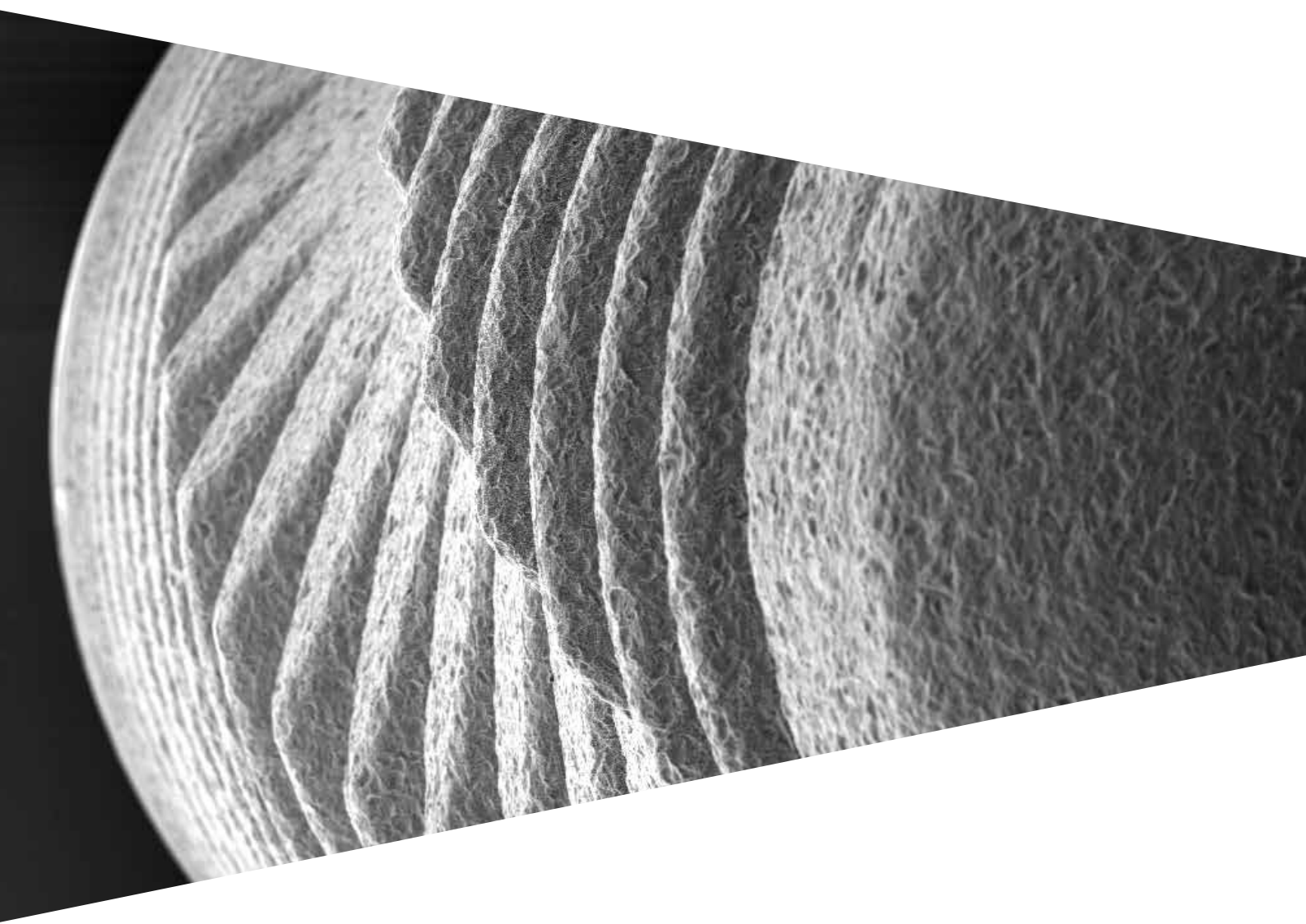


GLOBAL



# Global implants

The **morphology** of the Global implants has many distinctive characteristics that make the system extremely versatile and safe.

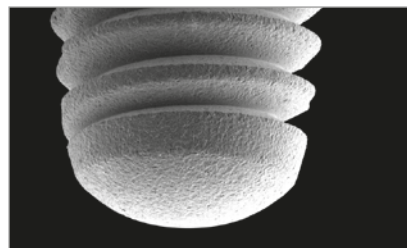
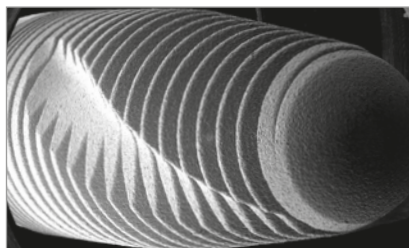
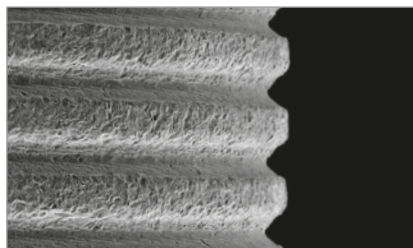
The **variable taper** is narrower in the neck and in the first middle section and thicker in the apical section. This distinctive profile makes the Global implant particularly suitable for the different surgical techniques.

Ø 3.80

Ø 4.30

Ø 4.80

Ø 5.50



The **coronal micro-threading** has the same shape as the actual spire, but with half the pitch. The micro-threaded section of the implant neck and the continuity with the main thread give **greater primary stability**.

The **two long apical, spiral and deep incisions** permit adequate self-tapping of the bone, offer two decompression and release areas for the coagulation, improve primary stability by increasing the non-rotational aspect of the implant during the screwing and unscrewing operations of the components connected to it. However, in case of highly compact bone, preventive self-tapping of the bone is always required.

The **rounded apex** makes the implant suitable even for mini sinus lifts and for maxillary sinus lifts.

## Global implants lengths range

Ø 3.80 mm	8.50, 10.00, 11.50, 13.00, 15.00 mm
Ø 4.30 mm	8.50, 10.00, 11.50, 13.00, 15.00 mm
Ø 4.80 mm	8.50, 10.00, 11.50, 13.00, 15.00 mm
Ø 5.50 mm	8.50, 10.00, 11.50, 13.00, 15.00 mm

The **root form morphology** that characterizes Global implants requires a first section of 6 mm height with a tapering of 2°, which is useful to stabilize the implant in the most cortical part of the receiving bone, and an apex with tapering 6° but with variable length, in order to adapt better to the morphology of bone crests, thanks to the progressive reduction of the apical diameter.



The thread with cylindrical profile has a pitch of 0.6 mm and a depth of 0.4 mm, in order to offer **more contact surface in case of more spongy bone**.

The external spire with **progressive profile**, angled at 60°, is complete till the implant apex.

Guidi R., Viscioni A., Dattola F., Carinci F.

**Dental implants inserted in native bone: cases series analyses**

Dental Research Journal, 2012, 12(9), Issue 8 (Suppl Issue 2), 175-180

Maiorana C., Farronato D., Pieroni S., Cicciù M., Andreoni D., Santoro F.

**A four-year survival rate multicenter prospective clinical study on 377 implants - correlations between implant insertion torque, diameter and bone quality**

Journal of Oral Implantology, 2014, Early view in ahead of print, accepted 11 February 2013

Canullo L., Patacchia O., Sisti A., Heinemann F.

**Implant Restoration 3 months after One Stage Sinus Lift Surgery in Severely Resorbed Maxillae: 2-years results of a multicenter Prospective clinical study**

Clinical Implant Dentistry and Related Research 2012 Jun;14(3):412-20, doi: 10.1111/j.1708-8208.2009.00261.x

Canullo L., Sisti A.

**Early implant loading after vertical ridge augmentation (VRA) using e-PTFE titanium-reinforced membrane and nano-structured hydroxyapatite: 2-year prospective study**

Eur J Oral Implantol 2010; 3 (1) pp 59-69

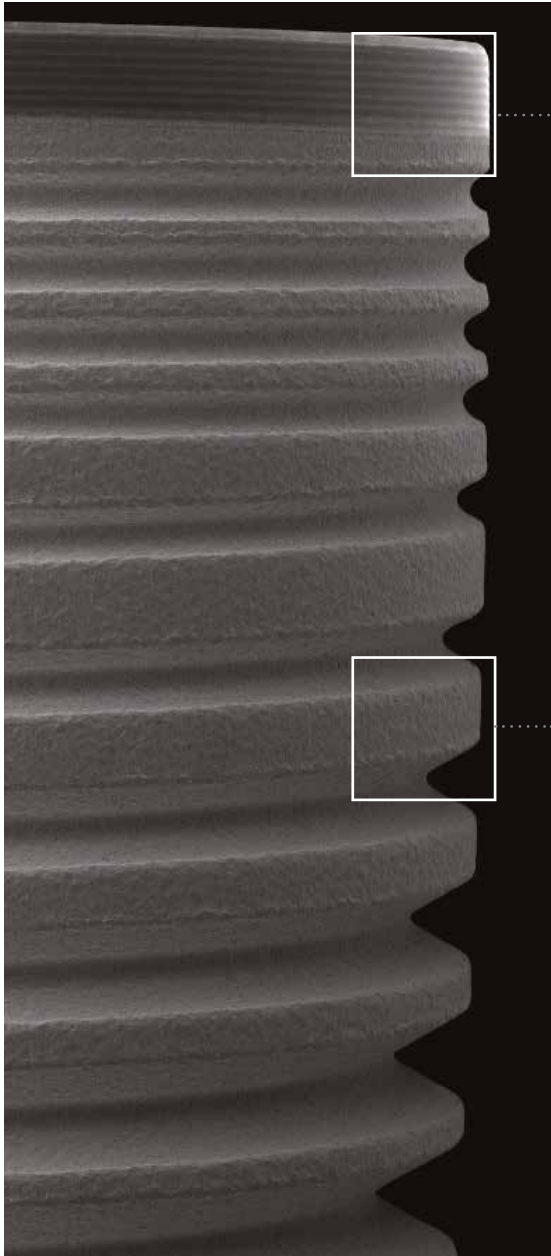
Canullo L., Bignozzi I., Cocchetto R., Cristalli M.P., Iannello G.

**Immediate positioning of a definitive abutment versus repeated abutment replacements in post-extractive implants: 3 year follow-up of a randomised multicenter clinical trial**

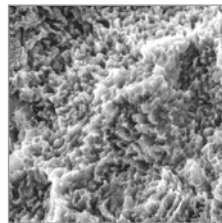
European Journal of Oral Implantology, 3(4), 2010, 285-296

# ZirTi surface

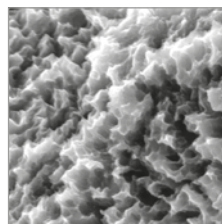
Global implants have a ZirTi surface, **characterised by a machined neck and a body treated with zirconium sand-blasting and mineral acid-etching.**



The **neck is machined** for 0.3 mm to allow the perfect control of connection diameter and prevent the accumulation of plaque in the area where it joins the post.  
**The level of roughness is Ra 0.2.**



The ZirTi body is sand-blasted with zirconia and acid-etched with mineral acids; these techniques give the surface the characteristic micromorphology which is **able to significantly increase the bone-implant contact surface and ensure osseointegration.**



*ZirTi surface at 4.000x and 10.000x with scanning electron microscope.*

The validity of the ZirTi surface is documented by **numerous experimental studies**.



Rossi F., Botticelli D., Pantani F., Priscila Pereira F., Salata L.A., Lang N.P.  
**Bone healing pattern in surgically created circumferential defects around submerged implants: an experimental study in dog**  
Clin. Oral Impl. Res. 23, 2012; 41–48. doi: 10.1111/j.1600-0501.2011.02170.x

Sivolella S., Bressan E., Salata L.A., Urrutia Z.A., Lang N.P., Botticelli D.  
**Osteogenesis at implants without primary bone contact – An experimental study in dogs**  
Clin. Oral Impl. Res. 23, 2012; 542–549 doi: 10.1111/j.1600-0501.2012.02423.x

Rossi F., Lang N.P., De Santis E., Morelli F., Favero G., Botticelli D.  
**Bone-healing pattern at the surface of titanium implants: an experimental study in the dog**  
Clin. Oral Impl. Res. 00, 2013; 1–8 doi: 10.1111/clr.12097

Baffone G., Lang N.P., Pantani F., Favero G., Ferri M., Botticelli D.  
**Hard and soft tissue changes around implants installed in regular-sized and reduced alveolar bony ridges. An experimental study in dogs**  
Clin. Oral Impl. Res. 00, 2013; 1–6 doi: 10.1111/clr.12306

Please refer to the following link to see the complete list of the studies about the ZirTi surface and to request your free copy of the bibliographic review SCIENTIFICA:



# DOCTA connection

The Global system is characterised by the **double internal octagon** DOCTA connection, in which the most internal octagon is reserved for implant insertion and the one located in a more coronal position is reserved for the prosthetic phase.



**Prosthetic octagon:** this is positioned at the crown and therefore offers **greater visibility, making it easier to reposition the prosthesis**, which exploits the octagon's internal angles of 135°. It is very versatile.

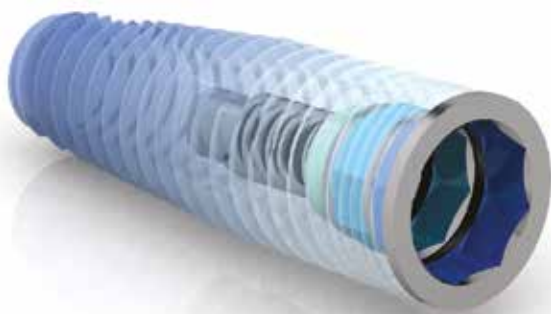
**Surgical octagon:** the deeper octagon **is for guiding the insertion of the implant**. The deepest positioning of the working octagon allows **compensating the leverage**, which is normally applied via the mounter and/or drivers on the bone matrix to reduce mechanical stress.

**Guide cylinder:** positioned below the two octagons, this final collar **makes it easier to centre the prosthetic components and to guide their insertion**, while allowing greater stability of the prosthetic structures, which make use of a connection with a total length of 3.5 mm.

### Deep positioning of the connecting screw

Thanks to the **3.50 mm long connection** of Global implants, the prosthesis with passing screw is able to **completely use the well depth**, by working on **multiple levels** for an excellent dissipation of the axial and non-axial chewing forces.

Such a deep positioning of the screw **prevents the unscrewing** as the head is centred with the barycentre of the forces.



### Possibility of 360° personalization

The **screw head** with a diameter of 1.8 mm penetrates **deep into the well**, guaranteeing a stable anchoring of the prosthesis and giving the prosthetist **innumerable cutting possibilities** for adapting the posts to the different clinical situations.

Risitano G., Franceschini G., Ciccù M., Maiorana C.

**Analisi parametrica dell'efficienza del sistema Osso-Protesi tipo "Toronto"**  
XXXVII Convegno Nazionale, AIAS Associazione Italiana per l'Analisi delle Sollecitazioni,  
10-13 Settembre 2008, Università di Roma La Sapienza, Atti del Congresso

Ciccù M., Risitano G., Maiorana C., Herford A., Oteri G., Ciccù D.

**"Toronto" Screwed Mandibular Overdenture on Dental Implants: FEM and Von Mises  
Analysis of Stress Distribution**  
The Journal of Implant & Advanced Clinical Dentistry, Vol. 2, No. 9 November 2010, 41-59

# Platform Switching

The **single platform** of Global implants allows carrying out protocols of Platform Switching, which **favours the maintaining of peri-implant bone levels, improving the biomechanical distribution** of the prosthetic loading and limiting the micro-stresses transmitted to the peri-implant bone.

Farronato D., Santoro G., Canullo L., Botticelli D., Maiorana C., Lang N.P.

**Establishment of the epithelial attachment and connective tissue adaptation to implants installed under the concept of "Platform Switching": a histologic study in minipigs**

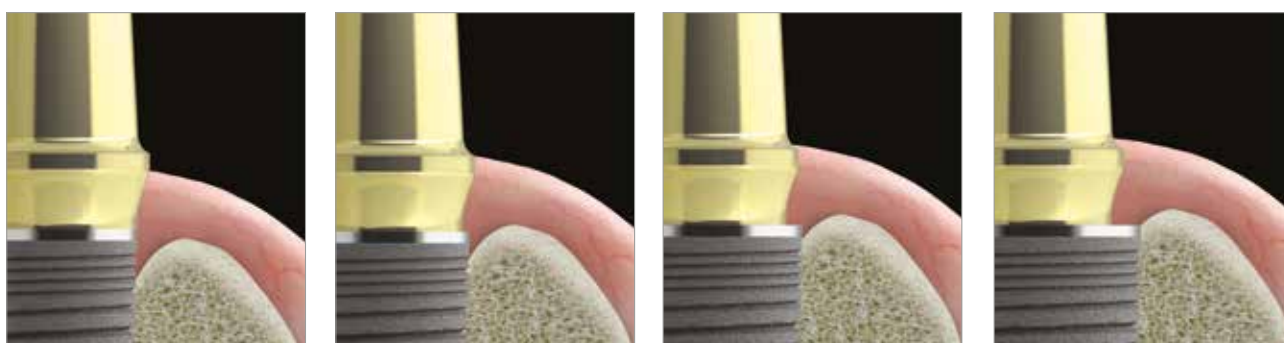
Clin Oral Implants Res. 2012 Jan;23(1):90-4. doi: 10.1111/j.1600-0501.2011.02196.x.

Epub 2011 Apr 15.

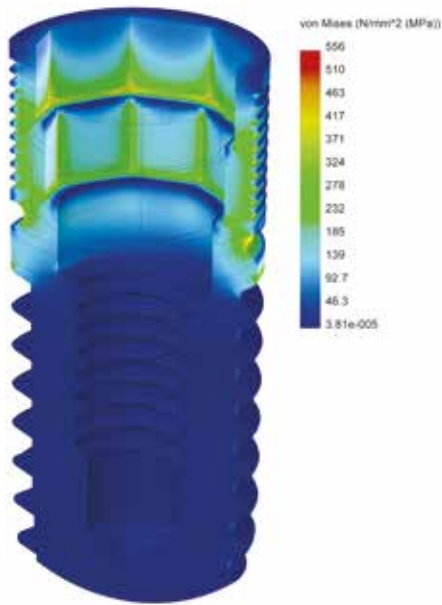


The **implant/abutment joint**, today considered one of the potential factors for inflammations, is **no longer near the cervical bone**. By following the Platform Switching protocol, the area affected by the response of any osteoclasts remains localised mainly on the titanium surface, instead of the bone.

The undeniable **advantage of the single platform**, which characterises the Global connection, allows choosing each time the desired level of mismatching depending on the aesthetic and functional necessities of each single case. The peri-implant bone reabsorption of prosthetic implants with Platform Switching technique is inversely proportional to the width of the adopted mismatching.







*Longitudinal section of a Global implant subjected to finished elements analysis. Isometric view of the tension field.*

The Platform Switching configuration leads not only to a relative **reduction of stress levels** in respect to standard configurations, but also to a remarkable moving of the bone solicitation area to the implant platform, thus causing a lower overloading of the bone crest.

Canullo L., Pace F., Coelho P., Sciubba E., Vozza I.  
**The influence of platform switching on the biomechanical aspects of the implant-abutment system. A three dimensional finite element study**  
 Med Oral Patol Oral Cir Bucal.2011 Sep 1;16(6):e852-6  
 DOI:10.4317/medoral.17243

The validity of the application of Switching Platform protocols on Global implants is documented by numerous experimental studies.

Canullo L., Goglia G., Iurlaro G., and Iannello G.  
**Short-term bone level observations associated with platform switching in immediately placed and restored single maxillary implants: a preliminary report**  
 Int J Prosthodont 2009;22:277-282

Canullo L., Rossi Fedele G., Iannello G., Jepsen S.  
**Platform switching and marginal bone-level alterations: the results of a randomized-controlled trial**  
 Clinical Oral Implants Research, 2010 21(1):115-21; DOI 10.1111/j.1600-0501.2009.01906.x

Canullo L., Quaranta A., Teles R.P.  
**The microbiota associated with implants restored with platform switching, a preliminary report**  
 Journal of Periodontology, 2010; 81:403-411

Canullo L., Pellegrini G., Allievi C., Trombelli L., Annibaldi S., e Dellavia C.  
**Soft tissues around long-term platform switching implant restorations: a histological human evaluation. Preliminary results.**  
 Journal of Clinical Periodontology, 38(1), 2011, 86-94

Canullo L., Iannello G., Gotz W.  
**The influence of individual bone pattern on peri-implant bone loss. Preliminary report from a 3-year randomized clinical and histological trial in patients treated with implants restored with matching diameter abutment or platform-switching concept**  
 International Journal of oral maxillofacial implants, 26(3), 2011, 618-630

Canullo L., Iannello G., Netuschil L., Jepsen S.  
**Platform switching and Matrix Metalloproteinase-8 levels in peri-implant sulcular fluid**  
 Clinical Oral Implant Research, 2012 May;23(5):556-9. doi: 10.1111/j.1600-0501.2011.02175.x. Epub 2011 Mar 28.

Della Via C., Canullo L., Allievi C., Lang N.P., Pellegrini G.  
**Soft tissue surrounding switching platform implants, an immunohistochemical evaluation of immunological response**  
 Clinical Oral Implant Research, 24,2013,63-70,

Canullo L., Iannello G., Peñarrocha M., Garcia B.  
**Impact of implant diameter on bone level changes around platform switched implants: Preliminary results of 18 months follow up - A perspective randomized match-paired controlled trial**  
 Clin. Oral Impl.2012 Oct;23(10):1142-6. doi: 10.1111/j.1600-0501.2011.02297.x. June 2013: 243:250

# PRESIZE solutions: from implant insertion to definitive restoration

## PRESIZE multifunction mounter: impression transfer and temporary post

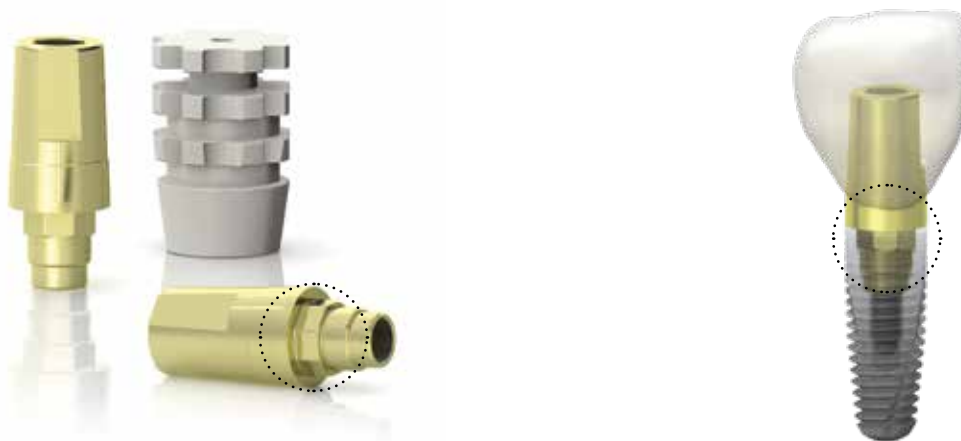
The Global implant is sold already assembled to its PRESIZE mounter, which, besides performing the usual function of carrier for the positioning of the implant in situ, thanks to its shape can be used for a precise impression taking through the appropriate PRESIZE cap in PEEK provided with retentive tabs which allow its stable anchorage in the impression material.



The PRESIZE mounter is connected to the implant through the **surgical octagon**.

## PRESIZE posts for definitive restorations

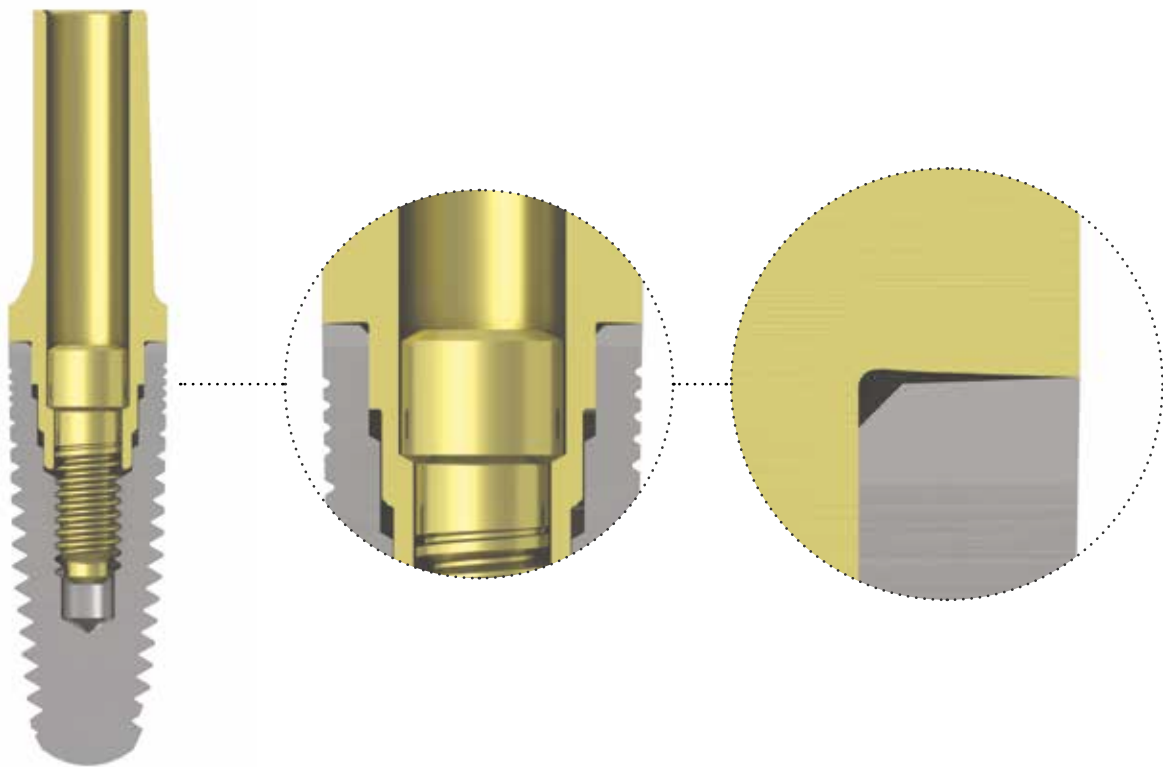
The Global PRESIZE posts, made of Gr. 5 titanium, present the **same external geometry of the mounter**, from which they differ only for the section that is connected to the implant. The **cap is the same which is used on the mounter**, specifically designed to fit permanently both the mounter/temporary post and the PRESIZE post, thus allowing **realizing both the temporary restoration and the definitive one with the same precision**.



The PRESIZE post is connected to the implant through the **prosthetic octagon**.

# Contracone seal

One of the key factors in determining the success of an implant rehabilitation is the **absence of bacterial microleakage**. The bacteria, penetrating until the implant-abutment joint level, proliferate and they can start an inflammatory process charged to the tissues around the implant. **Sweden & Martina special micro mechanical production process** creates a conical edge on both the implant coronal edge and the post edge which connects to this implant, granting a **peripheral “seal” able to hinder the bacteria microleakage** at the implant-abutment joint.



Thanks to the **tapering of both the coronal part of the implant and the abutment edge**, a mechanical barrier is created that ensures a peripheral seal able to limit the bacterial infiltrate and preserves the peri-implant tissues against possible inflammations.

# Complete surgical kit

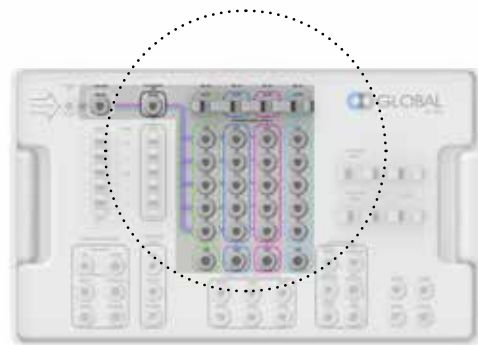
The surgical kit for the global implant system was designed for maximum simplicity and ergonomics. The instrument codes are printed on the tray to allow dental assistants to easily reposition them after cleansing and cleaning.



1

## Intuitive path printed on the tray

- Using sequences of the instruments indicated by **coloured marks according to the proper colour code** of the Global system.
- **Rapid and intuitive** management of each instrument.



2

## Precision drill and initial drills with depth stops

- Precision drill **to slice the cortical**, therefore very sharp and cutting.
- Initial drills provided with **laser notches to indicate the depth** of work and supplied with the relative **depth stops**.



3

### Final drill and relative depth stops

- Final drills with a **number of cutting edges proportioned** to the diameter of the hole, allowing very precise implant preparations.
- The depth stops guarantee a **preparation in complete safety**.



4

### Torque control ratchet

- Ratchet that performs **both the dynamometric function and of fixed key**.
- Possibility of **controlling the torque** from 10 to 70 Ncm, therefore ensuring absolute precision from the implant site preparation phase to the screwing of the prosthetic components.



\*

### Replies

- Made of Gr. 5 titanium, **they reply the morphology of the final drills** of the relative Global implants.
- Useful to **verify the adequacy and depth of the preparation performed** with the final drills, as well as to verify the **transmucous height** of the thanks to the practical millimetre notches at the base of each reply.
- They can serve as parallelism pin to **verify the preparation axis** made with the drill.



\* The replies are not contained in the surgical kit, they must be ordered separately.

# Wide range of prosthetic solutions

The prosthetic solutions are extremely versatile for all the Sweden & Martina implant systems. Please refer to each catalogue for further details.

## Impression and model phase

- Pick-up transfer
- Pull-up transfer
- Closed tray transfer
- Analogs



## SIMPLE temporary posts

- Straight emergence
- Anatomical emergence



## Pre-made posts

- Straight
- Angled at 15°
- Angled at 25°



## Standard millable posts

- Straight
- Pre-angled
- Anatomical emergence



## Entirely castable posts, or castable posts with base in alloy

- Repositionable
- Non-repositionable
- Straight emergence
- Anatomical emergence



## P.A.D. (Disparallel Screwed Prosthesis)

- Direct screw-retained abutments straight and angled at 17° and 30°



### Individualised prosthesis ECHO

- Individual posts in: titanium, zirconium, cobalt chrome
- Screw-retained bar structures in milled cobalt chrome and milled biotitanium
- Screw-retained bridge structures and Direct Bridges in zirconium
- Milled cobalt chrome, milled bio-titanium, PMMA and fibreglass



### Prosthesis on intermediate abutments

- Transfers
- Analogs
- Abutments
- Sleeves



### Vertical technique Prosthetics

- Healing abutments in titanium
- Temporary posts made of REEF resin
- Millable posts in titanium



### Locator Abutments for overdenture

- Abutments and caps for attaching overdentures to the implants





rev. 03-22



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