



# D-77 LOGIC SPHERO IMPLANT LINES



PRODUCT CATALOGUE  
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## IMPLANT SURFACE

Osseointegration with over 30 years of history

### OPTIMAL ROUGHNESS VALUE SANDBLASTING AND ACID ETCH- ING

Sandblasting and etching processes of the implant surface allow to obtain optimal roughness values that make the adhesion of fibrin to the surface more tenacious and facilitate the bone healing process, significantly reducing the time.

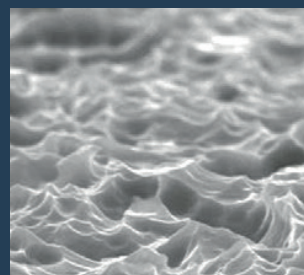
### CONTACT OSSEOINTEGRATION FIBRIN ADHERENCE

The capacity of BWS® to retain fibrin, lets osteoblasts migrate from the bone to the implant surface and reproduce there, generating new bone in direct contact with the titanium (contact Osseointegration).

### SEM CONTROL THE IMPLEMENTED PROTOCOL PROVIDES VERIFICATION OF EACH BATCH OF PRODUCTION

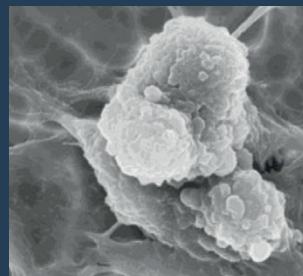
After the surface treatment and the classic washings, Dental Tech Implants are additionally cleaned with Argon Cold Plasma to minimize carbon contamination. Subsequently, minute controls are performed on the fixture with scanning electron microscopes (SEM).

Packaging takes place in controlled environments (Clean Room ISO 7) with packaging impermeable to micro organisms. A gamma-ray sterilisation process guarantees the destruction of all contaminants.



20 µm

SEM HV: 20.00 kV  
SEM MAG: 4.82 kx  
WD: 10.6470 mm  
Det: SE Detector  
View field: 62.05 µm  
VEGA\\TESCAN DentalTech



2 µm

EHT = 18.00 kV  
WD = 13 mm  
Mag = 6.50 KX  
Photo No. = 6159  
Detector = SE1

BWS® surface is made by a sandblasting and acid etching process. This double process allow to obtain an extremely clean surface with a uniform and homogeneous roughness that promotes cell adhesion.

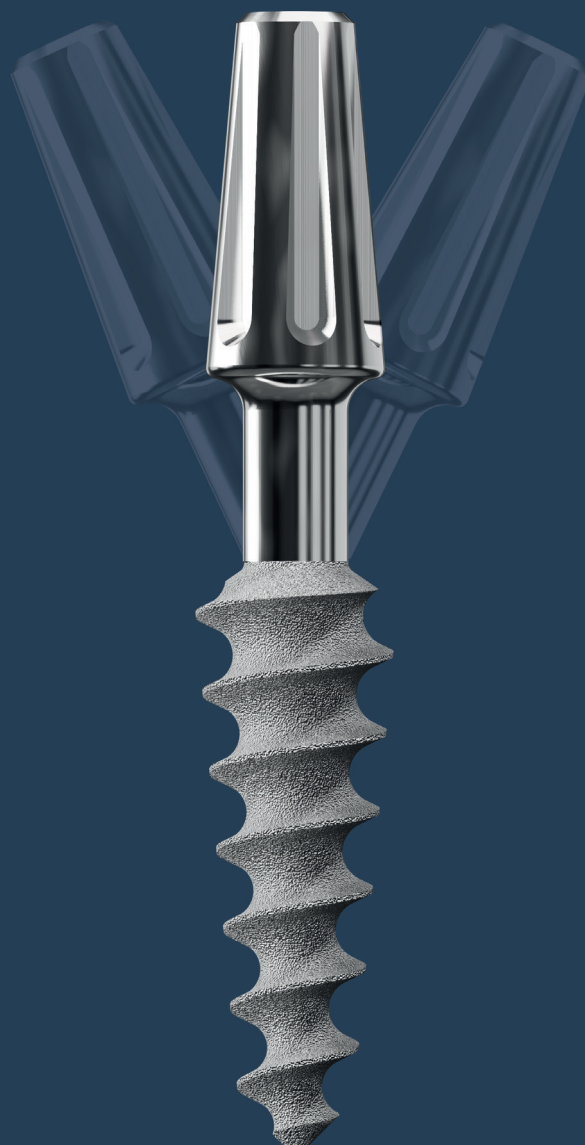
## D-77 Compressive threads

The D-77 implant is an implant with compressive threads. It is used for multiple unit restorations with immediate loading in the upper and lower jaws with adequate bone tissue. It can be used in combination with other implants and allows flap and flapless placement. If the implant has high primary stability it can be bent up to 15 degrees.

One-piece implant Simple placement & prosthetic procedure.

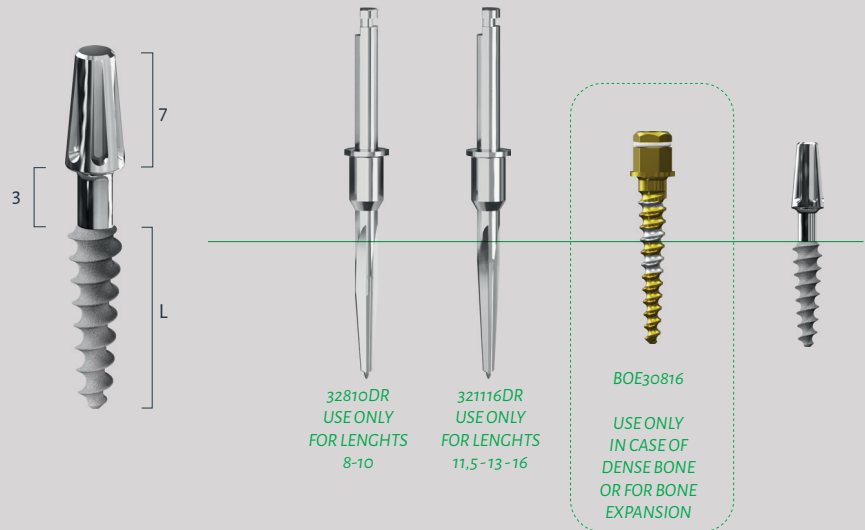
For single & multiple unit cement & telescopic restorations with bendable neck.

Adjustable abutment slope angle.  
No pumping effect.  
Bone condensation design.



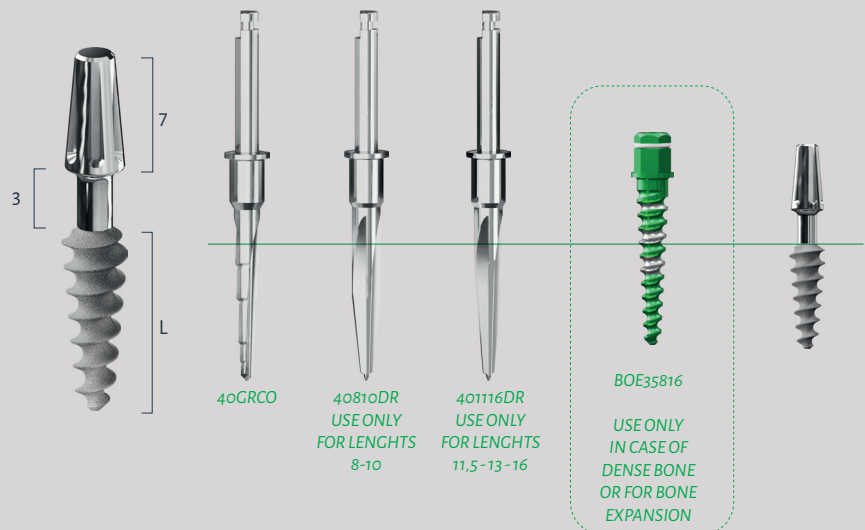
DIAMETER - Ø 3.25 mm

Length (L) mm	REF
8	3208C/SC
10	3210C/SC
11,5	3211C/SC
13	3213C/SC
16	3216C/SC



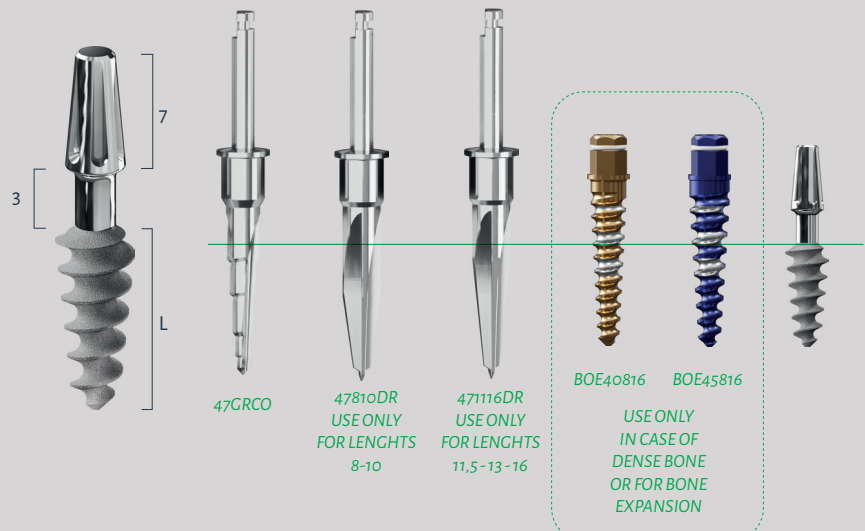
DIAMETER - Ø 4.00 mm

Length (L) mm	REF
8	4008C/SC
10	4010C/SC
11,5	4011C/SC
13	4013C/SC
16	4016C/SC



DIAMETER - Ø 4.75 mm

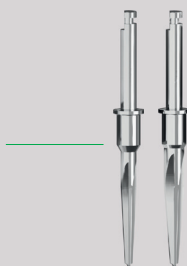
Length (L) mm	REF
8	4708C/SC
10	4710C/SC
11,5	4711C/SC
13	4713C/SC
16	4716C/SC



## Drill Stop

### STOP Ø 4.5 mm Material: Ti5

Length (L) mm	REF
8	STC2508
10	STC2510
11,5	STC2511
13	STC2513
16	STC2516



### Drill Material: Inox

Diameter (Ø) mm	REF
3.2	32810DR
3.2	321116DR
4.0	40GRCO
4.0	40810DR
4.0	401116DR

### STOP Ø 5.5 mm Material: Ti5

Length (L) mm	REF
8	STC3408
10	STC3410
11,5	STC3411
13	STC3413
16	STC3416



### Drill Material: Inox

Diameter (Ø) mm	REF
4.7	47GRO
4.7	47810DR
4.7	471116DR



Implant length (L) mm

## Recommended surgical sequence and drill speed

Ø	IMPLANT	3.25	4.0	4.75	LEGEND	
R.P.M. 600/900 max	DRILL				REQUIRED	✓
	32810DR	✓	✓	✓	OPTIONAL	⊙
	321116DR	✓	✓	✓		
	40GRCO		S	✓	Bone texture:	
	40810DR		R-D	✓	REGULAR BONE	R
	40116DR		R-D	✓	DENSE BONE	D
	47GRO			S	SOFT BONE	S
	47810DR			R-D		
	471116DR			R-D		

**Warning!** In the table "Recommended surgical sequence and drill speed" parameters should be considered as general indications; the clinical evaluation should always be subjected to careful analysis by the practitioner in each specific case.

Based on the clinical features and bone consistency detected at the time of implant surgery, the choice of the available instrumentation will be made by the practitioner.

## Drill Stop - Stop insertion and removal procedure

### STOP insertion

Hold the drill on the stalk side and insert the stop, with the retentions facing the drill, until the point of contact with the metallic stop located on the drill itself. (Fig. 1 - 2- 3).

### STOP removal

Hold the stop and remove the drill by pulling on the stalk side.

### Depth STOP for different lengths. The advantages:

- » Optimal check-depth during preparation of the surgical site, even in conditions of poor visibility of the operating field;
- » Reduction of surgical risk;
- » Reduction of operator stress;
- » Greater safety for the patient;
- » Easy Stop insertion and removal from the drills and greater safety in the surgical phase for the doctor and assistant.



1



2

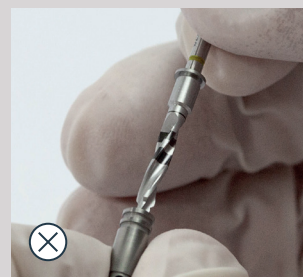


3

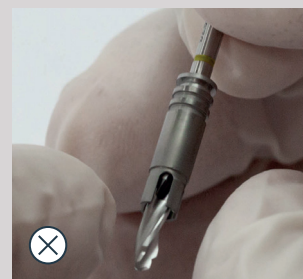


### Warning WRONG insertion STOP

Stop insertion with the retentions facing the tip of the drill is incorrect. (fig. 4 - 5).



4



5



D-77 prosthetic components



Impression coping  
Material:Peek

REF

C0010



Implant analog  
Material:Ti5

REF

C0020



Straight abutment  
shoulder  
Material:Ti5

REF

C0050 

C0050R 



Angled abutment 10°  
shoulder  
Material:Ti5

REF

C0060



Castable abutment  
shoulder  
Material:Pmma

REF

C0090 

C0090R 

## D-77 prosthetic components for digital flow



**WARNING**  
DO NOT orient  
the Scan Abutment  
in other unsuitable  
positions



**Always** match the  
smaller portion of  
the Scan Abutment,  
which is oriented on  
the hexagon side of  
the connection, with  
the milling on the  
cylindrical portion  
of the digital analog  
body.



**REF**

C0011

### Scan abutment

Material: Ti5  
Digital CAD-CAM intraoral scan and lab-  
oratory scan. For single and multiple ce-  
mented elements.



**REF**

HLA35DG

### Digital analog

Material: Ti5  
Analog for digital models, specific for  
applications through the manufacture  
of models made with 3D printing/  
prototyping. The characteristic shape with  
rounded edges, allows easy insertion into  
the model seat, without interference and  
friction with the resinous material of the  
models.  
The apical screw allows to always obtain  
a total working stability. *This prosthetic  
component must be used through the Dental  
Tech Libraries.*



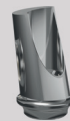
### Straight abutment shoulder

Material: Ti5  
Digital library stock  
abutment available.

**REF**

C0050 

C0050R 



### Angled abutment 10° shoulder

Material: Ti5  
Digital library stock  
abutment available.

**REF**

C0060

## D-77 surgical instruments



**Hand wheel**  
Material: Ti5

**L mm**  
6

**REF**  
AMCo16



**Mounter guide bone expander**  
Material: Ti5

**REF**  
MCGBOE



**Insertion tool**  
Material: Inox

**REF**

Coo70	Short
Coo80	Long



**Extension**  
Material: Inox

**L mm**  
12,5

**REF**  
110026



**Extension for drill**  
Material: Inox

**L mm**  
9

**REF**  
KI589



**Contra-angle adapter**  
Material: Inox

**L mm**  
7

**REF**  
CMX370



**Dynamometric ratchet**  
Material: Inox

**REF**  
CCDo70



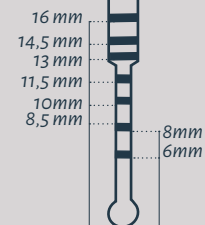
**Universal ratchet**  
Material: Inox

**REF**  
CTT600



**Depth gauge**  
Material: Ti5

**REF**  
001140



**Surgical screwdriver**  
Material: Inox

**REF**  
PGI 100

## **LOGIC SPHERO**

### **Mini implant system**

The LOGIC SPHERO system meets the growing clinical need to have small diameter implants for instant stabilisation of total prostheses. Designed for long-term rehabilitation and conceived for excellent clinical results.

#### **EXCEPTIONALLY EASY**

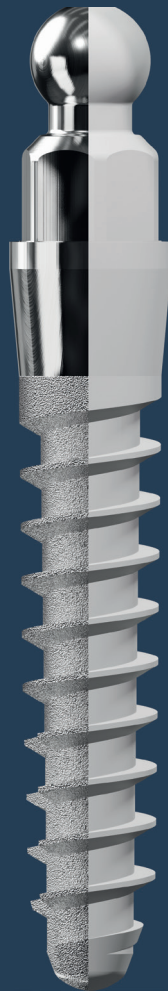
Implant characteristics make the surgical phase very easy. The ergonomics of supplied components facilitate prosthetic procedures. Hence, implants can be inserted and the prosthesis can be stabilised in just one session.

#### **EXCELLENT RESISTANCE**

The implant is a monocomponent made of Titanium Gr5 for maximum mechanical resistance.

#### **SMALL PROFILE**

The diameter (barely 2.7 mm) allows to place the implant in the thin crestal bone to avoid bone regeneration procedures.



#### **MAXIMUM BONE SURFACE CONTACT**

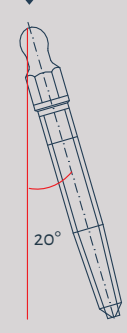
The development of implant macrotopography and the clinically tested surface obtained with the BWS® system ensures excellent primary stability of the device and a high BIC (Bone Implant Contact).

#### **MINIMALLY INVASIVE SURGERY**

The dentist can choose whether to insert the implant with a traditional or flapless technique.

Sphere DIAMETER - Ø 2.25 mm

Load direction

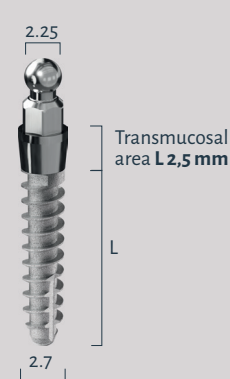


20°

**Static load**  
Breakage at N 1500

**Stress resistance**  
N 505 x 5,000,000 cycles  
No breakages

The tests were performed on devices with Ø2mm to evaluate either the same or higher diameters.



2.25

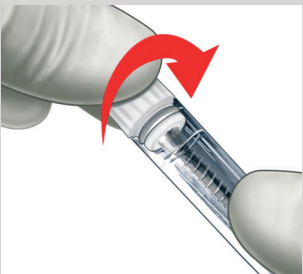
Transmucosal area L 2,5 mm

L

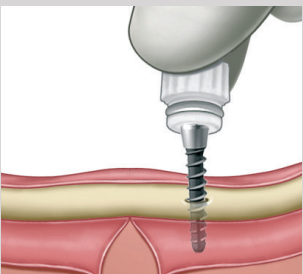
2.7

Length (L) mm	REF
10	SPH2710/S
11,5	SPH2711/S
13	SPH2713/S

Logic Sphero insertion procedure



1



2

Remove the device Logic Sphero, which is connected to the plastic cap, from the ampoule by concurrently pulling and gently rotating the cap (Fig. 1).

Carry the implant into the mouth with the cap/support, and use it to start placing the implant in the osteotomy site. Screw the implant onto the bone until it reaches the stability level that allows to extract the support from the device by pulling upwards (Fig. 2).

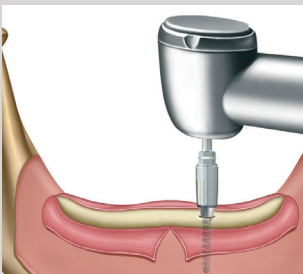
Complete the insertion of the Logic Sphero implant by using the contra-angle assembled with the dedicated adaptor to screw it on, leaving the entire hexagonal portion that is under the sphere outside the soft tissue. This will prevent the O-RING retention device from causing compression of soft tissues (Fig. 3).

Other instruments can also be used as an alternative to the contra-angle, such as the manual key and the pawl.

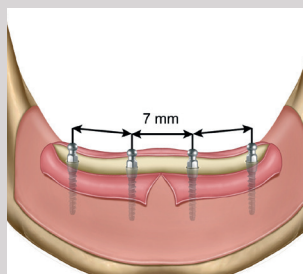
Insertion of the implant must ensure that O-RING retainers are correctly in place. Hence the need to ensure a distance of at least 7mm between the osteotomies (Fig. 4).



**Warning**  
Do not exceed 20 rpm and 55 Ncm of torque when screwing on the implant.



3



4

Logic Sphero prosthetic components



**Abutment**  
Material: Pmma / Ti5

**REF**  
PCSPH



**REF**  
PTSPH



**Sphere analog**  
Material: Ti5

**REF**  
AAF225

**O-ring**

Material: Ti5

Package 10 pcs.







**REF**  
POR225



**REF**  
ORG225

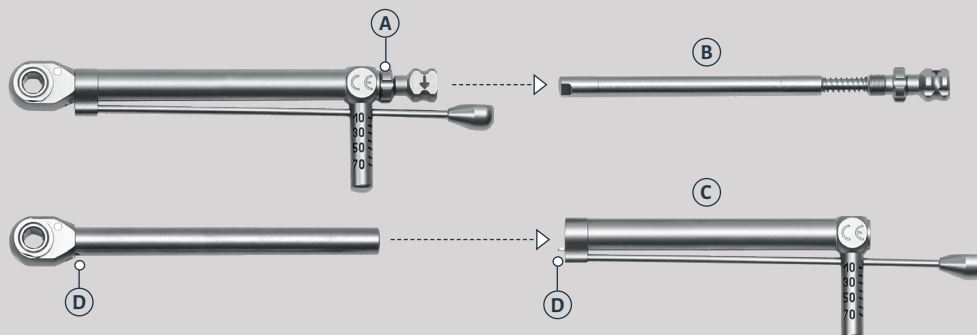
Retention compatible with  
Ø 2.25 Sphere RHEIN83®

## Logic Sphero surgical instruments

	<b>Initial cylindrical drill</b> Material: Inox	<b>L mm</b> 2,3	<b>REF</b> DRP200		<b>Implant screwdriver</b> Material: Ti5	<b>L mm</b> 6	<b>REF</b> RDS225
	<b>Parallel Pin</b> Material: Ti5	<b>L mm</b> L 11,5/13 L1 10	<b>REF</b> LSPHP27		<b>Hand wheel</b> Material: Ti5	<b>L mm</b> 6	<b>REF</b> AMC016
	<b>Tapper</b> Material: Ti5	<b>L mm</b> L10 L1 5	<b>REF</b> MSPH2700		<b>Dynamometric ratchet</b> Material: Inox		<b>REF</b> CCD070
					<b>Universal ratchet</b> Material: Inox		<b>REF</b> CTT600

## Dynamometric ratchet cleaning and maintenance

CCD070



The dynamometric ratchet, after each use, must be disassembled for cleaning. This maintenance operation does not require any tools. Completely unscrew the screw (A), remove the whole pawl (B) and then the flexible dynamometric bar (C). Once disassembled, clean according to the instructions for use

and maintenance attached to the device, brush with non-metallic rigid bristles, even in hollow areas with pipe cleaner for a complete removal of biological residues. Once the cleaning and disinfection phase has been completed, reassemble the ratchet using the reverse disassembly procedure,

making sure to match the pin (D) in the housing dedicated.

## Preliminary indications for surgical instrument use

### 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.



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Implantologia orale numero 2 marzo 2007

Dentista moderno ottobre 2011  
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Benefits of an implant platform modification technique to reduce crestal bone resorption. *Implant Dent* 2006;15:313-320

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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](http://dentaltechitalia.com/ifu-online)

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**OT-CAP RHEIN 83®**  
Registered trademark of Rhein83 S.r.l.

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

**RIUTILIZZABILE**

Reusable



Use by



Non-reusable



Attention, consult  
the supplied documentation



Directive 93/94/CEE  
conformity mark



0123  
Notified body identification

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