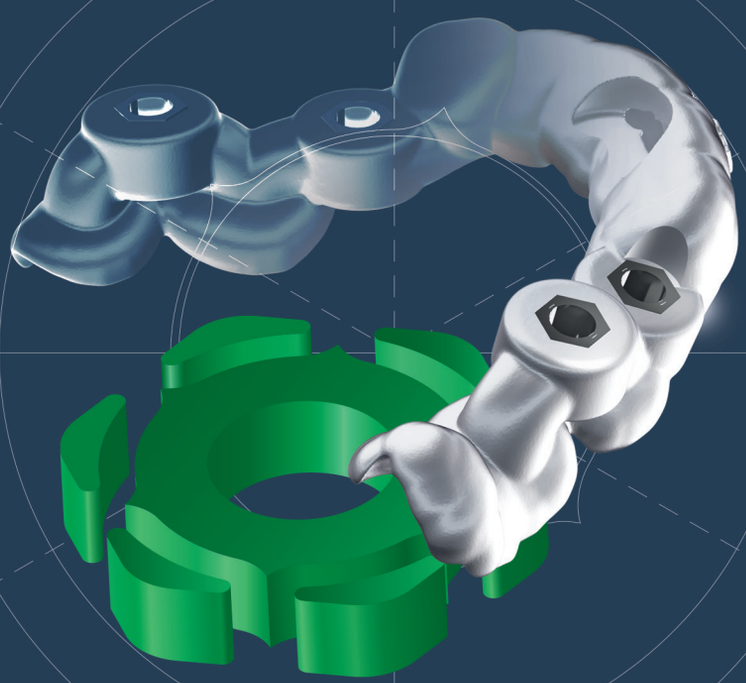
DENTALTECH

GUIDED SURGERY



USER MANUAL

www.dentaltechworldwide.com

INDEX

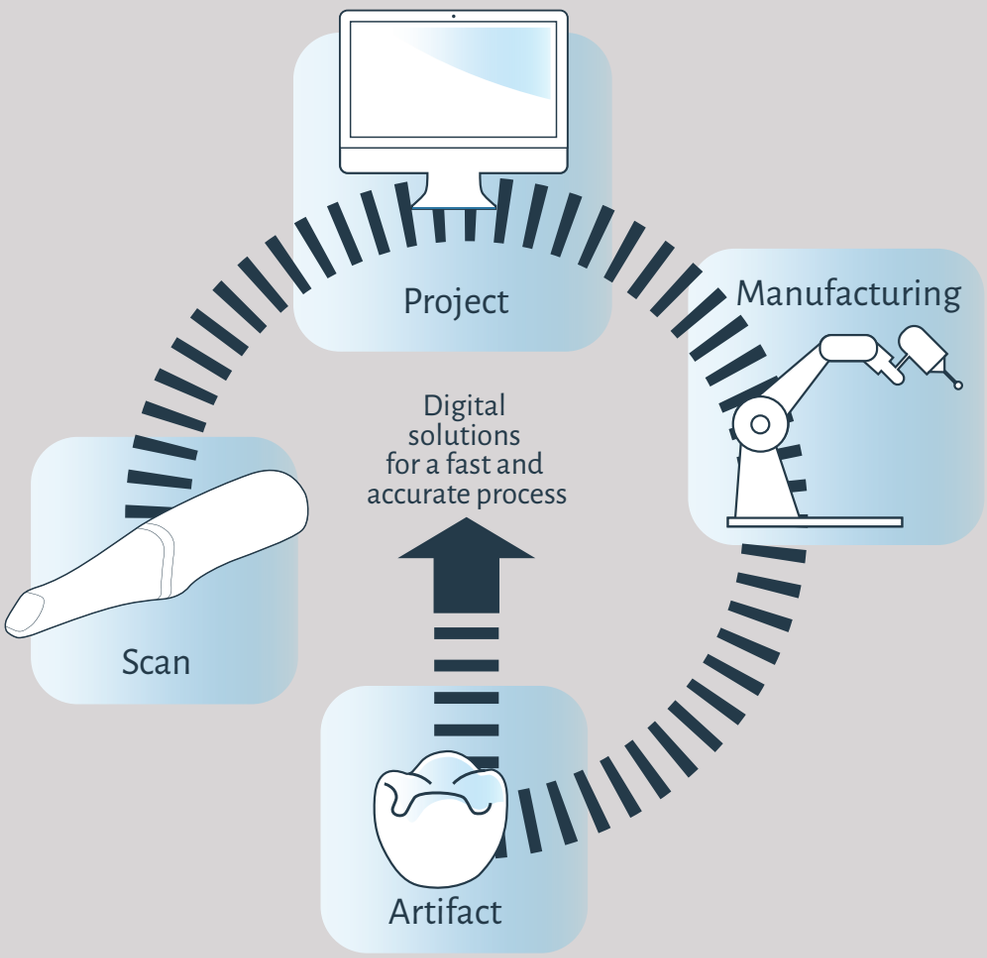
Implant treatment through the guided surgery technique, **allows you to plan and visualize in advance** the surgery that will be performed.

The **primary phases** of the guided surgery technique involve diagnosis, planning and implant/prosthetic positioning through the use of 3D surgical planning software. This allows the medical staff to accurately evaluate the surgical and radiological anatomy in order to orient the implant placement also according to the prosthetic needs.

The **clinical phase** is carried out through the use of dedicated instruments, suitable for creating osteotomies through the use of a surgical guide.

The **Guide** also allows implant positioning, orienting the anti-rotational engagement of the fixture.

Dental Tech surgical trays for guided surgery have been designed to be used with the main guided implantology techniques currently on the market.



Partial Edentulism

TRADITIONAL IMPRESSION

CASTING
MODELS

DIGITAL IMPRESSION

3D PRINT
MODELS

RADIOLOGICAL GUIDE
CONSTRUCTION

RADIOLOGICAL GUIDE MOUNTING
with **RESIN**
on the MODEL

RADIOLOGICAL GUIDE MOUNTING
with **SILICONE**
on the MODEL

MOUNTING INSIDE THE
MOUTH with ANTAGONIST

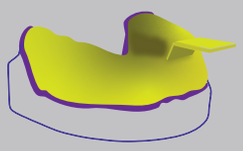
OPTICAL SCANNING in LABORATORY and
VIRTUAL WAX-UP

RADIOLOGICAL GUIDE DELIVERY to the
PATIENT for the CT/CBCT EXAM

Partial Edentulism

TRADITIONAL IMPRESSION

» Arch to operate, antagonist and centric.
» Material:
→ If teeth are stable: silicone (polyether or similar polysiloxanes).
→ If teeth are not stable: alginate (after removal or splinting).
Maximum extension, non-functionalized (anatomical).
Reproduce the exact situation of the mouth at the time of surgery.

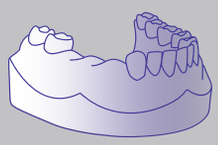


DIGITAL IMPRESSION

» Arch to operate, antagonist and centric.
Maximum extension, without holes.
Reproduce the exact situation of the mouth at the time of surgery.

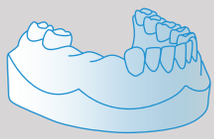
CASTING MODELS

Extra-hard plaster model casting (no imperfections or bubbles).



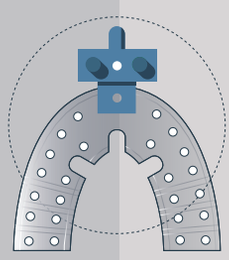
3D PRINT MODELS

High definition 3D print of the STL file.

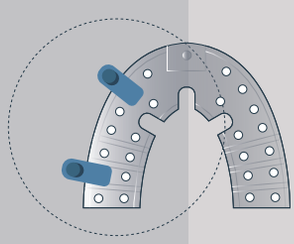


RADIOLOGICAL GUIDE CONSTRUCTION

» Fix the Markers to the bite according to the diagram below and glue them with a drop of cyanoacrylate.
» Measure the bite on the model and if necessary shorten and fit it to the dimensions of the arch. It is advisable for the bite to reach the molars (not over).



*Correct assembly for acquisition diameter **greater than 8 cm.***



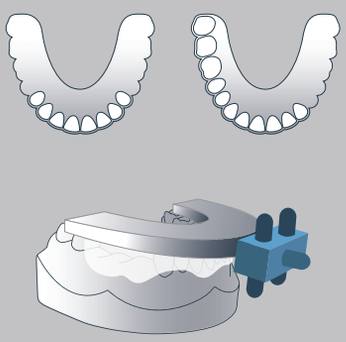
*Correct assembly for acquisition diameter **less than 8 cm.***

*NB: the components to construct the radiological guide **are disposable***

Partial Edentulism

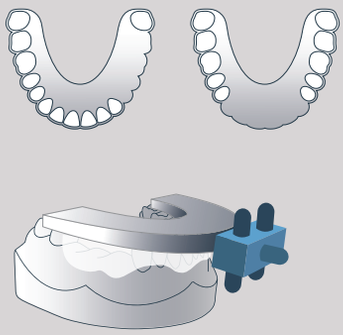
RADIOLOGICAL GUIDE MOUNTING with RESIN on the model

» Secure the radiological guide with transparent and not radiopaque resin (orthodontic type) on the model, particularly compensating the space in line with the edentulous areas.
» Keep the front Marker more central and as near to the incisor edge as possible.



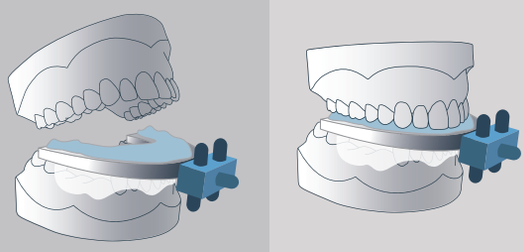
RADIOLOGICAL GUIDE MOUNTING withSILICONE on the model

» Apply a layer of universal adhesive between the silicone and the bite and apply the silicone on the side of the bite that interlocks with the model.
» Compensate with the silicone on the model corresponding to the edentulous area.
» Fix the bite on the model taking care that you keep the Marker more centred and as near to the incisor edge as possible.

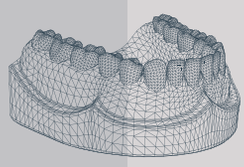


MOUNTING INSIDE the MOUTH with ANTAGONIST

When hardened, position the bite on the patient and reline towards the antagonist with the same silicone, taking care that you keep the bite steady.
Note: it is not a centric recording but a simple stabilization key.



OPTICAL SCANNING in LABORATORY and VIRTUAL WAX-UP



RADIOLOGICAL GUIDE DELIVERY to the PATIENT for the CT/CBCT EXAM

Total Edentulism

TRADITIONAL IMPRESSION

CASTING of MODELS

VERTICAL DIMENSION and OCCLUSAL RELATIONSHIPS DETECTION

AESTHETIC TEST

PRECISION DUPLICATION with TRANSPARENT RESIN

RADIOLOGICAL GUIDE MOUNTING with SILICON on the MODEL with the PROSTHESIC DUPLICATE MOUNTED

MOUNTING INSIDE the MOUTH with ANTAGONIST

OPTICAL SCANNING in LABORATORY

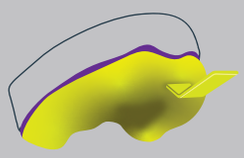
RADIOLOGICAL GUIDE DELIVERY to the PATIENT for the CT/CBCT EXAM

Total Edentulism

TRADITIONAL IMPRESSION

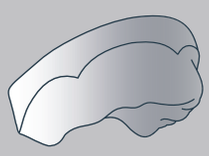
» Arch to operate, antagonist and centric (raised).
» Material: silicone or alginate.
» Maximum extension, non-functionalized (anatomical).

Reproduce the exact situation of the mouth at the time of surgery



CASTING MODELS

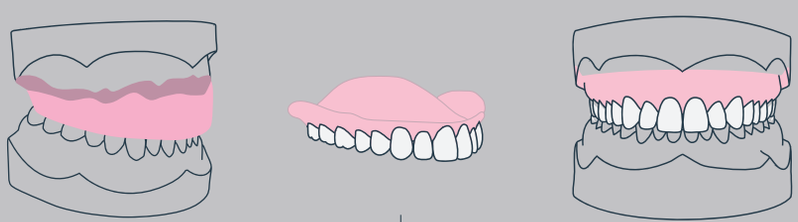
Extra-hard plaster model casting (no imperfections or bubbles).



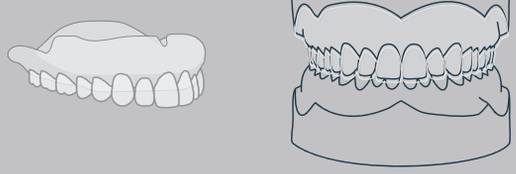
VERTICAL DIMENSION and OCCLUSAL RELATIONSHIPS DETECTION

AESTHETIC TEST

The procedure is comparable to that used for the construction of a total prosthesis.



PRECISION DUPLICATION with TRANSPARENT RESIN

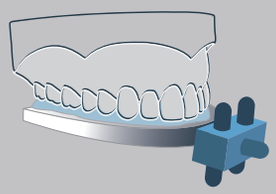


The duplicate of the aesthetic test must be precise and with transparent and NOT radiopaque material (orthodontic resin type), after having restored the vestibular flange.

COMPATIBLE PROTOCOL
Although it is NOT recommended, if the patient has adequate removable prosthesis (from the aesthetic and functional aspect), proceed with its duplication after having relined it.

Total Edentulism

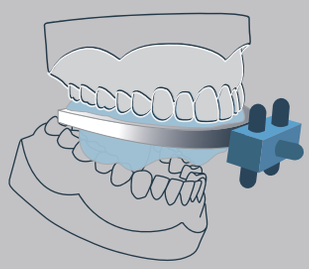
RADIOLOGICAL GUIDE MOUNTING with SILICON on the MODEL with the PROSTHESIC DUPLICATE MOUNTED

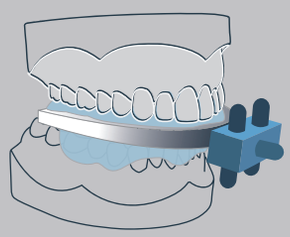


NB:the components to construct the radiological guide are ***disposable***

MOUNTING INSIDE the MOUTH with ANTAGONIST

For the radiological guide to be stabilized, position the bite in the patient's mouth and reline towards the antagonist with the same silicone, taking care that you keep the bite steady.

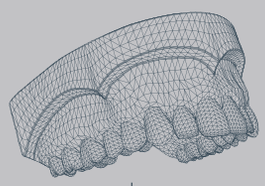




COMPATIBLE PROTOCOL
The procedure is compatible with DUAL SCAN protocol (double scan) that consists of the insertion of radiopaque points in the prosthesis duplicate and double CBCT scan (patient with radiological guide and radiological guide only) to automatically overlap the scan of the prosthesis with the anatomy of the patient directly into the software.
However, it is advisable to follow the standard procedure and use the radiological guide even in cases of total edentulism.

ALTERNATIVE PROTOCOL
Mounting the radiological guide to the antagonist can also be performed in the articulator ONLY IF a RAISED centric was used during the initial phase. The same should be done in the case of guided surgery on two arches during the same operation.

OPTICAL SCANNING in LABORATORY



RADIOLOGICAL GUIDE DELIVERY to the PATIENT for the CT/CBCT EXAM

Radiological protocol

Once the perfect mouth fit of the radiological guide is verified, send the Patient to the Radiology Centre for the tomographic exam.

IMPORTANT: the Patient must be trained to properly position the radiological guide. Show the patient how to fit the guide and do some testing to make sure that the procedure is clear. The radiological guide MUST be preserved and returned to the studio.

Patient positioning

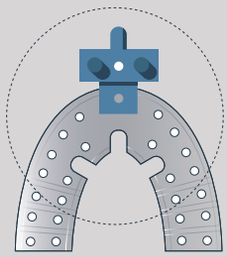
» If possible, remove objects that may introduce artifacts in the images (jewellery, piercing, etc.).
» Make sure that the patient fits the radiological guide correctly.
» Place the patient within the acquisition volume of the machine and make sure that he/she remains still during the capture of images.

Suggested image capture settings

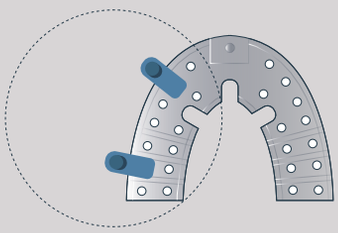
» Visual field (FOV: Field Of View): sections must have the same field of view that should include all relevant areas, especially the 3DMarkers related to the Radiological guide.
» Capture all of the sections of an exam in the same direction and keep the space between the sections constant (less than or equal to the thickness of the single section).
» Perform a single capture of the Patient with the radiological guide in position (it is not necessary to align the acquisition plane with the radiological guide).
» Make sure that the Markers are completely included in the capture volume, as seen in the images below.

Exporting images

» Recommended export matrix: 512 x 512 pixels for each image (The software can still import matrices of any size).
» Section thickness: use the thinnest available (possibly less than a mm).
» Reconstruction algorithm: use the algorithm with the highest resolution available (Bone or High Resolution).
» Image format: export axial images in uncompressed DICOM 3 format (standard). It is also advisable to export files in series and not compressed into a single file.

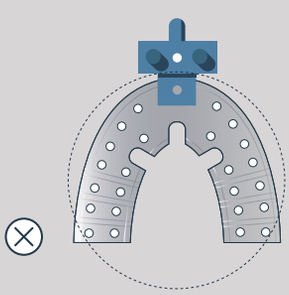


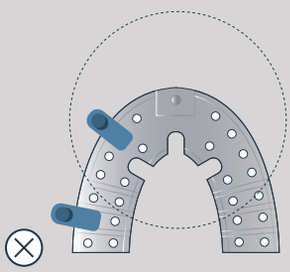
Complete Arch

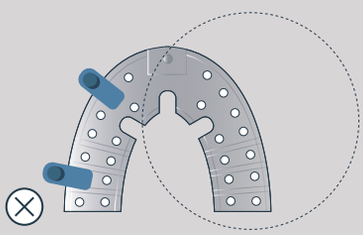


Half Arch

Conditions to avoid







Virtual planning

CT / CBCT EXAM
with RADIOLOGICAL GUIDE in CASE
of TOTAL EDENTULIA

*EXPORT in **DICOM** FORMAT*
(STANDARD)

ARCH OPTICAL SCANNING
and DIAGNOSTIC WAX-UP
in **STL** FORMAT

OVERLAPPED DATA

VIRTUAL PATIENT PLANNING

VIRTUAL IMPLANT
PLANNING

SURGICAL GUIDE and
WORK MODEL with HOLES for
IMPLANTS ANALOGS
MODELLING

PROSTHETIC MODELING in the
LABORATORY
with the use of CAD software

Operational phase

PRODUCTION

» **Surgical guide**
» **Work model**
» **Provisional prosthesis**
» **Surgical occlusal index**

For the production of guides and models, Dental Tech makes use of the collaboration and experience of specific production centers.

CHECKING the GUIDE INSIDE the MOUTH of the PATIENT BEFORE SURGERY

Dental Tech recommends an accurate test phase of the device directly with the patient, before the surgical phase.

SURGICAL KIT

Dental Tech recommends the use of Tray CGUIDE dedicated to its implant lines.

SURGERY

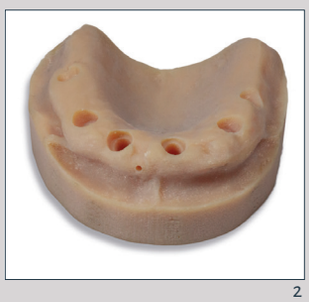
SURGICAL GUIDE

» Made of biocompatible material (for temporary use, Class I in accordance with Rule 5 of Annex IX, Directive 93/42/CEE).
» Including metal guide sleeves, dedicated to the Dental Tech kit.
» Cold sterilization.

1

WORK MODEL

» Model with implant analogs holes, suitable for mounting in the articulator.
» High quality and surface finishing.



2

The resulting STL files can be used for production, by means of rapid prototyping and CAD/CAM technologies, of all the components required for the transfer of the virtual design in the patient's mouth, and in particular:

» Construction of the SURGICAL OCCLUSAL INDEX: after mounting the work model and the surgical guide in the articulator, make a occlusal index in silicone with the same rise used for the initial centric.
» Constructing the PROVISIONAL PROSTHESIS: from the virtual modelling (integrated with the implants planning, exported from the software), milled with the CAD/CAM technologies available.

1. Anaesthesia

It is advisable to avoid anesthetic infiltration in keratinized mucosa to prevent dimensional changes that may affect the positioning accuracy of the surgical guide.
Therefore, it is advisable in the maxilla to perform plexus anesthesia in the vestibular fornix and nerve block at the greater palatine foramen and nose palatine foramen, whereas in the mandible perform plexus anesthesia (or possibly truncal at the lower alveolar nerve) and infiltration at the tongue level.

2. Positioning of the surgical guide

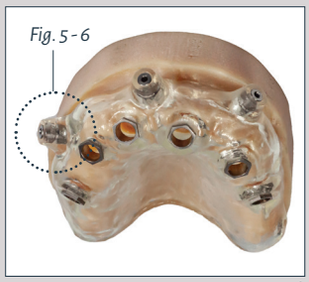
Place the surgical guide (Fig. 3) making sure it is stable. In case of a surgical guide with fixation pins, interpose the silicone occlusal bite between the arches and make the patient occlude firmly to ensure the position and stability of the surgical guide.

Pay particular attention to this stage as positioning the guide wrongly may affect the entire surgical treatment.

3

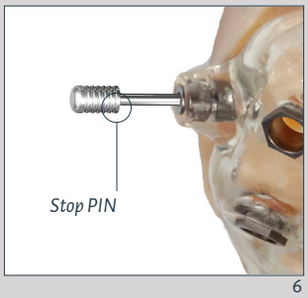
3. Fixing the surgical guide

Insert the fixation pin drill in the vestibular sleeve, push until you feel contact with the bone and activate the motor, pressing on the handpiece up to the limit (Fig.5-7). Remove the drill and insert the fixation pin (Fig. 6-8). Repeat the operation for all the fixation pins. Check the stability of the guide before proceeding with the other steps.

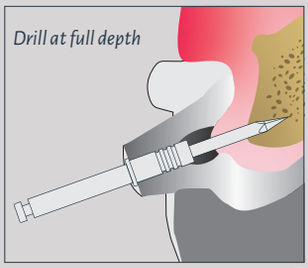


4

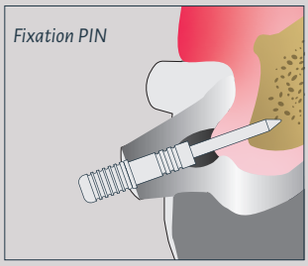
5



6



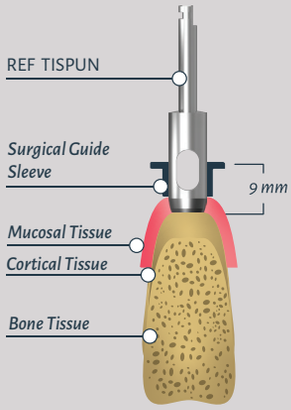
7



8

4. Mucotomy

Insert the drill for mucotomy through the sleeve of the surgical guide until you feel the mucotome make contact with the bone crest (Fig 9); subsequently it is possible to remove the portion of soft tissue through the sleeve with a special detacher or remove the guide to go directly to the gum.

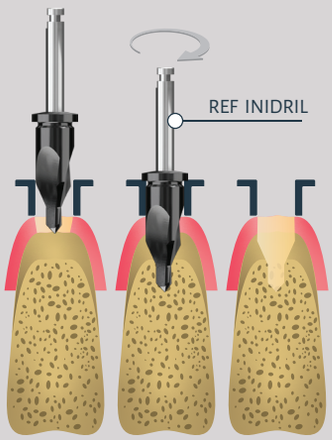


9

Warning
All surgical guides, for the use of Dental Tech guided surgery TRAYs, must be designed with 3D planning software that sets a unique stopping distance of the instruments at 9 mm.

5. Initial preparation

Insert the start drill through the guide sleeve with the MOTOR OFF until the tip touches the bone, check the simultaneous engagement of the cylindrical part of the drill in the guide sleeve, and then begin the drilling phase at low speed (800 rpm)
(Fig.10).



10

Pay particular attention to the insertion of the tip of this drill (perfectly aligned with the guide sleeve), as it directs the insertion of the subsequent drills.

Verify that the gum cut during the mucotomy has been removed completely before drilling the implant site and flush it thoroughly to prevent the presence of mucosal tissue bring left in the implant site.

6. Depth preparation

Begin the implant site preparation by inserting the (MANDATORY) **first 8.5 mm depth drill** in the guide sleeve of the surgical guide with the MOTOR OFF until the tip touches the bone.

Check the simultaneous engagement of the cylindrical part of the drill in the guide sleeve (**DOUBLE GUIDE diagram**: of the tip in the previous hole and of the cylindrical body in the guide sleeve).
Then start the milling phase at low speed (800 rpm).

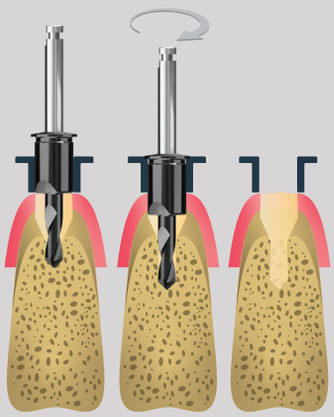
According to the length of the implant to be inserted, proceed with the next depth drill according to the following diagram:

» **Implants up to 13 mm in length:** after using the 8.5 mm drill, insert the drill corresponding to the length of the implant to be positioned (Fig.11).

» **Implants longer than 13 mm:** after using the 8.5 mm drill, insert the 11.5 mm drill and then the drill corresponding to the length of the implant to be positioned (Fig.12).

Warning
The Ø2.3 depth drills for site length preparation, correspond to the final drills for Ø3.25 implants

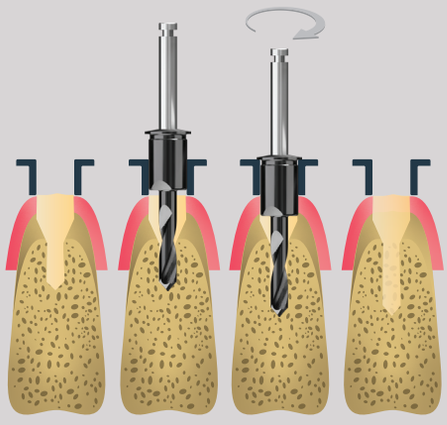
Implants up to 13 mm in length



→ *Final preparation*

11

Implants longer than 13 mm



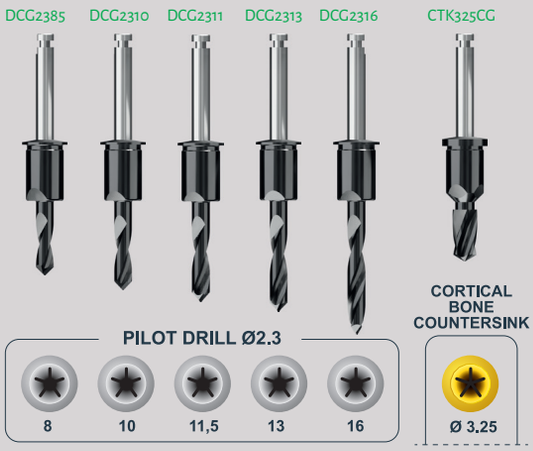
→ *Final preparation*

12

7. Final preparation

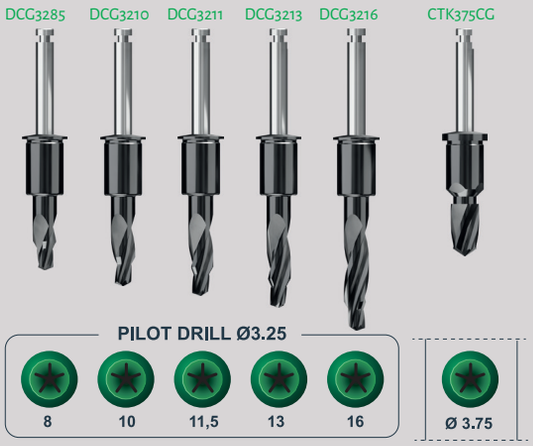
Implants Ø 3.25
Depth preparation

Always follow the use of the drills with the DOUBLE GUIDE scheme (tip in the previous hole and of the cylindrical body in the guide sleeve). **Use the Ø 2.3 drills for the preparation.** If necessary, at the discretion of the clinician, in the presence of particularly compact cortical bone (type D1 / D2), also use the CORTICAL BONE drill.



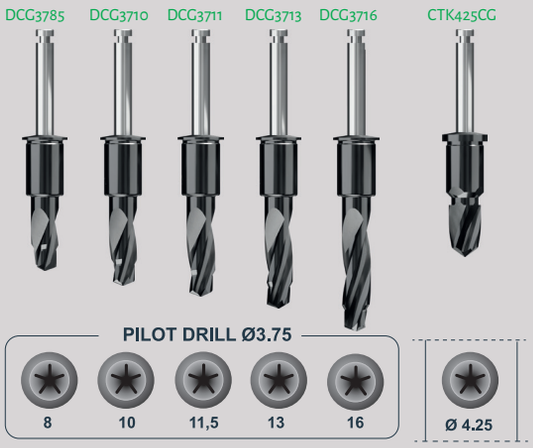
Implants Ø 3.75
Depth preparation

Always follow the use of the drills with the DOUBLE GUIDE scheme (tip in the previous hole and of the cylindrical body in the guide sleeve). **Use the Ø 3.25 drills for the preparation.** If necessary, at the discretion of the clinician, in the presence of particularly compact cortical bone (type D1 / D2), also use the CORTICAL BONE drill.



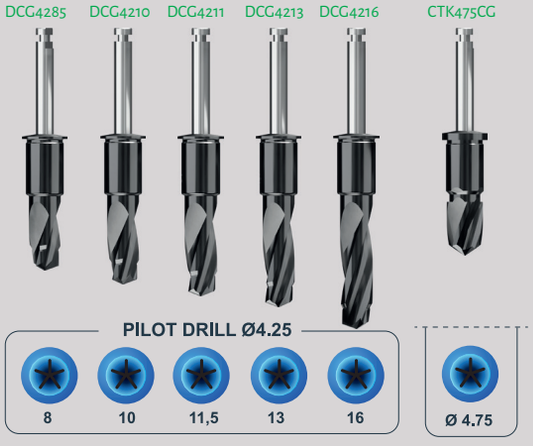
Implants Ø 4.25
Depth preparation

Always follow the use of the drills with the DOUBLE GUIDE scheme (tip in the previous hole and of the cylindrical body in the guide sleeve). **Use the Ø 3.75 drills for the preparation.** If necessary, at the discretion of the clinician, in the presence of particularly compact cortical bone (type D1 / D2), also use the CORTICAL BONE drill.



Implants Ø 4.75
Depth preparation

Always follow the use of the drills with the DOUBLE GUIDE scheme (tip in the previous hole and of the cylindrical body in the guide sleeve). **Use the Ø 4.25 drills for the preparation.** If necessary, at the discretion of the clinician, in the presence of particularly compact cortical bone (type D1 / D2), also use the CORTICAL BONE drill.

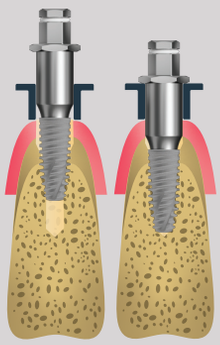


Warning
All Dental Tech guided surgery drills, inserted in dedicated TRAY, are designed with a unique stop length of 9 mm.

8. Guided implant positioning

Once you create the implant site, position the implant using the appropriate Dental Tech implant mount, according to the implant line chosen.

Mount the driver on the implant and tighten the connecting screw with a manual screwdriver (max. 15 Ncm)
Check that the **driver connection** *is correct according to the implant used* **BEFORE performing surgery.**



13

Insert the implant all the way through the guide sleeve using the square connector (handpiece-driver) or the torque wrench (max 50 Ncm). In case of difficulty in positioning due to excessive insertion torque of the implants, remove the implant and prepare with the drill that has a larger diameter according to the surgical site.

Keep the driver in place while proceeding to the insertion of the next implant (to increase the stability of the surgical guide).
In case of multiple implants, it is advisable to insert implants alternating the right site with the left site in order to avoid the surgical guide from possibly rotating with respect to the center of gravity.
Keep in position at most two or three drivers (depending on the number of implants to be inserted) to avoid generating excessive tension in the surgical guide.

14

In the case of use of **angled abutments,** *it is important that the hexagon present in correspondence with the head of the driver aligns with the hexagonal profile of the sleeve inserted in the surgical guide (Fig.14).*

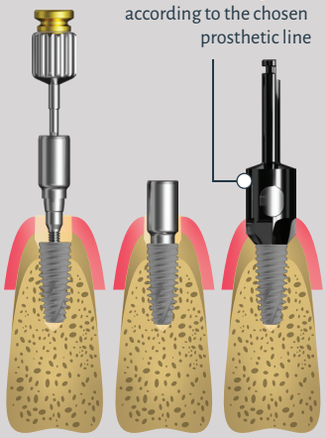
9. Guide removal

At the end of the insertion phase remove in the following order:
» the fixation pins of the surgical guide
» the connecting screws and drivers inserted to remove the surgical guide.
Also making use of extractors which will facilitate the removal operation of the driver.

Verify the possibility of the correct coupling of the prosthetic components correctly, thereby eliminating any excess soft tissue and residual bone crests that can interfere with the mounting of the abutments.

10. Adjusting the bone crest

REF BOMIL (Drill) + REF BMG325/ 200014/ ILC5519 (Bone mill guide) according to the chosen prosthetic line



15

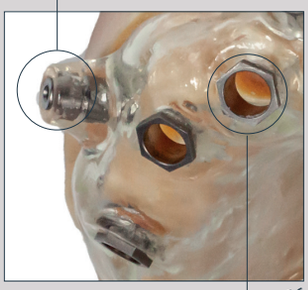
Mount the protective screw of the connection and guide of the bone mill on the implant (check that the screw connection is correct according to the implant used BEFORE performing the operation).
Insert the bone mill (with the motor off until it engages with the guide cylinder screw), then proceed at a low number of revolutions to the end of the stroke.
It is recommended not to press the handpiece to the end of its stroke excessively and to operate with an oscillatory movement, in order to avoid over-tightening (indirectly) the protection screw, making it difficult to remove from the implant (fig 15).
Remove the protective screw at the end of the operation.

11. Assembly of prosthesis

Proceed with the installation of the prosthesis according to standard procedures.

Surgical sleeve guide codes

REF CAPIN75
Pack 1 pc.

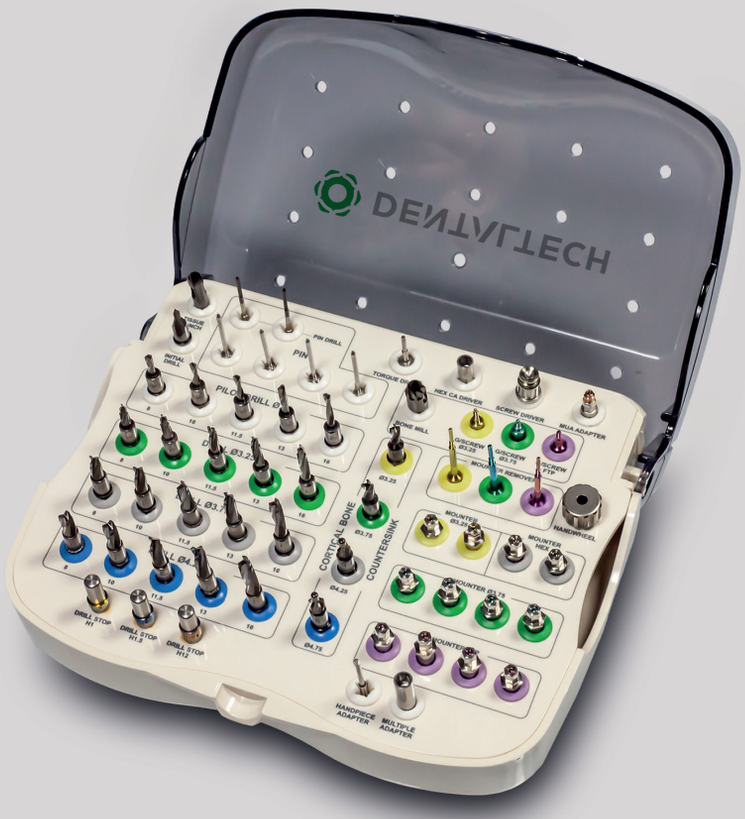


16

REF 3DM00670
Pack 10 pcs.

Guided Surgery Tray Composition for the CYLINDRICAL lines

Implant lines SLIM-HX3-FTZ-FTK

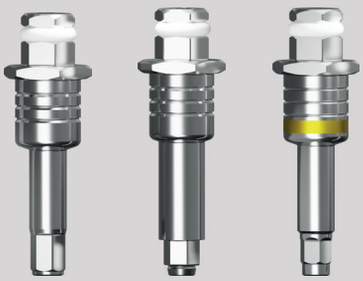


REF	DESCRIPTION	N°
TISPUN	Tissue Punch	1
INIDRIL	Initial drill	1
12ADCG	Reductions ring Set (1 - 1.5 - 2 mm, for 3 pieces of same size)	1
PIDRL	Pin Drill	2
PINDCG	Pin surgical guide	4
BOMIL	Bone mill	1
DCG2385	Pilot Drill Ø 2.3 x 8,5	1
DCG2310	Pilot Drill Ø 2.3 x 10	1
DCG2311	Pilot Drill Ø 2.3 x 11,5	1
DCG2313	Pilot Drill Ø 2.3 x 13	1
DCG2316	Pilot Drill Ø 2.3 x 16	1
DCG3285	Drill Ø 3,25 x 8,5	1
DCG3210	Drill Ø 3,25 x 10	1
DCG3211	Drill Ø 3,25 x 11,5	1
DCG3213	Drill Ø 3,25 x 13	1
DCG3216	Drill Ø 3,25 x 16	1
DCG3785	Drill Ø 3,75 x 8,5	1
DCG3710	Drill Ø 3,75 x 10	1
DCG3711	Drill Ø 3,75 x 11,5	1
DCG3713	Drill Ø 3,75 x 13	1
DCG3716	Drill Ø 3,75 x 16	1
DCG4285	Drill Ø 4,25 x 8,5	1
DCG4210	Drill Ø 4,25 x 10	1
DCG4211	Drill Ø 4,25 x 11,5	1
DCG4213	Drill Ø 4,25 x 13	1
DCG4216	Drill Ø 4,25 x 16	1

REF	DESCRIPTION	N°
CTK325CG	Countersink Ø 3.25	1
CTK375CG	CountersinkØ 3.75	1
CTK425CG	Countersink Ø 4.25	1
CTK475CG	Countersink Ø 4.75	1
MCG325	Mount surgical guide Ø 3.25	3
MCGHEX	Mount surgical guide HEX	3
MNT375/C	Mount surgical guide Z	3
MNT450/C	Mount surgical guide OS	3
IMA325CG	Subcrestal mount Ø 3.25	1
MNT375/L	Subcrestal mount Z	1
MNT450/L	Subcrestal mount OS	1
EXP325CG	Extractor mount Ø 3.25	1
MNT550/L	Extractor mount Z	1
001162	Extractor mount OS	1
TW0001-L	Torque driver	1
GCG0024	HEX ca driver	1
GMM250	Screw driver	1
TW0080	MUA adapter	1
CMC037	Handpiece adapter	1
110026	Multiple extension	1
AMC016	Handwhell	1
BMG325	Bone mill guide Ø 3.25	1
200014	Bone mill guide Z	1
ILC5519	Bone mill guide OS	1
CCD070	Dinamometric Ratchet	1
TRAY IP-CG	**TRAY M GUIDE**	1

Guided surgery screwdrivers for subcrestal insertion

Manual use / ratchet for subcrestal insertion

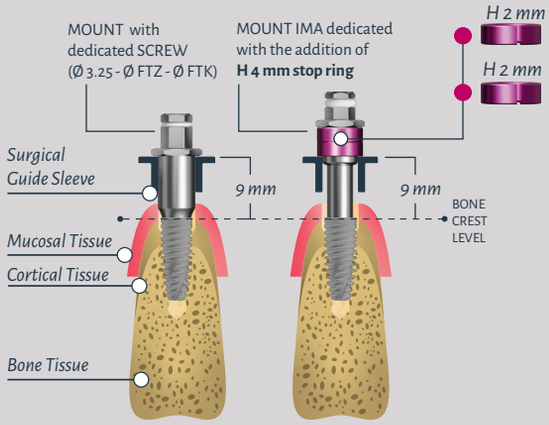


MNT375/L MNT450/L IMA325CG

12ADCG

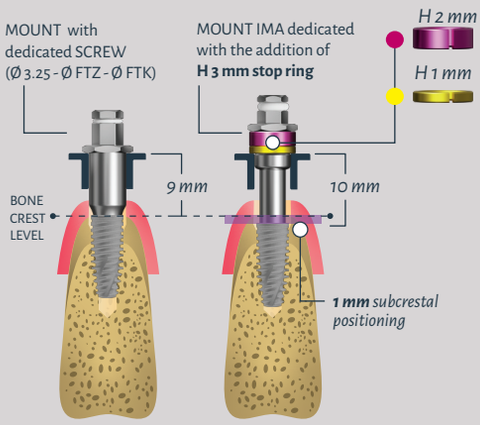
Positioning at the BONE CREST LEVEL

Start the implant placement using the MOUNT with SCREW, dedicated to the prosthetic line (MANDATORY); proceed with MOUNT IMA adding stop rings H 2 and H 2 mm.



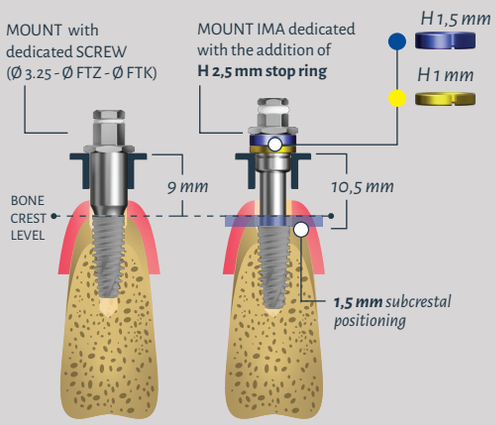
1 mm SUBCRESTAL POSITIONING

Start the implant placement using the MOUNT with SCREW, dedicated to the prosthetic line (MANDATORY); proceed with MOUNT IMA adding stop ring H 2 and H 1 mm.



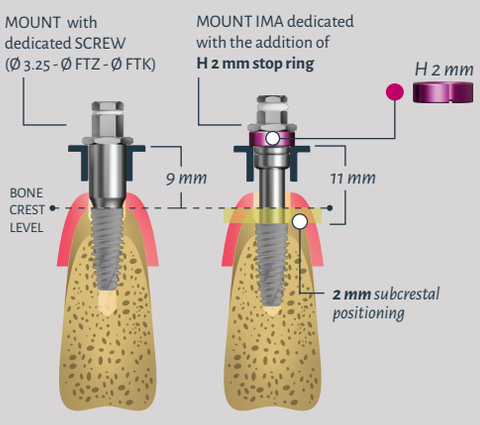
1,5 mm SUBCRESTAL POSITIONING

Start the implant placement using the MOUNT with SCREW, dedicated to the prosthetic line (MANDATORY); proceed with MOUNT IMA adding stop ring H 1,5 and H 1 mm.



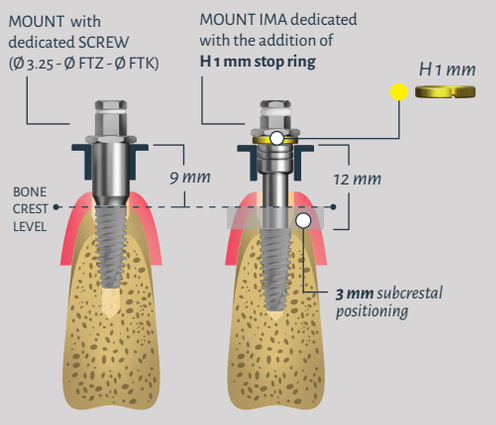
2 mm SUBCRESTAL POSITIONING

Start the implant placement using the MOUNT with SCREW, dedicated to the prosthetic line (MANDATORY); proceed with MOUNT IMA adding stop ring H 2 mm.



3 mm SUBCRESTAL POSITIONING

Start the implant placement using the MOUNT with SCREW, dedicated to the prosthetic line (MANDATORY); proceed with MOUNT IMA adding stop ring H 1 mm.



PREVENTION

Besides correct and continuous long-term maintenance, wear and tear of the instruments can also be prevented and slowed down. In the first place every instrument must only be used for the envisaged and indicated use.
The instruments used must be cleaned immediately after the end of surgery. Remove residue and encrustations only with soft brushes and NOT with metal brushes.
When envisaged, disassemble the instruments and deeply clean the cavity. The devices must be fully immersed in the most appropriate detergents or disinfectants for the material, and left to rest for a period of time that never exceeds the manufacturer's instructions.
After disinfecting them, rinse thoroughly with water and dry the devices with a clean and dry cloth. Complete with a jet of compressed air.

PACKAGING AND STERILITY

» Dental Tech tools are supplied as non sterile in heat-sealed Pouches in containing the leaflet.
» Dental Tech tools can be used again and therefore it has to be washed and sterilised prior to their usage.

Dental Tech validated the following cleansing and disinfection method:

MANUAL CLEANING

» Just after the use of Dental Tech equipment, place the equipment into a container with a peracetic acid based solution at concentration of 2% (NO GLUTARALDEHYDE OR SODIUM HYPOCHLORITE), as long as 18 minutes.
» After-ward rinse carefully.

MANUAL DISINFECTION

» Place the equipment into a container with a peracetic acid based solution at concentration of 4% (NO GLUTARALDEHYDE OR SODIUM HYPOCHLORITE), as long as 15 minutes.
» Rinse generously
» Examine the equipment and make sure there are no organic remains. Carefully scrub the outer parts with a non-metal bristled brush.

MANUAL RINSE

» Place the equipment into ultrasound bath, and wash it for approx. 18 minute and then rinse carefully.

DRY

» Perfectly dry the equipment, seal it individually with material suitable for moist heat sterilisation.

STERILIZATION

» Dental Tech validated the following Autoclave moist heat sterilization cycle: 3 minutes - 134 °C
» Since Dental Tech tools are manufactured in different materials, they shall be washed and sterilized one by one.

CHECK

After the cleaning phases, check that none of the instruments presents signs of corrosion, contamination or damage. Especially use a magnifying lens to check the most concealed areas, the joints and the handles.
If any contamination is detected, repeat the cleaning procedure.
In case of damage, dispose of the instrument as established by the laws in force for waste management.

Warning *The use of suitable protection during cleaning and sterilisation of contaminated instruments enhances personal safety during these phases.*

PRESERVATION

After the sterilisation phase, the instruments must be preserved in the sterilised package in a dry, dust-free place, far from heat sources. The bags must only be opened before use. The storage period of sterilised items must not exceed the period recommended and indicated on the bag.

DISPOSAL PROCEDURES

At the end of its life the medical device must be disposed of according to the methods established by national laws in force for waste management.

INSTRUMENT FOR SURGERY

The surgical instrumentation of the Dental Tech Implant System is simple and essential, responding to every clinical need and treatment protocol. All drills and components are laser marked, to allow preparation of the implant site correctly to the established depth, and a predictable and safe positioning of the implant. The instruments are available individually or in sets with different types of surgical kit.

HOW TO USE THE SURGICAL INSTRUMENTS

So as not to cause mechanical and/or thermal damage to bone tissue in the zone in which the implant is to be inserted, and to obtain a congruous surgical site (indispensable to achieving good osseointegration of the implant) some fundamental rules must be respected:
» Use drills with gradual diameter progression: the same instruments must not be used for more than 25 osteotomies;
» Do not exceed 800 RPM during the osteotomy;
» Do not exceed 20 RPM in the event of tapping with the contra-angle;
» Ensure, during the osteotomy, that the instruments work in axis;
» Do not exert lateral pressure during the osteotomy and tapping;
» The osteotomy must be performed exercising light pressure and back and forth movements on the axis of the instrument;
» Use generous irrigation with physiological solution, both during drilling and tapping of the surgical site;
» Ensure that during the intervention the irrigation canals of the instruments are clear;
» Avoid categorically, during surgery, the cooling of instruments and the implant site with the air-water syringes tips.
» For taps, during preparation of the site with the drills, don't set forces greater than 55N/cm with micromotors equipped with the control-TORQUE device.

NON-ROTATING INSTRUMENT

The non-rotating instrument is compatible with all Dental Tech implant systems.

BIBLIOGRAPHY

Abrahamsson I, Zitzmann NU, Berglundh T, Wennerberg A, Lindhe J. Bone and soft tissue integration to titanium implants with different surface topography: an experimental
study in the dog. Int.J.Oral Maxillofac Implants 2001;
16(3):323-32.

Abrahamsson I, Zitzmann NU, Berglundh T, Linder E., Wennerberg A, Lindhe J. The mucosal attachment to titanium implants with different surface characteristics: an experimental study in dogs. J Clin Periodontal 2002; 29(5): 448-55.

The Role of Surface Topography
Herman, J Perio 1997;68:1117-1130.

Micro-threads eliminate bone lossdue to crestal disuse atrophy Hansson, Clin Oral Imp Res,1999.

Topografia della neoformazione ossea perimplantare: studio sperimentale G. Petrone, G. Iezzi, M. Piattelli, A. Scarano Dipartimento di scienze Odontostomatologiche, Università " G. D'Annunzio" Chieti- Pescara.

Surface Chemistry Effects of topographic Modification of Titanium Dental Implant Surfaces: 1. Surface Analisis
M. Morra, dr. chem / C. Cassinelli, dr. Biol / G.Bruzzone, MD / A. Capri, MD / G. Di Santi, MD / R. Giardino, MD / M. Fini, MD. Int. JOMI 2003; 18:40-45

Surface Chemistry Effects of topographic Modification of Titanium Dental Implant Surfaces: 2. In Vitro Experiments
M. Morra, dr. chem / C. Cassinelli, dr. Biol / G. Bruzzone, MD / A. Capri, MD / G. Di Santi, MD / R. Giardino, MD / M. Fini, MD.
Int. JOMI 2003; 18:46-52

Valutazione della precisione della connessione tra moncone ed impianto
Benedicenti S.* / Balboni C.** / Maspero F. * / Benedicenti A.*
Quintessence International 3/4 bis 2001

Adesione cellulare epiteliale su superfici di titanio sabbiate e acidificate: studio in vitro
I. Vozza / A. Scarano* / S. Rossi / M. Quaranta
Supplemento n.1 a Doctor OS anno XIV n.1 gennaio 2003

Valutazione istologica della risposta ossea a una nuova superficie implantare sabbiata e mordenzata: uno studio sperimentale sul coniglio Antonio Scarano / Giovanna Iezzi* / Alessandro Quaranta** / Adriano Piattelli*

Implantologia orale numero 2 marzo 2007

Dentista moderno ottobre 2011
Progettazione e realizzazione di una superficie implatare dalla decontaminazione all'osteointegrazione
Chiara Giamberini / Angelo Tagliabue / Dino Azzalin / Giorgio Santarelli

Int J Periodontics Restorative Dent. 2006 Feb; 26(1): 9-17
Platform switching: a new concept in implant dentistry for controlling postrestorative crestal bone levels.
Lazzara RJ / Porter SS.

IVela-Nebot X, et al.
Benefits of an implant platform modification technique to reduce crestal bone resorption.
Implant Dent 2006;15:313–320

Sale Conditions - Warnings- Trademarks - Materials and Packaging symbols legends

SALE CONDITIONS

With the placing of an order, the present Conditions of Sale are considered to be accepted by the Customer.
The Company reserves the right to modify the Pricelist at any time, and without prior warning.

The goods travel at the risk of the Customer, even if delivered postage free.
The delivery terms have an indicative value. The Company reserves the right to make partial deliveries.

Payment must occur according to the agreed terms and method. In the event of non-fulfilment, the Company reserves the right to vary the conditions of payment for the new supplier or to suspend them and to resort to any other precautionary and executive measures for a total recovery of the sum owed.
Each claim for defect or damage must be communicated in writing within 8 days of receiving the goods. Any returns must be previously authorized by the Company.
For everything not expressly stated in the General Terms of Sale the provisions of Italian law shall apply. All disputes fall under the jurisdiction of the Court of Milano.

WARNINGS

RESPONSABILITY

The use of non-original components, produced by third-parties may compromise the functionality of the implants and their elements, compromising the final result and voiding the guarantee of the manufacturer. The application of the product occurs outside the control of Dental Tech and is the sole responsibility of the end user. We accept no liability for any damage resulting from such activities.

INSTRUCTIONS FOR USE

These are to be considered solely as recommendations. This information is not sufficient and does not exempt the user from ensuring the adequacy of the product for its intended use through continued training.
For more information about Dental Tech instruments and prosthetic components, consult the page:
dentaltechitalia.com/ifu-online

VALIDITY

This nullifies all previous versions. The images, the content and the products illustrated are subject to modification without warning.

TRADEMARKS

MATERIALS LEGEND

CrCo	Cobalt-chrome alloy
Inox	Surgical stainless steel
Ptfe	Polytetrafluoroethylene
Peek	Polyetereeterechetone
Pmma	Polymethylmethacrylate
Ti5	Titanium gr.V ELI for medical use
Plastic	Polymer

PACKAGING SYMBOLS LEGEND

Lot number

Sterilized by gamma rays

Not sterile

Product code

Reusable


Use by


Non-reusable


Attention, consult
the supplied documentation


Directive 93/94/CEE
conformity mark

Notified body identification

Dental Tech S.r.l.
Via G. Di Vittorio, 10/12
20826 Misinto (MB) - Italia

T. +39 02 967 20 218
Fax +39 02 967 21 269

info@dentaltechworldwide.com
dentaltechworldwide.com

linkedin.com/ company/dental-tech-worldwide

DENTALTECH

CCG2024/0
January 2024 edition