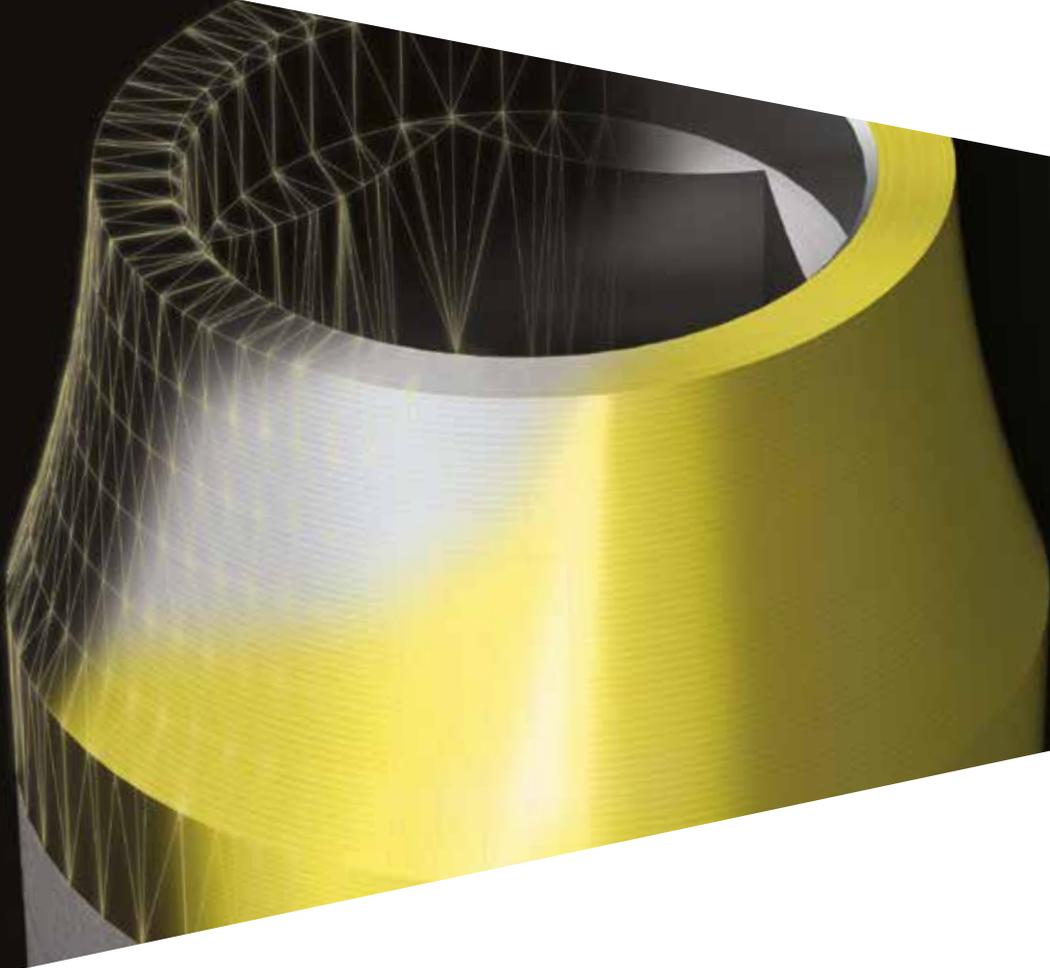


Catalogue

PRAMA



Prama



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UTM Surface

(Ultrathin Threaded Microsurface)

The convergent neck of the Prama implants is characterized by the UTM (Ultrathin Threaded Microsurface) surface treatment, a particular micro-threading that allows the perfect control over the connection diameter and prevents the accumulation of plaque around the junction with the post.

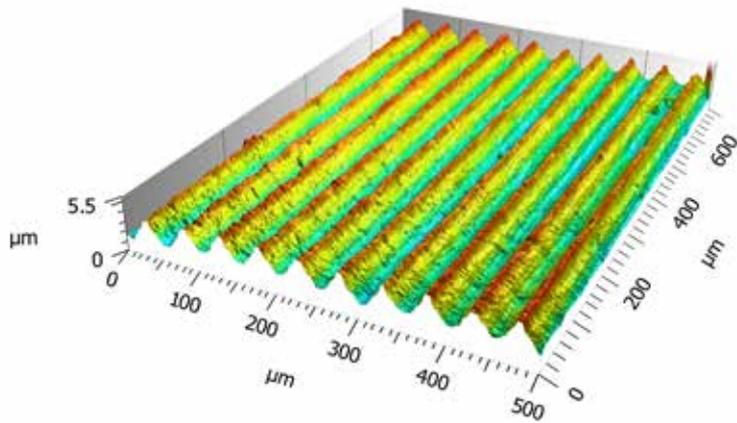
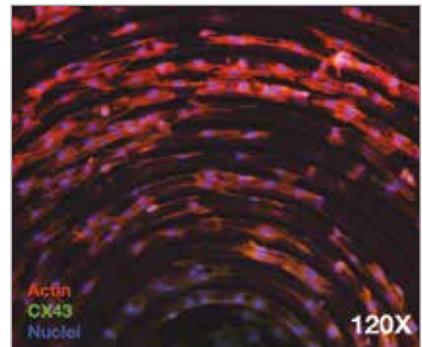
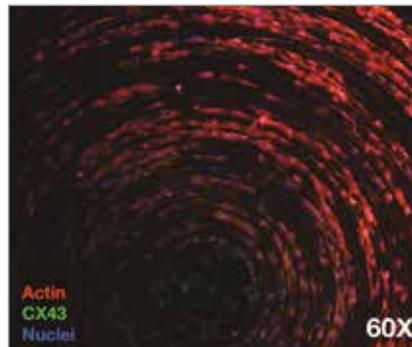
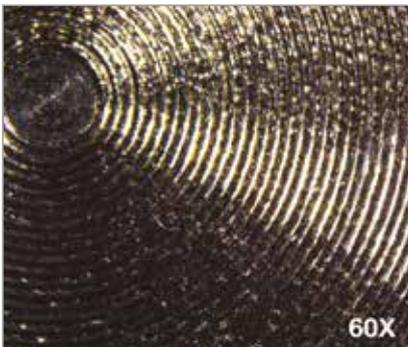
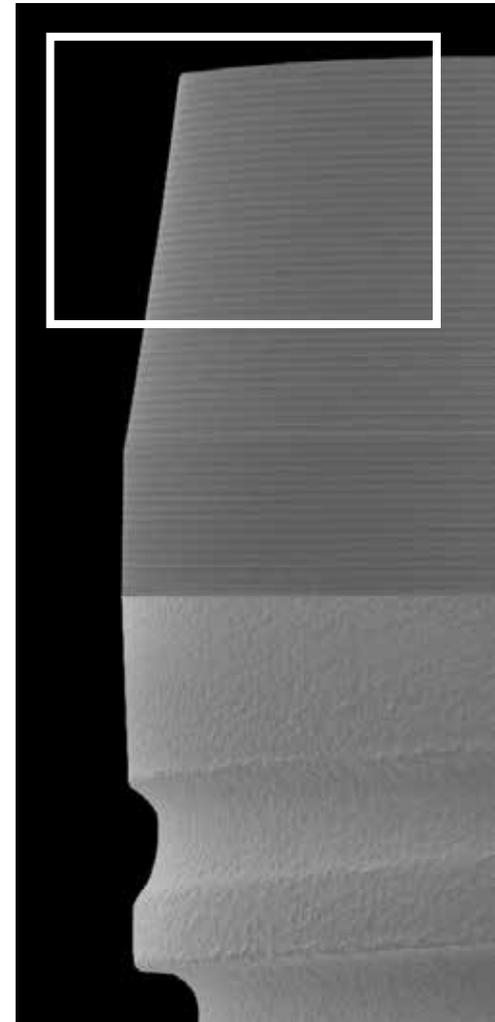


Image of a section of UTM surface obtained using a confocal microscope: the regularity of the micro-threading of the surface can be noted.

The micro-threading on the implant neck provides guidance for the unidirectional cell movement, with the biological benefit of rapid activity with low energy consumption, and the consequent clinical benefit of a faster healing process and a maintenance of healthy and stable tissues in the long term.

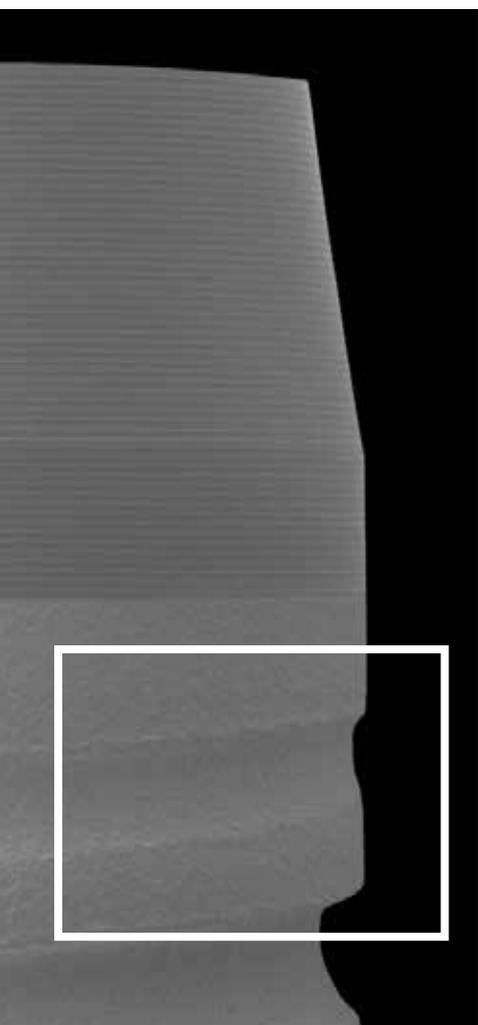


Arrangement of murine myofibroblasts on the UTM surface after 72 hours and observed with fluorescence microscopy - *in vitro* testing.

Thanks to the kind concession of the Dentistry Department of the University of Parma.

ZirTi Surface

(Zirconium Sand-Blasted Acid Etched Titanium)



Prima implants are characterized by ZirTi surface, sand-blasted with zirconium oxide and etched with mineral acids, techniques that give to the surface a characteristic micromorphology capable of significantly increasing the bone-to-implant contact area and promoting osseointegration.

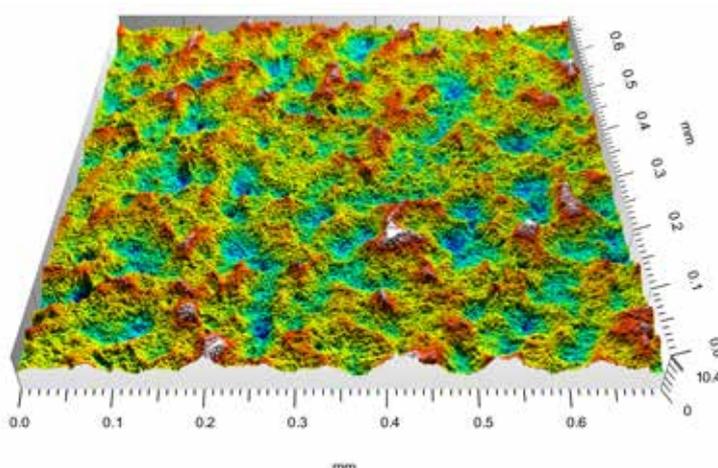


Image of a portion of ZirTi surface obtained using a confocal microscope: the micromorphology of the surface and the regularity of the bone picks deriving from sand-blasting and acid-etching can be noted.

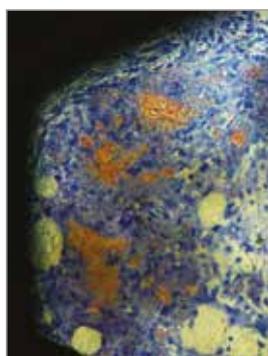
Roughness of the surfaces - Conclusions of the 2nd Consensus Conference EAO (European Association for Osseointegration), held in Monaco in 2009:

“This review concludes that rough and moderately rough surfaces support a correct osseointegration. The highest level of BIC is associated with moderately rough surfaces (Sa value between 1 and 2 µm).”

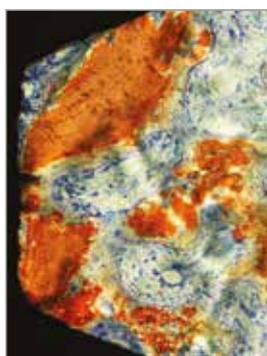
Wennerberg A., Albrektsson T.

Effects of titanium surface topography on bone integration: a systematic review
Clin Oral Implants Res. 2009 Sep;20 Suppl 4:172-84

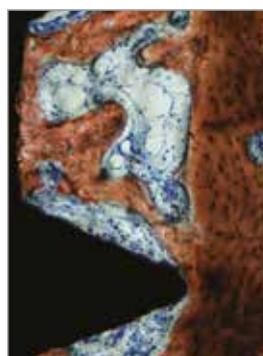
The roughness of ZirTi surface, with its Sa medium value of 1.3 µm, is considered ideal to achieve osseointegration.



5 giorni



10 giorni



20 giorni



30 giorni

Sequential healing at implants with ZirTi surface: the new bone can be noted just after 30 days.

Histologies by the kind courtesy of Dr. Daniele Botticelli (colored with Stevenel's blues and alizarin red).

Mainetti T, Lang NP, Bengazi F, Favero V, Soto Cantero L, Botticelli D

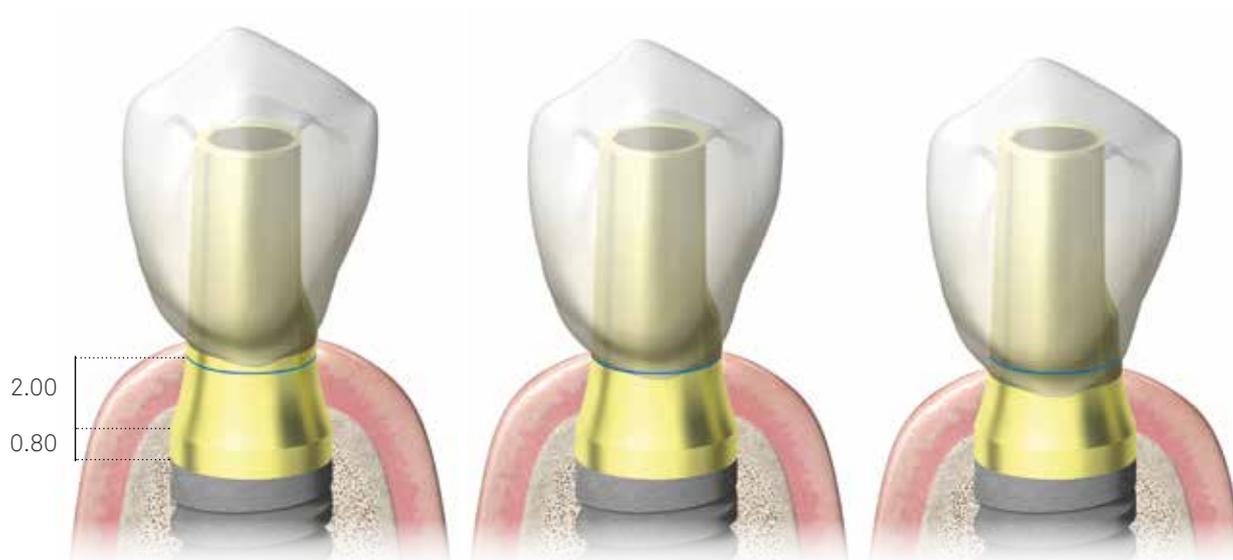
Sequential healing at implants installed immediately into extraction sockets. An experimental study in dogs

Clinical Oral Implant Research, 2016 Jan; 27(1): 130:138



Prosthetic recommendations

Prima convergent neck is characterized by a cylindrical part of 0.80 mm and a hyperbolic part with no sharp edges with a height of 2.00 mm designed in order to guarantee an effective continuity with the post, thus optimizing the contact between hard and soft tissues, according to the different clinical and anatomical situations. This absence of sharp edges will allow the soft tissues to adhere on the titanium without finding obstacles and to reach the profile established by the prosthodontist. Moreover, it will facilitate the positioning of the prosthetic crown in any part of the transgingival section.



The limits of the prosthetic loading of dental implants derive from mechanical fatigue tests according to the UNI EN ISO 1480.

Regarding Prima implants it has been observed that **in case of full arch and multiple structures**, no restrictions exist for:

- both anterior and distal sectors;
- both cemented and screw-retained prosthesis;
- prosthesis closing on the neck of the implant as well as closing on the post.

In case of both cemented or screw-retained single crowns there are no restrictions for anterior sectors, while in distal sectors it is necessary to close the prosthesis on the neck of the implant (Prima IN prosthetic components closing on the neck of the implant are shown in the following pages).

Key to the implant codes

The implant codes are so-called “mnemonic” codes, i.e. they allow easy identification of the piece. Below is a table showing how the mnemonic codes work using **LA-ZT-425-115** as an example:

type of implant	endosseous morphology	surface	diameter	length
L	A	ZT	425	115
L: Prama implant	A: cylindrical body S: RF tapered body	ZT: ZirTi surface	380: 3.80 mm 425: 4.25 mm 500: 5.00 mm It is the diameter of the implant in its wider point	060: 6.00 mm 085: 8.50 mm 100: 10.00 mm 115: 11.50 mm 130: 13.00 mm 150: 15.00 mm Nominal length which expresses the endosseous length of the implant

All measurements are given in mm, unless indicated otherwise.

Table of colour codes

A colour code system has been defined in the Prama implant system for identifying the endosseous diameter of the implant (see tables on pages 9 and 11).

The colour code identifies:

- the transfers for the impression taking and the laboratory analogs;
- the final drills;
- the sequence on the surgical tray.

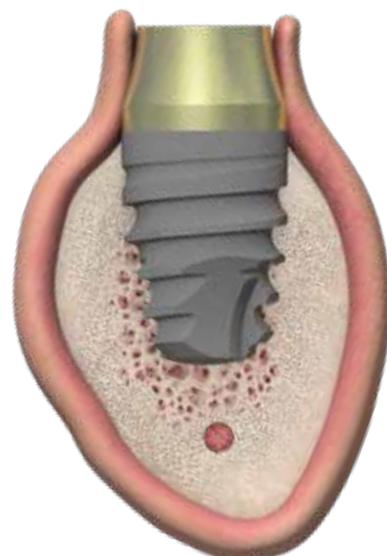
∅ implant	3.80	4.25	5.00
colour code on the pack			

Prama

The Prama implants have a cylindrical endosseous shape and a convergent neck characterized by a first cylindrical section and an upper part with a hyperbolic geometry. The Prama implants are produced starting from **cold-worked** Gr. 4 titanium bars.



The implants are also available in the Shorty version for all the system diameters. The height of only 6.00 mm allows them to be used as an alternative to the maxillary sinus elevation and vertical regeneration protocols. The surgical instruments required for the insertion of the Prama implants with a height of 6.00 mm are included in the Shorty Drilling Kit.



diameter	height	ø 3.80 mm	ø 4.25 mm	ø 5.00 mm
6.00 mm	LA-ZT-380-060 ø 3.40... ø 3.80... ø 2.97... 2.80 6.00	LA-ZT-425-060 ø 3.40... ø 4.25... ø 3.32... 2.80 6.00	LA-ZT-500-060 ø 3.40... ø 5.00... ø 4.22... 2.80 6.00	
8.50 mm	LA-ZT-380-085 ø 3.40... ø 3.80... ø 2.97... 2.80 8.50	LA-ZT-425-085 ø 3.40... ø 4.25... ø 3.32... 2.80 8.50	LA-ZT-500-085 ø 3.40... ø 5.00... ø 4.22... 2.80 8.50	
10.00 mm	LA-ZT-380-100 ø 3.40... ø 3.80... ø 2.97... 2.80 10.00	LA-ZT-425-100 ø 3.40... ø 4.25... ø 3.32... 2.80 10.00	LA-ZT-500-100 ø 3.40... ø 5.00... ø 4.22... 2.80 10.00	
11.50 mm	LA-ZT-380-115 ø 3.40... ø 3.80... ø 2.97... 2.80 11.50	LA-ZT-425-115 ø 3.40... ø 4.25... ø 3.32... 2.80 11.50	LA-ZT-500-115 ø 3.40... ø 5.00... ø 4.22... 2.80 11.50	
13.00 mm	LA-ZT-380-130 ø 3.40... ø 3.80... ø 2.97... 2.80 13.00	LA-ZT-425-130 ø 3.40... ø 4.25... ø 3.32... 2.80 13.00	LA-ZT-500-130 ø 3.40... ø 5.00... ø 4.22... 2.80 13.00	
15.00 mm	LA-ZT-380-150 ø 3.40... ø 3.80... ø 2.97... 2.80 15.00	LA-ZT-425-150 ø 3.40... ø 4.25... ø 3.32... 2.80 15.00	LA-ZT-500-150 ø 3.40... ø 5.00... ø 4.22... 2.80 15.00	
surgical cover screw	L-VT-340 	L-VT-340 	L-VT-340 	

Please note: The implant nominal length expresses the endosseous length of the implant. The total length of the implant is 2.80 mm longer than the nominal one, due to the presence of the transgingival neck. Each implant is sold with its own surgical cover screw. The surgical cover screws are also available on sale individually in a sterile pack and must be tightened to 8-10 Ncm.

See technical characteristics of Gr. 4 titanium on page 94.

Prama RF

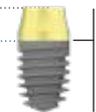
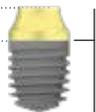
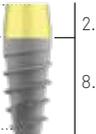
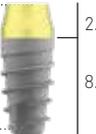
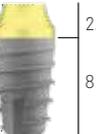
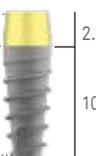
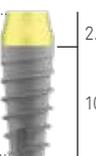
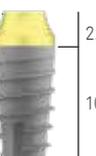
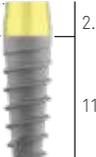
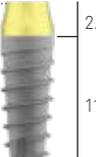
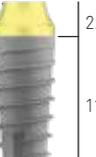
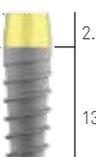
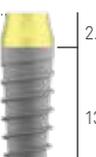
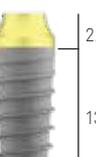
The Prama RF (Root Form) implants have a conical endosseous shape and a convergent neck characterized by a first cylindrical section and an upper part with a hyperbolic geometry. The rounded apex makes them ideal for maxillary sinus elevation protocols. The Prama RF implants are produced starting from **cold-worked** Gr. 4 titanium bars.



The Prama RF (Root Form) implants are also available in the Shorty version for 4.25 and 5.00 mm diameters. The Shorty range with a height of 6.00 mm is distinctly very tapered and has a triangular thread. These characteristics make the Prama RF Shorty ideal in clinical cases of limited vertical bone dimensions avoiding bone regeneration techniques, or in cases in which the reduced dimensions allow to avoid the alveolar nerve in the mandible or the maxillary sinus and the nasal cavities in the maxilla.

The surgical instruments required for the insertion of the Prama RF implants with a height of 6.00 mm are contained in the Syra Shorty Drilling Kit.



diameter \ height	ø 3.80 mm	ø 4.25 mm	ø 5.00 mm
6.00 mm	-	LS-ZT-425-060 ø 3.40..... ø 4.25..... 	LS-ZT-500-060 ø 3.40..... ø 5.00..... 
8.50 mm	LS-ZT-380-085 ø 3.40..... ø 3.80.....  ø 2.25.....	LS-ZT-425-085 ø 3.40..... ø 4.25.....  ø 2.65.....	LS-ZT-500-085 ø 3.40..... ø 5.00.....  ø 3.40.....
10.00 mm	LS-ZT-380-100 ø 3.40..... ø 3.80.....  ø 2.25.....	LS-ZT-425-100 ø 3.40..... ø 4.25.....  ø 2.65.....	LS-ZT-500-100 ø 3.40..... ø 5.00.....  ø 3.40.....
11.50 mm	LS-ZT-380-115 ø 3.40..... ø 3.80.....  ø 2.25.....	LS-ZT-425-115 ø 3.40..... ø 4.25.....  ø 2.65.....	LS-ZT-500-115 ø 3.40..... ø 5.00.....  ø 3.40.....
13.00 mm	LS-ZT-380-130 ø 3.40..... ø 3.80.....  ø 2.25.....	LS-ZT-425-130 ø 3.40..... ø 4.25.....  ø 2.65.....	LS-ZT-500-130 ø 3.40..... ø 5.00.....  ø 3.40.....
15.00 mm	LS-ZT-380-150 ø 3.40..... ø 3.80.....  ø 2.25.....	LS-ZT-425-150 ø 3.40..... ø 4.25.....  ø 2.65.....	LS-ZT-500-150 ø 3.40..... ø 5.00.....  ø 3.40.....
surgical cover screw	L-VT-340 	L-VT-340 	L-VT-340 

Please note: The implant nominal length expresses the endosseous length of the implant. The total length of the implant is 2.80 mm longer than the nominal one, due to the presence of the transgingival neck. Each implant is sold with its own surgical cover screw. The surgical cover screws are also available on sale individually in a sterile pack and must be tightened to 8-10 Ncm.

See technical characteristics of Gr. 4 titanium on page 94.

Prama surgical kit

The Prama surgical kit includes all the instruments needed to insert both the Prama implants, with cylindrical endosseous morphology and the Prama RF implants, with tapered body. Prama Shorty and Prama RF Shorty implants of 6.00 mm height must be inserted with short drills, not contained in the surgical kit but available separately.

Each type of preparation has the related dedicated drills, whose use sequence is given by coloured marks for the various implant diameters. For the Prama RF implants are also available in the kit the titanium replies which allow to evaluate the congruity of the receiving site compared to the implant. The kit also includes X-ray with the graphical representation of the implants, both in real dimension and enlarged of 20% and 30%, in order to allow the choice of the implants in their most appropriate dimensions by means of radiographic or tomographic analysis.

The compact dimensions of the kit make it very practical for everyday use and in transport



A practical ratchet is also included that acts as a dynamometric key for checking the closing torque of the prosthetic screws and as a surgical key for inserting the implants. The ratchet has a very small head, making it easy to use even in distal sectors

The kit consists of a practical box in Radel with a surgical tray inside that is set-up to hold the instruments according to a guided procedure. The sequences of use of the instruments are indicated by coloured marks

description	code
<p>complete surgical grommetless kit of the instruments necessary for Prama and Prama RF implants</p>	<p>ZPRAMA-INT</p> 
<p>radel instrument grommetless tray for Prama and Prama RF instruments</p>	<p>L-TRAY-INT</p> 

Initial and intermediate drills

All Sweden & Martina drills are made of stainless steel with high resistance to corrosion and wear and tear. The extreme accuracy of design and production allows use completely free from vibrations and oscillations.

Intermediate drill: the shape with progressive diameter of the two intermediate drills allows gradual expansion of the implant site when using a drill with a diameter much larger than the previous one, so as to reduce bone stress to a minimum

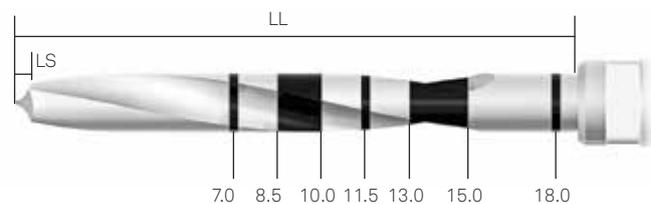
Precision drill: very sharp and precise, it facilitates the opening of the implant site especially in the case of very hard cortical bone



Pilot drill: the different heights of the laser markings allow better visibility in the surgical field and greater ease of recognition of the different depths during use

LL: Total length of the working part, including the tip.

LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.



Please note: the initial drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing above.

precision drill	intermediate drill	intermediate drill
<p>FS-230 precision drill</p> 	<p>FG-200/280XS intermediate drill \varnothing 2.00 - 2.80 mm</p> 	<p>FG-330/425XS intermediate drill \varnothing 3.30 - 4.25 mm</p> 

pilot drill and related stops					
<p>FPT3-200-LXS pilot drill</p> 	<p>STOP4-200-085 stop 8.50 mm for pilot drill</p> 	<p>STOP4-200-100 stop 10.00 mm for pilot drill</p> 	<p>STOP4-200-115 stop 11.50 mm for pilot drill</p> 	<p>STOP4-200-130 stop 13.00 mm for pilot drill</p> 	<p>STOP4-200-150 stop 15.00 mm for pilot drill</p> 

Optional cylindrical drill

A cylindrical drill made of surgical stainless steel with a 2.50 mm diameter is available, useful for underpreparation protocols of Prama implants. The related stops are available, meant to guarantee a safe preparation.

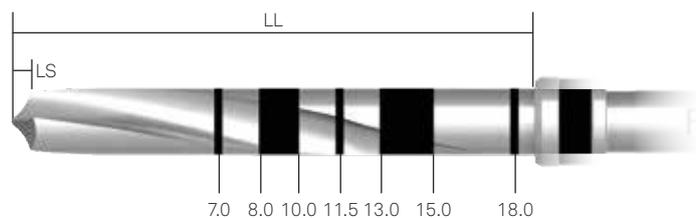


cylindrical drill \varnothing 2.50 mm and related stops*					
FFT3-250-LXS cylindrical drill 	STOP4-250-085 Stop 8.50 mm for cylindrical drillw	STOP4-250-100 Stop 10.00 mm for cylindrical drill	STOP4-250-115 Stop 11.50 mm for cylindrical drill	STOP4-250-130 Stop 13.00 mm for cylindrical drill	STOP4-250-150 Stop 15.00 mm for cylindrical drill

Please Note: the drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing on the side.

LL: Total length of the working part, including the tip.

LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.



*The cylindrical drill **FFT3-250-LXS** and the related stops are not included in the surgical kit. The whole set of drills and stops can be ordered with the code **KIT-INTEGRA-F250**. Drills and stops are also available in single pack.

Optional conical drill

A conical drill made of surgical stainless steel with a 2.50 mm diameter is available, ideal to underprepare implant sites with a tapered morphology, as Prama RF. The related stops are available, meant to guarantee a safe preparation.

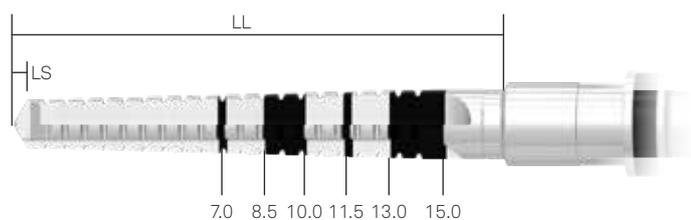


conical drill \varnothing 2.50 mm and related stops*					
<p>SE-FK250 conical drill</p>	<p>CSR-STOP-2028-085 stop 8.50 mm for conical drill</p>	<p>CSR-STOP-2028-100 Stop 10.00 mm for conical drill</p>	<p>CSR-STOP-2028-115 Stop 11.50 mm for conical drill</p>	<p>CSR-STOP-2028-130 Stop 13.00 mm for conical drill</p>	<p>CSR-STOP-2028-150 Stop 15.00 mm for conical drill</p>

Please note: the drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing on the side.

LL: Total length of the working part, including the tip.

LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.



*The conical drill **SE-FK250** and the related stops are not included in the surgical kit. The whole set of drills and stops can be ordered with the code **KIT-INTEGRA-SE-FK250**. Drills and stops are also available in single pack.

Final cylindrical drills and related stops

Also made of surgical stainless steel with high resistance to corrosion and wear, Prama final drills present a number of cutting edges proportional to the hole diameter, so as to allow a continuous and homogeneous cutting movement and greater instrument stability during operation. All this enables high-precision implant preparations to be obtained, with consequent ease in implant insertion.



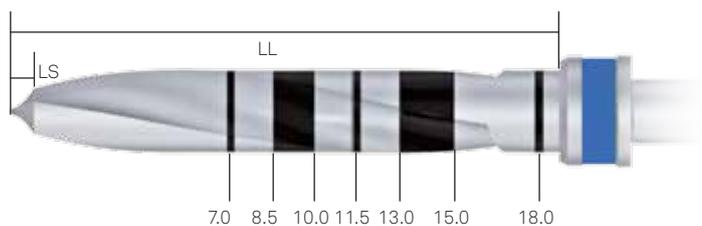
The coloured rings make it easy to recognise the dedicated instruments for each implant diameter

The stops are inserted from the tips of the drills, with great ease and speed

The surgical drills have a spiral designed to give the operator better control of the forward movement and better centring during the drilling phase

LL: Total length of the working part, including the tip.

LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.



Please note: the drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing above.

implant ø	3.80 mm	4.25 mm	5.00 mm
final drills	FFT3-300-LXS 	FFT3-340-LXS 	FFT3-425-LXS 
stop for preparations h 8.50 mm	STOP4-300-085 	STOP4-340-085 	STOP4-425-085 
stop for preparations h 10.00 mm	STOP4-300-100 	STOP4-340-100 	STOP4-425-100 
stop for preparations h 11.50 mm	STOP4-300-115 	STOP4-340-115 	STOP4-425-115 
stop for preparations h 13.00 mm	STOP4-300-130 	STOP4-340-130 	STOP4-425-130 
stop for preparations h 15.00 mm	STOP4-300-150 	STOP4-340-150 	STOP4-425-150 

Final conical drills and related stops

Always made of stainless steel with high resistance to corrosion and wear, the final conical drills for Prama RF implants are characterised by four straight cutting edges.

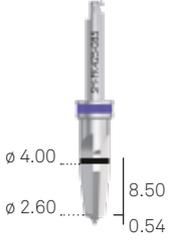


LL: Total length of the working part, including the tip.

LS: Length of the tip. This measurement must be calculated in addition to the length of the preparation hole.



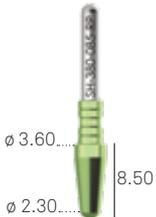
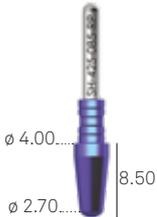
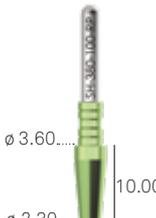
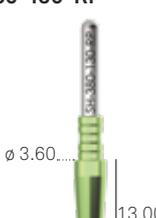
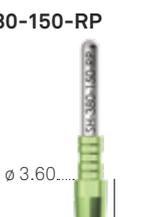
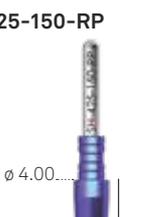
Please note: the drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing above.

implant ϕ	3.80 mm	4.25 mm	5.00 mm
conical drills for implants h 8.50 mm	SH-FK380-085 	SH-FK425-085 	SH-FK500-085 
conical drills for implants h 10.00 mm	SH-FK380-100 	SH-FK425-100 	SH-FK500-100 
conical drills for implants h 11.50 mm	SH-FK380-115 	SH-FK425-115 	SH-FK500-115 
conical drills for implants h 13.00 mm	SH-FK380-130 	SH-FK425-130 	SH-FK500-130 
conical drills for implants h 15.00 mm	SH-FK380-150 	SH-FK425-150 	SH-FK500-150 
stop for conical drills	SH-STOP4-FK380 	SH-STOP4-FK425 	SH-STOP4-FK500 

Reply: replies for Prama RF implants

The Reply replies are made of Gr. 5 titanium and reply the morphology of the final drills of the related Prama RF tapered implants. They are useful to verify the depth of the preparation hole made with the final drills, and to verify the axis of the preparation made with the drill. The replies are contained in the Prama surgical kit.



∅ implant	3.80 mm	4.25 mm	5.00 mm
replies for implants h 8.50 mm	SH-380-085-RP 	SH-425-085-RP 	SH-500-085-RP 
replies for implants h 10.00 mm	SH-380-100-RP 	SH-425-100-RP 	SH-500-100-RP 
replies for implants h 11.50 mm	SH-380-115-RP 	SH-425-115-RP 	SH-500-115-RP 
replies for implants h 13.00 mm	SH-380-130-RP 	SH-425-130-RP 	SH-500-130-RP 
replies for implants h 15.00 mm	SH-380-150-RP 	SH-425-150-RP 	SH-500-150-RP 

Countersink drills

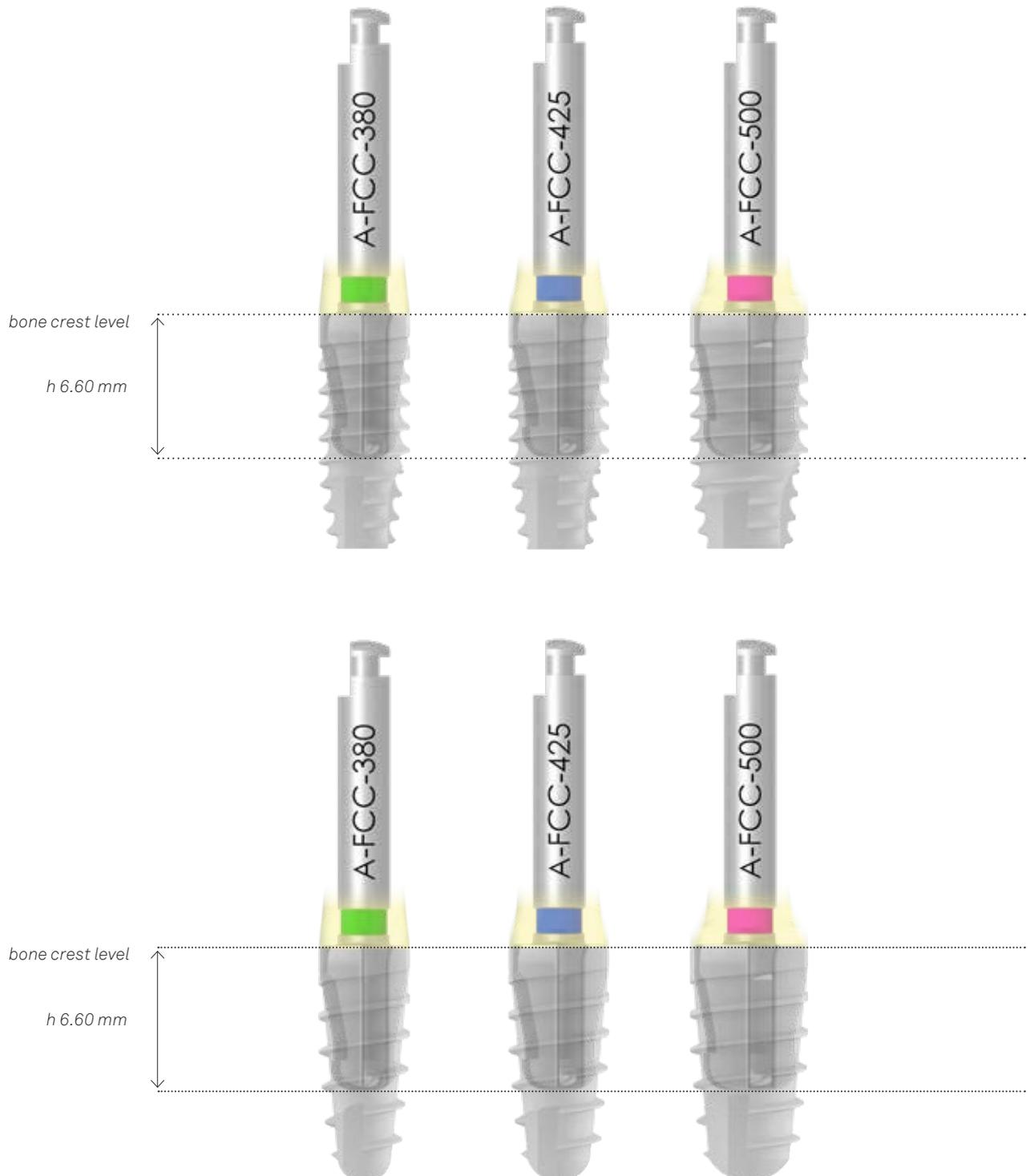
Countersink drills are available optionally. They allow to prepare the neck of Prama and Prama RF implants in presence of a very thick cortical bone. The drills are characterized by an apical portion that is guided into the hole created by the final cylindrical drill and by a standard height of the working part of 6.60 mm.



Drills are available with 3.80, 4.25 and 5.00 mm diameters

implant ϕ	3.80 mm	4.25 mm	5.00 mm
countersink drills	A-FCC-380	A-FCC-425	A-FCC-500
	<p>ϕ 3.80 6.60</p>	<p>ϕ 4.25 6.60</p>	<p>ϕ 5.00 6.60</p>

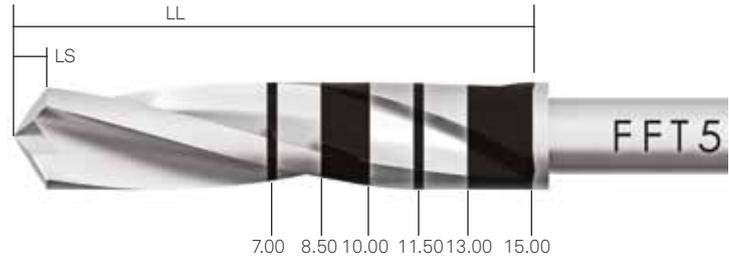
The particular morphology of the countersink drills allows to widen the initial part of the hole bored by the final cylindrical drills to prepare the cortical bone portion, that will be in contact with the neck of the implant. The maximum recommended speed is 1,000 rpm. Each drill has to be used only for the implant of equal diameter.



Drills for distal sectors

As an option, shorter drills are available, very practical in distal sectors with limited oral opening. They come in a wide range of diameters and are also useful for preparations in extremely compact bone where, in the most coronal portion, you want to widen the preparation diameter by 0.10 mm with respect to the size of the standard drills to facilitate the insertion of the implants. On the other hand, in low-density bone, they can be used to underprepare the implant site so as to obtain optimum primary stability.

- LL:** Total length of the working part, including the tip
- LS:** Length of the tip. This measurement must be calculated in addition to the length of the preparation hole



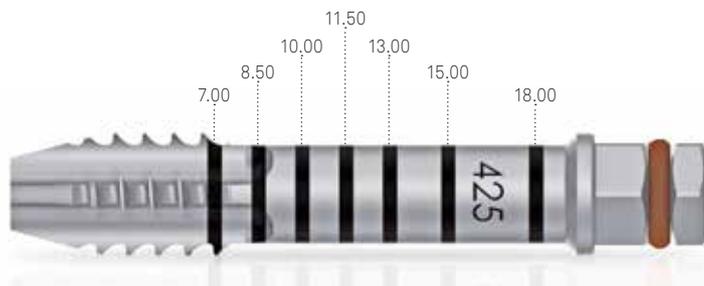
Please note: the drills always make a hole that is longer than the implant to be inserted. The oversizing (LS) is equal to the height of the tip of the drill that is being used. See drawing above.

drill ϕ	2.00 mm	2.80 mm	2.90 mm	3.00 mm	3.20 mm
drills for distal sectors	FPT5-200-LXS	FPT5-280-LXS	FPT5-290-LXS	FPT5-300-LXS	FPT5-320-LXS
drill ϕ	3.30 mm	3.40 mm	3.60 mm	4.25 mm	4.45 mm
drills for distal sectors	FPT5-330-LXS	FPT5-340-LXS	FPT5-360-LXS	FPT5-425-LXS	FPT5-445-LXS

The drills for distal sectors are not included in any surgical kit and must be purchased separately. They cannot be used with depth stops.

Bone taps

Prama and Prama RF implants are self-tapping implants with excellent cutting capacity and are easy to insert. However, the use of a bone tap is recommended in all cases where the type of bone requires it in order to make inserting the fixture easier. They are available both with right angle shank and with a hexagonal connector for dynamometric ratchet, and have a specific design for the two endosseous morphologies.



implant \varnothing	3.80 mm	4.25 mm	5.00 mm
bone taps with right angle attachment for Prama implants	A-MS-380-CA  \varnothing 2.30	A-MS-425-CA  \varnothing 2.50	A-MS-500-CA  \varnothing 3.55
bone taps with hexagonal attachment for Prama implants*	A-MS-380  \varnothing 2.30	A-MS-425  \varnothing 2.50	A-MS-500  \varnothing 3.55
short bone taps with attachment for torque control ratchet for Prama implants*	A-MSC-380  \varnothing 2.25	A-MSC-425  \varnothing 2.45	A-MSC-500  \varnothing 3.50
bone taps with right angle attachment for Prama RF implants	SH-MS-380-CA  \varnothing 2.55	SH-MS-425-CA  \varnothing 2.65	SH-MS-500-CA  \varnothing 3.40
bone taps with hexagonal attachment for Prama RF implants*	SH-MS-380  \varnothing 2.55	SH-MS-425  \varnothing 2.65	SH-MS-500  \varnothing 3.40

*Optional instruments not included in the surgical kit, they must be purchased separately.

Osteotomes

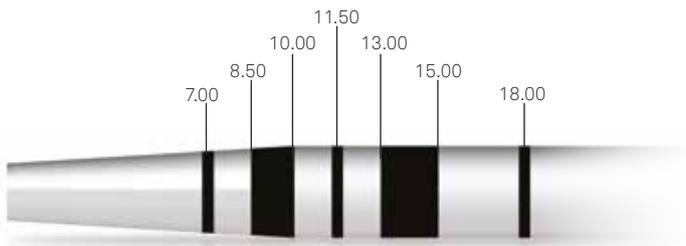
Osteotomes for expansion protocols are available for each Prama and Prama RF endosseous morphology, not included in the surgical kit. The laser-etched codes on the handles indicate the osteotome diameter, to make it easier to recognize the correct surgical sequence. A practical universal instrument case for storing and organising them is available and can be ordered separately using the code **OS-TRAY**.

Prama osteotomes

Prama osteotomes present laser markings of all the available heights.

code	E-OS-020-PP	E-OS-090-PP	E-OS-160-PC	E-OS-200-PC	E-OS-240-PC
					
ø 0.20ø 0.90ø 1.60ø 2.00ø 2.40
description	osteotome ø 0.20 flat tip	osteotome ø 0.90 flat tip	osteotome ø 1.60 concave tip	osteotome ø 2.00 concave tip	osteotome ø 2.40 concave tip

Osteotomes are optional instruments that are not included in the surgical kit. They can be purchased separately and singularly.



description	code
universal case in Radel for osteotomes can hold up to 12 instruments	OS-TRAY
	

Prama RF osteotomes

Prama RF osteotomes are designed considering the height and diameter of the implant to be inserted. They present two laser-etched markings: one corresponds to the height of the fixture and the other one, at a lower height, is useful for an intermediate check during the preparation phase. In the osteotome for 10.00 mm implants the laser markings correspond to the height 8.50 and 10.00 mm, therefore the instrument can also be used for inserting implants of height 8.50 mm.

implant ϕ	3.80 mm		4.25 mm		5.00 mm	
osteotome for implants h 8.50 and 10.00 mm	SH-OS-380-100-PP ϕ 3.50...10.00 8.50 ϕ 2.00...	SH-OS-380-100-PR ϕ 3.50...10.00 8.50 ϕ 2.00...	SH-OS-425-100-PP ϕ 3.80...10.00 8.50 ϕ 2.30...	SH-OS-425-100-PR ϕ 3.80...10.00 8.50 ϕ 2.30...	SH-OS-500-100-PP ϕ 4.60...10.00 8.50 ϕ 3.10...	SH-OS-500-100-PR ϕ 4.60...10.00 8.50 ϕ 3.10...
osteotome for implants h 11.50 mm	SH-OS-380-115-PP ϕ 3.50...11.50 10.00 ϕ 2.00...	SH-OS-380-115-PR ϕ 3.50...11.50 10.00 ϕ 2.00...	SH-OS-425-115-PP ϕ 3.80...11.50 10.00 ϕ 2.30...	SH-OS-425-115-PR ϕ 3.80...11.50 10.00 ϕ 2.30...	SH-OS-500-115-PP ϕ 4.60...11.50 10.00 ϕ 3.10...	SH-OS-500-115-PR ϕ 4.60...11.50 10.00 ϕ 3.10...
osteotome for implants h 13.00 mm	SH-OS-380-130-PP ϕ 3.50...13.00 10.00 ϕ 2.00...	SH-OS-380-130-PR ϕ 3.50...13.00 10.00 ϕ 2.00...	SH-OS-425-130-PP ϕ 3.80...13.00 10.00 ϕ 2.30...	SH-OS-425-130-PR ϕ 3.80...13.00 10.00 ϕ 2.30...	SH-OS-500-130-PP ϕ 4.60...13.00 10.00 ϕ 3.10...	SH-OS-500-130-PR ϕ 4.60...13.00 10.00 ϕ 3.10...
osteotome for implants h 15.00 mm	SH-OS-380-150-PP ϕ 3.50...15.00 10.00 ϕ 2.00...	SH-OS-380-150-PR ϕ 3.50...15.00 10.00 ϕ 2.00...	SH-OS-425-150-PP ϕ 3.80...15.00 10.00 ϕ 2.30...	SH-OS-425-150-PR ϕ 3.80...15.00 10.00 ϕ 2.30...	SH-OS-500-150-PP ϕ 4.60...15.00 10.00 ϕ 3.10...	SH-OS-500-150-PR ϕ 4.60...15.00 10.00 ϕ 3.10...
tip	flat	round	flat	round	flat	round

Osteotomes are optional instruments that are not included in the surgical kit. They can be purchased separately and singularly.

Additional instruments

All the additional instruments for inserting Prama and Prama RF implants, made of surgical stainless steel, have been designed to offer maximum ergonomics and ease of use. All the instruments have a laser-marked code for easy identification of the pieces. All the instruments are available individually as spare parts.

Driver Easy Insert: the particular geometry of the hexagon helps limit sticking and prevents deformations in the implant connection

Drivers: solid help for intraoral removing of implants



Prosthetic screwdrivers: designed for the retention and fastening of prosthesis connecting screws

Easy Insert Drivers

description	code	kit
short driver with right angle shank	EASYC4-EX230-CA 	ZPRAMA-INT
long driver with right angle shank	EASYL4-EX230-CA 	ZPRAMA-INT
driver with connector for dynamometric key	EASY4-EX230-EX 	ZPRAMA-INT

Extraction tools for intraoral removing of implants

description	code	kit
short driver	BC-EX230 	ZPRAMA-INT
long driver	BL-EX230 	ZPRAMA-INT

Ratchet

description	code	kit
torque-control ratchet, which can be used in dynamometric or fixed mode, complete with accessories for quick torque adjustment and periodic maintenance (Allen wrench and lubricant) the ratchet has torque limits from 35 to 70 Ncm, with adjustment lines at 10-20-25-30-35-50-70 Ncm	CRI5-KIT 	ZPRAMA-INT

Torque wrench with control lever

description	code	kit
torque wrench with control lever allowing torque to be displayed during use Laser-etched marks at 0-10-20-30-50-70-90 Ncm	TWL 	Not included in the surgical kit, available separately

Surgical screwdrivers

description	code	kit
driver for tap screws and fixation screws, digital, extra-short	HSMXS-20-DG 	ZPRAMA-INT
driver for tap screws and fixation screws, digital, short	HSM-20-DG 	ZPRAMA-INT
driver for tap screws and fixation screws, digital, long	HSML-20-DG 	ZPRAMA-INT

Prosthetic screwdrivers for standard screws

description	code	kit
driver for connecting screws, with hexagonal connector for dynamometric key or hand knob, short	HSM-20-EX 	ZPRAMA-INT
driver for connecting screws, with hexagonal connector for dynamometric key or hand knob, long	HSML-20-EX 	ZPRAMA-INT
driver for connecting screws, with hexagonal connector for dynamometric key or hand knob, extra-long	HSMXL-20-EX 	Not included in the surgical kit, available separately
driver for connecting screws, with right angle shank	HSM-20-CA 	ZPRAMA-INT
driver for connecting screws, with right angle shank, extra-short	HSMXS-20-CA 	Not included in the surgical kit, available separately

Mounter

description	code	kit
mounter	MOU-EX230 	Not included in the surgical kit, available separately
mounter stop key	CM2 	Not included in the surgical kit, available separately

Prosthetic screwdrivers for screws with Full Head technology

description	code	kit
screwdriver for screws with Full Head technology, digital, extra-short	L-HSM-EX 	ZPRAMA-INT
screwdriver for screws with Full Head technology, digital, short	L-HSML-EX 	ZPRAMA-INT
screwdriver for screws with Full Head technology, digital, long	L-HSMXL-EX 	ZPRAMA-INT
screwdriver for screws with Full Head technology for right angle	L-HSM-CA 	ZPRAMA-INT

Other prosthetic screwdrivers

description	code	kit
screwdriver for ball attachments, with hexagonal connector for dynamometric key	BASCC-EX 	Not included in the surgical kit, available separately
screwdriver for P.A.D. straight abutments, with hexagonal connector for dynamometric key	AVV2-ABUT 	Not included in the surgical kit, available separately
Gr. 5 titanium driver for screwing Locator abutments, with hexagonal connector for dynamometric key, short	8926-SW 	Not included in the surgical kit, available separately
Gr. 5 titanium driver for screwing Locator abutments, with hexagonal connector for dynamometric key, long	8927-SW 	Not included in the surgical kit, available separately
instrument for inserting, fitting and maintaining the titanium cap for CAP-TIT-1 ball attachments	AVV-CAP-TIT-1 	Not included in the surgical kit, available separately
dynamic Abutment screwdriver 24 mm length	DSPDCLH-24 	Not included in the surgical kit, available separately
dynamic Abutment screwdriver 32 mm length	DSPDCLH-32 	Not included in the surgical kit, available separately

Extensions and adapter

description	code	kit
extension for bone taps, mounters, drivers and manual drivers, with hexagonal connector for dynamometric key	BPM-15 	ZPRAMA-INT
extension for surgical drills	PROF-CAL3 	ZPRAMA-INT
mechanical adapter with right angle shank for instruments with hexagonal connector	B-AVV-CA3 	Not included in the surgical kit, available separately
driver for right angle and manual instruments and instruments with hexagonal connection for ratchet	AVV-CA-DG-EX 	ZPRAMA-INT
digital knob for bone taps, mounters, screwdrivers and drivers	AVV3-MAN-DG 	Not included in the surgical kit, available separately
P.A.D. transfer screw for manual screwing	PAD-VTRAL-140-MAN 	Not included in the surgical kit, available separately
carrier to transfer angled P.A.D. abutments into the oral cavity, sterilizable and reusable It must be fixed to abutments with screw PAD-VTRAL-140	PAD-CAR 	Not included in the surgical kit, available separately

Parallelism pins

description	code	kit
parallelism pin with a \varnothing 2.00 mm side and a \varnothing 2.80 mm	PP-2/28 	ZPRAMA-INT
parallelism pin with depth lines, large	PPTL-2-28 	Not included in the surgical kit, available separately
parallelism pin with depth lines, small	PPTS-2-28 	Not included in the surgical kit, available separately

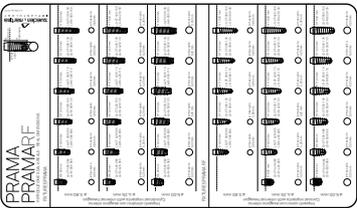
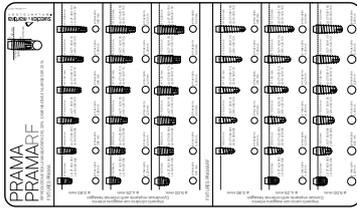
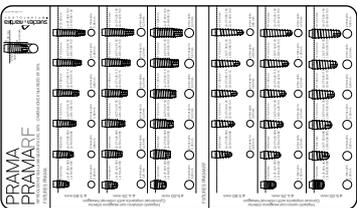
Depth gauge

description	code	kit
depth gauge	<p>PROF3</p> 	<p>Not included in the surgical kit, available separately</p>

Spare O-ring

description	code	kit
<p>box with 5 spare o-rings for all accessories with hexagonal connector for dynamometric key</p>	<p>ORING180-088</p> 	<p>ZPRAMA-INT</p>

X-ray templates

description	code	kit
<p>x-ray template for Prama and Prama RF implants, real dimensions</p>	<p>L-L100</p> 	<p>ZPRAMA-INT</p>
<p>x-ray template for Prama and Prama RF implants, dimensions increased by 20%</p>	<p>L-L120</p> 	<p>ZPRAMA-INT</p>
<p>x-ray template for Prama and Prama RF implants, dimensions increased by 30%</p>	<p>L-L130</p> 	<p>ZPRAMA-INT</p>

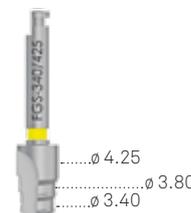
Drills for Prama Shorty implants

Prama Shorty implants with a height of 6.00 mm must be inserted with specific short drills. The drills have a drill tip design that does not create an overpreparation in length and allows to devote all the available bone to receive the implant. The laser markings that report heights from 5.00 mm to 7.00 mm, together with the relative stops, allow safe and rapid preparation.

Pilot drill

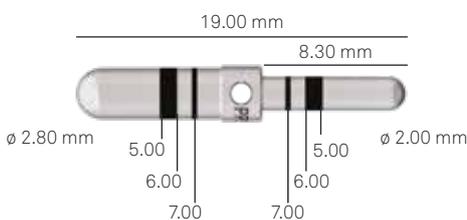
shorty pilot drill and related stops	
<p>FPS-200 Shorty pilot drill</p> 	<p>STOPS4-200-060 Stop 6.00 mm for Shorty pilot drill</p> 

Short guide drills

short guide drills	
<p>FGS-200/300</p> 	<p>FGS-340/425</p> 

Parallelism pin

parallelism pin for short drills with depth lines at 5.00, 6.00 and 7.00 mm
<p>PPS-2/3</p> 



LL: Total length of the working part, including the tip



Final drills and related stops

drill ϕ	3.80 mm	4.25 mm	5.00 mm
Short Final Drills	FFS-300 	FFS-340 	FFS-425
stops for preparations h 0.60 mm	STOPS4-300-060 	STOPS4-340-060 	STOPS4-425-060

Drills for Prama Shorty implants are contained in the Shorty Drilling Kit, as well as available separately. The Shorty Drilling Kit is a set of drills for the insertion of short implants with cylindrical morphology.

description	code
Shorty Drilling Kit for short implants	ZSHORTY-INT
Shorty Drilling Kit tray	SHORTY-TRAY-INT
Kit with 5 spare silicon supports for surgical trays, for drills or instruments with right-angle shank	GROMMET-CA-1

Important warning

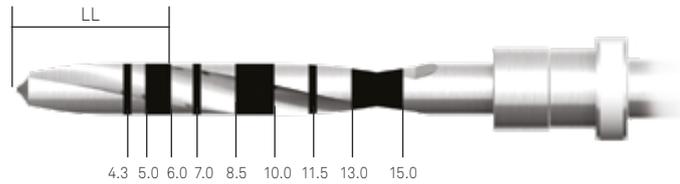
The Shorty Drilling Kit contains only drills and two parallelism pins. It is not a complete surgical kit: to insert implants must be used all the other instruments included in the standard surgical kit (driver, ratchet, screwdrivers, etc.).

Drills for Prama RF Shorty implants

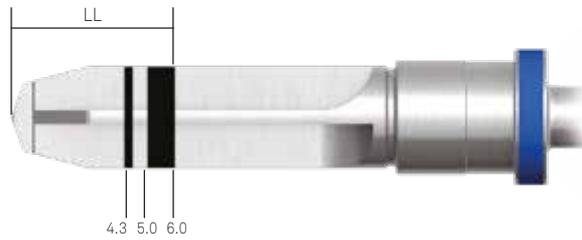
Prama RF Shorty implants with a height of 6.00 mm must be inserted with specific short conical drills. The pilot drill has a standard height, while final drills are short and have been properly designed for the use in bone of different quality, hard bone and soft bone. All the drills are designed to engage the depth stops that guarantee greater precision and security during preparation.

shorty pilot drill and related stops	
<p>SE-FP200 short pilot drill</p> 	<p>SE-STOP-FP200-060 Stop 6.00 mm for short pilot drill</p> 

LL: Total length of the working part, including the tip.



LL: Total length of the working part, including the tip.



drill ϕ	4.10	5.00	
short final drills	SE-FK410-U drill for soft bone 	SE-FK500 drill for hard bone 	SE-FK500-U drill for soft bone
stop	SE-STOP-FK410-060 	SE-STOP-FK500-060 	SE-STOP-FK500-060

Drills for Prama RF Shorty implants are contained in the Syra Short Drilling Kit, as well as available separately.

description	code
grommetless Syra Short Drilling Kit for short implants	ZSYRASHORT-INT
empty grommetless Syra Short Drilling Kit tray	SESHORT-TRAY-INT

Important warning

The Syra Short Drilling Kit contains only drills. It is not a complete surgical kit: to insert Prama RF implants must be used all the other instruments included in the standard surgical kit (driver, ratchet, screwdrivers, etc.).

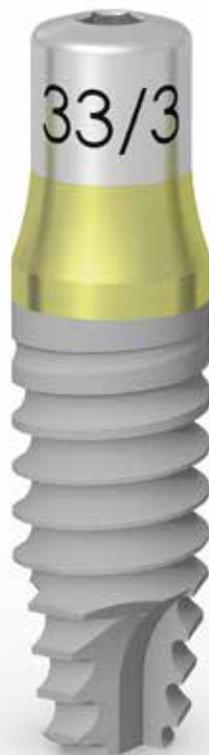
Standard healing abutments

The standard healing abutments are made of Gr. 5 titanium and **lengthen the emergence profile of the implant neck**. All the healing abutments must be tightened to 8-10 Ncm, using the HSM series drivers.

The straight healing abutments are available in a single diameter of 3.30 mm for all the Prama implant sizes



∅ 3.80 mm



∅ 4.25 mm



∅ 5.00 mm

The laser marking reports the diameter (in the example 33 = 3.30 mm) and the transgingival height (in the example 3 = 3.0 mm), which can be 2.00, 3.00 and 5.00 mm

Standard healing abutments

description	code
healing abutments straight emergence transgingival h 2 mm	<p>A-TMG-330-2</p> 
healing abutments straight emergence transgingival h 3 mm	<p>A-TMG-330-3</p> 
healing abutments straight emergence transgingival h 5 mm	<p>A-TMG-330-5</p> 
healing abutments straight emergence transgingival h 7 mm	<p>A-TMG-330-7</p> 

Recommended torque for healing abutments: 8-10 Ncm.

Prama IN healing abutments

Prama IN healing abutments **incorporate the geometry of the hyperbolic neck of the Prama implant for a height of 1.50 or 0.50 mm**, to be chosen according to the prosthetic protocol adopted and are available in Gr. 5 titanium and REEF resin for all the diameters of Prama implant system. Prama IN healing abutments for direct screwing made of Gr. 5 titanium are available with two transgingival heights of 2.50 and 3.50 mm. Prama IN healing abutments in REEF resin with passing screw are available in one single height of 6.00 mm and can be easily modified or relined chair-side.

Healing abutment that incorporates the implant-abutment interface for 0.50 mm. The laser marking reports the connection diameter (in the example 380 = 3.80 mm), the transgingival height (in the example 25 = 2.50 mm) and the closure on the neck (in the example 05 = 0.50 mm)



Healing abutment that incorporates the implant-abutment interface for 1.50 mm. The laser marking reports the connection diameter (in the example 380 = 3.80 mm), the transgingival height (in the example 25 = 2.50 mm) and the closure on the neck (in the example 15 = 1.50 mm)



Healing abutment in REEF resin that incorporates the implant-abutment interface for 0.50 mm



Healing abutment in REEF resin that incorporates the implant-abutment interface for 1.50 mm



Prama IN healing abutments in titanium

implant ø	3.80 mm	4.25 mm	5.00 mm
Prama IN healing abutments in Gr. 5 titanium closing of 0.50 mm transgingival h. 2.50 mm	L-TMG-380-25-05 	L-TMG-425-25-05 	L-TMG-500-25-05
Prama IN healing abutments in Gr. 5 titanium closing of 1.50 mm transgingival h. 2.50 mm	L-TMG-380-25-15 	L-TMG-425-25-15 	L-TMG-500-25-15
Prama IN healing abutments in Gr. 5 titanium closing of 0.50 mm transgingival h. 3.50 mm	L-TMG-380-35-05 	L-TMG-425-35-05 	L-TMG-500-35-05
Prama IN healing abutments in Gr. 5 titanium closing of 1.50 mm transgingival h. 3.50 mm	L-TMG-380-35-15 	L-TMG-425-35-15 	L-TMG-500-35-15

Prama IN healing abutments in REEF resin

implant ø	3.80 mm	4.25 mm	5.00 mm
Prama IN healing abutments in REEF resin closing of 0.50 mm transgingival h. 6.00 mm standard fixation screw included	L-TMGPF-380-05 	L-TMGPF-425-05 	L-TMGPF-500-05
Prama IN healing abutments in REEF resin closing of 1.50 mm transgingival h. 6.00 mm standard fixation screw included	L-TMGPF-380-15 	L-TMGPF-425-15 	L-TMGPF-500-15
single pack pack of 10 pieces standard fixation screw supplied with the healing abutments, it can also be ordered separately	VM2-180 VM2-180-10 	Utilizzare VM2-180 VM2-180-10	Utilizzare VM2-180 VM2-180-10

Recommended torque for transgingival healing abutments: 8-10 Ncm.

See technical characteristics of Gr. 5 titanium and REEF resin on pages 88 and 94.

Impression and model phase

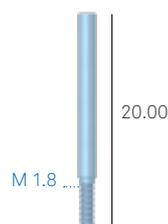
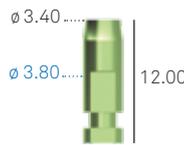
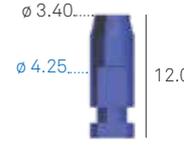
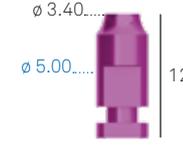
The components for the impression and the creation of the model are produced with the same machines that make the implants; this ensures a real guarantee of precision from the point of view of tolerance and fidelity in the reproduction of the clinical situation. The Pick-up transfers are made of Gr. 5 titanium, according to the colour code of the corresponding platform, facilitating the identification of any different diameters that may be used. The Pull-up transfer is made of PEEK with a titanium ring at the base to check the proper seating in the platform connection with a Rx. Even though the platform connection is the same for the different diameters, the analogs are available in three sizes to reproduce the different emergences of the convergent neck of Prama implants.

Pull-up transfer: the connection with tabs clicks into the implant fixation hexagon, without requiring a screw

Implant analog: anodised according to the colour code to facilitate recognition and laboratory phases



Pick-up transfer: the design of the upper portion guarantees excellent retention and therefore an extremely stable fixing in the impression

implant ϕ	3.80 mm	4.25 mm	5.00 mm
Pick-up transfer straight emergence fixation screw included	L-TRA-380 	L-TRA-425 	L-TRA-500 
single pack fixation screw for Pick-up transfer supplied with the transfers, it can also be ordered separately as a spare	VTRA2-180-15 	Use VTRA2-180-15	Use VTRA2-180-15
fixation screw for Pick-up transfer not supplied with transfers, available separately as a spare in single pack	VTRA2-180-20 	Use VTRA2-180-20	Use VTRA2-180-20
fixation screw for Pick-up transfer for manual screwing not supplied with transfers, available separately as a spare in single pack	VTRA2-180-MAN 	Use VTRA2-180-MAN	Use VTRA2-180-MAN
Pull-up transfer in radiopaque PEEK and Gr. 5 titanium ring straight emergence	A-TRAP-330 	Use A-TRAP-330	Use A-TRAP-330
analog	L-ANA-380 	L-ANA-425 	L-ANA-500 

Recommended torque for Pick-up transfer screws: 8-10 Ncm.

Temporary posts

The temporary posts can be used in a conventional way after the bone healing period, or immediately after surgical insertion of the implants, if conditions exist for immediate loading. They can also be used as an alternative to the traditional healing abutments for reconditioning the soft tissues, depending on the prosthetic protocol adopted.

Temporary posts in REEF resin are characterized by a nanostochiometric conformation allowing a high capability resistance to the bacterial attack which lasts and makes more difficult the plaque adherence, facilitating the healing phase. They are suitable for single rehabilitations and bridges.

The **Gr. 5 titanium temporary posts** have been designed to give a resistant support in case both of single crowns and multiple or full arch rehabilitations. The connection presents an hexagon for single crowns, while it's not indexed for multiple structures or full arch; the posts for multiple structures present a morphology that facilitates the insertion and removal manoeuvres and it is deep enough to guarantee more stability. **PEEK temporary posts with a Gr. 5 titanium base** are also available, ideal to support single cemented crowns.

The REEF resin has a great chair-side use easiness allowing an easy relining

Titanium offers great resistance in case of long-term temporary rehabilitations



description	code
temporary posts in REEF resin engaging standard fixation screw included	A-PPF-330-EX 
temporary posts in REEF resin non engaging standard fixation screw included	A-PPF-330 
SIMPLE temporary posts in PEEK with a Gr. 5 titanium base engaging standard fixation screw included	A-MPSC-330 
SIMPLE temporary posts in Gr. 5 titanium engaging standard fixation screw included	A-MPSCI-330-EX 
SIMPLE temporary posts in Gr. 5 titanium non engaging standard fixation screw included	A-MPSCI-330 
temporary titanium posts in with castable sleeve non engaging straight emergence castable sleeve and standard fixation screw included	A-CTI-330 
spare castable sleeve for titanium temporary posts fixation screw not included	A-CCI-S 
single pack pack of 10 pieces standard fixation screw supplied with the temporary posts, it can also be ordered separately as a spare	VM2-180 VM2-180-10 

Recommended torque for temporary posts in REEF resin: 8-10 Ncm.

Recommended torque for temporary posts in titanium and in PEEK with a Gr. 5 titanium base: 20-25 Ncm.

Important warning

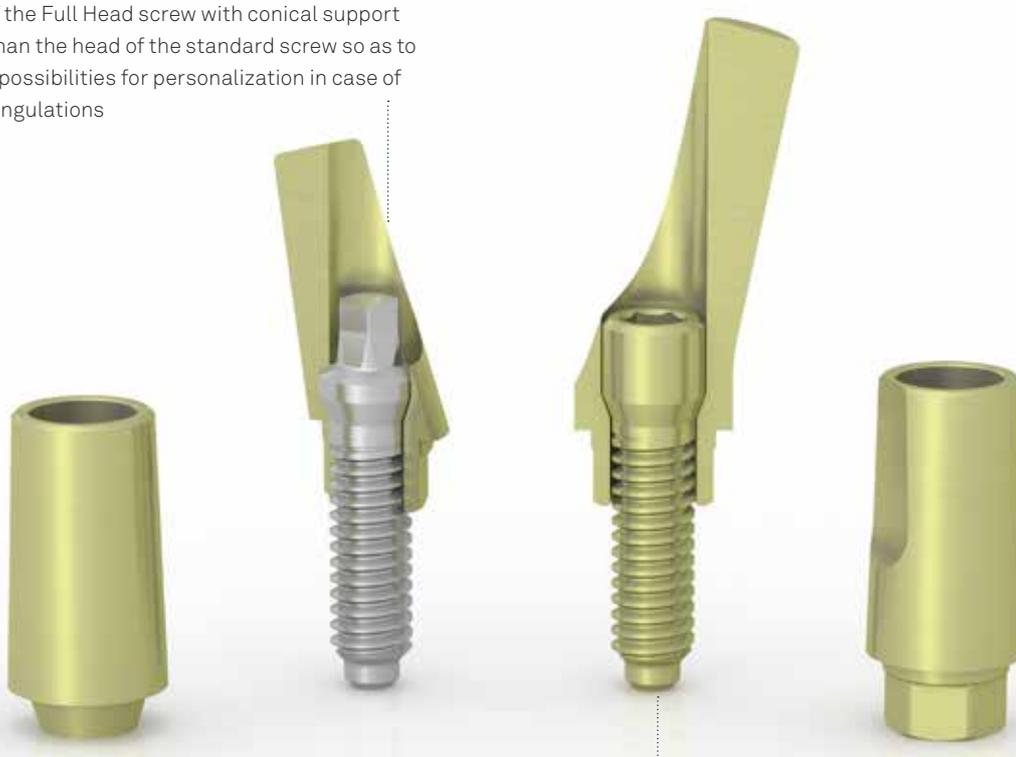
It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity. It is not possible to use the screw with conical support with these posts (code L-VMS-180).

Pre-made straight and angled posts

The pre-made posts are made of Gr. 5 titanium and subjected to a controlled passivation process that changes their surface colour: the result is a characteristic golden pale yellow colour. This colour is obtained through an oxidation process and therefore, there is no type of coating, so it ensures the use of a **highly biocompatible and highly aesthetic surface**.

With the engaging **straight pre-made posts** it is possible to fabricate cemented crowns as well as screw-retained crowns with luting technique made with highly aesthetic materials that close on the implant neck. Furthermore **pre-made posts angled at 15° and 25°** are available for the fabrication of single cemented crowns. **Conical posts without repositioning hexagon** are available to produce multiple structures using luting technique.

The head of the Full Head screw with conical support is smaller than the head of the standard screw so as to allow more possibilities for personalization in case of particular angulations



The conical support of the screws used with the pre-made posts increases resistance to unscrewing by 20% compared with the standard screws

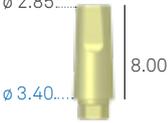
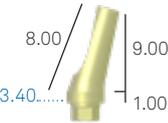
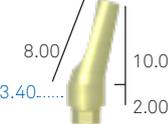
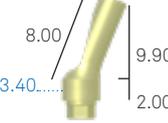
Important warning

It is recommended not to use standard fixation screws (code VM2-180) with these posts because standard screws do not have the conical support, so they do not interface exactly with the seat of the screw head inside these prosthetic components. Failure to observe this warning leads to the risk of unscrewing or breaking of the screw.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

Pre-made posts

description	code	
straight pre-made posts engaging h 6.00 mm fixation screw with conical support included	L-MD-340-6	
straight pre-made posts engaging h 8.00 mm fixation screw with conical support included	L-MD-340-8	
15° angled pre-made posts engaging h 6.00 mm Full Head screw included	L-MA15-340	
15° angled pre-made posts engaging transgingival height 1.00 mm fixation screw with conical support included	L-MA15-340-1	
15° angled pre-made posts engaging transgingival height 2.00 mm fixation screw with conical support included	L-MA15-340-2	
25° angled pre-made posts engaging transgingival height 1.00 mm fixation screw with conical support included	L-MA25-340-1	
25° angled pre-made posts engaging transgingival height 2.00 mm fixation screw with conical support included	L-MA25-340-2	
conical pre-made posts non engaging h 6.00 mm fixation screw with conical support included	L-MD-340-6-ROT	
conical pre-made posts non engaging h 8.00 mm fixation screw with conical support included	L-MD-340-8-ROT	
single pack pack of 10 pieces	L-VMS-180 L-VMS-180-10	
fixation screw with conical support supplied with straight and angled pre-made posts, it can also be ordered separately as a spare	L-VM-180 L-VM-180-10	
single pack pack of 10 pieces Full Head screw Supplied with L-MA15-340 pre-made posts, it can also be ordered separately as a spare		

Recommended torque for pre-made posts: 20-25 Ncm.

The fixation screws with Full Head technology (L-VM-180) must be tightened with the appropriate drivers for screws with Full Head technology contained with the Prama surgical kit.

Standard and Prama IN preparable posts

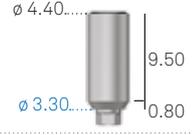
Preparable posts are made of Gr. 5 titanium for the production of a definitive prosthesis that can be widely personalized: the possibility to be milled, given their large dimensions, allows **a response to complex anatomical requirements in terms of narrow prosthetic spaces**. The connections of the preparable posts are indexed, ideal in cases of rehabilitations of single crowns or multiple cemented prostheses. For Prama system, Simple and Prama IN preparable posts are available, which incorporate the geometry of the hyperbolic neck of the Prama implant for a height of 1.50 or 0.50 mm.



Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

Preparable posts

description	code	
standard preparable posts engaging straight emergence standard fixation screw included	A-MF-330	
simple preparable posts engaging very wide emergence standard fixation screw included	A-MFS-330	
single pack pack of 10 pieces standard fixation screw supplied with preparable post, it can also be ordered separately as a spare	VM2-180 VM2-180-10	

Prama IN preparable posts

implant ø	3.80 mm	4.25 mm	5.00 mm
Prama IN preparable posts engaging closing of 0.50 mm fixation screw with conical support included	L-MF-380-05 	L-MF-425-05 	L-MF-500-05 
Prama IN preparable posts engaging closing of 1.50 mm fixation screw with conical support included	L-MF-380-15 	L-MF-425-15 	L-MF-500-15 
single pack pack of 10 pieces fixation screw with conical support supplied with preparable posts, it can also be ordered separately as a spare	L-VMS-180 L-VMS-180-10 	Use L-VMS-180	Use L-VMS-180
single pack pack of 10 pieces Full Head screw not supplied with preparable posts, available optionally*	L-VM-180 L-VM-180-10 	Use L-VM-180	Use L-VM-180

Recommended torque for preparable posts: 20-25 Ncm.

* The fixation screws with Full Head technology (L-VM-180) must be tightened with the appropriate drivers for screws with Full Head technology contained with the Prama surgical kit.

Important warning

It is recommended not to use standard fixation screws (code VM2-180) with these posts because standard screws do not have the conical support, so they do not interface exactly with the seat of the screw head inside these prosthetic components. Failure to observe this warning leads to the risk of unscrewing or breaking of the screw.

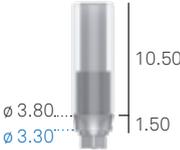
Standard castable posts with base in gold alloy, titanium, and cobalt chrome

Castable posts with a metal base combine the simplicity of castable solutions with **a base of gold alloy, cobalt chrome or titanium, highly biocompatible materials**. The melting point of the above mentioned alloys is such as to preserve the base against dimensional alterations at the time of overcasting the castable part.

The castable posts, available in engaging and non engaging version, allow to realize single crowns or multiple screw retained structures as Toronto, that lean on the connection platform of the implant.



The bases are available in gold alloy, Gr. 5 titanium and cobalt chrome

description	code
castable posts with a pre-made base in gold alloy "1" engaging anatomical emergence fixation screw included	A-UCR-330-EX 
castable posts with a pre-made base in gold alloy "1" non engaging anatomical emergence fixation screw included	A-UCR-330 
castable posts with a pre-made base in titanium engaging anatomical emergence fixation screw included	A-UCTR-330-EX 
castable posts with a pre-made base in cobalt chrome engaging anatomical emergence fixation screw included	A-UCRCO-330-EX 
castable posts with a pre-made base in cobalt chrome non engaging anatomical emergence fixation screw included	A-UCRCO-330 
spare castable sleeves for castable posts with alloy base fixation screw not included	A-CCUCR-330 
single pack pack of 10 pieces fixation screw for posts supplied with the posts, it can also be ordered separately as a spare	VM2-180 VM2-180-10 

Recommended torque for castable posts with metal base: 20-25 Ncm.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity. It is not possible to use the screw with conical support with these posts (code L-VMS-180).

Prama IN castable posts with base in gold alloy or cobalt chrome

Castable posts with a metal base combine the simplicity of castable solutions with a base of gold alloy, cobalt chrome or titanium, highly biocompatible materials. The melting point of these alloys is high enough to protect the base from dimensional changes during overcasting of the castable part. As with all Prama IN components, **the profile of Prama IN castable posts with metal base incorporates the hyperbolic neck of the Prama implant** for a height of 1.50 or 0.50 mm.



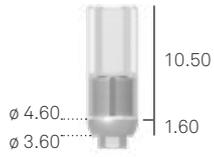
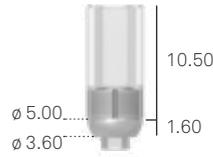
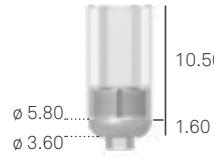
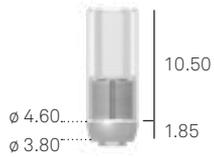
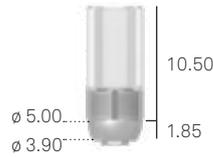
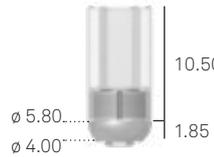
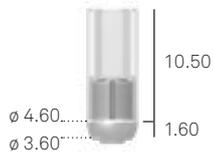
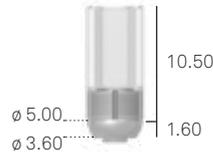
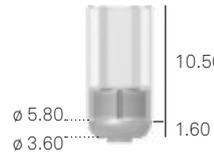
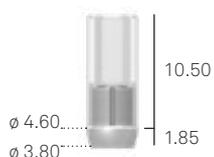
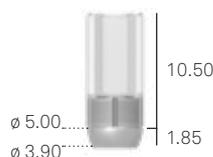
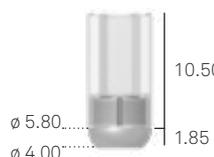
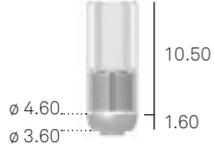
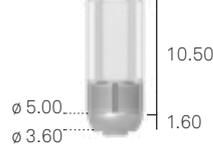
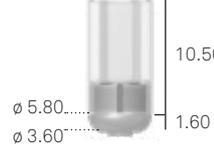
Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

Important warning

It is recommended not to use standard fixation screws (code VM2-180) with these posts because standard screws do not have the conical support, so they do not interface exactly with the seat of the screw head inside these prosthetic components. Failure to observe this warning leads to the risk of unscrewing or breaking of the screw.

* The fixation screws with Full Head technology (L-VM-180) must be tightened with the appropriate drivers for screws with Full Head technology contained with the Prama surgical kit.

implant ø	3.80 mm	4.25 mm	5.00 mm
prama IN castable posts with a pre-made base in cobalt chrome closing of 0.50 mm engaging fixation screw with conical support included	L-UCRCO-380-05 	L-UCRCO-425-05 	L-UCRCO-500-05 
prama IN castable posts with a pre-made base in cobalt chrome closing of 1.50 mm engaging fixation screw with conical support included	L-UCRCO-380-15 	L-UCRCO-425-15 	L-UCRCO-500-15 
prama IN castable posts with a pre-made base in cobalt chrome closing of 0.50 mm non engaging fixation screw with conical support included	L-UCRCO-380-05-ROT 	L-UCRCO-425-05-ROT 	L-UCRCO-500-05-ROT 
prama IN castable posts with a pre-made base in cobalt chrome closing of 1.50 mm non engaging fixation screw with conical support included	L-UCRCO-380-15-ROT 	L-UCRCO-425-15-ROT 	L-UCRCO-500-15-ROT 
prama IN castable posts with a pre-made base in gold alloy closing of 0.50 mm non engaging fixation screw with conical support included	L-UCR-380-05-ROT 	L-UCR-425-05-ROT 	L-UCR-500-05-ROT 
spare castable sleeves for castable posts with alloy base fixation screw with conical support not included	A-CCUCR-380 	A-CCUCR-425 	A-CCUCR-500 
single pack pack of 10 pieces fixation screw with conical support supplied with castable posts, it can also be ordered separately as a spare	L-VMS-180 L-VMS-180-10 	Use L-VMS-180	Use L-VMS-180
single pack pack of 10 pieces full Head screw not supplied with castable posts, available optionally*	L-VM-180 L-VM-180-10 	Use L-VM-180	Use L-VM-180

Recommended torque for castable posts with metal base: 20-25 Ncm.

See technical characteristics of PMMA, gold alloy and cobalt chrome on pages 98, 100 and 101.

Fully castable posts

The posts made entirely of PMMA, a resin that does not leave any residue in casting, are produced not by moulding but by turning, like all Sweden & Martina prosthetic components, allowing the respect of micrometric tolerances and enabling a precise connection to be obtained even after the casting process. It must be considered that the casting process should compromise the precision of the coupling implant-abutment at the connection platform level.



.....**Castable posts:** allow maximum ease of modelling

description	code
castable posts for casting engaging straight emergence standard fixation screw included	A-CC-330-EX 
castable posts for casting non engaging straight emergence standard fixation screw included	A-CC-330 
single pack pack of 10 pieces standard fixation screw supplied with the castable posts, it can also be ordered separately as a spare	VM2-180 VM2-180-10 

Recommended torque for posts obtained from the casting of fully castable posts: 20-25 Ncm.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity. It is not possible to use the screw with conical support with these posts (code L-VMS-180).

Dynamic Abutment posts

Dynamic Abutment* posts can be customised thanks to the casting and the overcasting; they are a patented solution that allows prostheses to be **freely angled up to 28°**. The primary benefit of this innovative technology consists in the **possibility of moving the hole for the connecting screw to a palatal or lingual position, avoiding unsightly vestibular hole** and permitting a greater vestibular thickness of the ceramic structure. This is made possible by the synergy between the non engaging castable sleeve on the head of the abutment and screwdriver with its specially designed hexalobular tip, which allows the head of the screw to be engaged even in the presence of extreme angulations.



**Dynamic Abutment posts are medical devices manufactured and patented by Talladium España S.L., Avenida Blondel, 54 3º, 25002 Lleida, Spain. Dynamic Abutment is a registered trademark of this company.*

description	code
Dynamic Abutment engaging cobalt chrome base for overcasting fixation screw not included	PD3PKH330/CC 
Dynamic Abutment non engaging cobalt chrome base for overcasting fixation screw not included	PD3PKR330/CC 
Dynamic Abutment engaging entirely castable fixation screw not included	PD3PKH330/P 
Dynamic Abutment non engaging entirely castable fixation screw not included	PD3PKR330/P 
fixation screw for Dynamic Abutment must be ordered separately	TPDH18L66 

description	code
screwdriver for Dynamic Abutment length 24 mm must be ordered separately	DSPDCLH-24 
screwdriver for Dynamic Abutment length 32 mm must be ordered separately	DSPDCLH-32 

Recommended torque for the Dynamic Abutment: 20-25 Ncm.

Important warning

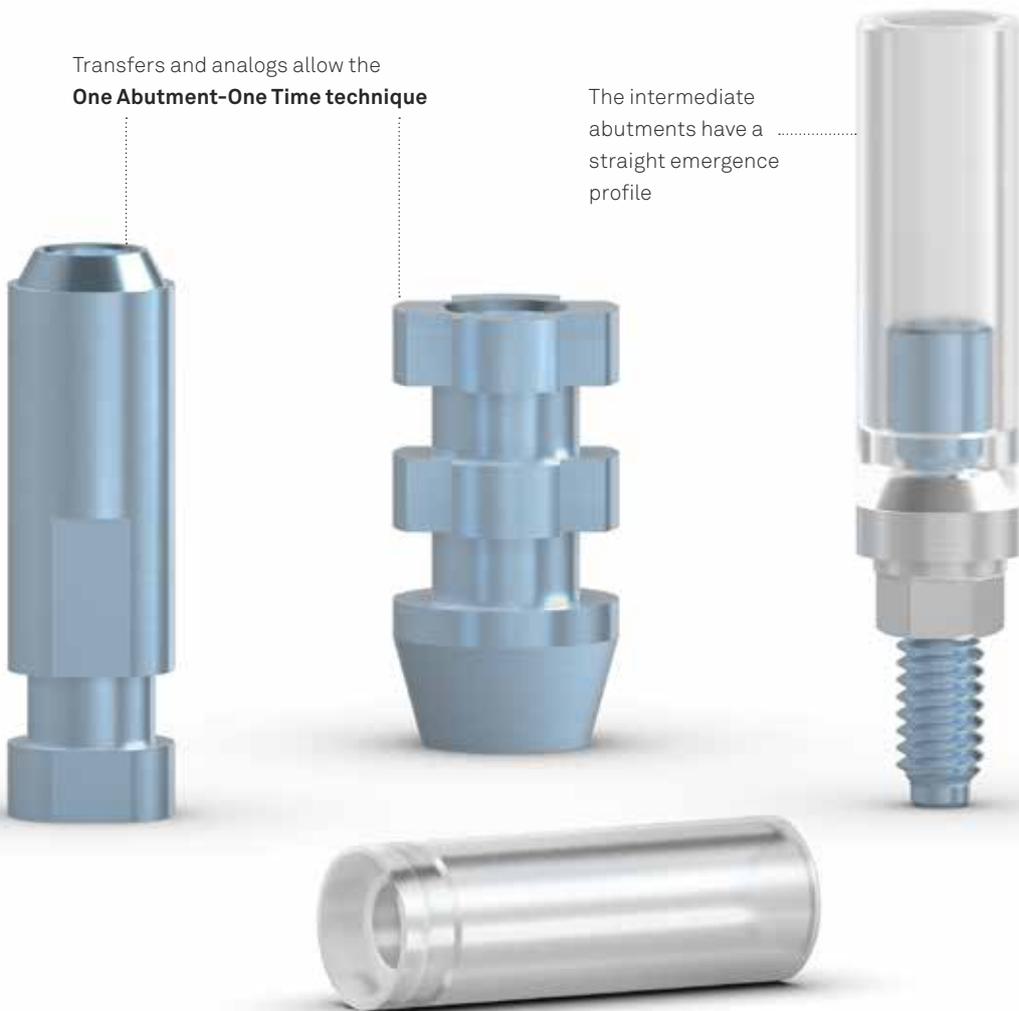
It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

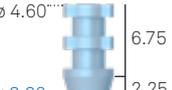
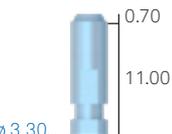
Prostheses on intermediate abutments

Intermediate abutments have a straight emergence profile and are made up of a repositionable Gr. 5 titanium base, characterized by a small upper cone with a height of 0.70 mm, which allows **easy insertion and removal of the over-structures, even in case of slight disparallelisms**. They are supplied with PMMA castable sleeves for modelling and casting the over-structure and with the passing screw for the “packet” fastening of the over-structure and abutments to the implants. Normally, when these abutments are used, the impression can be taken directly on the implants using the specific transfers.

Transfers and analogs allow the **One Abutment-One Time technique**

The intermediate abutments have a straight emergence profile



description	code
straight abutments with passing screw engaging transgingival h. 1.00 mm fixation screw included	A-ABU-330-1 
straight abutments with passing screw engaging transgingival h. 2.00 mm fixation screw included	A-ABU-330-2 
fixation screw for abutments supplied with the abutments, it can also be ordered separately as a spare	A-VABU-180 
Pick-up transfers for intermediate abutments non engaging fixation screw included	A-TRABU-330 
single pack spare screw for abutment transfers of intermediate abutments supplied with the transfer, it can also be ordered separately as a spare	A-VTRABU-180 
analog for intermediate abutments non engaging	A-ANABU-330 
single pack spare castable sleeves in PMMA fixation screw not included	A-CCABU-330-ROT 

Recommended torque for Pick-up transfers: 8-10 Ncm.

Recommended torque for intermediate abutments: 20-25 Ncm.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

Prostheses on PLAIN abutments

The PLAIN abutments, made of Gr. 5 titanium, take advantage of the completely flat geometry of their upper part which, by means of a very small guide, is joined to normal castable sleeves of PMMA. The usefulness of these abutments is therefore that they **maximize centring and repositioning operations of structures screw retained onto several implants.**

The healing caps allow excellent conditioning of the tissues, thanks to an emergence profile that is very flared at the crown

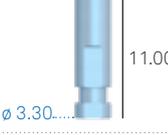


PLAIN system also includes transfers and analogs to take the impression directly on the abutment. The Pick-up transfer is supplied with its transfer screw



The guide for lodging the castable sleeves is only 0.2 mm, the minimum indispensable for centring the prosthesis



description	code	
PLAIN abutment, transgingival h 2.00 mm	A-PLAIN-ABU330-2	
PLAIN abutment, transgingival h 3.00 mm	A-PLAIN-ABU330-3	
PLAIN abutment, transgingival h 4.00 mm	A-PLAIN-ABU330-4	
healing cap for PLAIN abutment	A-PLAIN-CG330	
castable sleeve for PLAIN abutments fixation screw included	A-PLAIN-CC330	
single pack pack of 10 pieces fixation screw for castable sleeve for PLAIN abutments	A-PLAIN-VP200 A-PLAIN-VP200-10	
titanium post for PLAIN abutment fixation screw included	A-PLAIN-CT330	
transfer for PLAIN abutment fixation screw included	A-PLAIN-TRA-330	
analog for PLAIN abutment	A-PLAIN-ANA-330	
spare screw for PLAIN transfer supplied with the transfers for PLAIN abutments, it can also be ordered separately as a spare	A-PLAIN-VTRA200	

Recommended torque for Pick-up transfers and PLAIN healing caps: 8-10 Ncm.

Recommended torque for PLAIN castable sleeves: 20-25 Ncm.

Recommended torque for PLAIN abutments: 25-30 Ncm.

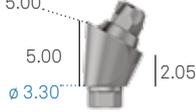
See technical characteristics of Gr. 5 titanium and PMMA on pages. 95 e 98.

P.A.D. (Disparallel Screwed Prosthesis)

P.A.D. (Disparallel Screwed Prosthesis) system has been developed to facilitate the fabrication of **multiple screw retained prostheses even in presence of divergent implants and disparallel prosthetic emergence axes**. In particular, P.A.D. angled abutments are simple and predictable solutions for implants positioned with an extreme inclination in distal saddles. P.A.D. system is characterized by its great versatility, including a wide range of straight abutments (available in various transgingival heights, from 1.50 mm to 4.00 mm), angled abutments (available with inclinations of 30° and 17° and transgingival heights of 3.00 and 5.00 mm), and a complete line of components necessary for the production of over-structures (transfers, analogs, sleeves, etc).

P.A.D. abutments all have the same upper cone, angled at 15°, which facilitates the manoeuvres of inserting and removing multiple screw retained prostheses



description	code	
straight P.A.D. abutments transgingival h 1.50 mm	A-PAD-AD330-15	
straight P.A.D. abutments transgingival h 3.00 mm	A-PAD-AD330-30	
straight P.A.D. abutments transgingival h 4.00 mm	A-PAD-AD330-40	
P.A.D. abutment angled at 17° transgingival h 3.00 mm fixation screw included	A-PAD-AA330-173	
P.A.D. abutment angled at 17° transgingival h 5.00 mm fixation screw included	A-PAD-AA330-175	
P.A.D. abutment angled at 30° transgingival h 3.00 mm fixation screw included	A-PAD-AA330-303	
P.A.D. abutment angled at 30° transgingival h 5.00 mm fixation screw included	A-PAD-AA330-305	
single pack pack of 10 pieces fixation screw for angled P.A.D. supplied with angled P.A.D. abutments, it can also be ordered separately as a spare	PAD-VM-180 PAD-VM-180-10	
screwdriver for straight P.A.D. abutments, with hexagonal connector for dynamometric key	AVV2-ABUT	
carrier for transferring angled abutments into the oral cavity, sterilisable and reusable it must be fixed to abutments with the screw PAD-VTRAL-140	PAD-CAR	

Recommended torque for straight P.A.D. abutments: 25-30 Ncm.

Recommended torque for angled P.A.D. abutments: 20-25 Ncm.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

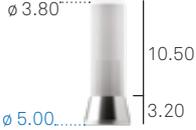
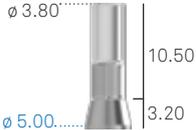
See technical characteristics of Gr. 5 titanium on page 95.

P.A.D. components for over-structures

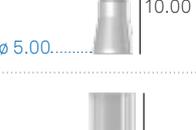
description	code
protection caps for P.A.D. abutments in Gr. 5 titanium fixation screw included (code PAD-VP-140)	<p>PAD-CG</p> 
protection caps for P.A.D. abutments in PEEK fixation screw included (code PAD-VP-140)	<p>PAD-CGP</p> 
rotating caps in POM for direct impression taking on P.A.D. abutments non engaging	<p>PAD-CAP</p> 
non rotating caps in POM for direct impression taking on P.A.D. abutment, with hexagon engaging	<p>PAD-CAP-EX</p> 
pick-up transfer in Gr. 5 titanium for P.A.D. abutments, rotating long transfer screw included (code PAD-VTRAL-140)	<p>PAD-TRA</p> 
pick-up transfer in Gr. 5 titanium for P.A.D. abutments, with hexagon, non rotating long transfer screw included (code PAD-VTRAL-140)	<p>PAD-TRA-EX</p> 
spare screw for P.A.D. abutment transfer supplied with the transfers, it can be ordered separately as a spare	<p>PAD-VTRAL-140</p> 
spare screw for P.A.D. transfers supplied with transfers and also available separately as a spare	<p>PAD-VTRA-140</p> 
P.A.D. transfer screw for manual screwing not included with transfers, it can be ordered separately	<p>PAD-ANA</p> 
analog for P.A.D. abutment in Gr. 5 titanium	<p>PAD-CC</p> 
castable sleeves in PMMA for P.A.D. abutments, rotating fixation screw included	<p>PAD-CC-EX</p> 

Recommended torque for fix protection caps: 8-10 Ncm.

Recommended torque for Pick-up transfers: 8-10 Ncm.

description	code
castable posts in PMMA with a pre-made base in gold alloy type "1", rotating, non engaging, for overcasting on P.A.D. abutments fixation screw included (code PAD-VP-140)	PAD-UC 
castable posts in PMMA with a pre-made base in cobalt chrome, rotating, not engaging, for overcasting on P.A.D. abutments fixation screw included (code PAD-VP-140)	PAD-UCRCO 
spare screw for P.A.D. abutment prosthetic components supplied with all the components for making the over-structure and also available as a spare may also be bought in packs of 10 pieces (code PAD-VP-140-10)	PAD-VP-140 

P.A.D. components for relining and luting technique

description	code
sleeves in PEEK, for P.A.D. abutments, rotating, for the relining of existing prosthesis fixation screw included (code PAD-VP-140)	PAD-CP 
sleeves in PEEK, for P.A.D. abutments, with hexagon, non rotating, for the relining of existing prosthesis fixation screw included (code PAD-VP-140)	PAD-CP-EX 
sleeves in Gr. 5 titanium for P.A.D. abutments, rotating, for the relining of existing prosthesis fixation screw included (code PAD-VP-140)	PAD-CT 
sleeves in Gr. 5 titanium for P.A.D. abutments, with hexagon, non rotating, for the relining of existing prosthesis fixation screw included (code PAD-VP-140)	PAD-CT-EX 
sleeves in Gr. 5 titanium for P.A.D. abutments for luting of CAD CAM structures non rotating fixation screw included (code PAD-VP-140)	PAD-BASTZR 
castable sleeves in PMMA for cementing techniques on Gr. 5 titanium sleeves	PAD-CCEM 
spare screw for P.A.D. abutment prosthetic components supplied with all the components for making the over-structure and also available as a spare may also be bought in pack of 10 pieces (code PAD-VP-140-10)	PAD-VP-140 

Recommended torque for securing the prosthetic screws: 20-25 Ncm.

See technical characteristics of Gr. 5 titanium, PMMA, POM and gold alloy "1" on pages 95, 98, 99 e 100.

P.A.D. prostheses for “D.P.F.” Technique (Direct Prosthetic Framework)

P.A.D. abutments have proven to be a valid support for creating various simplified prosthetic protocols, including **the creation of temporary posts for Full Arch implant rehabilitations with immediate loading** with a very simple and safe procedure. The D.P.F. components have been specially developed for creating a castable resin structure directly in the oral cavity that is absolutely passive, not restricted by connection geometries and with the additional advantage of being made without errors due to the taking of the impression and the development of the model. The intra-oral cementing of the metal truss obtained subsequently by casting allows the times for inserting the reinforced temporary post to be reduced to 8 hours after the end of surgery, while still maintaining the important properties of resistance and passivity during the first phase of implant loading. The temporary post created in this way can also be used as a positioning stent for making the final prosthesis.

STEP 1

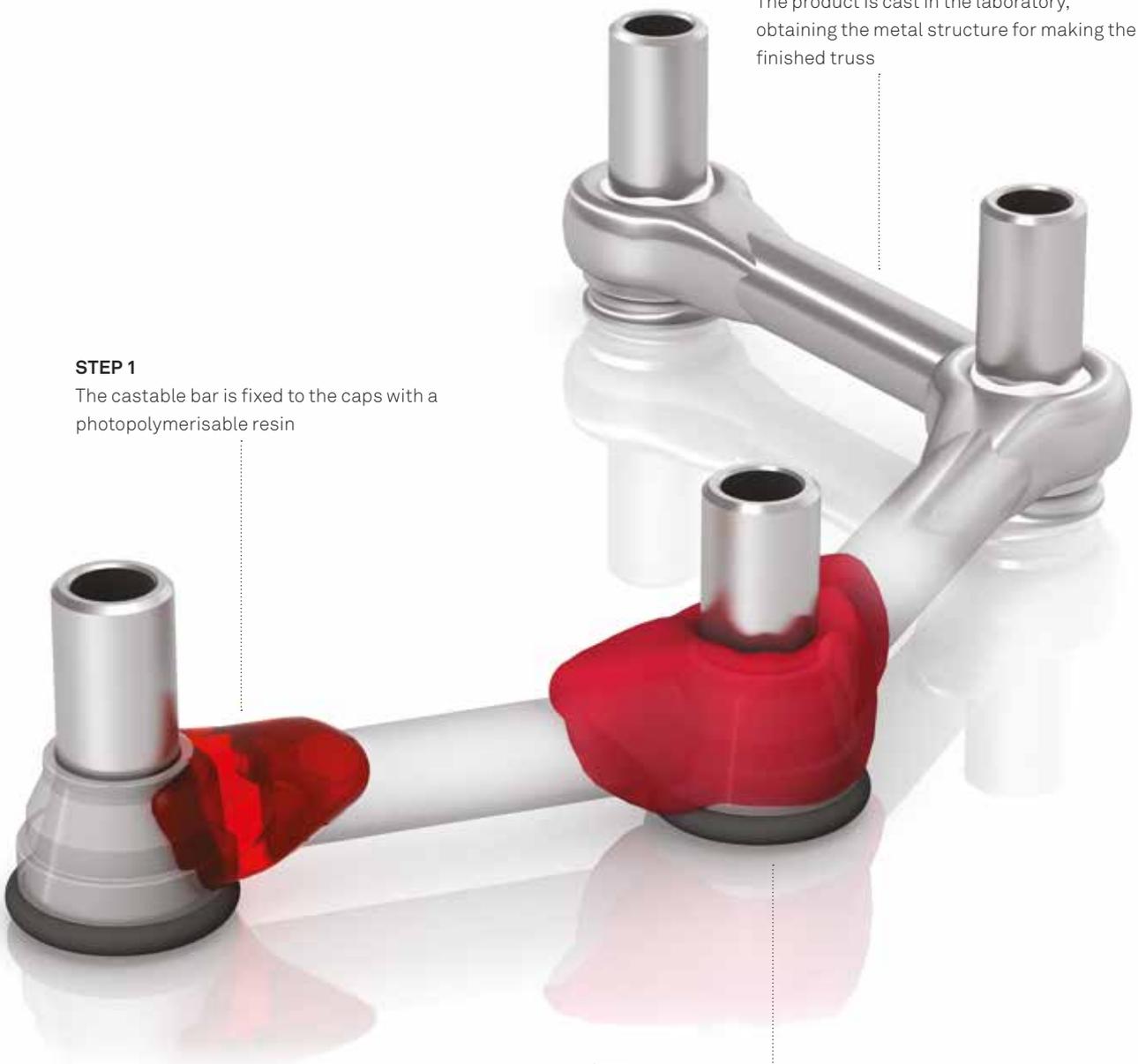
The castable bar is fixed to the caps with a photopolymerisable resin

STEP 3

The product is cast in the laboratory, obtaining the metal structure for making the finished truss

STEP 2

After photo-polymerisation of the truss, the product is removed from the oral cavity



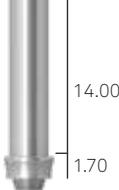
description	code
<p>complete pack of all the prosthetic components for the "D.P.F." technique on a single P.A.D. abutment the pack includes the titanium sleeve (PAD-CT-LV), the castable centring device (PAD-CC-LV), the anti-escape plug (PAD-TR-LV), the protective O-ring (PAD-ORING-LV) and the fixation screw (PAD-VP-140)</p>	<p>PAD-LV</p> 
<p>spare titanium sleeve for the "D.P.F." technique the pack does not include the fixation screw</p>	<p>PAD-CT-LV</p> 
<p>spare castable centring device for the "D.P.F." technique</p>	<p>PAD-CC-LV</p> 
<p>spare anti-escape plug for the "D.P.F." technique</p>	<p>PAD-TR-LV</p> 
<p>spare O-ring for the "D.P.F." technique</p>	<p>PAD-ORING-LV</p> 
<p>single pack pack of 10 pieces</p> <p>spare screw for P.A.D. abutment prosthetic components</p>	<p>PAD-VP-140 PAD-VP-140-10</p> 
<p>castable bar, L. 5.00 cm, ø 2.20 mm</p>	<p>BARC</p> 

Recommended torque for P.A.D. abutments screws: 20-25 Ncm.

Titanium and cobalt chrome sleeves

These sleeves are made of titanium and cobalt chrome and have a specific length guaranteeing an excellent support to the prosthesis. These sleeves, thanks to their 14.00 mm length can be used for the **fabrication of prostheses using various techniques such as casting, overcasting, luting and welding**. In order to tighten these sleeves, screws with conical support must be used, or alternatively screws with Full Head technology, available optionally.



description	code
Gr. 5 titanium sleeves non engaging h 14.00 mm straight emergence fixation screw with conical support included	L-CT-340-ROT 
Gr. 5 titanium sleeves non engaging h 14.00 mm anatomical emergence fixation screw with conical support included	L-CTR-340-ROT 
cobalt chrome sleeves non engaging h 14.00 mm straight emergence fixation screw with conical support included	L-CCRCO-340-ROT 
cobalt chrome sleeves non engaging h 14.00 mm anatomical emergence fixation screw with conical support included	L-CCRCOR-340-ROT 
single pack pack of 10 pieces fixation screw with conical support supplied with sleeves, it can also be ordered separately as a spare	L-VMS-180 L-VMS-180-10 
single pack pack of 10 pieces full head screw not supplied with sleeves, available optionally*	L-VM-180 L-VM-180-10 

Recommended torque for titanium sleeves: 20-25 Ncm.

*The fixation screws with Full Head technology (L-VM-180) must be tightened with the appropriate drivers for screws with Full Head technology contained with the Prama surgical kit.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

Important warning

It is recommended not to use standard fixation screws (code VM2-180) with these posts because standard screws do not have the conical support, so they do not interface exactly with the seat of the screw head inside these prosthetic components. Failure to observe this warning leads to the risk of unscrewing or breaking of the screw.

See technical characteristics of Gr. 5 titanium and cobalt chrome on pages 95 e 101.

Conoweld posts

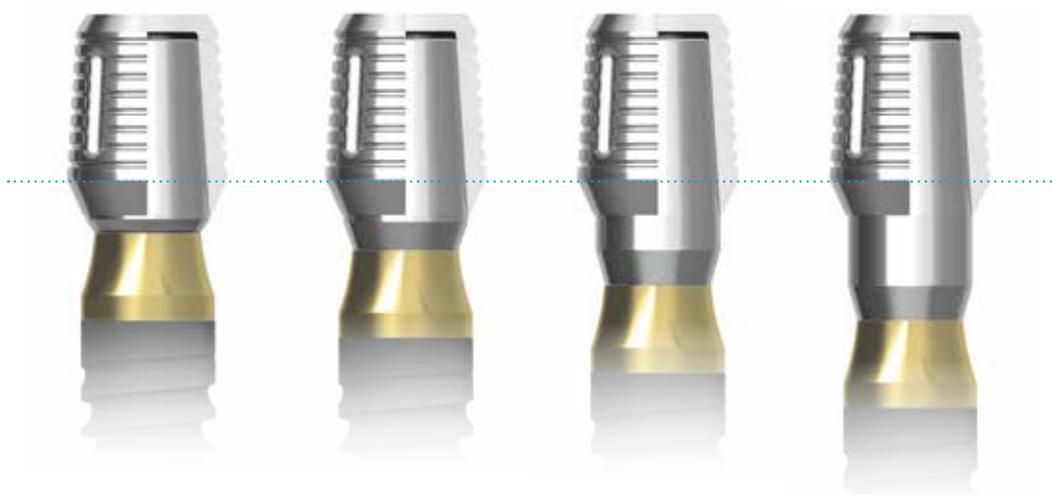
These abutments are made of Gr. 5 titanium for the purpose of using the **Conoweld conometric technique**. This technique embraces the advantages of two protocols already widely established in oral implantoprosthesis: intraoral welding and conometric retention, both for temporary and final solution, employing cement-less prosthetic components and removable by the clinician.

Conoweld posts are straight and angled at 5°, 10° and 15°



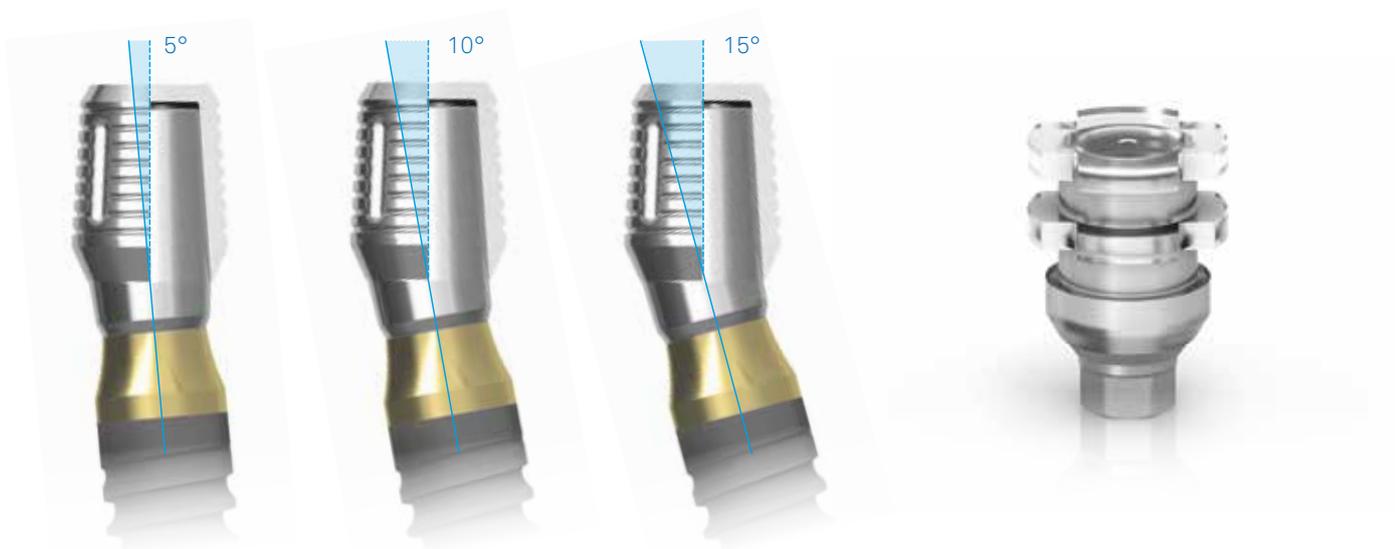
Conoweld conometric caps

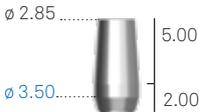
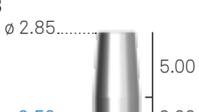
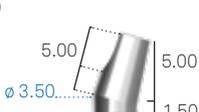
The Conoweld range includes three different caps, which are universal in relation to the diameters of the posts and the implant platforms: this is due to the fact that conometric retention is in the most coronal portion of the post, which always has the same dimensions.



The two titanium caps differ in thickness: the cap designed for the construction of a welded structure intraorally for the temporary stage is thicker in order to withstand the welding with the titanium bars, without bonding with the underlying post, while the cap designed to anchor the final prosthesis glued on is thinner, in order to reduce the impact on the anatomical morphology of the prosthesis; it should not, therefore, be used for the welding.

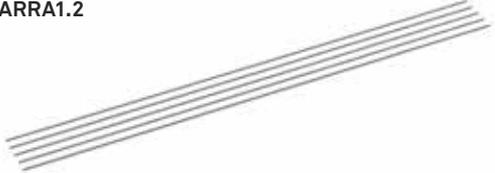
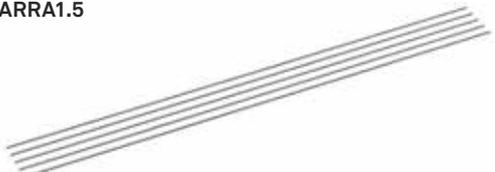
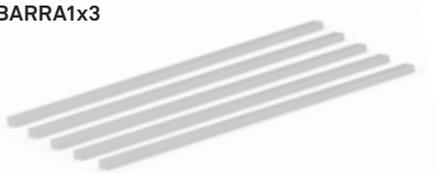
A cap in PMMA is also available, which allows a precise impression to be taken even when working without an intraoral welding machine and which can be used for modelling and casting a structure entirely in cobalt chrome or other alloys, when the decision has been taken not to use luting techniques for assembly.



description	code
<p>conoweld post in Gr. 5 titanium straight transgingival h. 0.50 mm standard fixation screw included</p>	<p>A-MD-TS-EX230-05</p> 
<p>conoweld post in Gr. 5 titanium straight transgingival h. 1.00 mm standard fixation screw included</p>	<p>A-MD-TS-EX230-1</p> 
<p>conoweld post in Gr. 5 titanium straight transgingival h. 2.00 mm standard fixation screw included</p>	<p>A-MD-TS-EX230-2</p> 
<p>conoweld post in Gr. 5 titanium straight transgingival h. 3.00 mm standard fixation screw included</p>	<p>A-MD-TS-EX230-3</p> 
<p>conoweld post in Gr. 5 titanium straight transgingival h. 5.00 mm standard fixation screw included</p>	<p>A-MD-TS-EX230-5</p> 
<p>conoweld post in Gr. 5 titanium angled at 5° standard fixation screw included</p>	<p>A-MA05-TS-EX230</p> 
<p>conoweld post in Gr. 5 titanium angled at 10° standard fixation screw included</p>	<p>A-MA10-TS-EX230</p> 
<p>conoweld post in Gr. 5 titanium angled at 15° standard fixation screw included</p>	<p>A-MA15-TS-EX230</p> 
<p>single pack pack of 10 pieces</p> <p>standard fixation screw for conoweld posts supplied with the posts and also available separately as a spare</p>	<p>VM2-180 VM2-180-10</p> 

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity. It is not possible to use the screw with conical support with these posts (code L-VMS-180).

description	code
temporary cap for intraoral welding	CAP-TS-PRO  5.70
final cap for luting	CAP-TS-DEF  5.70
cap for impression taking on Conoweld posts	CAP-TS-IMP  5.70
analog of the Conoweld posts	ANA-TS  17.00
package of 5 pieces bar in Gr. 2 titanium, l. 150 mm, \varnothing 1.20 mm	DW-BARRA1.2 
package of 5 pieces bar in Gr. 2 titanium, l. 150 mm, \varnothing 1.50 mm	DW-BARRA1.5 
package of 5 pieces bar in Gr. 2 titanium, l. 150 mm, \varnothing 1.80 mm	DW-BARRA1.8 
package of 5 pieces bar in Gr. 2 titanium, rectangular profile l 100 mm, 3x1 mm	DW-BARRA1x3 
package of 5 pieces bar in Gr. 2 titanium, rectangular profile l 100 mm, 4x2 mm	DW-BARRA2x4 

ECHO custom-made prosthesis

Maximum aesthetic results and design flexibility, in the case of custom-made prosthesis, can be reached with custom-made ECHO solutions, designed using CAD CAM technique and produced by Sweden & Martina ECHO milling centre. It is possible to realize prosthetic structures with luting technique on titanium supports (see page 76).

Titanium and PEEK Scan-transfers are available, specific for intraoral use. Analogs for models manufactured by means of 3D printers are also available (see following pages).

For further information on the ECHO system, contact Sweden & Martina CAD CAM product specialists at +39 049 9124394.

Custom-made posts and screw retained crowns:

- Biomedical Gr. 5 titanium
- Zirconium oxide with support for luting
- Layered zirconium oxide with support for luting
- Fibreglass with support for luting
- Lithium disilicate with support for luting
- Milled cobalt chrome
- Laser-sintered cobalt chrome
- PEEK
- Strengthened PEEK
- Biomedical resin for temporary posts



CAD CAM
echo



DIRECT/TORONTO screw retained bridges:

- Biomedical Gr. 5 titanium
- Milled cobalt chrome
- PEEK
- Strengthened PEEK
- Biomedical resin for temporary posts



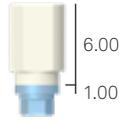
DIRECT/TORONTO Bridge and screw retained bridges with support for luting:

- Biomedical Gr. 5 titanium
- Zirconium oxide with support for luting
- Layered zirconium oxide
- Milled or laser-sintered cobalt chrome
- PEEK
- Strengthened PEEK
- Biomedical resin for temporary posts

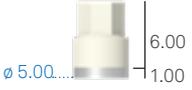


Milled bars tightened onto implants:

- Biomedical Gr. 5 titanium
- Milled cobalt chrome

description	code
<p>laboratory scanbodies in ergal to transfer implant connection position engaging standard fixation screw included</p>	<p>A-CAMETRA330</p> 
<p>scanbodies in PEEK for intraoral use standard fixation screw included</p>	<p>A-INT-CAMTRA330</p> 
<p>single pack pack of 10 pieces</p> <p>standard fixation screw supplied with the scanbodies, it can also be ordered separately as a spare</p>	<p>VM2-180 VM2-180-10</p> 
<p>single pack</p> <p>spare screw for fastening individual posts in zirconium oxide and ECHO prosthetic over-structures in zirconium oxide directly onto implants (in Gr. 5 titanium complete with lock ring washer)</p>	<p>A-CAMTVABU180</p> 
<p>single pack pack of 10 pieces</p> <p>spare standard fixation screw for ECHO prosthetic over-structures in titanium and cobalt chrome screw retained directly onto implants (in Gr. 5 titanium)</p>	<p>VM2-180 VM2-180-10</p> 

Recommended torque for scanbodies: 20-25 Ncm.

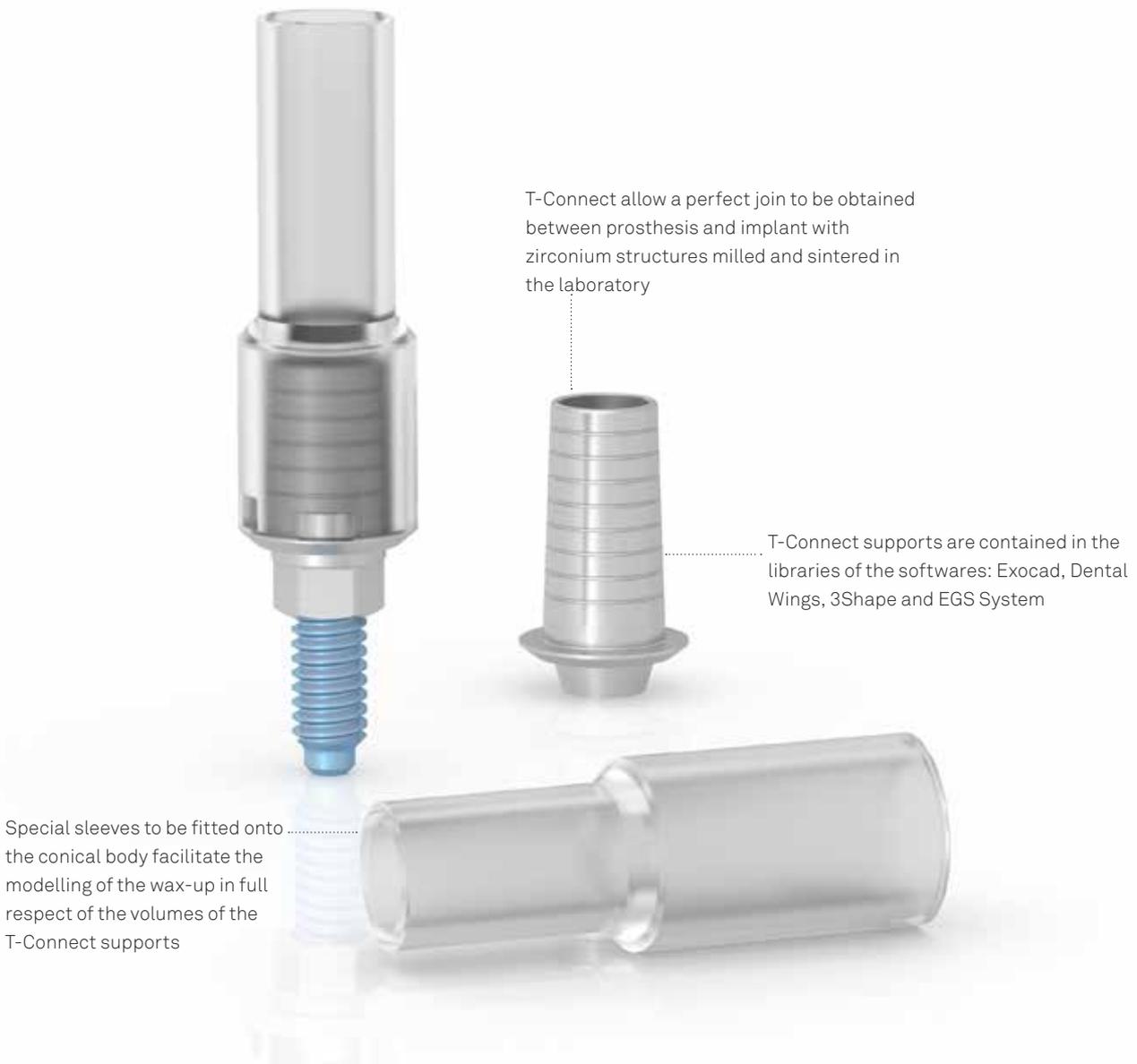
description	code
laboratory scanbodies in Ergal to transfer P.A.D. connection position engaging fixation screw included	PAD-CAMETRA500 
scanbodies in peek for intraoral use for P.A.D. abutments fixation screw included	PAD-INT-CAMTRA 
single pack spare screw for fastening prosthetic over-structures in zirconium oxide on P.A.D. abutments in Gr. 5 titanium, complete with lock ring washer	PAD-VCAM-140 
single pack pack of 10 pieces spare screw for fastening ECHO prosthetic over-structures in titanium and cobalt chrome on P.A.D. abutments in Gr. 5 titanium	PAD-VP-140 PAD-VP-140-10 
pack of 10 pieces spare lock ring washers for the head of the fixation screw, for individual ECHO posts in zirconium oxide, made of classic PEEK, and for zirconium oxide over-structures	CAMPRON205-10 

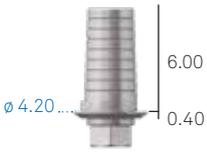
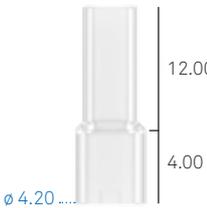
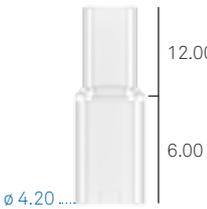
Recommended torque for Scanbodies: 20-25 Ncm.

T-Connect

T-Connect supports are made of Gr. 5 titanium and can be used to create custom-made posts for **single or multiple screw retained prostheses as Toronto which lean on the connection platform**. Posts and structures can be fabricated in titanium, zirconia, cobalt-chrome, PEEK and biomedical resin, by means of open CAD CAM systems, including ECHO by Sweden & Martina, without sacrificing the micrometric precision in coupling between platforms that can be obtained with conventional components. ECHO users too can choose to use T-Connect supports: posts in zirconium produced in this way have a small titanium base that prevents the contact between the zirconium body and the implant platform. If posts are realized using ECHO software, see page 74 for the scanbody codes to use.

For further information about compatible systems contact the Sweden & Martina CAD CAM product specialists at +39 049 9124394.



description	code
<p>T-Connect engaging cone h 4.00 mm fixation screw included</p>	<p>A-BASTZR-S-330-4</p> 
<p>T-Connect engaging cone h 6.00 mm fixation screw included</p>	<p>A-BASTZR-S-330-6</p> 
<p>T-Connect non engaging cone h 4.00 mm fixation screw included</p>	<p>A-BASTZR-M-330-4</p> 
<p>T-Connect non engaging cone h 6.00 mm fixation screw included</p>	<p>A-BASTZR-M-330-6</p> 
<p>sleeve for wax-up modelling on T-Connect supports with cone h 4.00 mm</p>	<p>A-CCBAS-330-4</p> 
<p>sleeve for wax-up modelling on T-Connect supports with cone h 6.00 mm</p>	<p>A-CCBAS-330-6</p> 
<p>single pack pack of 10 pieces</p> <p>standard fixation screw supplied with T-Connect, it can also be ordered separately as a spare</p>	<p>VM2-180 VM2-180-10</p> 

Recommended torque for T-Connect: 20-25 Ncm.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

It is not possible to use the screw with conical support with these posts (code L-VMS-180).

Prama IN T-Connect

Prama IN T-Connect supports can be used to create custom-made **posts for single prostheses or Toronto multiple screw retained structures closing on the neck of the implant for a height of 0.50 mm**. Posts and structures can be made of titanium, zirconium, cobalt-chrome, PEEK and biomedical resin, using open CAD CAM systems, including Sweden & Martina's ECHO, without sacrificing micrometric precision in coupling between platforms that can be obtained with conventional components.

Prama IN T-Connect supports can be also used for luting crowns or multiple structures fabricated in the laboratory with the traditional casting techniques.

For posts made with ECHO software, see pages 78-79 for the codes of the scanbodies to be used.

For further information on compatible systems please contact the Sweden & Martina CAD CAM product specialists at +39 049 9124394.



Made of Gr. 5 titanium, Prama IN T-Connect supports are subjected to a controlled passivation process that changes their surface colour: the result is a characteristic golden pale yellow colour for a highly aesthetic surface



Prama IN T-Connect supports are contained in the libraries of the softwares: Exocad, Dental Wings and 3Shape



The castable sleeve can be used for wax-up modelling for laboratory scanning

implant ϕ	3.80 mm	4.25 mm	5.00 mm
T-Connect engaging cone h 4.00 mm fixation screw with conical support included	L-BASTZR-S-380-4-05 	L-BASTZR-S-425-4-05 	L-BASTZR-S-500-4-05
T-Connect engaging cone h 6.00 mm fixation screw with conical support included	L-BASTZR-S-380-6-05 	L-BASTZR-S-425-6-05 	L-BASTZR-S-500-6-05
T-Connect non engaging cone h 4.00 mm fixation screw with conical support included	L-BASTZR-M-380-4-05 	L-BASTZR-M-425-4-05 	L-BASTZR-M-500-4-05
T-Connect non engaging cone h 6.00 mm fixation screw with conical support included	L-BASTZR-M-380-6-05 	L-BASTZR-M-425-6-05 	L-BASTZR-M-500-6-05
sleeve for wax-up modelling on Prama IN T-Connect supports with cone h 4.00 mm	A-CCBAS-330-4 	A-CCBAS-425-4 	A-CCBAS-500-4
sleeve for wax-up modelling on Prama IN T-Connect supports with cone h 6.00 mm	A-CCBAS-330-6 	A-CCBAS-425-6 	A-CCBAS-500-6
single pack pack of 10 pieces fixation screw with conical support supplied with Prama IN T-Connect, it can also be ordered separately as a spare	L-VMS-180 	L-VMS-180 	L-VMS-180

Recommended torque for Prama IN T-Connect: 20-25 Ncm.

Important warning

It is recommended not to use standard fixation screws (code VM2-180) with these posts because standard screws do not have the conical support, so they do not interface exactly with the seat of the screw head inside these prosthetic components. Failure to observe this warning leads to the risk of unscrewing or breaking of the screw.

Important warning

It is recommended always to use test screws for the laboratory phases and to keep the new screw supplied for the final fastening in the oral cavity.

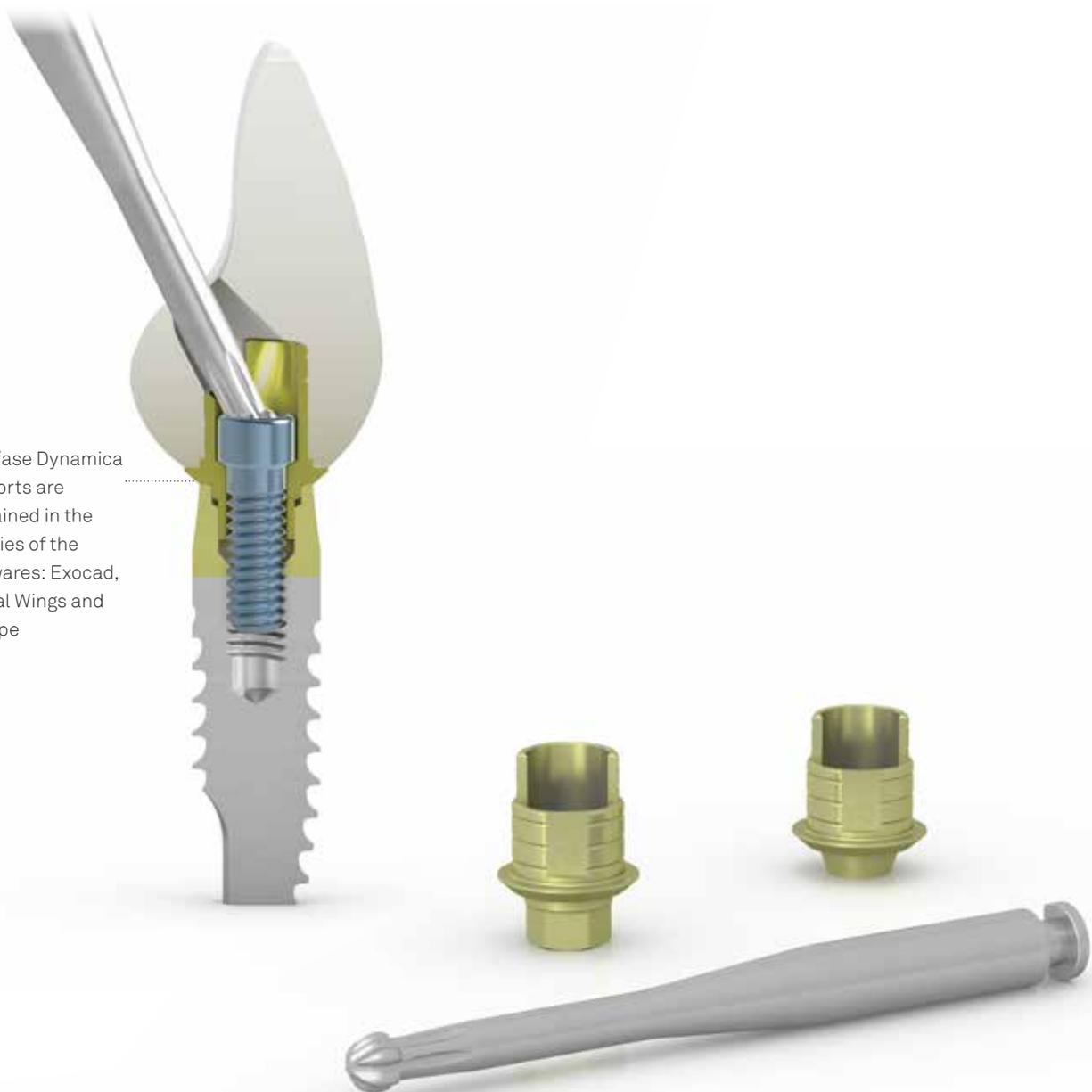
See technical characteristics of Gr. 5 titanium on page 95.

Interfase Dinamica

Interfase Dinamica* supports are a patented solution that allows to **produce prostheses in the aesthetic zone designed with CAD CAM systems**. Their morphology permits to **move the screw hole more palatally or lingually, so avoiding unsightly vestibular holes**. The supports must be tightened with a screwdriver with a special hexalobular design, which allow the head of the screw to be engaged even in presence of extreme angulations, up to a maximum of 30°.

Interfase Dinamica supports are available in indexed version with hexagon as well as in rotating version, and allow to produce crowns, posts and multiple structures with luting technique in different materials with open CAD CAM systems, including ECHO by Sweden & Martina.

Interfase Dinamica supports are contained in the libraries of the softwares: Exocad, Dental Wings and 3Shape



**Interfase Dinamica supports are medical devices manufactured and patented by Talladium España S.L., Avenida Blondel, 54 3º, 25002 Lleida, Spain. Interfase Dinamica is a registered trademark of the same company.*

description	code
Interfase Dynamica angled at 25° engaging fixation screw not included	IND3PKH330/TIA 
Interfase Dynamica angled at 25° non engaging fixation screw not included	IND3PKR330/TIA 
fixation screw not included with Interfase Dynamica supports, available separately	TPDH18L66 

description	code
screwdriver for Interfase Dynamica, length 24 mm not included in the surgical kit, available separately	DSPDCLH-24 
screwdriver for Interfase Dynamica, length 32 mm not included in the surgical kit, available separately	DSPDCLH-32 

Recommended torque for Interfase Dynamica supports: 20-25 Ncm.

Locator Abutment

Locator Abutments* are a patented and versatile prosthetic solution for attaching overdentures to dental implants easily and safely. The Locator system allows easily **correcting misalignment of divergent implants by up to 40° (20° for each implant) in limited occlusal spaces** and, given the limited amount of space occupied, is perfect for patients with a removable prosthesis. The abutments are made of Gr. 5 titanium and are available in different transgingival heights; they must be tightened at 25-30 Ncm, using the special drivers (see the codes on page 89). See following pages for the list of accessories available.



The Locator system has a practical steel or titanium cap where the retainer lodges inside the prosthesis. When the retainer loses retentiveness, it can be easily replaced because there is no need to extract it from the resin by removing material from the prosthesis, but it can be simply extracted from the metal cap, which remains attached to the prosthesis

The self-guiding design of the head of the Locator abutment allows easy insertion of the prosthesis. The self-alignment of the prosthesis reduces deterioration of the pieces and increases the life of the device

**Locator abutments are medical devices manufactured and patented by Zest Anchors, Inc., 2061 Wineridge Place, Escondido, CA 92029, USA. Locator is a registered trademark of Zest Anchors, Inc. The European Agent for the purposes of MDD 93/42/EEC is Ventura Implant and Attachment Systems, 69 The Avenue, Ealing, London W13 8JR, England.*

description	code
Locator Abutment straight emergence transgingival h. 1.00 mm	1670 
Locator Abutment straight emergence transgingival h. 2.00 mm	1671 
Locator Abutment straight emergence transgingival h. 3.00 mm	1672 

Recommended torque for Locator Abutments: 25-30 Ncm.

Accessories for overdenture on Locator

description	code
kit containing 2 Gr.5 titanium caps, 2 spacer rings in silicon rubber, 2 black polyethylene retainers (LDPE 993I) with low retention capacity for impression taking and 2 nylon retainers for each of the 4 different retention capacities	8519-2 
kit containing 2 Gr.5 titanium caps, 2 spacer rings in silicon rubber, 2 black polyethylene retainers (LDPE 993I) with low retention capacity for impression taking and 2 nylon retainers for each of the 4 different retention capacities, designed for severe disparallelism	8540-2 
kit containing 2 steel caps, 2 spacer rings in silicon rubber, 2 black polyethylene retainers (LDPE 993I) with low retention capacity for impression taking and 2 nylon retainers for each of the 4 different retention capacities	8550-2 
pack of 20 spacer rings in silicon rubber, for the prosthesis relining phase	8514 
pack of 4 black polyethylene retainers (ldpe 993i) with low retention capacity for impression taking	8515 
pack of 4 transparent nylon retainers, retention 5 lb corresponding to 2268 g	8524 
pack of 4 pink nylon retainers, retention 3 lb corresponding to 1361 g	8527 
pack of 4 blue nylon retainers, retention 1.5 lb corresponding to 680 g	8529 
pack of 4 green nylon retainers, retention 4 lb corresponding to 1814 g	8547 
pack of 4 red nylon retainers, retention 1 lb corresponding to 450 g	8548 
pack of 4 orange nylon retainers, retention 2 lb corresponding to 907 g	8915 

description	code
<p>pack of 4 aluminium analogs for Locator abutments, one size for all platforms</p>	<p>8530</p> 
<p>pack of 4 aluminium transfers for Locator abutments, one size for all platforms. 4 black polyethylene retainers (LDPE 993I) with low retention included (code 8515), available also as a spare</p>	<p>8505</p> 
<p>pack of 4 black nylon parallelism pins (LDPE 993I) for Locator abutments</p>	<p>8517</p> 
<p>steel plate AISI 316L for measuring angles</p>	<p>9530</p> 
<p>Locator Core Tool. Steel instrument composed of a handle, driver (8390) for screwing Locator abutments, tip (8397) for inserting the retainers in the caps and the retention jacket (8394) for the driver (8390) for transferring the Locator abutments into the oral cavity</p>	<p>8393</p> 
<p>steel push rod for inserting the retainers in the caps Not necessary for those who already own or order the complete Locator Core Tool separately</p>	<p>8397</p> 
<p>steel driver for abutment screwing/unscrewing Not necessary for those who already own or order the complete Locator Core Tool separately</p>	<p>8390</p> 
<p>retention jacket for the driver (8390) for transferring the Locator abutments into the oral cavity</p>	<p>8394</p> 
<p>short driver in Gr. 5 titanium for screwing the Locator abutments the driver is compatible with the dynamometric ratchet</p>	<p>8926-SW</p> 
<p>long driver in Gr. 5 titanium for screwing the Locator abutments the driver is compatible with the dynamometric ratchet</p>	<p>8927-SW</p> 

Overdentures anchored with ball attachments

The anchoring system with ball attachments, also known as ball joints, is composed of a Gr. 5 titanium post with spherical top with a diameter of 2.20 mm and of a selection of many anchoring matrices that can be directly incorporated into the removable prosthesis. See the following pages for a list of the matrices available and the respective accessories.

The ball attachments present a small hexagon at the base of the sphere, used to connect the driver



description	code
ball attachments straight emergence transgingival h 1.00 mm	A-AS-330-1 
ball attachments straight emergence transgingival h 2.00 mm	A-AS-330-2 
ball attachments straight emergence transgingival h 4.00 mm	A-AS-330-4 
analog of the ball attachment	ANAS 
steel driver for ball attachments, with connector for dynamometric ratchet or digital connector	BASCC-EX 

Recommended torque for ball attachments: 25-30 Ncm.

Accessories for overdentures on ball attachments

Polyamide caps for ball attachments

description	code
polyamide cap for ball attachments \varnothing 2.20 mm	CAP-TFL-1 
steel container for polyamide cap with outer \varnothing 4.80 mm the total height is 3.20 mm	CONT-CAP-TFL-1 

Titanium caps for ball attachments

description	code
titanium cap complete with cap in two parts, titanium retention spring, and plastic mounting ring for ball attachments \varnothing 2.20 mm. the total height is 3.20 mm	CAP-TIT-1 
spare plastic ring for titanium cap h 2.20 mm	AN-CAP-TIT-1 
spare retention spring for titanium caps, average hardness, steel, \varnothing 3.20 mm	MOL1-CAP-TIT-1 
spare retention spring for titanium cap, soft, for progressive adaptation of the prosthesis, steel, \varnothing 3.20 mm	MOL2-CAP-TIT-1 
driver for mounting and maintenance of the titanium cap CAP-TIT-1	AVV-CAP-TIT-1 

Caps in gold alloy for ball attachments

description	code
cap in gold alloy 2, complete with plastic positioning ring for ball attachments \varnothing 2.20 mm. The total height is 3.10 mm, and the outside diameter is 3.50 mm	CAP-1 

O-ring retention devices for ball attachments

description	code
pack of 6 pieces metal container in the shape of a ring for rubber O-rings. for ball attachments \varnothing 2.20 mm, outside \varnothing 4.50 mm, h 1.50 mm	1500502 
pack of 12 pieces red ring in silicon for laboratory use, outside \varnothing 4.50 mm h 1.50 mm	1500505 
pack of 12 pieces white ring in natural rubber, soft, outside \varnothing 4.50 mm h 1.50 mm	1500504 
pack of 12 pieces black ring in natural rubber, hard, outside \varnothing 4.50 mm h 1.50 mm	1500503 

Overdenture on bars

description	code
castable bar, L. 5.00 cm, h. 3.00, thickness 2.20 mm ovoid-shaped profile with spacer	BARC-CAV-TIT 
divisible bar attachment in titanium for oval bars h. 3.00 mm, thickness 2.20 mm	CAV-TIT 
castable bar, L. 5.00 cm, \varnothing 2.20 mm	BARC 
bar attachment in gold alloy 3, for round bars \varnothing 2.20 mm	CAV-375 

Composition of the materials

Gr. 4 titanium (Cold worked)* ASTM F67-13, ISO 5832-2:2012 for implants and surgical cover screws

chemical composition	maximum allowed values (%)	tolerance
nitrogen	0.05	+/- 0.02
carbon	0.10	+/- 0.02
hydrogen	0.015	+/- 0.002
iron	0.25	+/- 0.10 (%<0.25) +/- 0.15 (%>0.25)
oxygen	0.20	+/- 0.02 (%<0.20) +/- 0.03 (%>0.20)
titanium	remainder	-

**This technical information complies with the express specifications of the regulations in force on the use of Gr. 4 titanium in implantology:*

- ASTM F67-13: Standard Specification for unalloyed titanium, for surgical implant applications.
- ISO 5832-2: 2012: Implants for surgery – Metallic materials – Part 2: Unalloyed titanium.

Please note: the use of **cold-worked** Gr. 4 titanium bars for the production of Sweden & Martina implants allows the exploitation of mechanical characteristics higher than those required by applicable standards. Furthermore, the excellent results documented since 1996 corroborate the choice of the cold-working production process and of **ZirTi surface** treatments, which express and enhance the raw material potential selected by Sweden & Martina.

Gr. 5 titanium* ASTM F136-13, ISO 5832-3:2012 for prosthetic components

chemical composition	maximum allowed values (%)	tolerance
nitrogen	0.05	+/- 0.02
carbon	0.08	+/- 0.02
hydrogen	0.012	+/- 0.002
iron	0.25	+/- 0.10
oxygen	0.13	+/- 0.02
alluminio	5.5÷6.5	+/- 0.40
vanadium	3.5÷4.5	+/- 0.15
titanium	a bilancio	-

* This technical information complies with the express specifications of the regulations in force on the use of Gr. 5 titanium in implantology:

- ASTM F 136-13: Standard Specification for wrought Titanium-6 Aluminium-4 Vanadium Eli (Extra low interstitial) Alloy for surgical applications;
- ISO 5832-3:2012: Implants for surgery – Metallic materials – Part 3: Wrought Titanium-6 Aluminium-4 Vanadium Alloy.

Gr. 2 titanium* ASTM F67-13, ISO 5832-2:2012 for bars

chemical composition	maximum allowed values (%)	tolerance
nitrogen	0.03	+/- 0.02
carbon	0.08	+/- 0.02
hydrogen	0.015	+/- 0.002
iron	0.30	+/- 0.10 (%<0.25) +/- 0.15 (%>0.25)
oxygen	0.25	+/- 0.02 (%<0.20) +/- 0.03 (%>0.20)
titanium	remainder	-

* This technical information complies with the express specifications of the regulations in force on the use of titanium Gr. 2 in implantology.

Resina REEF

REEF resin	
description	acrylic material resistant to bacterial colonization
colour	translucent white

physical and mechanical properties	
hardness (ASTMD92/ISO 6507)	17.5 +/- 0.5 Vickers
tensile strength	28.3 +/- 3.8 Mpa
compressive strength (ASTM D3410)	404.2 +/- 22 Mpa
bending strength (ASTM D790M)	67.5 +/- 15.3 Mpa

PEEK

PEEK	
chemical designat	polyether ether ketone
colour	opaque white cream

physical and mechanical properties	
density	1.14 g/cm ³
modulus of elasticity in tension (DIN EN ISO 527-2)	4100 MPa
yield strength (DIN EN ISO 527-2)	>90 MPa
yield strength at 0.2% (DIN EN ISO 527-2)	>70 MPa
elongation at 0.2% (DIN EN ISO 527-2)	5 %
elongation at break (DIN EN ISO 527-2)	13 %
flexural strength (DIN EN ISO 178)	174 MPa
modulus of flexural elastici (DIN EN ISO 178)	4000 MPa
modulus of compressibility (EN ISO 604)	3500 MPa

thermal properties	
glass transition temperature	150 °C
maximum temperature for short-term use	300 °C
maximum temperature for continuous use	260 °C

chemical properties	
absorption at 23°C in 24/96 hours (DIN EN ISO 62)	0.02/0.03%

PMMA

PMMA	
chemical designation	polymethylmethacrylate
colour	transparent

physical and mechanical properties	
density	1.19 g/cm ³
yield strength (DIN EN ISO 527-2)	80 MPa
elongation at break (DIN EN ISO 527-2)	5.5 %
modulus of elasticity in tension (DIN EN ISO 527-2)	3300 MPa
hardness ball falling (ISO 2039-1)	175 MPa
impact strength (Charpy) (DIN EN ISO 179-1eU)	15 kJ/m ²

thermal properties	
maximum temperature for continuous use	80 °C
maximum temperature for short-term use	85 °C
coefficient of linear thermal expansion (0-50 °C, long) (DIN 53752-A)	7x10 ⁻⁵ 1/K
thermal conductivity (DIN 52612)	0.19 W/(K*m)
Heat Deflection Temperature (HDT-B) at 0.46 MPa (DIN ISO 75)	113 °C
Heat Deflection Temperature (HDT-A) at 1.80 MPa (DIN ISO 75)	105 °C

POM

POM	
chemical designation	polyoxymethylene (copolymer)
colour	opaque white

physical and mechanical properties	
density	1.41 g/cm ³
yield strength (DIN EN ISO 527-2)	67 MPa
elongation at break (DIN EN ISO 527-2)	32%
modulus of elasticity in tension (DIN EN ISO 527-2)	2800 MPa
hardness ball falling (ISO 2039-1)	165 MPa
impact strength (Charpy) (DIN EN ISO 179-1eU)	Not broken

thermal properties	
melting point (DIN 53765)	166 °C
maximum temperature for continuous use	100 °C
maximum temperature for short-term use	140 °C
specific thermal capacity	1,4 J/(g*K)
thermal expansion (CLTE) 23°C-60°C (DIN EN ISO 11359-1;2)	13x10 ⁻⁵ 1/K
thermal expansion (CLTE) 23°C-100°C (DIN EN ISO 11359-1;2)	14x10 ⁻⁵ 1/K

chemical properties	
absorption (DIN EN ISO 62) 24h/96h (23 °C)	0.05/0.1%

Gold alloy

gold alloy	gold alloy 1	gold alloy 2	gold alloy 3
chemical designation	gold alloy 1	gold alloy 2	gold alloy 3
colour	white	yellow	yellow

composition	% of reference		
Au	60 %	> 68.60 %	70 %
Pt	24 %	2.45 %	8.5 %
Pd	15 %	3.95 %	-
Ir	1 %	0.05 %	0.10 %
Ag	-	11.85 %	13.40 %
Cu	-	10.60 %	7.50 %
Zn	-	2.50 %	0.50 %
Au+group metals	-	75.35 %	-
Ru	-	-	-

physical and mechanical properties			
density	18.1 g/cm ³	15.0 g/cm ³	15.7 g/cm ³
melting range	1400 ÷ 1460 °C	880 ÷ 940 °C	895 ÷ 1010 °C
modulus of elasticity in tension	115 GPa	97 GPa	100 GPa
Vickers hardness HV1 (gold alloy1) HV5 (gold alloy 2, gold alloy 3)	160 (annealed) 250 (tempered) 220 (after deformation) 240 (after casting)	> 240	170 (annealed) 295 (after deformation)
limit of elasticity	400 MPa (annealed) 700 (after deformation) 800 (after casting)	> 710 MPa	380 MPa (annealed) 730 (after deformation)
elongation	20 % (annealed) 15 % (after deformation) 1 % (after firing)	> 4 %	37 % (annealed) 13 % (after deformation)

- Gold alloy "1": all castable posts with a premade alloy base (e.g. VSR-UCR. etc).
- Gold alloy "2": CAP-1 cap for ball attachments in gold alloy.
- Gold alloy "3": CAV-375 bar attachment for round bars \varnothing 2.20 mm

Cobalt chrome alloy

chemical composition	maximum allowed values(%)
C	0.10
Mn	1.00
Cr	26.00 ÷ 30.00
Ni	1.00
Mo	5.00 ÷ 7.00
N	0.25
Fe	0.75
Co	remainder

physical and mechanical properties	
density	8.27 g/cm ³
modulus of elasticity in tension	241 GPa
yield strength (0.2%)	585 MPa
tensile stress	1035 MPa
elongation at yield	25 %
section reduction	23 %
hardness	30 HTc

thermal properties	
melting range	1400 ÷ 1450 °C
coefficient of thermal expansion at 500 °C	14.15
coefficient of thermal expansion at 600 °C	14.47
thermal conductivity at 600 °C	25.76W/mK

Bibliography on Sweden & Martina implants



Sweden& Martina offers to dentists the opportunity to promptly get an update on the international scientific studies on its implant systems with the volumes SCIENTIFICA, where you can find the abstracts of all publications in the most relevant international papers specialized in implantology.



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We have met the good manufacturing standards (GMP) set forth by many countries worldwide, including the United States FDA.



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