- Implant parallelometers
- Parallelism axes Ø 2.2
- Short, medium and long direct grip wrenches
- Short and long direct grip mandrels
- External medium length hex key 22 mm
- External long length hex mandrel 26 mm
- Mandrel extension
- Ratchet wrench

Surgical PROCEDURE

Protocol BY IMPLANT DIAMETER AND BONE DENSITY



Step-by-Step PROTOCOL

1.a **Bone** MARKING PILOT DRILL BIT

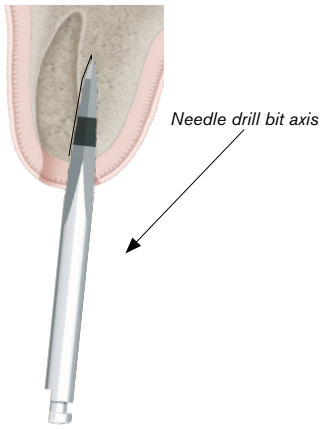
Set the maximum motor speed to 1200 rpm and start the irrigation. Visually mark the implantation site(s). The bone is marked using a pilot drill bit, which is more efficient than a ball burr. This one is equipped with a tip allowing it to pass easily through the cortical. Its upper part, which measures 2.2 mm in diameter, serves as a guide for the next drill bit.
After use, the drill bit is placed in a decontamination solution according to standard 14476.
In the case of multiple implants in the same area, mark adjacent sites according to the spacing rules on p. 23 (see box).
In post-extraction, preferably use the needle drill bit to create a starting point in the palatal wall thicker than the vestibular bone for monoradicular alveoli or in the bony septum of large alveoli. The first part of the needle drill bit measures 6 mm. The black band with the laser marking measures 2 mm. At 8 mm deep, this drill bit has a ø of 2.2 mm

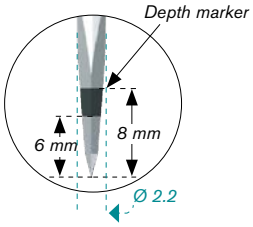
CAUTION

Provide a minimum space around the implants according to the rules commonly accepted in implant dentistry.

- *In the vestibular-palatal or lingual direction: leave 1.5 to 2 mm of bone thickness.*
- *In the mesiodistal plane: allow 2 mm between the coils of one implant and an adjacent natural tooth, and 3 mm between the coils of two implants.*
- *Consideration must be given to the flare of the neck in the implant spacing - specifically designed gauges allow you to preview the neck of the implant.*
- *Provide the necessary space between the implant necks:*

Ø implant body	*4.3*		
Length / Ø implant	*4.8*	*5.5*	*6.2*

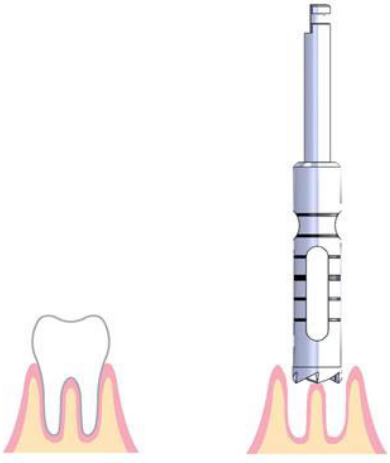




1.b **Bone** MARKING BONE DRILL BIT

In the case of post-extraction implant placement, it is possible to use the drill bits.
The purpose of the drill bit is to remove the bony septum left by the extraction of the tooth.
It will then be possible, if necessary, to pass the drill bits indicated in the protocol.

Matching drill bits
Implant Ø 4.3 -> with drill bit with external Ø 4.4



2 **First** DRILL BIT

The initial drill bit will determine the axis and depth of the implant socket.

These 2.2 mm diameter drill bits are drill bits with integrated stop collars. There are 5 lengths: 6 - 8 - 10 - 12 - 14 mm.

Carry out the drilling, with constant external irrigation using sterile sodium chloride solution at a maximum speed of 1200 rpm. The drill bit must progress without being forced. If this is not the case, it indicates that bone debris is not able to drain along the propeller. A simple back and forth movement, well-controlled so as not to ovalize the site, will allow smoother progression of the drill bit. This movement does not require a reversal of the motor direction if it is done at the right time. If the drill bit is blocked, it can be released in reverse mode.

WARNING

Remember to perform the axial correction at this stage if it is necessary. With the needle drill bit previously used, the Ø 2.2 drill bit will be perfectly centered and guided at the entrance of the socket.

Ø 2.2 at the length of the implant to be inserted

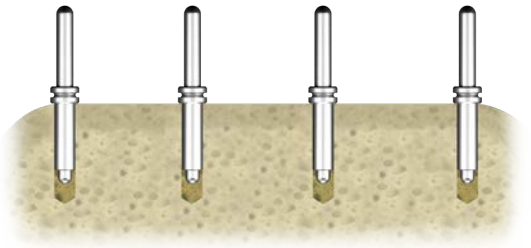
CAUTION

The rounded end of the implant does not fully engage with the tip of the drill bit. <u>The drill hole is therefore slightly deeper than the length of the implant.</u> This prevents any apical compression and ensures that the site is sealed by the support of the implant neck in the cortical area.

3 **Depth** CONTROL

Check the depth of the site using the graduated depth probe. The depth probe positioned in this way can also be used to control bleeding.

4 **Control** OF AXES OF IMPLANT SOCKETS



Insert the stepped part Ø 1.5 / 2.2 of the parallelism axes in the implant sockets to determine the emergence axes of the implants.
Gauges positioned in this way can also be used to control bleeding.

5 **Passage** OF THE TAPERED DRILL BIT

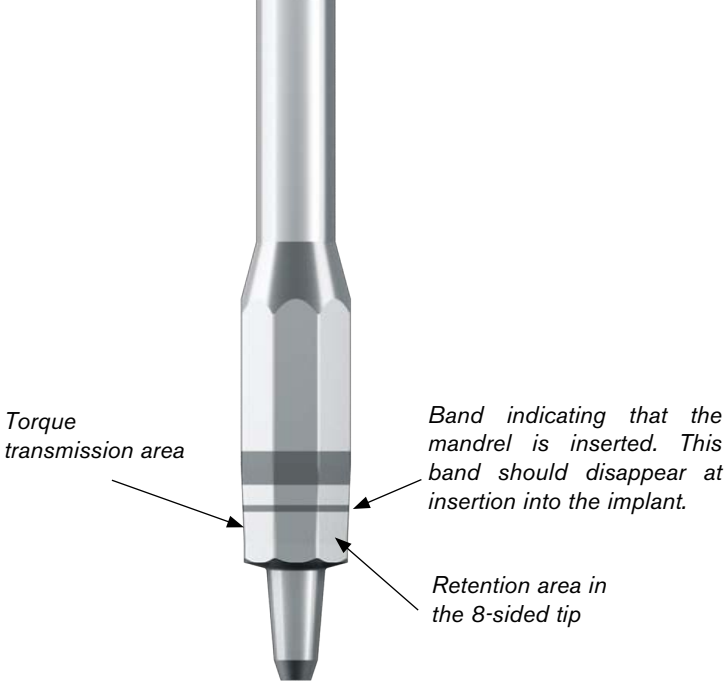
Use the protocol diagrams to determine the tapered drill bit corresponding to the selected implant Ø and adapt the implant socket to the bone quality of the site. When drilling, make sure the bone bleeds. Otherwise, scratch the bone a little to make it bleed. If there is no vascularization, it is preferable to close and wait for vascularization.

6 **Intermediate** DRILL HOLES

Use the protocol diagrams to determine the succession of drill steps corresponding to the diameter of the selected implant, and to adapt the implant socket to the selected implant according to the bone quality of the site. When drilling, make sure the bone bleeds. Otherwise, scratch the bone a little to make it bleed. If there is no vascularization, it is preferable to close and wait for vascularization. Drill at a maximum speed of 800 rpm and 600 rpm respectively for the Ø 5.3 and Ø 5.7 drill bits

7 **Implant** INSERTION

The implant can be positioned manually or with the contra-angle. This operation must be performed with the utmost care to eliminate the risk of the implant falling out and to ensure that it does not come into contact with any non-sterile components before insertion into the bone site. To do this, use the wrench or screwing mandrel. After opening the sterile tube, connect the end of the wrench or mandrel directly to the implant without removing it from the tube.



8.a **Implant gripping** IN THE TUBE SHOULD BE DONE AS FOLLOWS:

Step 1 - Align the hexagon of the mandrel or of the wrench with the internal hexagon of the implant.

Step 2 - To grasp the implant, rotate the mandrel or the wrench in the implant connection clockwise, until you feel a stop in rotation of the implant in its insert (a device in the insert limits the rotation of the implant during its handling).

Step 3 - Insert the mandrel into the implant by applying a slight effort on the mandrel so that it is retentive on the implant (5 N = 500 g).

a. If the positioning mark is no longer visible, the instrument is inserted correctly into the implant.

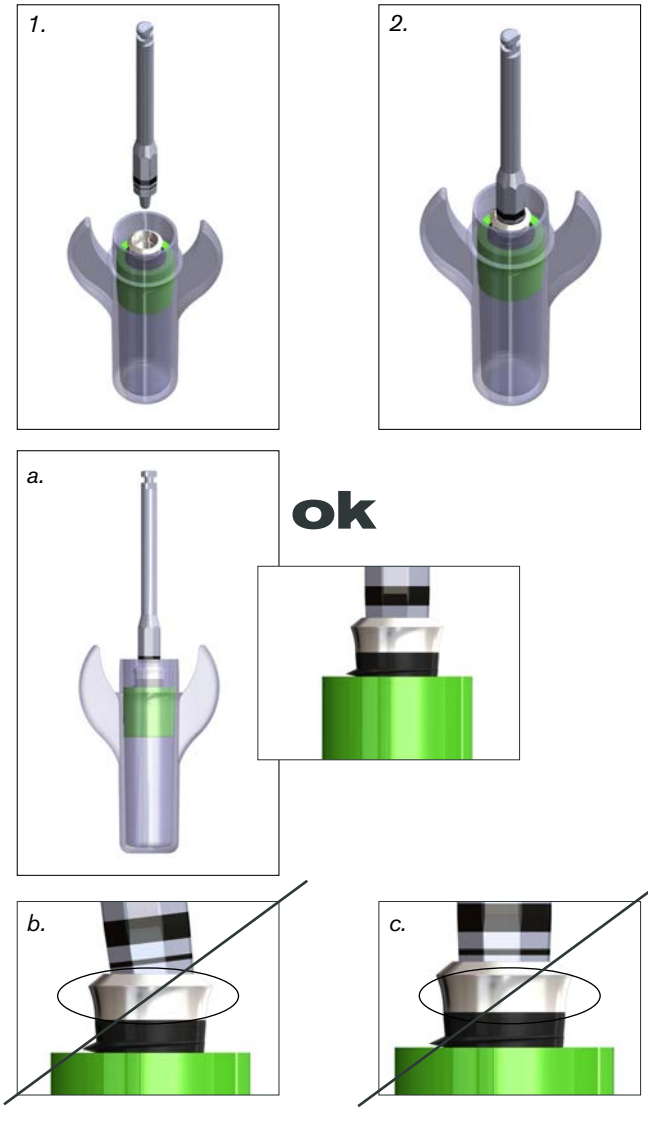
b. If the positioning mark is visible, the instrument is not aligned or inserted. In this case, go back to step 1.

c. If the positioning mark is visible, the instrument is not oriented and inserted. In this case, go back to step 2.

Step 4 - With the mandrel well-inserted into the implant, apply a slight counter-clockwise rotation and gently remove the implant from its packaging.

Step 5 - Transport the implant to the receiving site and present it at the entrance of the socket.

Note: Secure your handling against the risk of the implant falling to the ground or into the mouth.



8.b For placement WITH THE CONTRA-ANGLE

We recommend a speed of 15 to 25 rpm in order to properly control the descent of the implant. The contra-angle placement enables the insertion torque of the implant to be measured, and its primary stability to be determined. We recommend inserting the implant at a minimum of 30 N.cm for delayed loading and more than 40 N.cm for immediate or early loading. Do not exceed a torque greater than 70 N.cm.

In a D1 - D2 bone

For a D1 - D2 bone, it is recommended when screwing the implant with the contra-angle to finish it with a torque wrench in order to ensure the correct insertion of the implant and proper tightening torque.

8.c **In the event that the placement** IS MANUALL,

The implant is pre-screwed with the direct grip wrench. It is finished with the torque wrench. It is recommended to test the primary stability of the implant after screwing by trying to move it. If the implant moves, its primary stability is insufficient and will compromise osseointegration; it is better to remove it, and consider the use of a larger diameter implant if the bone volume allows it.

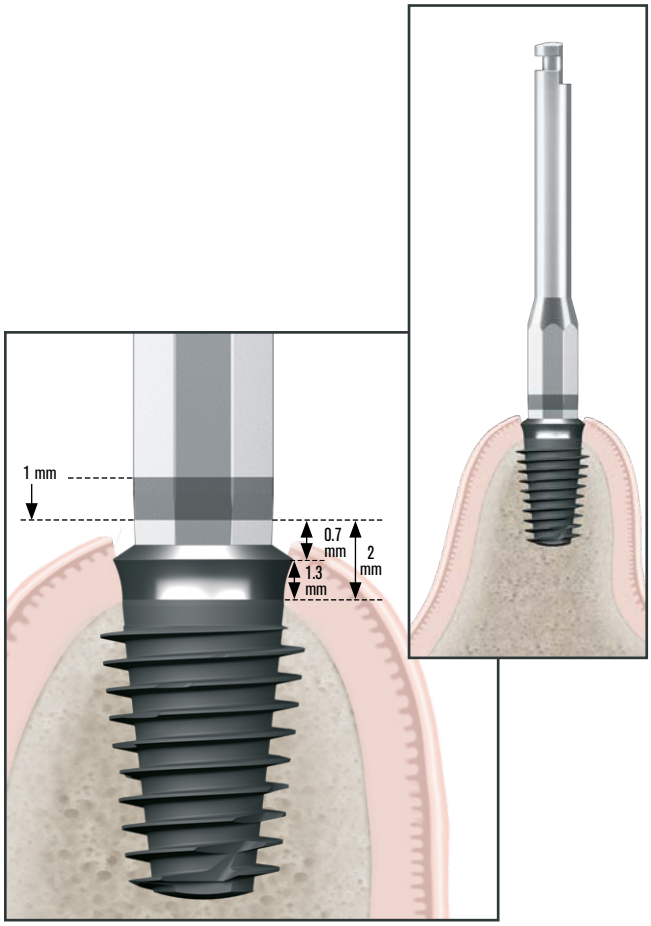
CAUTION

Avoid using force when inserting the implant. Excessive screwing can damage the integrity of the internal connection and create over-compression of the surrounding bone that can compromise osseointegration. If there is strong resistance, unscrew the implant slightly and then re-insert the implant or remove the implant to replace it in the titanium insert of its packaging and resume the drilling protocol to widen the implant site while following the protocol.

8.d **Final insertion** OF THE IMPLANT

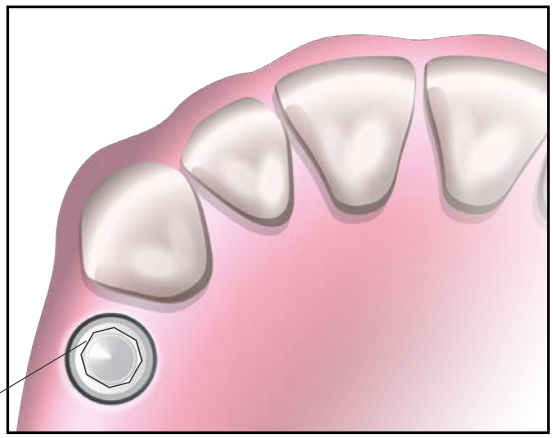
- For optimal esthetic results, position the implant transmucosally. Use the depth mark on the wrench or screwing mandrel.

- When inserting the implant, align one side of the octagon of the wrench or screwing mandrel parallel to the vestibular wall, which ensures that one side of the octagon of the implant is aligned to match the prosthetic components on the vestibular side.



8.e **Disengaging** THE DIRECT GRIP MANDREL

To disengage the direct grip mandrel, make a circumferential movement, not a left-to-right or top-to-bottom movement.



9 **Protecting** the connection

The ibone G implant is a one-stage surgical implant. The connection is protected by the healing abutment housed in the tube cap. Place this healing abutment on the implant head with the external hex key or external hex mandrel and then torque to 10 N.cm

If the height of the healing abutment (3mm) supplied with the implant is not suitable, other abutment heights are available in the range.

FOR IMPLANT NECK Ø 4.8	
ACI 48 55 15	**H 1.5 mm**
ACI 48 55 30	**H 3 mm (supplied with the implant)**
ACI 48 55 45	**H 4.5 mm**
FOR IMPLANT NECK Ø 6.5	
ACI 65 72 20	**H 2 mm**
ACI 65 72 30	**H 3 mm (supplied with the implant)**
ACI 65 72 45	**H 4.5 mm**

The healing time will then be observed without stressing the implants. The period of time required to achieve good osseointegration is:
- 3 months in the mandible
- 6 months in the maxilla

IN CASE OF FAILURE

To remove an implant, try unscrewing it with the implant connector or direct grip wrench. If this solution is not sufficient, please refer to the instructions for the extraction kit etk.

The site may possibly be reimplanted*, if the patient is fit to receive a new implant, with an implant of a larger diameter, in the event that the insertion of this implant takes place at the same time.

To reimplant the site with a smaller diameter implant, it is advisable to wait for the complete healing of the socket.**

* It is important to analyze the causes of failure before considering possible reimplantation.
** The practitioner determines whether it is appropriate to use a filler material.

EXTRACTION KIT
ref: KDR_AEST

TECHNIQUES OF
IMPRESSION TAKING

1 **Technique with** PICK-UP TRANSFER (OPEN TRAY IMPRESSION)

- After unscrewing the healing abutment, manually screw the pick-up transfer into the implant using the external hex key. Observe the maximum tightening torque of 10 N.cm.

- You can choose between 2 transfer heights depending on your case:
  - Short: 10 mm height
  - Long: 13.5 mm height

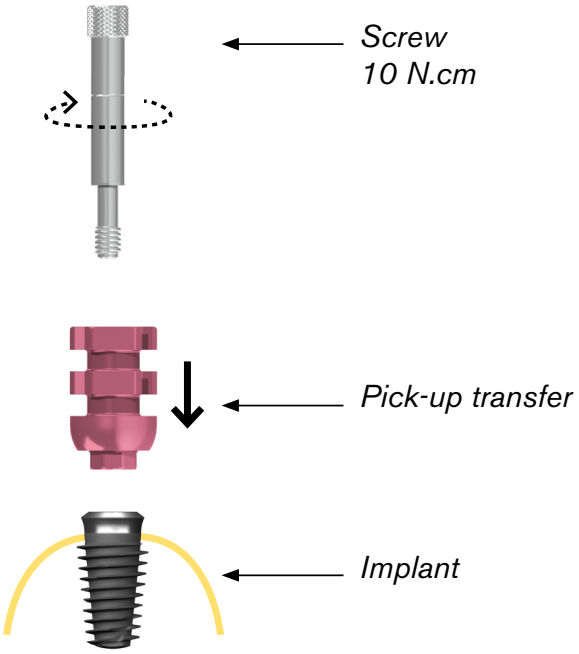
- After making sure the transfer is correctly positioned, take the impression with an open tray impression holder while remembering to remove the screw head.

- Once the impression material has set, unscrew the pick-up transfer with the external hex key.

- Remove the impression

- Screw the analog to transfer.

Caution: Always hold the analog and not the impression holder.



2 **Technique with** POP-IN TRANSFER (CLOSED TRAY IMPRESSION)

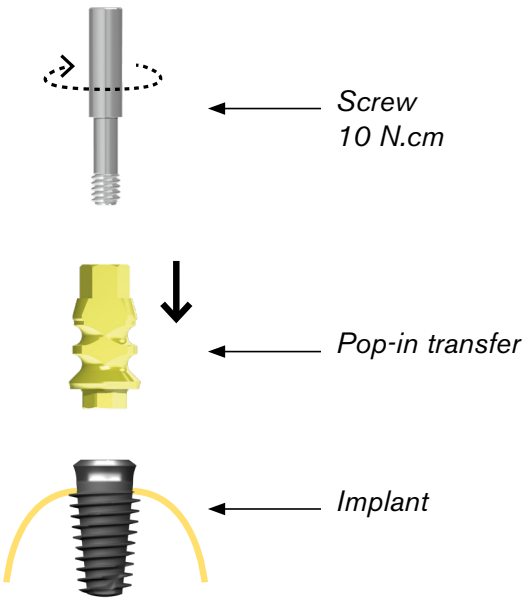
- After unscrewing the healing abutment, manually screw the pop-in transfer into the implant using the external hex key. Observe the maximum tightening torque of 10 N.cm.

- After making sure the transfer is correctly positioned, take the impression with a closed tray impression holder.

- Once the impression material has set, release the impression, ideally in the axis of the transfer.

- Unscrew the pop-in transfer using the external hex key.

- Screw the analog to the transfer, align it and then reposition the transfer in the impression.



3 **Technique with** POP-UP TRANSFER (CLOSED TRAY IMPRESSION)

▶ After unscrewing the healing abutment, manually screw the pop-up transfer into the implant using the external hex key. Observe the maximum tightening torque of 10 N.cm.

▶ After making sure the transfer is correctly positioned, install the clip-on transfer cap.

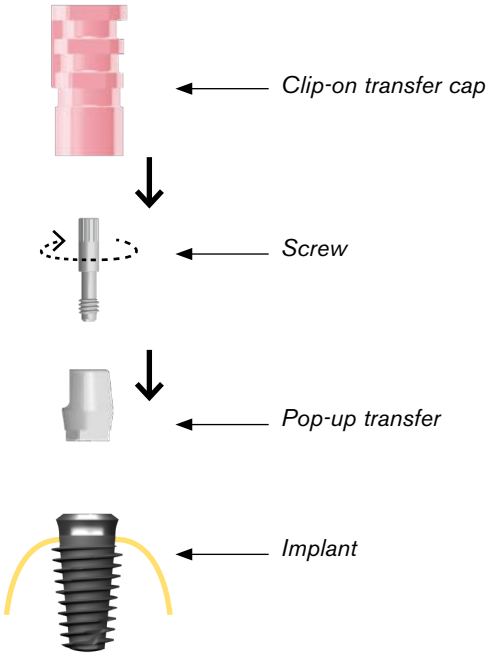
- Align the pink cap rib with the flat transfer surface
- Clip it on: Feel the "click" of the insertion

▶ Take the impression with a closed tray impression holder.

▶ Once the impression material has set, release the impression, ideally in the axis of the transfer.

▶ Unscrew the pop-up transfer using the external hex key.

▶ Screw the analog to the transfer, align it and then reposition the assembly in the impression by clipping it on to the transfer cap.

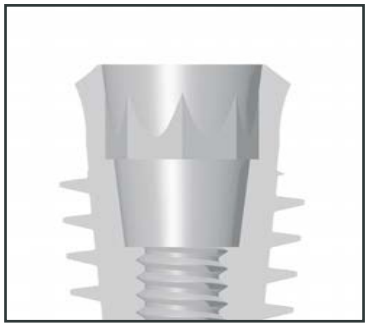


PROSTHETIC
PROCEDURE

Foreword

Precautions for use:

- Observe the tightening torques indicated in this manual to limit the risks of damage, breakage and malfunction of the devices
- Check the proper adjustment of part assemblies in order not to compromise the insertion of the prosthesis and to guarantee its mechanical performance
- Secure the handling of prosthetic components and instruments against the risk of falling into the mouth or out of the sterile drape due to their reduced dimensions. Check that the handling instruments have a good grip on them
- Certain prosthetic components are delivered sterile to allow their use in surgery: CAUTION: Do not re-sterilize.
- All disposable components delivered non-sterile must be cleaned and disinfected before entering the patient's mouth (and sterilized during surgery).
- Observe decontamination and/or sterilization rules (plastic and ceramic components cannot be sterilized by autoclave)
- In the case of plastic or ceramic components, always disinfect in a solution complying with standard EN 14 476 and preferably aldehyde-free.
- Any product delivered sterile (by gamma radiation) must not be re-sterilized.
- Respect sterile parts of packages when unpacking and place the contents on a sterile drape.
- Respect the expiration date of the product.
- Check the proper assembly and adjustment of the interconnected components so as not to compromise the denture insertion, mechanical performance of the components and esthetic outcome in the mouth.



A single common connection

The ibone G implant has a common connection with our Aesthetica+² implant. It is also compatible with the Straumann connection.

SEALED PROSTHESIS
ON SCREW-RETAINED ABUTMENT

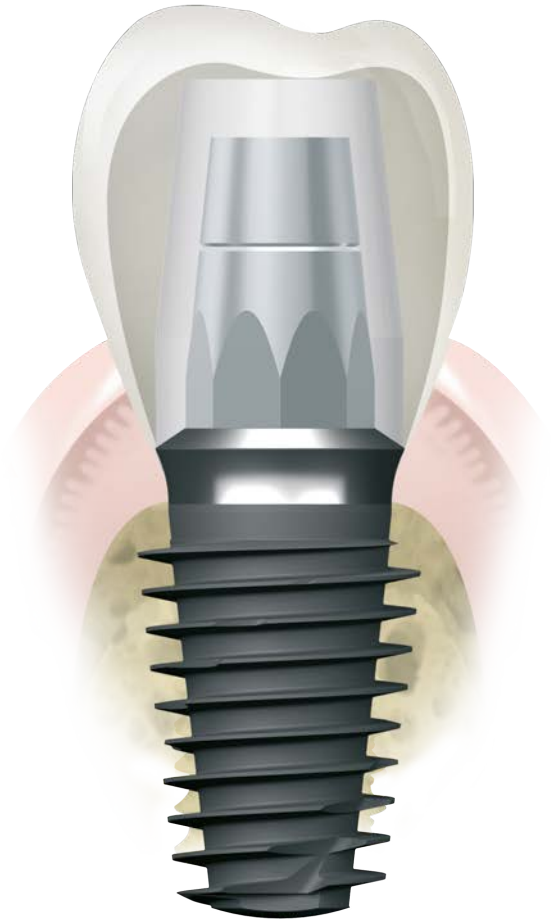


FIGURE 1. TRANSFER ATTACHMENT

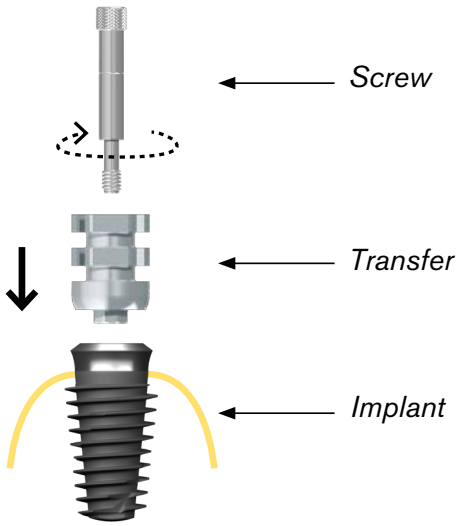


FIGURE 2. ANALOG ATTACHMENT

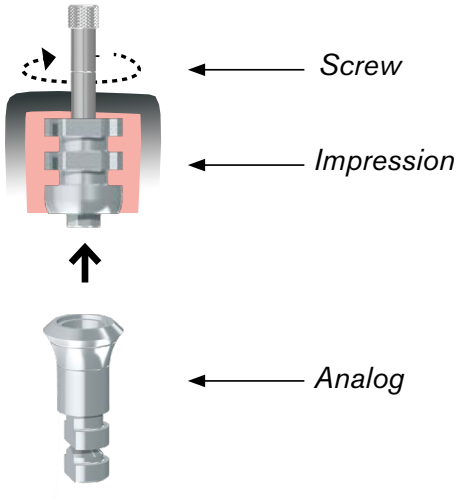


FIGURE 3. ON MODEL

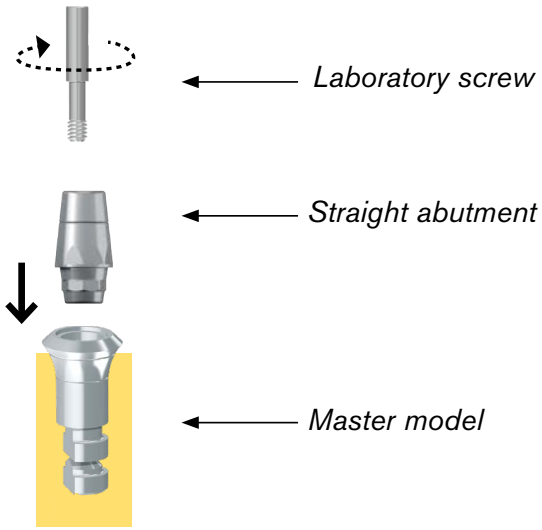
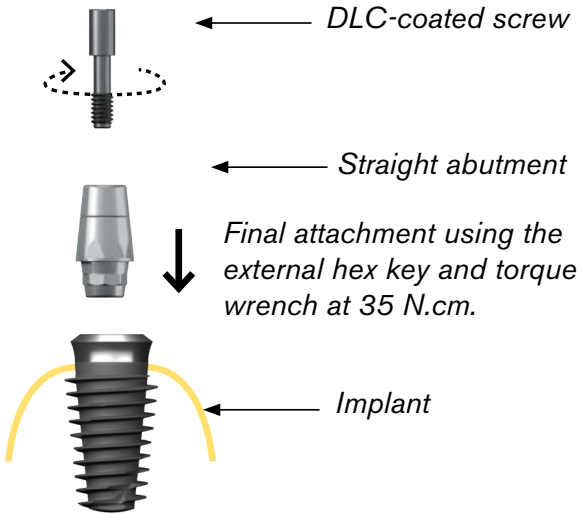


FIGURE 4. IN MOUTH



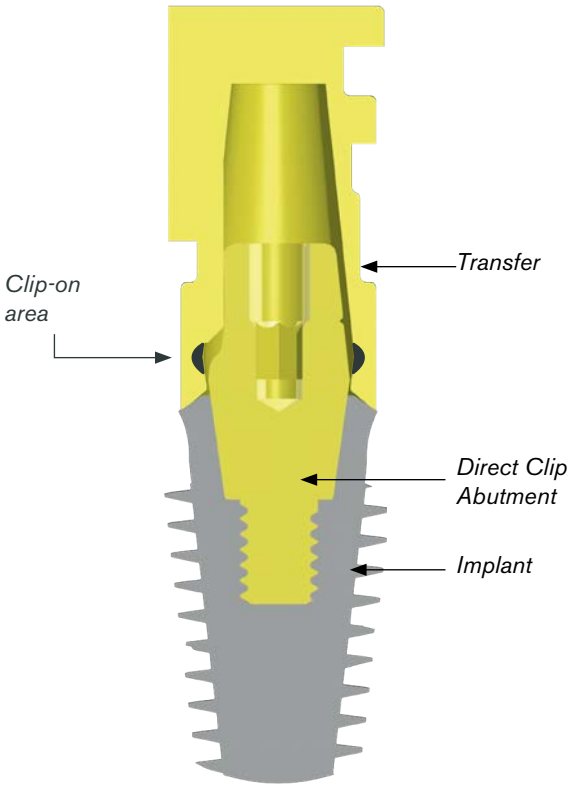
SEALED PROSTHESIS
ON DIRECT CLIP ABUTMENT

Using A DIRECT CLIP ABUTMENT

- Risks of the impression-taking are prevented by a standardized protocol using clip-on transfers that replicate the abutment.
- The clip-on areas of the transfer are located above the prosthetic rim of the abutment (see red areas in the image below).
- Plastic sleeves are not clipped on to the abutment in order to facilitate handling in the laboratory and to prevent any alterations that could affect the seal of the prosthetic joint.

Impression

Ease of setting up the transfer ***without removing gingival sulcus***



CAUTION

Be sure to align the flat side of the abutment with the inside flat side of the transfer.

Two types of transfers are offered:

- A homothetic transfer to the chosen Direct Clip abutment if it is not altered.
- A hollow transfer in case of abutment alteration.

1. Choose the crown height for the abutment (4 - 5.5 - 7 mm).

2. Place the abutment and perform the final tightening to 35 N.cm using the torque wrench (Ref. CCC 35).

3. Take an impression using the transfer. The transfer is oriented (aligning the transfer plate with the abutment plate) and then clipped on to the Direct Clip abutment with light pressure (the transfer will then be embedded in the impression material). This technique precisely records the abutment shoulder, since the information is given by the parts and not by the impression material, whose limits are known.
(see Figure 1).

4. Remove the impression and place the analog corresponding to the Direct Clip abutment (4 - 5.5 - 7) on the transfer taken in the inside of the impression (aligning the transfer plate with the analog plate). The precision of the repositioning is guaranteed by clipping it on (see Figure 2).

5. Place a protective cap on the Direct Clip abutment (see Figure 3).

LABORATORY STEPS

6. In the laboratory, the model is cast.

7. Place the plastic sleeve on the model and shape the final sleeve (see Figure 4).

8. Cast the sleeve.

9. Make the cosmetic ceramic veneer on the sleeve.

10. Seal the crown after removing the protective cap.

FIGURE 1. IMPRESSION ON INTACT ABUTMENT

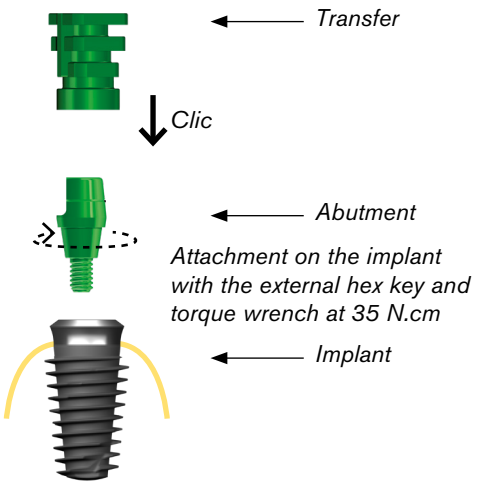


FIGURE 2. ANALOG ATTACHMENT

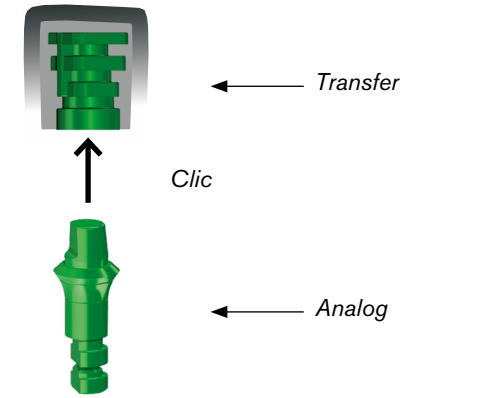


FIGURE 3. PROTECTIVE CAP

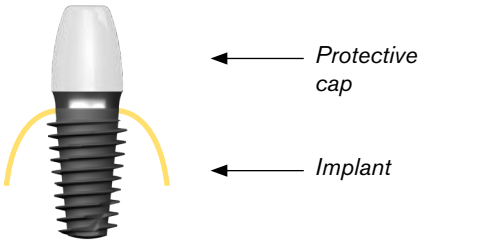
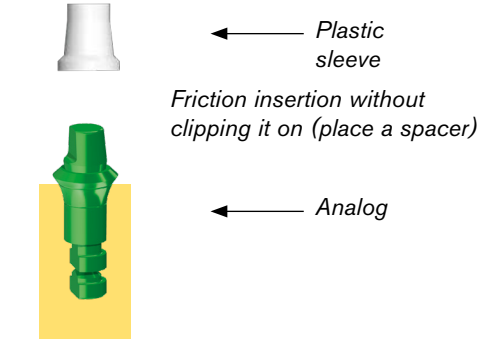


FIGURE 4. ON MODEL



Protocol ON ALTERED DIRECT CLIP ABUTMENT

Since the benefits of the standardized impression system cannot be fully achieved by altering Direct Clip abutments, it is recommended that this technique be reserved for single-unit cases where the prosthetic fit is less sensitive to even the most minimal impression inaccuracies.

1. Choose the crown height for the abutment (4 - 5.5 - 7 mm).
2. Alter the abutment (do not go beyond the alteration limit hole).

3. Place the abutment and perform the final tightening to 35 N.cm.

4. Take an impression using the hollow transfer clipped on to the Direct Clip abutment with a simple press. After checking the fit of the transfer on the abutment, the impression material is inserted inside the transfer and then all the way around to completely cover it (see Figure 1).

5. Place the protective cap on the abutment during the denture production time (see Figure 2).

FIGURE 1. IMPRESSION ON ALTERED ABUTMENT

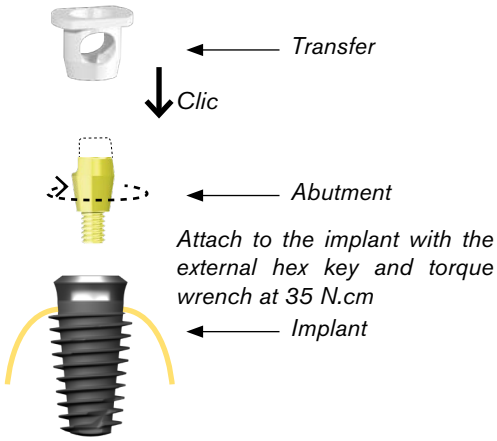
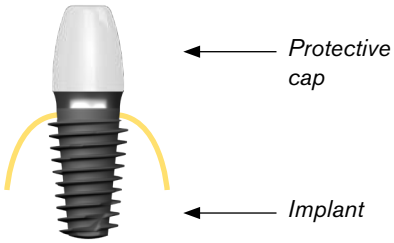


FIGURE 2. PROTECTIVE CAP



LABORATORY STEPS

6. Remove the impression which is sent as is to the laboratory.

7. Cast the master model from the impression without analogs.

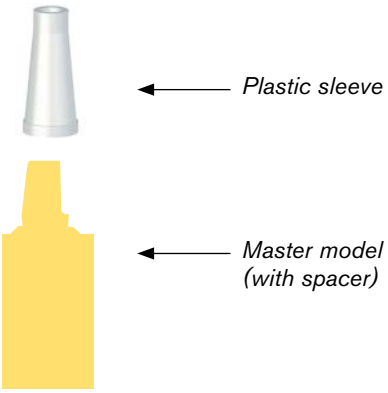
8. Place the plastic sleeve on the model and shape the final sleeve.

9. Cast the sleeve (see Figure 3).

10. Assemble the ceramic and perform the firing.

11. Seal the crown after removing the protective cap.

FIGURE 3. ON MODEL



Case of multi-unit prosthesis

A very precise adaptation of the prosthesis is necessary to avoid any tension/fracture. For this reason, we recommend the use of Direct Clip abutments of suitable height (as short as possible to tolerate the axial divergences of the implants) without alterations. If no Direct Clip abutments are suitable, it is preferable to work with screw-retained abutments and make the impression on the implants.

Protocol FOR TEMPORARY PROSTHESIS

► The temporary prosthesis can be performed on the protective cap of the Direct Clip abutment, which will then be sealed on to the Direct Clip abutment.

1. Select the appropriate protective cap for the abutment used.

2. If necessary, create some retentions (grooves) on the outer surfaces to improve the retention of the temporary tooth.

3. Apply a small amount of temporary sealing cement to the inside of the cap and on the Direct Clip abutment surfaces.

4. Press the cap on the Direct Clip abutment until it clips on to the abutment base.

5. Check the fit and remove any excess cement.

6. Place the temporary tooth on the cap.

Direct Clip abutment KITS

These kits include all parts necessary for a sealed prosthetic restoration on the Direct Clip abutment of the selected height.
They facilitate the identification of the necessary parts and prevent any of the parts from being missing on the day of surgery.
The kit is supplied without Direct Clip abutments.

This kit includes:

The corresponding homothetic transfer for an impression on an unaltered abutment

The corresponding homothetic analog

A protective cap

A hollow transfer for impression on an alteredabutment

A sleeve oriented according to the type of prosthesis considered (single-unit or multi-unit)

ZIRCONIA PROSTHESIS
ON ESTHETIBASE INTERFACE

The use of zirconia abutments significantly improves the esthetic outcome of implant-supported restorations, but in the long term, there is a risk of deformation of the connections (sagging of the internal connections and loss of sealing, etc.) under the effect of repeated masticatory stresses. Hence the idea of preserving a titanium interface between the implant connector and the prosthetic component, as small as possible, which will serve as the basis for the construction of the zirconia abutment.

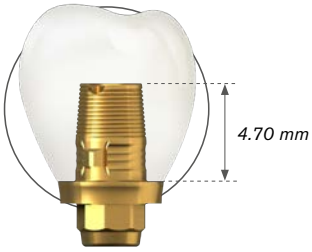
Discretion

Reduced dimensions of the titanium interface

- Thin collar and reduced height.
- Invisible in the final restoration.

Even more discreet

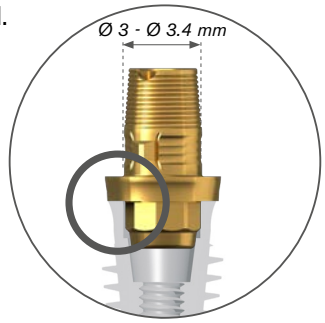
- Biocompatible yellow titanium nitride coating blends better into soft tissue shades.



Reliability

Titanium on titanium contact

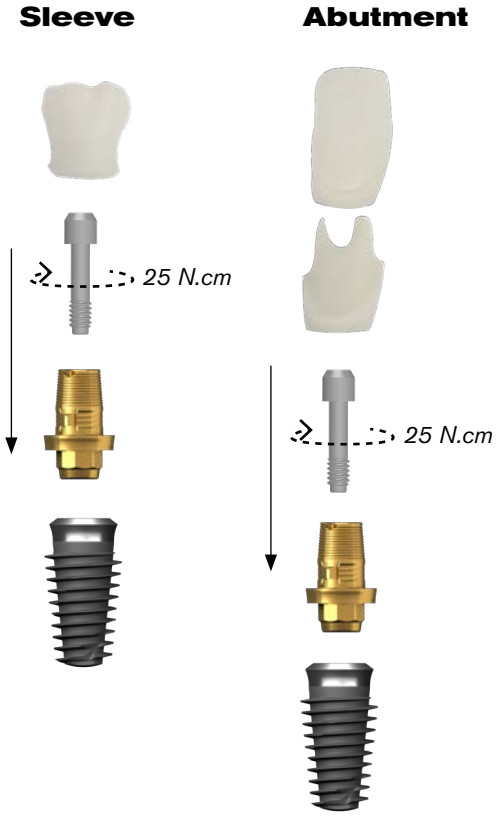
- The interface prevents contact between zirconia and titanium.
- Having the same hardness as the implant, it does not cause deformation of the connectors and keeps a good seal.



Applications

Single-unit cases

Allows the production of prosthetic components (abutments or sleeves) made of zirconia or pressed ceramic.



Non-contractual images

Protocol

1.Prosthetic component design

- in pressed ceramic (sleeve) according to the usual lost wax technique.
- in machined zirconia (abutment). The mock-up of the component to be machined will be delivered either on a traditional physical model or in digital format (scan or CAD).

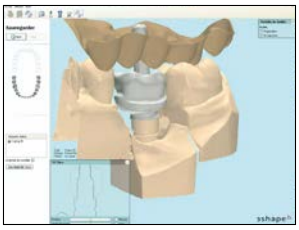
2. Bonding

Use a self-adhesive universal bonding composite. Apply the bonding composite to the titanium interface and the zirconia stump or sleeve, and then assemble the two parts. To achieve complete polymerization of the material, follow the product manufacturer's instructions.

3. Screwing

To 35 N.cm, regardless of the implant diameter using the torque wrench. Do not use the same screw for fittings on the master model and for final screwing.

PROSTHETIC COMPONENT DESIGN



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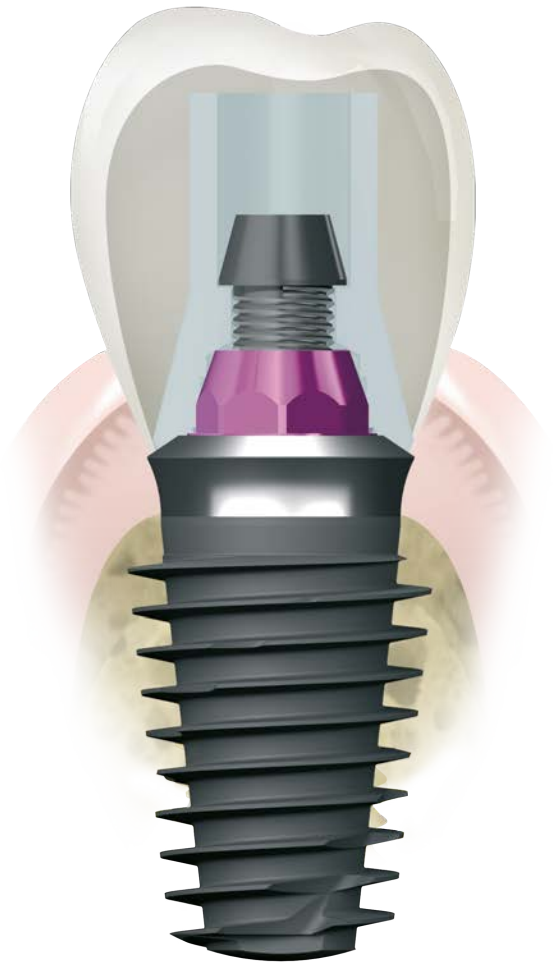
SCREW-ON PROSTHESIS
ON CONOCTA ABUTMENT



SIMPLE AND PRECISE**protocol**

1. Screw the ConOcta abutment on to the implant in the mouth using the external hex key or mandrel and torque wrench (Ref. CCC 35).

2. Screw the pick-up transfer on to the ConOcta abutment, using the same screwdriver. To check the adjustment of the transfer on the ConOcta, make sure that the horizontal mark on the screw is no longer visible (see Figure 1).

3. Take the impression.

4. Unscrew the transfer and place the analog on the transfer taken in the impression (the analog represents the implant mounted by its ConOcta) (see Figure 2).

5. At this stage, a protective cap will temporarily cover the ConOcta abutment during the time that the prosthesis is being produced. A provisional prosthesis can be built on the protective cap or directly on the temporary abutment (see Figure 3).

LABORATORY STEPS

6. Cast the model.

7. Attach the plastic sleeve on the analog of the model (see Figure 4).

8. Produce the prosthesis.

9. Screw the prosthesis on to the ConOcta abutment in the mouth to 35 N.cm using the torque wrench (Ref. CCC 35).

The final attachment screw must not be used for laboratory tests & handling operations. Use a guide screw ***Order No. APV VG 20 150***

FIGURE 1. TRANSFER ATTACHMENT

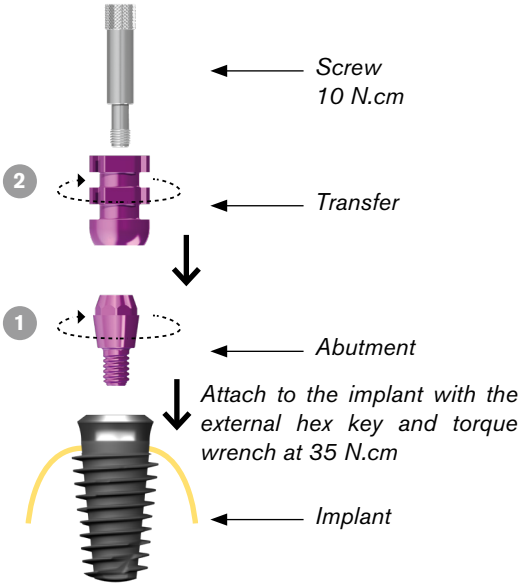


FIGURE 2. ANALOG ATTACHMENT

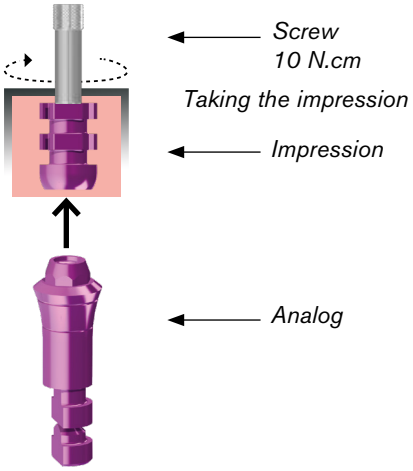


FIGURE 3. PROTECTIVE CAP OR PROVISIONAL ABUTMENT

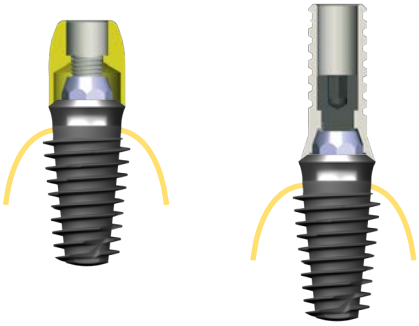
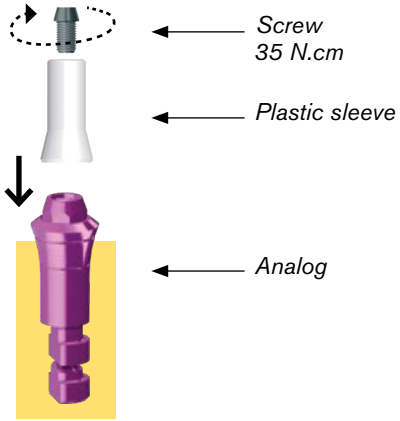
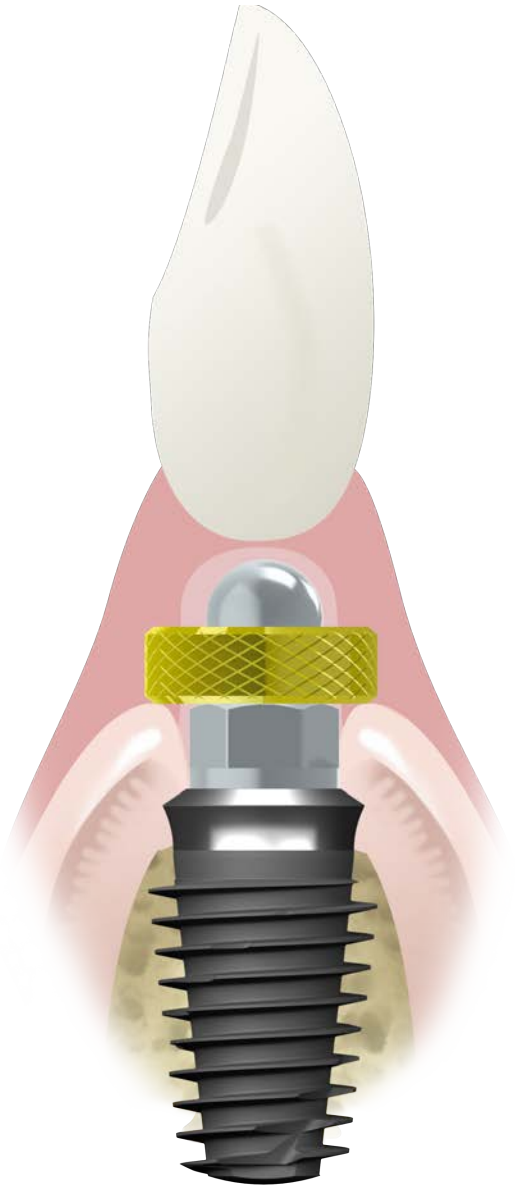


FIGURE 4. PLASTIC SLEEVE ATTACHMENT



REMOVABLE PROSTHESIS
ON O-RING ATTACHMENTS



Protocol FOR REMOVABLE PROSTHESIS WITH BALL ABUTMENTS

1. Screw the pick-up transfers on to the implants for taking the impression. To check the fit of the transfer on the implant, make sure that the horizontal mark of the screw is no longer visible (see Figure 1).

2. Unscrew the transfers and remove the impression (see Figure 2).

3. Connect the analogs to the transfers taken in the impression by screwing them together (see Figure 3).

LABORATORY STEPS

4. In the laboratory, the model is cast.

5. Place the ball abutments on the model by screwing them on to the implant analogs (see Figure 4).

6. Clip the O-rings on the ball abutments of the model.

7. Prosthetic production of the overdenture using resin teeth positioned in wax according to the same process as a complete prosthesis with exclusively mucosal support.

8. Flasking for integration of the O-rings on the overdenture.

9. After fitting, relining and adjustment of the occlusion.

10. Attach the ball abutments to the implants using the internal hex key or mandrel and torque wrench (Ref. CCC 35).
Clip-on the prosthesis in the mouth. Check the mucosal support.

Variant

It is also possible to make the impression on the ball abutment, in which case the use of the transfer is not necessary. In this case, use a ball abutment analog.

FIGURE 1. TRANSFER ATTACHMENT

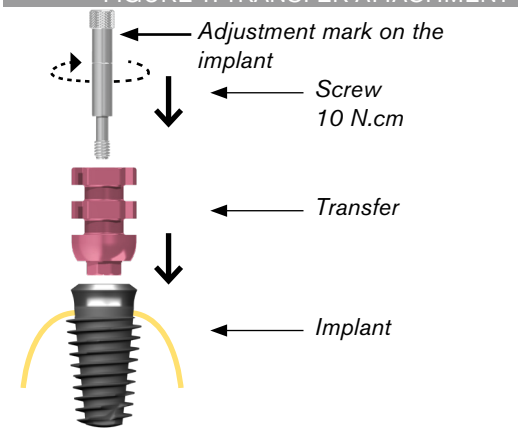


FIGURE 2. REMOVAL OF THE IMPRESSION

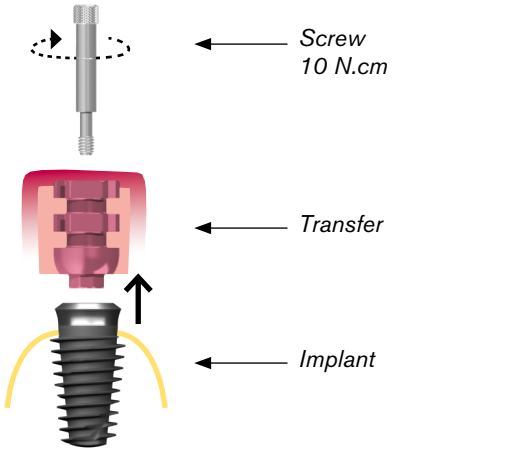


FIGURE 3. ANALOG ATTACHMENT

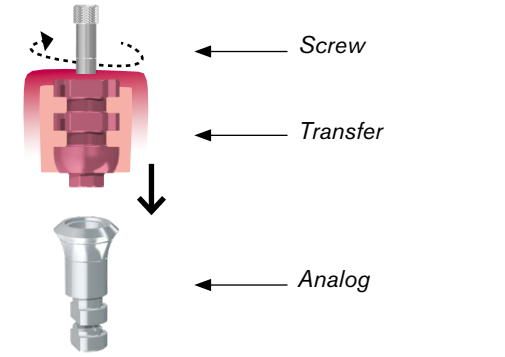
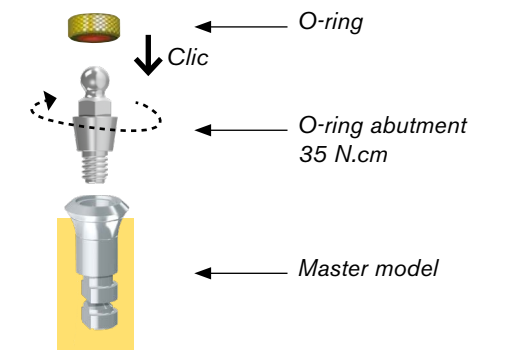


FIGURE 4. ON MODEL



Studies & PUBLICATIONS

• Placement of implants in the mandible reconstructed with free vascularized fibula flap: comparison of 2 cases on Aesthetica+ implants - University of Cukurova (Turkey) - 2008

• Geriatric slim implants for complete denture wearers: clinical aspects and perspectives with OBI mini-implants - University of Auvergne (Clermont-Ferrand - France) - 2013

• Clinical study of Naturactis dental implants in post-extraction dental procedures - University of Madrid (Spain) - 2013

• Contribution of a hybrid synthetic and innovating product in bone surgery and its filling: Matri™ BONE with Natea and Naturall implants - Université Henri Poincaré (Nancy-France) - 2012

• Implant-supported prosthetic solution in case of small inter-alveolar distance on Aesthetica+ implants - Polyclinic Kiev (Ukraine) - 2009

• Histology and histomorphometry - Comparative study of the Universal implant - Laboratoire d'Histologie d'Angers (France) - 1993

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• Analysis of the surface treatment of euroteknika and competitor implants - University of Barcelona (Spain) - 2006

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• Comparison between the digital planning and the final position of the implants with the teknika3D system - University of Bordeaux (France) - 2013

• Resonance frequency analysis, insertion torque and BIC of 4 implant surfaces: comparison and correlation study in sheep - Saint Joseph University (Lebanon)

• Comparison of two types of decalcified freeze-dried bone allografts in the treatment of dehiscence defects around Natea implants in dogs - University of Iran - 2011

• Comparison of the insertion and removal torque of two types of dental implants with different thread designs in 3 different materials - University of Catalonia (Spain) - 2008

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