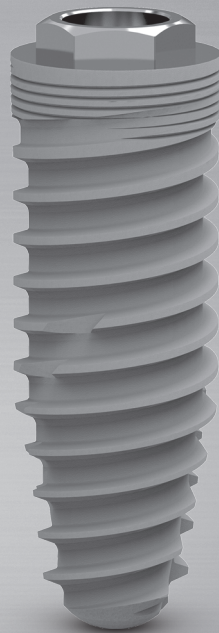
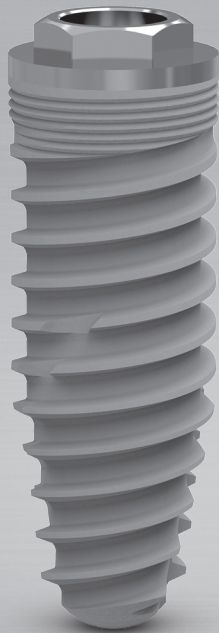




Surgical procedure manual

ZM4[®]MT

ZM1[®]



ZM4[®]MT ZM1[®]

Surgical procedure manual



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Important information

Read this carefully before using ZIACOM® products

General information

This document contains basic information about the use of ZIACOM® Dental Implant Systems, henceforth, ZIACOM® products. This document has been written as a quick reference guide for the professional in charge of the treatment, henceforth, "User". It does not provide sufficient indications and technical specifications for the use of ZIACOM® products. It is neither an alternative nor a substitute for specialised training and professional clinical experience.

ZIACOM® products must be used in accordance with proper treatment planning and in strict accordance with the surgical and prosthetic protocols established by the manufacturer. Before using a ZIACOM® product, please read the specific surgical and prosthetic protocols as well as the operating and maintenance instructions carefully. You can consult them on our website www.ziacom.es or request them from your nearest ZIACOM® authorised distributor.

Information about responsibility, safety and guarantee.

The indications for use and handling of ZIACOM® products are based on the published international literature, current clinical standards and our clinical experience with our products and should therefore be understood as general indicative information. The handling and use of ZIACOM® products, as they are beyond the control of Ziacom Medical SLU, are the sole responsibility of the user. Ziacom Medical SLU, its subsidiaries and/or its official distributors decline all responsibility, express or implicit, totally or partially, for any possible damage or loss caused by the improper handling of the product or by any other fact not contemplated in its protocols and manuals for the correct use of its products.

The user of the product must ensure that the ZIACOM® product used is suitable for the intended procedure and purpose. Neither these instructions for use nor the protocols for working with or handling the products relieve the user of this obligation. The use, handling and clinical application of ZIACOM® products must be carried out by qualified professional personnel with the necessary qualifications according to the current legislation of each country.

The use, handling and/or application, fully or in part, of ZIACOM® products in any of their manufacturing phases by unqualified personnel or without the necessary qualifications, automatically voids any type of guarantee and may cause serious damage to the patient's health.

ZIACOM® products are part of an own system, with its design features and working protocols, which include dental implants, abutments and prosthetic components and surgical or prosthetic instruments. The use of ZIACOM® products in combination with elements or components from other manufacturers can lead to treatment failure, serious damage to bone structures, tissue and patient health, as well as undesired cosmetic results. For this reason, only original ZIACOM® products should be used.

The clinician, who is responsible for the treatment, is solely responsible for ensuring that original ZIACOM® products are used and that they are used in accordance with the instructions for use and the corresponding handling protocols throughout the entire implant treatment process. The use of ZIACOM® components, instruments or any other non-original product used alone or in combination with any of the original ZIACOM® products will automatically void any guarantee on the original ZIACOM® products.

Please consult the ZIACOM® Guarantee Program on our website www.ziacom.es

Warning Non entire ZIACOM® products are available in all countries. Please consult their availability.

ZIACOM®, Zinic®, Zinic®MT, Zinic®Shorty, OEX®, OEX®MT, OEX®ST, OIN®, OIN®MT, OIN®ST, OXP®, ZMK®, ZMR®, OST®, ZM1®, ZM1®MT, ZM4®, ZM4®MT, ZM8®, ZM8®N, ZM8®S, Galaxy®, ZV2®, Zinic®3D, TPlus®, XPlus®, ZPlus®, Z2Plus®, 3DPlus®, Kiran®, Kirator®, ZM-Equator®, Basic®, XDrive®, ZiaCam®, ZIACOR®, Tx30®, Zellplex®, ZellBone®, PlexGuide®, OsseosBCP®, OsseosTCP®, Osseolife®, Osseonova®, DSQ®, Zitium® and all logos are trademarks of Ziacom Medical SLU.

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ZM4[®]MT y ZM1 | External hexagonal connection implants

ZM4[®]MT

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ZM1[®]

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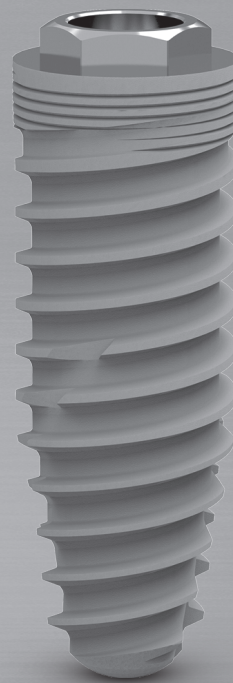
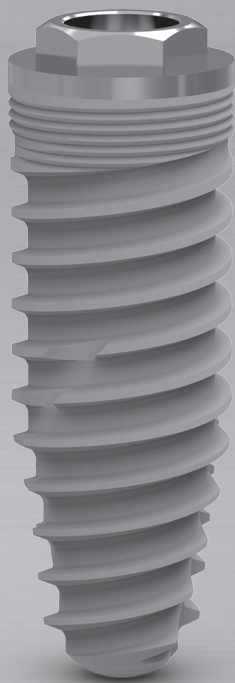
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ZM4[®]MT ZM1[®]

External hexagonal connection implants

- **Features**
 - » Connection
 - » Cortical area
 - » Body
- **Available diameters and lengths**
- **Usage recommendations**
 - » Clarifications on measurement and drilling techniques:
- **ZPlus[®] Mount**
 - » Packaging and product handling
 - » Features and references
- **Z2Plus[®] Mount**
 - » Packaging and product handling
 - » Features and references



ZM4[®]MT

Features

CONNECTION

- » External hexagonal connection: simplicity and versatility
- » Upper screw canal: facilitates the insertion of the screws

CORTICAL AREA

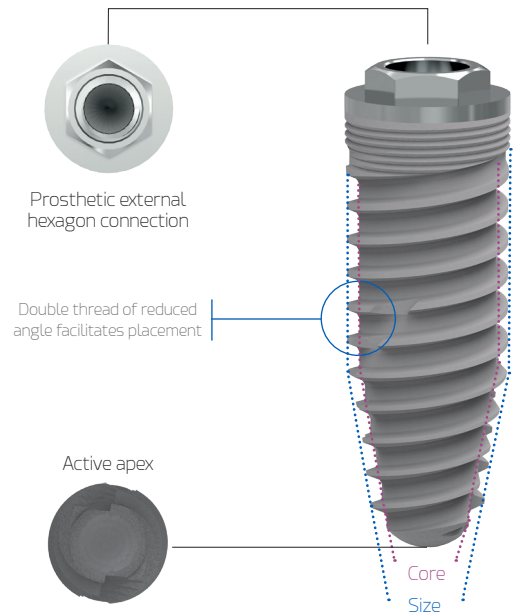
- » Mechanised ring 0,4mm: allows to raise the prosthetic gap according to the crestal bone in medium-thick biotypes; voiding to expose the treated surface in irregular crest
- » Micro-thread design: preserves marginal bone
- » Micro-thread extension: improves load distribution
- » Macro-design: excellent cortical compression

BODY

- » Reduced angle lead threads: provide stability during insertion and increase BIC (bone-implant contact)
- » Double lead thread: quick insertion and reduction of surgical time.
- » Active apex (self-tapping): makes the implant insertion easy with undersized drilling technique
- » Transversal apical vents: collect bone detritus during the insertion
- » Optimised morphology: high primary stability
- » Atraumatic apex: protects anatomical structures

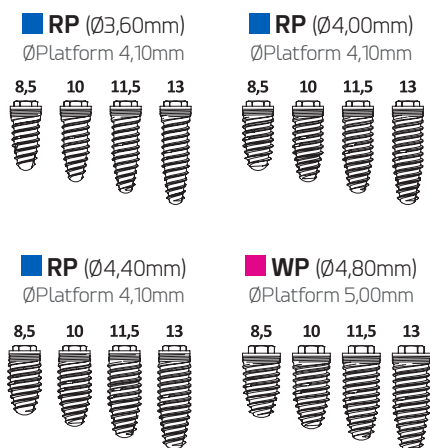
TAPERED DESIGN

- » Facilitates bone formation in soft bone type
- » Suitable for immediate loading
- » For apical collapse situations

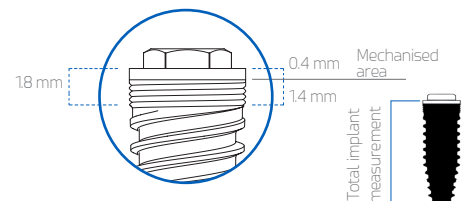


Available diameters and lengths

Lengths in mm

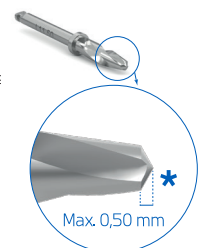


Implant coronal area measurements



IMPORTANT:

- *When choosing the implant size, take into account the overdrilling due to the length of the drill tip.



Usage recommendations

All implant planning must respect the natural biomechanical stability of the oral cavity and allow the natural emergence of the dental crown, through the soft tissue, by means of an implant with a prosthetic platform whose diameter is proportionally smaller than the emergence diameter of the tooth to be restored. The implantologist must assess the quantity and quality of bone in the recipient area of the implant and consider the need for prior or simultaneous bone regeneration as appropriate.

ZIACOM® has a broad range of implants to cover every restoration possibilities.

In the odontogram, the squares identified with letters, represent the diameters and platforms of the implants recommended for those dental positions. These recommendations apply to teeth replacement with single restoration, bridges and partial or total implant-retained tissue-supported prosthesis.

Remember to maintain minimum distances between adjacent implants and and/or implants and teeth, to preserve papillae, bone vascularisation and natural emergence profiles.

The choice of the appropriate implant, in each case, is the exclusive responsibility of the clinician. Ziacom Medical recommends taking into account warnings based on scientific evidence contained in product catalogues and website.

CLARIFICATIONS ON MEASUREMENT AND DRILLING TECHNIQUES:

- **IMPLANT SIZE:** identifies implant diameter and length.
- **IMPLANT BODY:** implant core diameter.
- **DRILL MEASUREMENT:** corresponds to the drill diameter and length.
- **UNDERSIZED DRILLING TECHNIQUE:** surgical site preparation with final drill of lower diameter than the implant body. Technique associated with high insertion torque and increased primary stability.
Important: possible increased risk of bone necrosis due to pressure.
- **SIMPLIFIED DRILLING TECHNIQUE:** technique proposed by Coelho and Cols in 2013 (1). It consists of the use of pilot drill and final drill corresponding to the size of the implant. It reduces drilling sequence but with risk of bone necrosis due to thermal increase.

(1) The effect of simplifying dental implant drilling sequence on osseo-integration: an experimental study in dogs.

Giro G1, Tovar N, Marin C, Bonfante EA, Jimbo R, Suzuki M, Janal MN, Coelho PG. Int J Biomat. 2013;2013:230310. doi: 10.1155/2013/230310. Epub 2013 Jan 30.

Odontogram

ZM4[®]MT

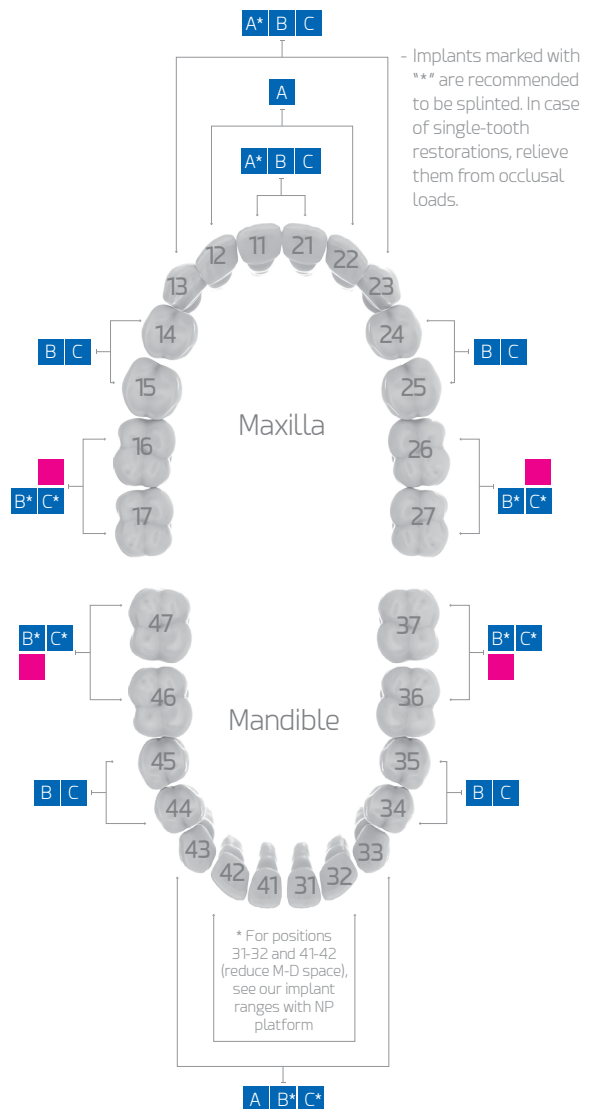
Implant diameter (1)

A RP Ø3,60mm **B** RP Ø4,00mm **C** RP Ø4,40mm **WP** Ø4,80mm

(1) Diameters are available for analog platforms.

Coronal implant diameter

■ RP Ø4,10mm **■** WP Ø5,00mm



ZPlus® Mount

Packaging and product handling

1. Click on the word "PRESS" and rip the carton.



2. Remove the cardboard flap and take out the blister.



3. Carefully remove the blister seal from the implant

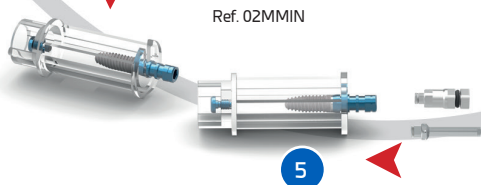


4. Drop the vial on the sterile cloth in surgical area.



5. Hold the vial horizontally with one hand and insert the manual or CA adapter into the ZPlus® Mount.

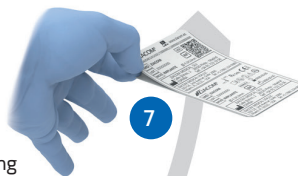
Ref. XSMIN,
Ref. TSMIN,
Ref. TLMIN,
Ref. 01MMIN or
Ref. 02MMIN



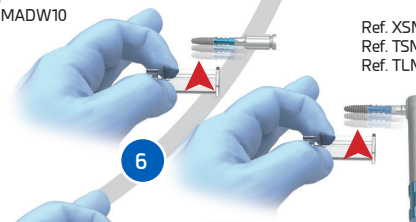
7. Remember to remove the label from the implant to paste it onto the patient's implantation document and thus maintain product traceability

6. Remove the implant-ZPlus® assembly by pulling it up vertically to the vial

Ref. XSMIN,
Ref. TSMIN or
Ref. TLMIN + MADW10



Ref. XSMIN,
Ref. TSMIN or
Ref. TLMIN + RATC50



Ref. 01MMIN or
Ref. 02MMIN + contra-angle

ZIACOM® ZPlus® are packaged in a sealed carton box with a product label for immediate identification. It contains:

- **Instructions for Use (IFU).**
- **Implant blister:** heat-sealed, with product identification labels for correct traceability. Its flap facilitates opening in clinic and prevents accidental opening. Contains: implant carrier vial.
- **Implant carrier vial:** contains suspended implant attached to the Mount + final screw + implant cover screw threaded on the back.
- **Product identification label data:** product reference, platform, implant diameter and length, product description, batch number, product manufacturer, expiration date and product identification symbols.

Note. Do not open the sterile container until the time of implant placement.

				Implants Dentales ES Dental Implant EN Zahnimplantat DE Implant Dentaire FR Implanto Dentale IT Implante Dentário PT	
MD ZM44010M LOT Z0000000 1 Unid RP Ø4.00X10mm		(01)08435481201271(17)000000(11)000000(10)Z0000000 www.ziacom.es UDI		ZIACOM MEDICAL, S.L.U. P.I. Pinar - Madrid ZIACOM MEDICAL USA, LLC 353 S.E. 2nd Avenue, Suite 2000 Miami, FL 33131 - USA Tel: +1 (786) 224-0089 Fax: +1 (786) 224-3396	
4.00X10mm ZPlus® STERILE R ZM4®MT Rx Only					

Description of the symbology used

- | | |
|--|--|
| MDD CE certification and notified body
Name of the medical device
Number of product batch
Patient information website
Unique device identification
Beta sterile product
Temperature restriction
Caution, consult accompanying documents | Do not resterilise
Do not use if the packaging is damaged
Non-reusable product
Consult the instructions for use
Expiry date of the product
Date of manufacture
Product manufacturer
Rx Only Caution: federal law prohibits dispensing without prescription |
|--|--|

Features and references

The **ZPlus®** is designed as an ELI HT Grade 5 titanium multifunction abutment. **ZPlus®** improves the handling of the implant during the surgery and incorporates new functions of use. In addition, the fundamental concept of the **ZPlus®** is the reduction of treatment costs, as it can be used as a Mount, impression transfer or provisional abutment for cement-screwed.

The **ZPlus®** Mount is available in all **ZIACOM®** implant ranges (except ZM8®N, ZM8®S, Galaxy®, ZV2®, ZMK® and ZMR®).

Attention

ZPlus® can be used as provisional abutment. **ZPlus®** should be prepared extraorally, by mounting in an analogue, preferably on a laboratory model or assembled on a clamping handle.

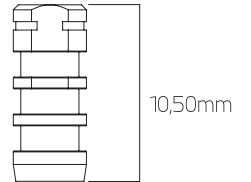
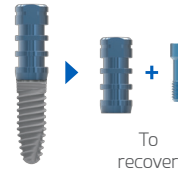
The structural integrity of the Mount and its screw, which have not been deformed or damaged by excessive insertion torque or forced removal handling, must be confirmed. Check that **ZPlus®** cover screw is properly seated and that the connection to the analogue is correctly adjusted.

Important

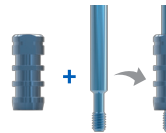
Always place the implant according to the specifications of the surgical protocol, to protect the Mount and its screw from possible damage that may prevent its later use as an impression abutment and/or provisional abutment. *Each **ZPlus®** should only be used in the same implant that the Mount belonged to. You should keep the **ZPlus®** and its screw with patient identification, detailing the reference and lot of the implant to avoid confusion and exchange the Mounts. The **ZPlus®** is supplied with 3 flat faces. At the end of the implant insertion, make sure that one of them matches the vestibular area.*

ZPlus® Mount uses

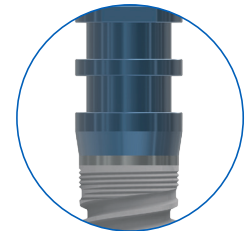
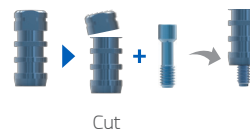
As a Mount



As impression transfer



As provisional abutment



Implant view + Mount

ZPlus® option. References

	IMPLANT				PLATFORM					
	Ø (mm)	Ø Core (mm)	Length	REF.	Type	Ø (mm)	Internal metric			
ZM4 ^{MT}	3,60	3,10/1,80	8,5 mm	ZM43685M	■	RP	4,10	M2,00		
			10,0 mm	ZM43610M						
			11,5 mm	ZM43611M						
			13,0 mm	ZM43613M						
	4,00	3,40/2,10	8,5 mm	ZM44085M						
			10,0 mm	ZM44010M						
			11,5 mm	ZM44011M						
			13,0 mm	ZM44013M						
	4,40	3,80/2,30	8,5 mm	ZM44485M						
			10,0 mm	ZM44410M						
			11,5 mm	ZM44411M						
			13,0 mm	ZM44413M						
4,80	4,10/2,40	8,5 mm	ZM44885M	■	WP	5,00				
		10,0 mm	ZM44810M							
		11,5 mm	ZM44811M							
		13,0 mm	ZM44813M							

(1) Untreated mechanised zone. (2) Height of external hexagon (3) Distance between internal hex faces. (4) Platform work diameter.



Cover screw*



Platf.	Length (L)	Reference
■	5,00 mm	OEXRPT
■	4,90 mm	OEXWPT

Anodised ■ RP ■ WP



Screw already included in each implant.

Z2Plus® Mount

Packaging and product handling

1. Click on the word "PRESS" and rip the carton.



2. Remove the cardboard flap and take out the blister.



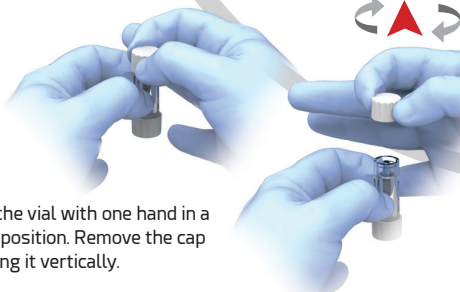
3. Carefully remove the blister seal from the implant.



4. Drop the vial on the sterile cloth in surgical area.



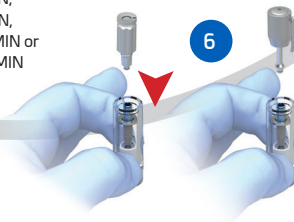
5. Hold the vial with one hand in a vertical position. Remove the cap by turning it vertically.



Implant removal

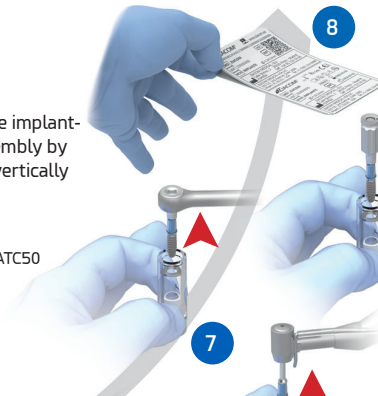
6. Hold the vial vertically with one hand and place the insertion key, for ratchet or CA, into the Z2Plus® Mount.

Ref. XSMIN,
Ref. TSMIN,
Ref. TLMIN,
Ref. 01MMIN or
Ref. 02MMIN



7. Remove the implant-Z2Plus® assembly by pulling it up vertically to the vial.

Ref. XSMIN,
Ref. TSMIN or
Ref. TLMIN + RATC50



Ref. 01MMIN or
Ref. 02MMIN + Contra-angle

8. Remember to remove the label from the implant to paste it onto the patient's implantation document and thus maintain product traceability.



ZIACOM® Z2Plus® are packaged in a sealed carton box with a product label for immediate identification. It contains:

- **Instructions for Use (IFU).**
- **Implant blister:** heat-sealed, with product identification labels for correct traceability. Its flap facilitates opening in clinic and prevents accidental opening. Contains: implant carrier vial + Snap-On plastic transfer
- **Implant carrier vial:** contains vertically suspended implant attached to the Mount + final screw + implant cover screw on the back.
- **Product identification label data:** product reference, platform, implant diameter and length, product description, batch number, product manufacturer, expiration date and product identification symbols.

Note. Do not open the sterile container until the time of implant placement.

				Implants Dental ES Dental Implant EN Zahnimplantat DE Implant Dentaire FR Impianto Dentale IT Implante Dentário PT	
MD ZM44010MN LOT Z0000000 1 Unid RP Ø4.00X10mm		(01)08435481243899(17)000000(11)000000(10)Z0000000 www.ziacom.es UDI		ZIACOM MEDICAL, S.L.U. P.I. nº 100 333 S.E. 2nd Avenue, Suite 2000 Miami, FL 33131 - USA Tel: +1 (786) 224-0089 Fax: +1 (786) 224-3306	
4.00X10mm Snap On STERILE R ZM4®MT Rx Only					

Description of the symbology used

- | | |
|--|--|
| MDD CE certification and notified body
Name of the medical device
Number of product batch
Patient information website
Unique device identification
Beta sterile product
Temperature restriction
Caution, consult accompanying documents | Do not resterilise
Do not use if the packaging is damaged
Non-reusable product
Consult the instructions for use
Expiry date of the product
Date of manufacture
Product manufacturer
Rx Only Caution: federal law prohibits dispensing without prescription |
|--|--|

Features and references

The new **Z2Plus®** has been designed as an ELI HT grade 5 titanium multifunction abutment. Its three functions include: Mount, sculptable straight abutment for easy preparation and transfer for Snap-On technique.

Z2Plus® in its application as a transfer for Snap-On, allows an easy and quick impression in the surgical act, allowing to advance the manufacture of the restoration with less time of dental office and fewer clinical appointments, with the consequent saving of costs in the treatment. **Z2Plus®** is supplied with one flat face. At the end of the implant insertion, make sure that the flat face matches the vestibular area.

The Snap-On impression transfer, which is supplied with **Z2Plus®**, has an internal plane, which is guided by the upper grooves and aligned with the plane of the **Z2Plus®** abutment, and after sliding by pressure, its inner groove fits into the lower ring of the abutment, ensuring secure retention for the dragging impression and subsequent replacement of the **Z2Plus®**.

The impression transfer has an oval top which must coincide with the vestibular area (Figures 1 and 2).

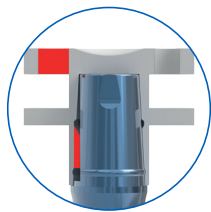


Fig. 1: Side view of the Snap-On transfer, alignment of the abutment plane

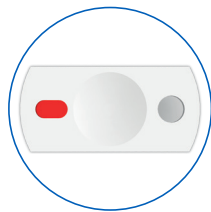
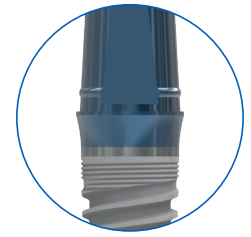
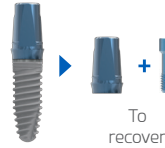


Fig. 2: Anti-rotational plane of the abutment signalling

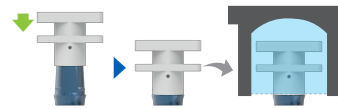
Z2Plus® Mount uses

As a Mount



Implant view + Mount

As a transfer for Snap-On



Implant view + Mount as a transfer for Snap-On

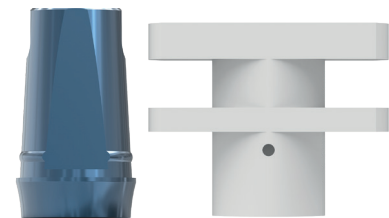
As straight abutment



Z2Plus® option. References

	IMPLANT				PLATFORM				
	Ø (mm)	Ø Core (mm)	Length	REF.	Type	Ø (mm)	Internal metric		
ZM4 ^{MT}	3.60	3,10/1,80	8,5 mm	ZM43685MN	RP	4.10	M2,00	(4) 4,10 mm (3) 2,70 mm (2) 0,70 mm (1) 0,40 mm	
			10,0 mm	ZM43610MN					
			11,5 mm	ZM43611MN					
			13,0 mm	ZM43613MN					
	4.00	3,40/2,10	8,5 mm	ZM44085MN					
			10,0 mm	ZM44010MN					
			11,5 mm	ZM44011MN					
			13,0 mm	ZM44013MN					
	4.40	3,80/2,30	8,5 mm	ZM44485MN					
			10,0 mm	ZM44410MN					
			11,5 mm	ZM44411MN					
			13,0 mm	ZM44413MN					
4.80	4,10/2,40	8,5 mm	ZM44885MN	WP	5.00		(4) 5,00 mm (3) 3,00 mm (2) 1,00 mm (1) 0,40 mm		
		10,0 mm	ZM44810MN						
		11,5 mm	ZM44811MN						
		13,0 mm	ZM44813MN						

(1) Untreated mechanised zone. (2) Height of external hexagon (3) Distance between internal hex faces. (4) Platform work diameter.



Z2Plus® as a transfer for Snap-On

Cover screw*



Platf.	Length (L)	Reference
	5,00 mm	OEXRPT
	4,90 mm	OEXWPT

Anodised RP WP



Screw already included in each implant.

ZM1® Features

CONNECTION

- » External hexagonal connection: simplicity and versatility
- » Upper screw canal: facilitates the insertion of the screws

CORTICAL AREA

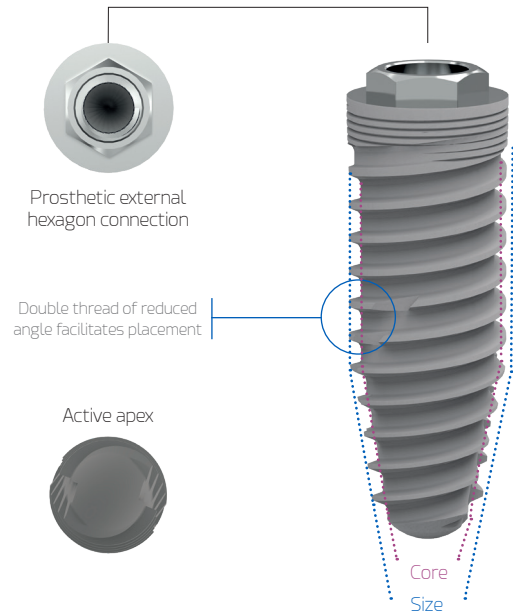
- » Micro-thread design: preserves marginal bone
- » Micro-thread extension: improves load distribution
- » Macro-design: excellent cortical compression

BODY

- » Reduced angle lead threads: provide stability during insertion and increase BIC (bone-implant contact)
- » Double lead thread: quick insertion and reduction of surgical time.
- » Active apex (self-tapping): makes the implant insertion easy with undersized drilling technique
- » Transversal apical vents: collect bone detritus during the insertion
- » Optimised morphology: high primary stability
- » Atraumatic apex: protects anatomical structures

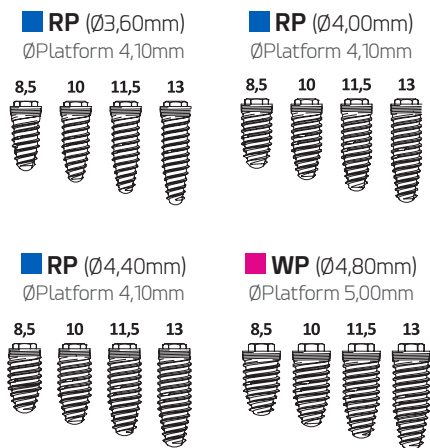
TAPERED DESIGN

- » Facilitates bone formation in soft bone type
- » Suitable for immediate loading
- » For apical collapse situations

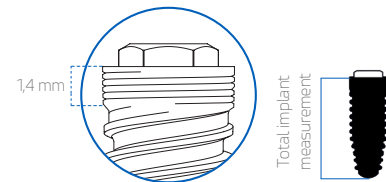


Available diameters and lengths

Lengths in mm



Implant coronal area measurements



IMPORTANT:

- ★ When choosing the implant size, take into account the overdrilling due to the length of the drill tip.



Usage recommendations

All implant planning must respect the natural biomechanical stability of the oral cavity and allow the natural emergence of the dental crown, through the soft tissue, by means of an implant with a prosthetic platform whose diameter is proportionally smaller than the emergence diameter of the tooth to be restored. The implantologist must assess the quantity and quality of bone in the recipient area of the implant and consider the need for prior or simultaneous bone regeneration as appropriate.

ZIACOM® has a broad range of implants to cover every restoration possibilities.

In the odontogram, the squares identified with letters, represent the diameters and platforms of the implants recommended for those dental positions. These recommendations apply to teeth replacement with single restoration, bridges and partial or total implant-retained tissue-supported prosthesis.

Remember to maintain minimum distances between adjacent implants and/or implants and teeth, to preserve papillae, bone vascularisation and natural emergence profiles.

The choice of the appropriate implant, in each case, is the exclusive responsibility of the clinician. Ziacom Medical recommends taking into account warnings based on scientific evidence contained in product catalogues and website.

CLARIFICATIONS ON MEASUREMENT AND DRILLING TECHNIQUES:

- **IMPLANT SIZE:** identifies implant diameter and length.
- **IMPLANT BODY:** implant core diameter.
- **DRILL MEASUREMENT:** corresponds to the drill diameter and length.
- **UNDERSIZED DRILLING TECHNIQUE:** surgical site preparation with final drill of lower diameter than the implant body. Technique associated with high insertion torque and increased primary stability.

Important: possible increased risk of bone necrosis due to pressure.

- **SIMPLIFIED DRILLING TECHNIQUE:** technique proposed by Coelho and Cols in 2013 (1). It consists of the use of pilot drill and final drill corresponding to the size of the implant. It reduces drilling sequence but with risk of bone necrosis due to thermal increase.

(1) The effect of simplifying dental implant drilling sequence on osseointegration: an experimental study in dogs.

Giro G1, Tovar N, Marin C, Bonfante EA, Jimbo R, Suzuki M, Janal MN, Coelho PG. Int J Biomater. 2013;2013:230310. doi: 10.1155/2013/230310. Epub 2013 Jan 30.

Odontogram

ZM1®

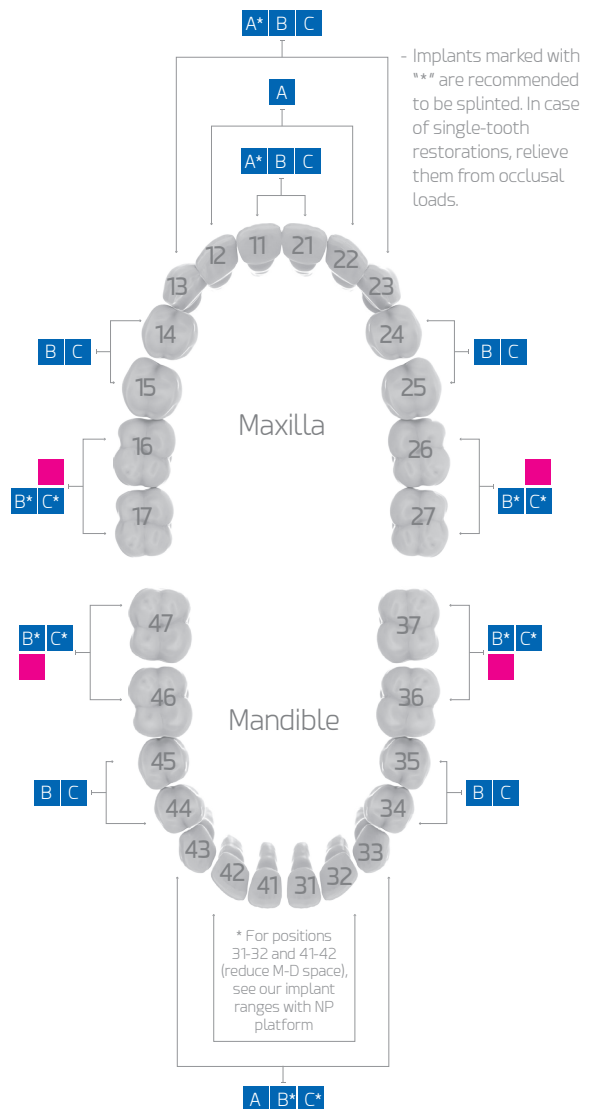
Implant diameter (1)

A RP Ø3,60mm **B** RP Ø4,00mm **C** RP Ø4,40mm **WP** Ø4,80mm

(1) Diameters are available for analog platforms.

Coronal implant diameter

B RP Ø4,10mm **WP** Ø5,00mm



ZPlus® Mount

Packaging and product handling

1. Click on the word "PRESS" and rip the carton.



2. Remove the cardboard flap and take out the blister.



3. Carefully remove the blister seal from the implant



4. Drop the vial on the sterile cloth in surgical area.



5. Hold the vial horizontally with one hand and insert the manual or CA adapter into the ZPlus® Mount.

Ref. XSMIN,
Ref. TSMIN,
Ref. TLMIN,
Ref. 01MMIN or
Ref. 02MMIN



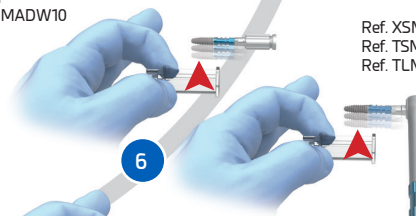
7. Remember to remove the label from the implant to paste it onto the patient's implantation document and thus maintain product traceability

6. Remove the implant-ZPlus® assembly by pulling it up vertically to the vial

Ref. XSMIN,
Ref. TSMIN or
Ref. TLMIN + MADW10



Ref. XSMIN,
Ref. TSMIN or
Ref. TLMIN + RATC50



Ref. 01MMIN or
Ref. 02MMIN + contra-angle

ZIACOM® ZPlus® are packaged in a sealed carton box with a product label for immediate identification. It contains:

- **Instructions for Use (IFU).**
- **Implant blister:** heat-sealed, with product identification labels for correct traceability. Its flap facilitates opening in clinic and prevents accidental opening. Contains: implant carrier vial.
- **Implant carrier vial:** contains suspended implant attached to the Mount + final screw + implant cover screw threaded on the back.
- **Product identification label data:** product reference, platform, implant diameter and length, product description, batch number, product manufacturer, expiration date and product identification symbols.

Note. Do not open the sterile container until the time of implant placement.

Description of the symbology used

- | | | | |
|-----------|---|---------|--|
| CE 1503 | MDD CE certification and notified body | ☒ | Do not resterilise |
| MD | Name of the medical device | ☒ | Do not use if the packaging is damaged |
| LOT | Number of product batch | ☒ | Non-reusable product |
| 🌐 | Patient information website | 📖 | Consult the instructions for use |
| UDI | Unique device identification | 📅 | Expiry date of the product |
| STERILE R | Beta sterile product | 🏭 | Date of manufacture |
| 🌡️ | Temperature restriction | 🏭 | Product manufacturer |
| ⚠️ | Caution, consult accompanying documents | Rx Only | Caution: federal law prohibits dispensing without prescription |

Features and references

The **ZPlus®** is designed as an ELI HT Grade 5 titanium multifunction abutment. **ZPlus®** improves the handling of the implant during the surgery and incorporates new functions of use. In addition, the fundamental concept of the **ZPlus®** is the reduction of treatment costs, as it can be used as a Mount, impression transfer or provisional abutment for cement-screwed.

The **ZPlus®** Mount is available in all **ZIACOM®** implant ranges (except ZM8®N, ZM8®S, Galaxy®, ZV2®, ZMK® and ZMR®).

Attention

ZPlus® can be used as provisional abutment. **ZPlus®** should be prepared extraorally, by mounting in an analogue, preferably on a laboratory model or assembled on a clamping handle.

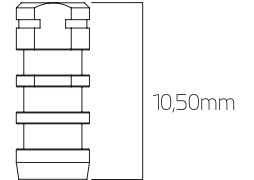
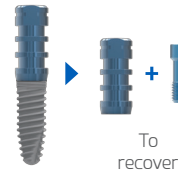
The structural integrity of the Mount and its screw, which have not been deformed or damaged by excessive insertion torque or forced removal handling, must be confirmed. Check that **ZPlus®** cover screw is properly seated and that the connection to the analogue is correctly adjusted.

Important

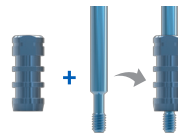
Always place the implant according to the specifications of the surgical protocol, to protect the Mount and its screw from possible damage that may prevent its later use as an impression abutment and/or provisional abutment. *Each ZPlus® should only be used in the same implant that the Mount belonged to. You should keep the ZPlus® and its screw with patient identification, detailing the reference and lot of the implant to avoid confusion and exchange the Mounts. The ZPlus® is supplied with 3 flat faces. At the end of the implant insertion, make sure that one of them matches the vestibular area.*

ZPlus® Mount uses

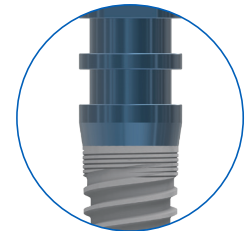
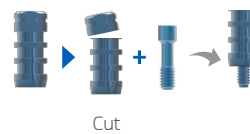
As a Mount



As impression transfer



As provisional abutment



Implant view + Mount

ZPlus® option. References

	IMPLANT				PLATFORM				
	Ø (mm)	Ø Core (mm)	Length	REF.	Type	Ø (mm)	Internal metric		
ZM1®	3.60	3,10/1,80	8,5 mm	ZM13685	RP	4.10	M2,00		
			10,0 mm	ZM13610					
			11,5 mm	ZM13611					
			13,0 mm	ZM13613					
4.00	3,40/2,10	8,5 mm	ZM14085	WP	5.00	M2,00			
		10,0 mm	ZM14010						
		11,5 mm	ZM14011						
		13,0 mm	ZM14013						
4.40	3,80/2,30	8,5 mm	ZM14485	RP	4.10	M2,00			
		10,0 mm	ZM14410						
		11,5 mm	ZM14411						
		13,0 mm	ZM14413						
4.80	4,10/2,40	8,5 mm	ZM14885	WP	5.00	M2,00			
		10,0 mm	ZM14810						
		11,5 mm	ZM14811						
		13,0 mm	ZM14813						

(1) Treated Micro-threads. (2) Height of external hexagon (3) Distance between internal hex faces. (4) Platform work diameter.



Cover screw*



Platf.	Length (L)	Reference
	5,00 mm	OEXRPT
	4,90 mm	OEXWPT

Anodised RP WP



Screw already included in each implant.

Mount Z2Plus®

Packaging and product handling

1. Presione sobre la palabra "PRESS" y rasgue la caja de cartón.



2. Retire la solapa de cartón y extraiga el blíster.



3. Carefully remove the blister seal from the implant.



4. Drop the vial on the sterile cloth in surgical area.



5. Hold the vial with one hand in a vertical position. Remove the cap by turning it vertically.



Implant removal

6. Hold the vial vertically with one hand and place the insertion key, for ratchet or CA, into the Z2Plus® Mount.

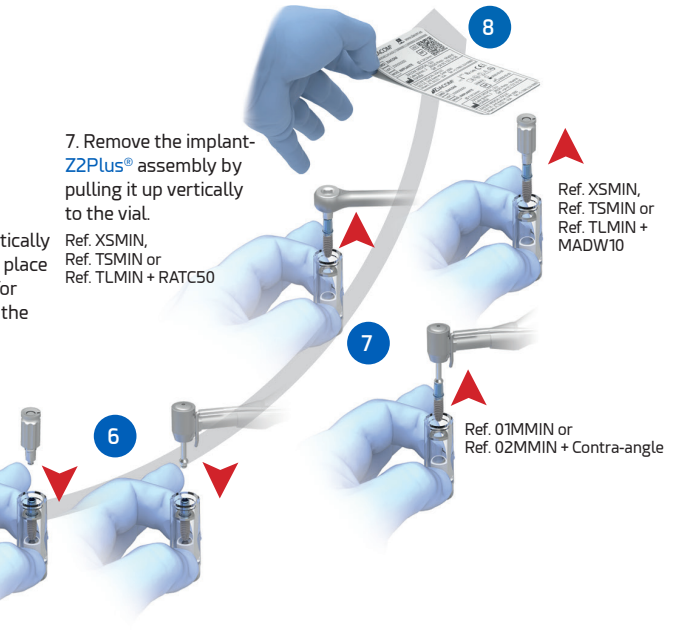
Ref. XSMIN, Ref. TSMIN, Ref. TLMIN, Ref. 01MMIN or Ref. 02MMIN



8. Recuerde retirar las etiquetas identificativas del implante para pegarlas sobre el Documento de Implantación del paciente y mantener de esta forma la trazabilidad del producto

7. Remove the implant-Z2Plus® assembly by pulling it up vertically to the vial.

Ref. XSMIN, Ref. TSMIN or Ref. TLMIN + RATC50



Ref. XSMIN, Ref. TSMIN or Ref. TLMIN + MADW10

Ref. 01MMIN or Ref. 02MMIN + Contra-angle

ZIACOM® Z2Plus® are packaged in a sealed carton box with a product label for immediate identification. It contains:

- **Instructions for Use (IFU).**
- **Implant blister:** heat-sealed, with product identification labels for correct traceability. Its flap facilitates opening in clinic and prevents accidental opening. Contains: implant carrier vial + Snap-On plastic transfer
- **Implant carrier vial:** contains vertically suspended implant attached to the Mount + final screw + implant cover screw on the back.
- **Product identification label data:** product reference, platform, implant diameter and length, product description, batch number, product manufacturer, expiration date and product identification symbols.

Note. Do not open the sterile container until the time of implant placement.

Implante Dental	ES
Dental Implant	EN
Zahnimplantat	DE
Implant Dentaire	FR
Impianto Dentale	IT
Implante Dentário	PT

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 Fax: +1 (786) 224-0089

Description of the symbology used

- | | | | |
|-----------|---|---------|--|
| CE 1503 | MDD CE certification and notified body | ⊘ | Do not resterilise |
| MD | Name of the medical device | ⊗ | Do not use if the packaging is damaged |
| LOT | Number of product batch | ⊗ | Non-reusable product |
| ⓘ | Patient information website | ⓘ | Consult the instructions for use |
| UDI | Unique device identification | 📅 | Expiry date of the product |
| STERILE R | Beta sterile product | 🏭 | Date of manufacture |
| 🌡️ | Temperature restriction | 🏢 | Product manufacturer |
| ⚠️ | Caution, consult accompanying documents | Rx Only | Caution: federal law prohibits dispensing without prescription |

Features and references

The new **Z2Plus®** has been designed as an ELI HT grade 5 titanium multifunction abutment. Its three functions include: Mount, sculptable straight abutment for easy preparation and transfer for Snap-On technique.

Z2Plus® in its application as a transfer for Snap-On, allows an easy and quick impression in the surgical act, allowing to advance the manufacture of the restoration with less time of dental office and fewer clinical appointments, with the consequent saving of costs in the treatment. **Z2Plus®** is supplied with one flat face. At the end of the implant insertion, make sure that the flat face matches the vestibular area.

The Snap-On impression transfer, which is supplied with **Z2Plus®**, has an internal plane, which is guided by the upper grooves and aligned with the plane of the **Z2Plus®** abutment, and after sliding by pressure, its inner groove fits into the lower ring of the abutment, ensuring secure retention for the dragging impression and subsequent replacement of the **Z2Plus®**.

The impression transfer has an oval top which must coincide with the vestibular area (Figures 1 and 2).

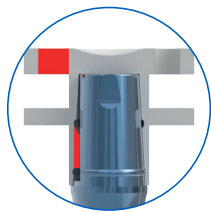


Fig. 1: Side view of the Snap-On transfer, alignment of the abutment plane

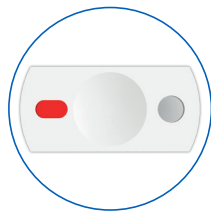
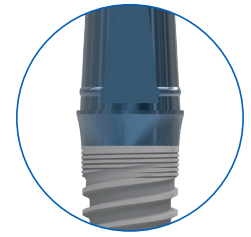
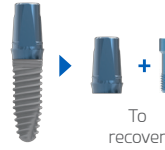


Fig. 2: Anti-rotational plane of the abutment signalling

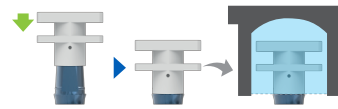
Z2Plus® Mount uses

As a Mount



Implant view + Mount

As a transfer for Snap-On



Implant view + Mount as a transfer for Snap-On

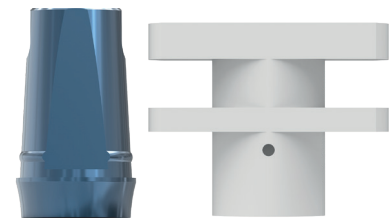
As straight abutment



Z2Plus® option. References

	IMPLANT				PLATFORM				
	Ø (mm)	Ø Core (mm)	Length	REF.	Type	Ø (mm)	Internal metric		
ZM1®	3.60	3,10/1,80	8,5 mm	ZM13685N	RP	4.10	M2,00		
			10,0 mm	ZM13610N					
			11,5 mm	ZM13611N					
			13,0 mm	ZM13613N					
	4.00	3,40/2,10	8,5 mm	ZM14085N					
			10,0 mm	ZM14010N					
			11,5 mm	ZM14011N					
			13,0 mm	ZM14013N					
	4.40	3,80/2,30	8,5 mm	ZM14485N					
			10,0 mm	ZM14410N					
			11,5 mm	ZM14411N					
			13,0 mm	ZM14413N					
4.80	4,10/2,40	8,5 mm	ZM14885N	WP	5.00	M2,00			
		10,0 mm	ZM14810N						
		11,5 mm	ZM14811N						
		13,0 mm	ZM14813N						

(1) Treated Micro-threads. (2) Height of external hexagon (3) Distance between internal hex faces. (4) Platform work diameter.



Z2Plus® as a transfer for Snap-On

Cover screw*



Platf.	Length (L)	Reference
■	5,00 mm	OEXRPT
■	4,90 mm	OEXWPT

Anodised ■ RP ■ WP



Screw already included in each implant.

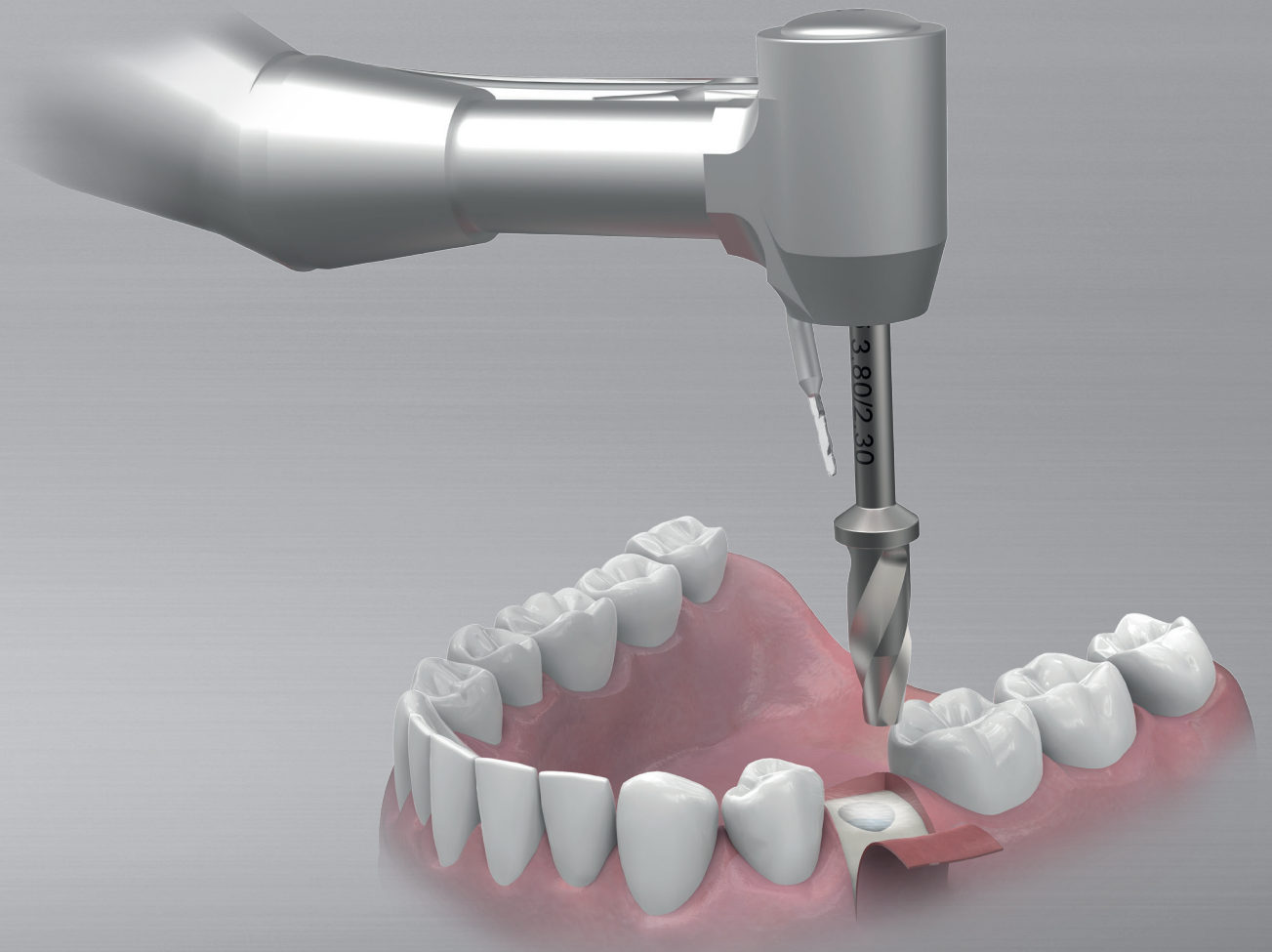
ZM4[®]MT ZM1[®]

Surgical protocol

Important: Read carefully the recommendations of the surgical protocol and implant manipulation for predictable results.

Risks of not respecting the recommendations of the drilling sequence:

- Difficulty in implant insertion.
- Overcompression in the implant site.
- Reduction of primary stability and impossibility of osseointegration.



General considerations

ZIACOM® drills system

ZIACOM® implant systems drills are made of stainless steel.

The drills must be handled carefully, avoiding damage that could compromise their effectiveness. Make sure that the drills are in proper condition. If in doubt, avoid using it.

Indications for the drilling sequence

- The drills must be inserted at the contra-angle with the surgical motor stopped, ensuring correct anchorage and rotation before starting the drilling.
- The drills must be used with external irrigation.
- The recommended speed and torque for each drill must be respected. (See drilling sequence / Pages 25, 26 and 27).
- Position the drill at the location chosen for implant insertion before starting drilling.
- Perform controlled swinging movements, drilling the bone to the desired depth, guided by the laser reference mark of that depth.
- Remove the drill from the surgical site with the motor running.

Notes:

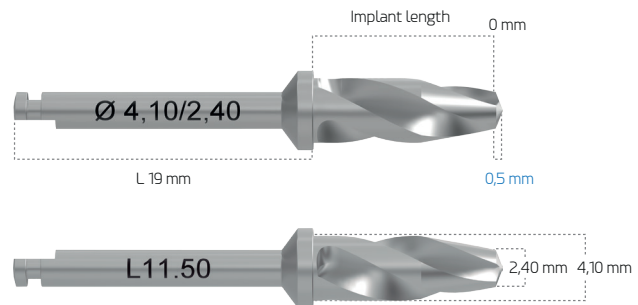
- Do not continue drilling without irrigation.
- If using a drill extender, supplement irrigation manually.
- For surgical and cortical drills, a maximum of 45 uses per drill is recommended. Exceeding the recommended use endangers the osseointegration process of the implant.
- If you notice any damage to the drill, avoid using it and replace it with a new one.
- After each use, sterilise them according to the cleaning and sterilisation instructions (Page 28)

Surgical drills

ZIACOM® surgical drill length measuring system is simple, intuitive and guides you through the surgical site during the drilling process. The laser marking on the drill rod identifies its largest and smallest diameter and length. The drills have conical geometry adapted to the size of each implant, both in diameter and length. That it's means, every diameter and length of implant has a final drill.

The length of the drill tip is 0.5 mm and is not included in the measurements of the different laser marks.

When performing implant placement without flap lifting, measure the thickness of the soft tissue with a periodontal probe and add this measurement to the drilling depth.



Crestal surgical drill

It is indicated for the regularisation of irregular bone crests.

Its use allows the surgical drill to reach the adequate drilling length, all around the surgical site, avoiding the exposure of the treated surface of the implant. This facilitates the implant placement on crestal position.

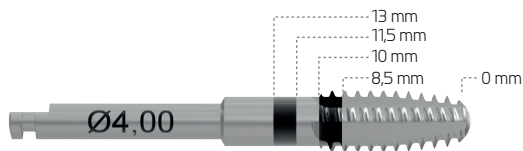
Pay special attention to the drilling length in cases of angled implants. Mandatory for use on irregular crests.



Surgical taps

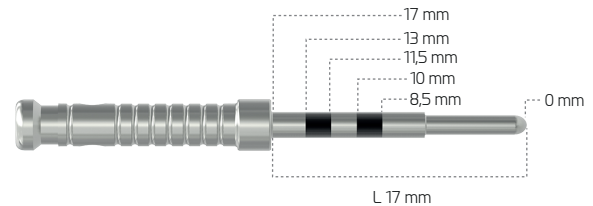
The use of surgical tap for thread-forming in each implant diameter depends on the type of bone. (See drilling sequence / Step 9 / Page 19).

The taps are available for contra-angle. The laser marking on the tap rod identifies its diameter and the horizontal bands of the laser marking on its active part represent the different lengths of the implants.



Depth gauge

This instrument has horizontal laser marking bands in its active part that represent the different lengths of the implants. It can be used to verify the depth of the surgical site prior to implant insertion. It has a hole in the handle to secure the instrument with dental floss or suture to prevent complications during the surgical procedure.



Cortical drills

The use of cortical drill for shaping the coronal area of the implant site depends on the type of bone. (See drilling sequence / Step 10 / Page 19).

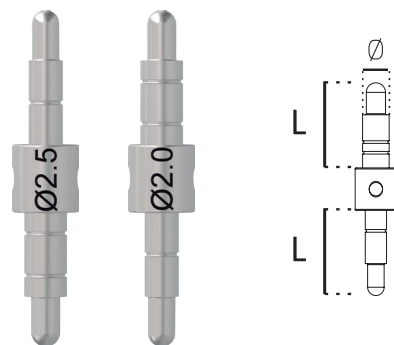
The laser marking on the rod of the cortical drills identifies the diameter and type of the implant for which it is indicated, for instance, ZM4®MT RP corresponds to ZM4®MT and ZM1®. And the horizontal laser mark on its active part represents the limit of insertion of the cortical drill into the surgical site.



Paralleling pin

Paralleling pins are instruments to indicate the surgical site direction to the clinician during drilling. It has two active parts of 2,00 and 2,50 mm respectively. It has a hole in the middle area to secure the instrument with dental floss or suture to prevent complications during the surgical procedure.

It has laser marking that identifies the diameters of the active tips. The smallest and largest diameter can be easily identified, with one and two grooves respectively.

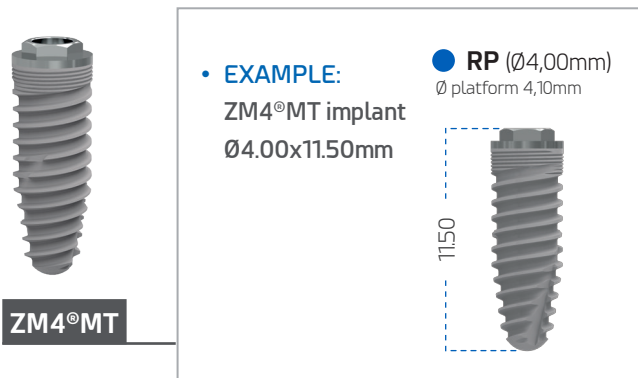


ZM4[®]MT · ZM1[®] SURGICAL PROCEDURE MANUAL

Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Steps for placing ZM4[®]MT · ZM1[®] implants

Instruments required



Step 02

Lance drill



Start surgical site drilling sequence using the lance drill Ref- SID01 to its stop (length: 5,00 mm). Check the direction and inclination of the drill, always making intermittent pressure in a vertical direction, taking care not to generate excessive pressure on the bone. If necessary, use the drill extender Ref-DEXT10

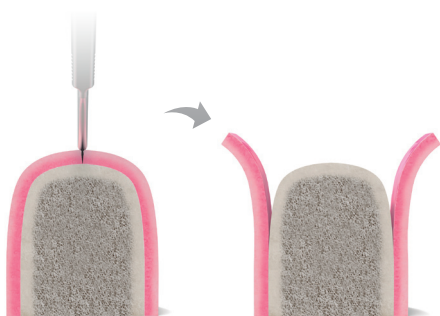
Important: Increase by 200 Rpm for bone Type I/II drilling over those indicated in the protocol.



Preliminary step

Gingiva opening

Make an incision and flap reflection.



Step 03

Pilot drill Ø1,60/2,00



In the surgical box, choose the implant length column to be instrumented. Perform the drilling sequence with the pilot drill Ref- OTD102C until you reach the drill stop matching the total length of the selected implant. Check the direction and inclination of the drill, always making intermittent pressure in a vertical direction, taking care not to generate excessive pressure on the bone. If necessary, use the drill extender Ref-DEXT10.

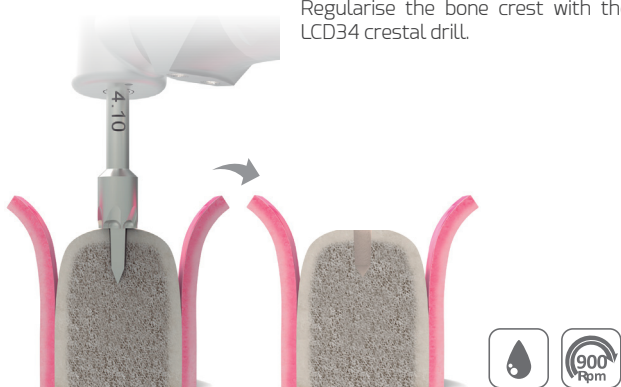
Important: Increase by 200 Rpm for bone Type I/II drilling over those indicated in the protocol.



Step 01

Crestal drill

Regularise the bone crest with the Ref- LCD34 crestal drill.



Step 04

Pilot drill Ø1,70/2,50



In the surgical box, choose the implant length column to be instrumented. Perform the drilling sequence with the pilot drill Ref- OTD202C until you reach the drill stop matching the total length of the selected implant. Check the direction and inclination of the drill, always making intermittent pressure in a vertical direction, taking care not to generate excessive pressure on the bone. If necessary, use the drill extender Ref-DEXT10.

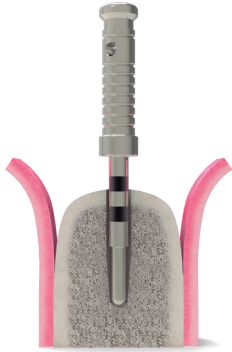
Important: Increase by 200 Rpm for bone Type I/II drilling over those indicated in the protocol.



Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Step 05
Depth gauge

Check surgical site depth by inserting the depth gauge Ref-MURE25.



Step 08
Double paralleling pin Ø2,00/2,50

Check the parallelism between implants or between implant and teeth with the Ref- PARA40 double paralleling pin. You can repeat this step as many times as you consider necessary throughout the surgical procedure.



Step 06
Final drill Ø1,80/3,10

Perform the drilling sequence with the surgical drill Ø 3,1 Ref- OTD302C. Check the direction and inclination of the drill, always making intermittent pressure in a vertical direction, taking care not to generate excessive pressure on the bone. If necessary, use the drill extender Ref-DEXT10.



Important: Increase by 200 Rpm for bone Type I/II drillingover those indicated in the protocol.



Step 09
Tap Ø4,00

Place the surgical tap Ø 4.0 in the prepared surgical site. Press firmly and start turning slowly. When threads engage, allow the tap to advance without pressure to desired depth. If you encounter excessive resistance, make a 90° counter-rotation movement for each complete turn. To remove the tap, turn it in the opposite direction.



The tap must be used mechanically with a contra-angle Ref. MTAP40M.

The use and level of insertion of the surgical tap will depend on the type of bone:

		Tipo I	Total
		Tipo II	2/3
		Tipo III-IV	No necesario

*Based on the bone quality classification by Lekholm and Zarb 1985

Step 07
Final drill Ø2,10/3,40

Perform the drilling sequence with the Ø 3,4 surgical drill Ref- OTD402C until you reach the drill stop matching the total length of the selected implant. Check the direction and lean of the drill, always making intermittent pressure in a vertical direction, taking care not to generate excessive pressure on the bone. If necessary, use the drill extender Ref-DEXT10.



Important: Increase by 200 Rpm for bone Type I/II drillingover those indicated in the protocol.



Step 10
Cortical drill

Use the cortical drill Ref. OTD01CA to shape the coronal area of the surgical site. Insert the drill up to its laser mark, always making intermittent pressure in the vertical plane, taking care that no excessive pressure is generated on the bone. If necessary for this step, use the drill extender Ref. DEXT10.



The use of the cortical drill will depend on the type of bone:

		Tipo I	Obligatorio
		Tipo II	Depende del grosor cortical
		Tipo III-IV	No necesario

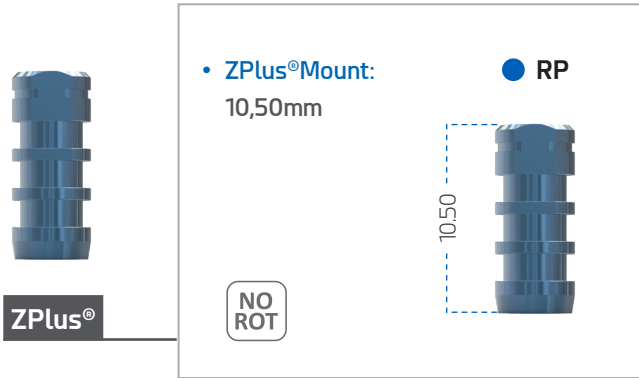
*Based on the bone quality classification by Lekholm and Zarb 1985

ZM4[®]MT · ZM1[®] SURGICAL PROCEDURE MANUAL

Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Implant insertion

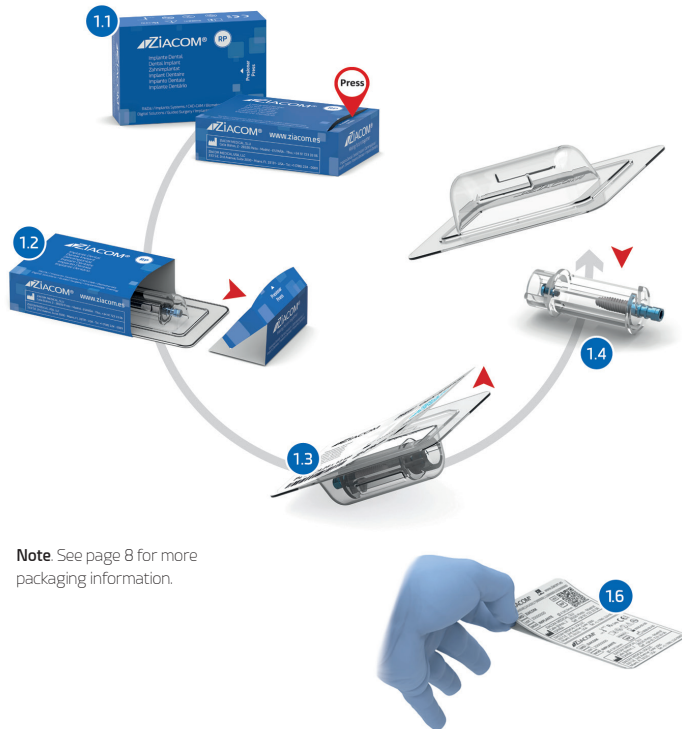
ZPlus[®] Mount option



Step 01

Implant unpacking

- 1.1 Click on the word "PRESS" and rip the implant carton box.
- 1.2 Remove the flap from the carton and pull out the blister.
- 1.3 Carefully remove the blister seal.
- 1.4 Drop the implant vial onto a sterile cloth in the surgical area.
- 1.5 Remember to remove the label from the implant to paste it onto the patient's passport and thus maintain product traceability.



Step 02

Choice of insertion instrument

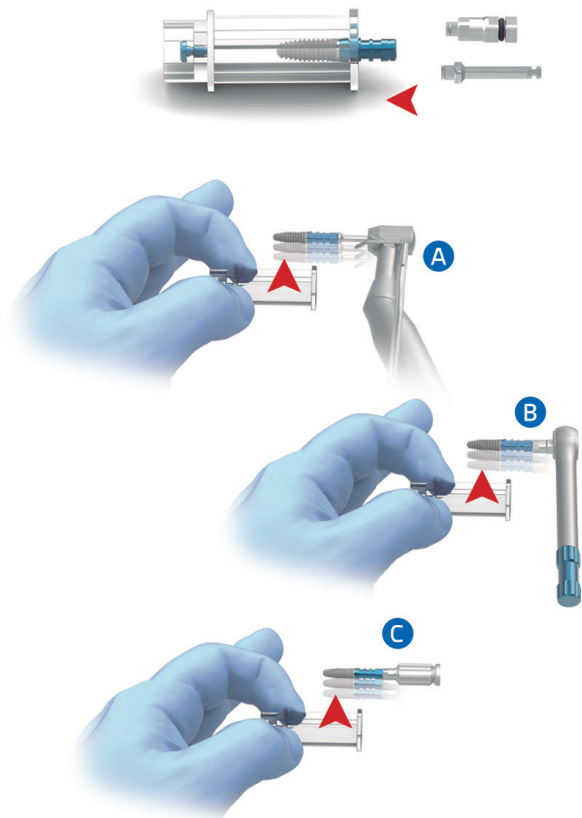
Depending on the clinical situation and access to the area, three different instruments can be chosen to insert the implant:

- Contra-angle.** Use ZPlus[®] insertion key. CA of the length of your choice (Ref.01MMIN or 02MMIN) and insert it into the contra-angle.
- Ratchet Ref. RATC50:** Use ZPlus[®] insertion key. Ratchet/Manual of the length of your choice (Ref. XSMIN, TSMIN or TLMIN) and insert it into the ratchet in function "IN", marked with an arrow.
- Screwdriver handle 4x4 Ref. MADW10.** Use ZPlus[®] insertion key. Ratchet/Manual of the length of your choice (Ref. XSMIN, TSMIN or TLMIN) and insert it into the screwdriver handle.

Step 03

Remove the implant from the vial

Hold the implant carrier vial in one hand and insert the selected insertion key into the ZPlus[®] with the other hand. Remove the implant-mount assembly by pulling up the vial vertically.



Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Step 04

Implant insertion

Insert the implant into the surgical site, controlling the direction and inclination.

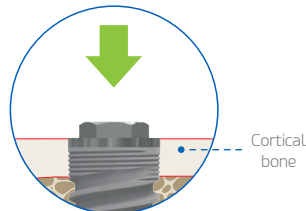
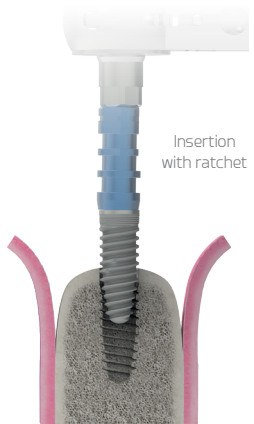
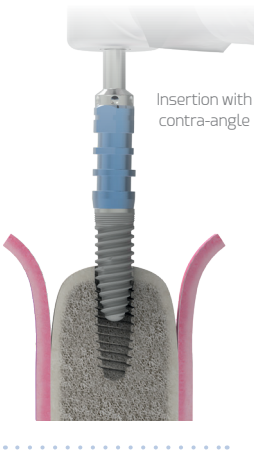
When inserting with contra-angle, use a maximum speed of 25 Rpm.

The recommended insertion torque is between 35 and 50 Ncm depending on each case, without being limited to a single torque.

If there is resistance during insertion, it is recommended to turn the implant counterclockwise slightly and after seconds of pause continue insertion. Repeat this process as many times as necessary.

The ZIACOM[®] surgical protocol establishes crestal position of the implant platform.

ZPlus[®] has three flat faces. At the end of the implant insertion, make sure that one of them matches the vestibular area.

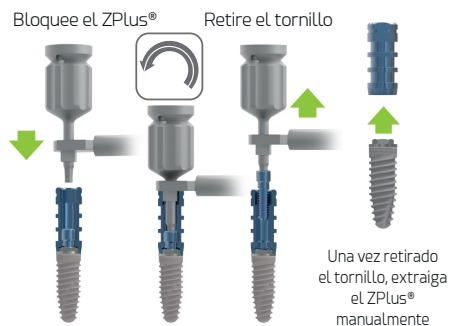


The ZIACOM[®] surgical protocol establishes crestal position of the implant platform.

Step 05

ZPlus[®] Mount disassembly

Lock the ZPlus[®] Mount with the block key Ref. 01MOHW and remove the screw with the manual surgical screwdriver Ref. SMSD or LMSD. After removing the screw, pull out the ZPlus[®] manually.

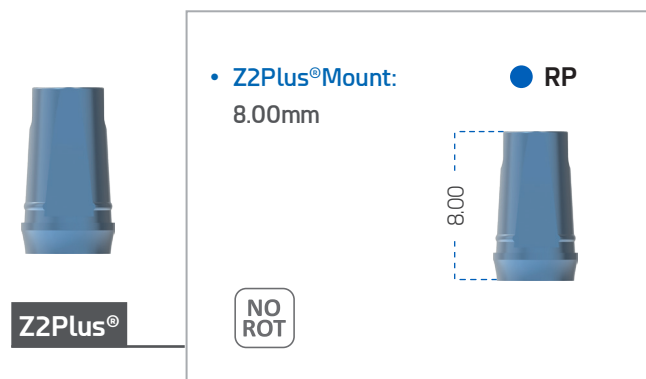


ZM4[®]MT · ZM1[®] SURGICAL PROCEDURE MANUAL

Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Implant insertion

Z2Plus[®] Mount option



Step 02

Choice of insertion instrument

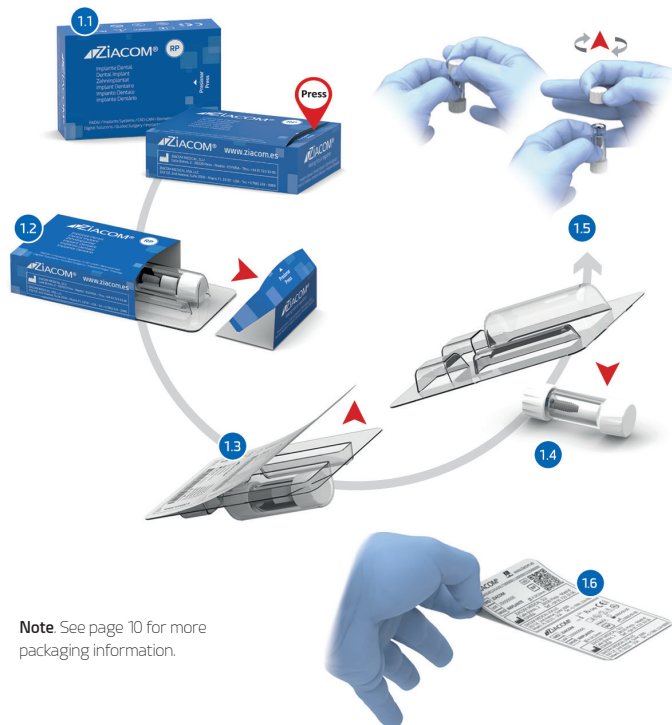
Depending on the clinical situation and access to the area, three different instruments can be chosen to insert the implant:

- A** **Contra-angle.** Use Z2Plus[®] insertion key. CA of the length of your choice (Ref.01MMIN or 02MMIN) and insert it into the contra-angle
- B** **Ratchet Ref. RATC50:** Use Z2Plus[®] insertion key. RATCHET/MANUAL of the length of your choice (Ref. XSMIN, TSMIN or TLMIN) and insert it into the ratchet in function "IN", marked with an arrow.
- C** **Screwdriver handle 4x4 Ref. MADW10.** Use Z2Plus[®] insertion key. Ratchet/Manual of the length of your choice (Ref. XSMIN, TSMIN or TLMIN) and insert it into the screwdriver handle.

Step 01

Implant unpacking

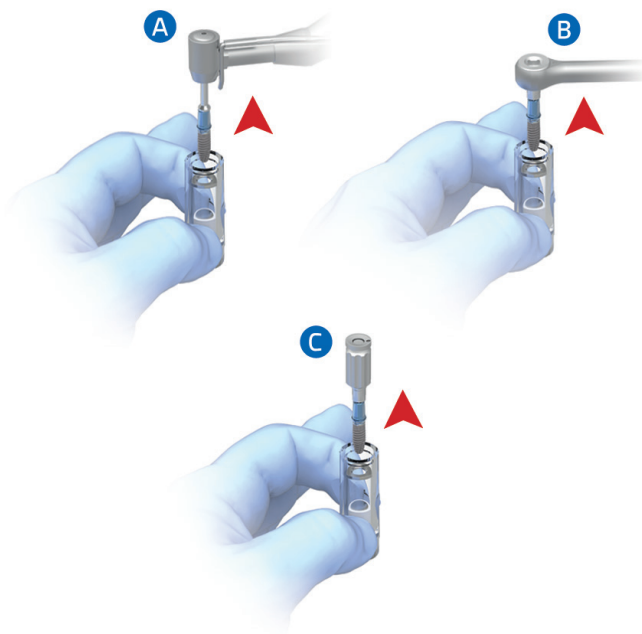
- 11 Click on the word "PRESS" and rip the implant carton box.
- 12 Remove the flap from the carton and pull out the blister.
- 13 Carefully remove the blister seal.
- 14 Drop the implant vial onto a sterile cloth in the surgical area.
- 15 Hold the vial with one hand in a vertical position. Remove the cap by turning it vertically.
- 16 Remember to remove the label from the implant to paste it onto the patient's passport and thus maintain product traceability.



Step 03

Remove the implant from the vial

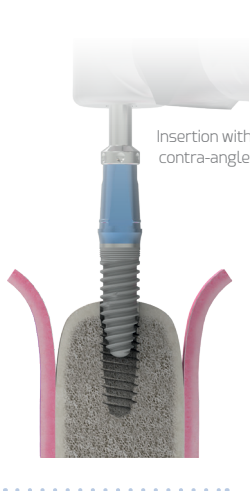
Hold the implant carrier vial in one hand and insert the selected insertion key into Z2Plus[®] with the other hand. Remove the implant-mount assembly by pulling up the vial vertically.



Steps for placing ZM4 [®] MT · ZM1 [®] implants		Instruments required	Implant insertion
ZPlus [®] Mount option	Z2Plus [®] Mount option	Soft tissue conditioning	

Step 04

Implant insertion



Insertion with contra-angle

Insert the implant into the surgical site, taking care to control the direction and lean.

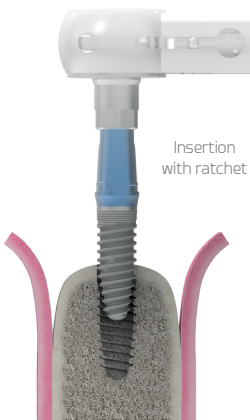
When inserting with contra-angle, use a maximum speed of 25 Rpm.

The recommended insertion torque is between 35 and 50 Ncm depending on each case, without being limited to a single torque.

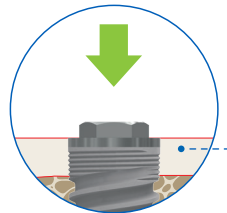
If there is resistance during insertion, it is recommended to turn the implant counterclockwise slightly and after seconds of pause continue insertion. Repeat this process as many times as necessary.

The ZIACOM[®] surgical protocol establishes crestal position of the implant platform.

Z2Plus[®] has a flat face. At the end of the implant insertion, make sure that the flat face matches the vestibular area.



Insertion with ratchet



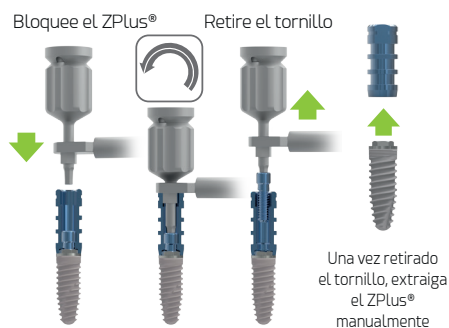
Cortical bone

The ZIACOM[®] surgical protocol establishes crestal position of the implant platform.

Step 05

Z2Plus[®] Mount disassembly

Lock Z2Plus[®] Mount with the block key Ref. 01M0HW and remove the screw with the manual surgical screwdriver Ref. SMSD or LMSD. After removing the screw, pull out Z2Plus[®] manually.



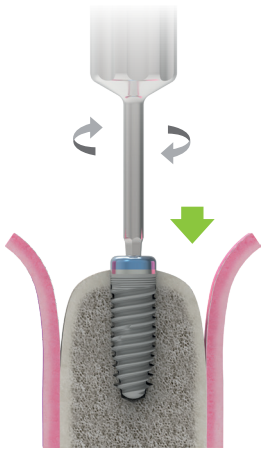
ZM4®MT · ZM1® SURGICAL PROCEDURE MANUAL

Steps for placing ZM4®MT · ZM1® implants		Instruments required	Implant insertion
ZPlus® Mount option	Z2Plus® Mount option	Soft tissue conditioning	

Soft tissue conditioning

Step 01

Cover screw placement



Depending on the package, remove the cover screw from the vial counterclockwise with the manual surgical screwdriver Ref. SMSD or LMSD.

Approach it to the implant avoiding the fall and accidental screw swallowing. Insert it into the implant until it locks, with manual torque and clockwise.

In ZIACOM® No Mount option, the cover screws are supplied separately.

The cover screw placement during the first surgical phase requires that after the osseointegration period, the second surgical phase or the implant uncovering is performed to place the chosen abutment.

Depending on the case, you can choose not to place a cover screw but to place a healing abutment directly.



Step 03

Uncovering and removing the cover screw

Locate the implant and make an incision until the cover screw is exposed or use the tissue punch Ref. MPU34 on the soft tissue. Remove the screw with the manual surgical screwdriver Ref. SMSD or LMSD.



Step 02

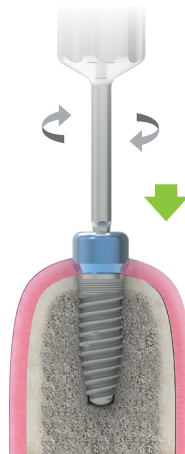
Soft tissue closure



Close and suture the soft tissue, fitting the flaps carefully.

Step 04

Healing abutment placement



Insert the selected healing abutment with the manual surgical screwdriver Ref. SMSD or LMSD.

The choice of the healing abutment will depend on each case. It must match the implant platform and be in accordance with the gingival tissue height to avoid interference in occlusion. Excessive height could subject the implant to premature loading, compromising the osseointegration process.

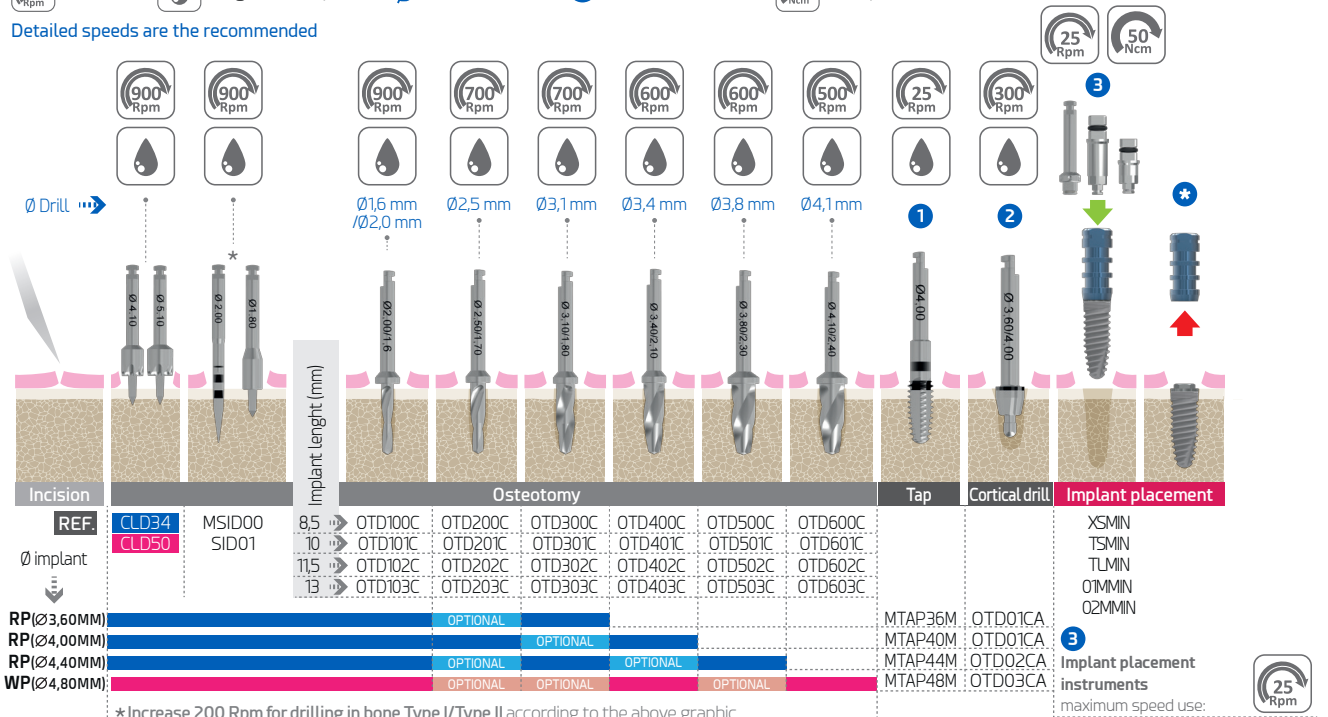


ZM4^{MT} ZM1[®]

Surgical drilling protocol with ZPlus[®] Mount

Rotation
 Irrigation required
 Drill diameter
 See instructions
 Torque

Detailed speeds are the recommended

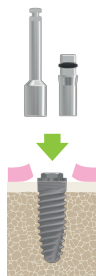


* Increase 200 Rpm for drilling in bone Type I/Type II according to the above graphic.

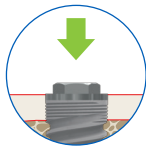
UNDERSIZED DRILLING: to be assessed on Type III and IV bones

IMPORTANT: control the drilling axis by applying intermittent pressure (tapping) always in the vertical plane, taking care not to exert excessive pressure on the bone.

3 Implant placement at crestal level



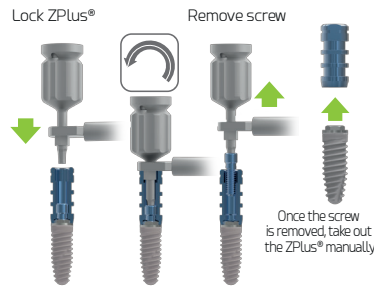
It has direct insertion keys to the implant ref.:
 SMEX20/SMEX34/SMEX50, for ratchet and
 MMEX20/MMEX34/MMEX50 for CA, to adjust the implant
 end-position



ZIACOM[®] implant platforms should be placed at bone crest level.

* Mount disassembly

Removing the screw



REF. SMSD/LMSD with O1MOHW

Important: in case the Mount ZPlus[®] is retained with the implant, use the extractor screw to facilitate its extraction: with RP and WP, ref.: EDSZ34

TAP AND CORTICAL DRILL

INSERTION AND REMOVAL OF THE MOUNT

Very important: consult the warnings about insertion and torque

1

Tap usage

Depending on bone type:

Contra-angle (CA)

Type I Total

Type II 2/3

Type III-IV Not necessary

The maximum speed limit must be taken into account.

2

Cortical drill usage

Depending on bone type:

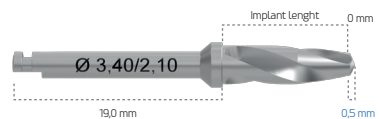
Type I Necessary

Type II Depending on the cortical thickness

Type III-IV Not necessary

Drills measures

ZIACOM[®] drills have their dimensions laser marked on the shaft: diameter and/or length. Conical: for tapered implants we have one per size for the necessary diameters and lengths, avoiding the control of laser marks and the use of stops.



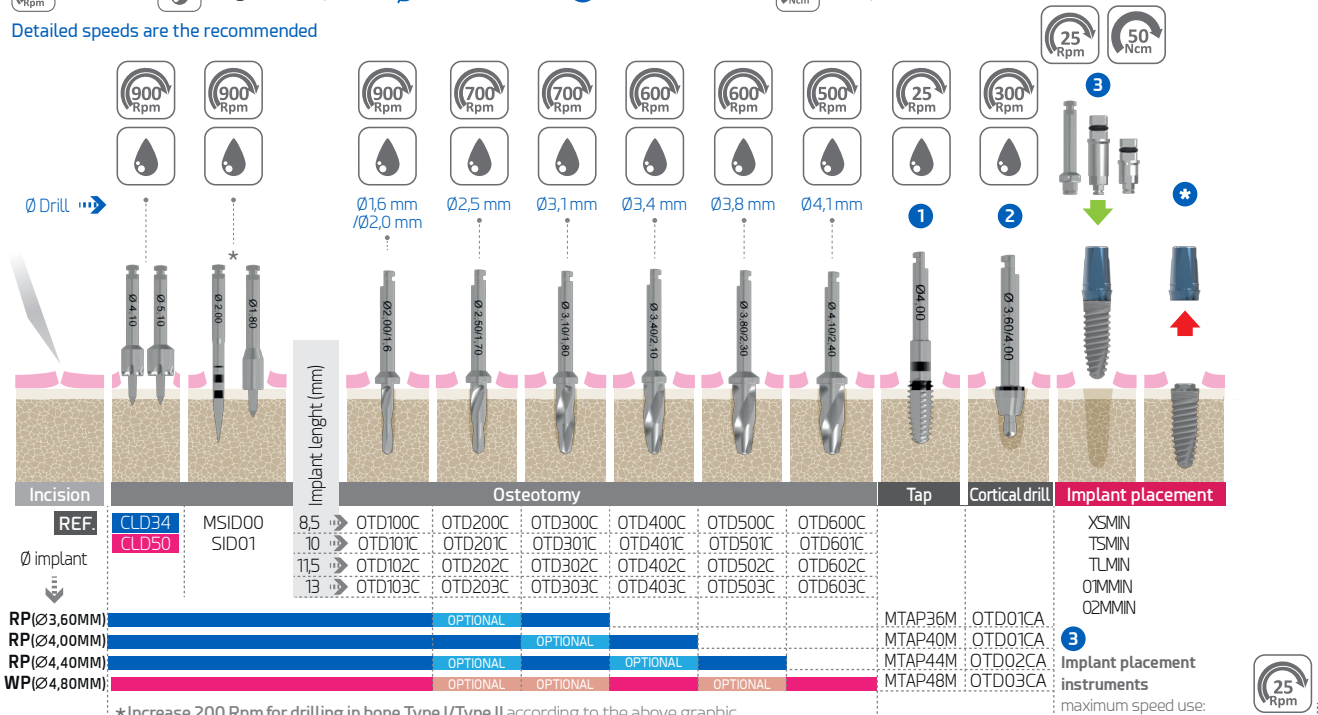
Important: When measuring during preparation of the implant site, please note the +0,5mm cutting tip on all burs, which provides more efficient cutting and reduces thermal growth. The cutting tip is not included in the nominal length.

ZM4^{MT} ZM1[®]

Surgical drilling protocol with Z2Plus[®] Mount

Rotation Irrigation required Drill diameter See instructions Torque

Detailed speeds are the recommended

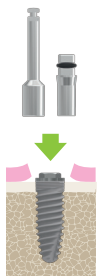


* Increase 200 Rpm for drilling in bone Type I/Type II according to the above graphic.

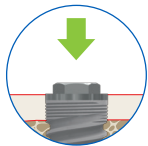
UNDERSIZED DRILLING: to be assessed on Type III and IV bones

IMPORTANT: control the drilling axis by applying intermittent pressure (tapping) always in the vertical plane, taking care not to exert excessive pressure on the bone.

3 Implant placement at crestal level



It has direct insertion keys to the implant ref.: SMEX20/SMEX34/SMEX50, for ratchet and MMEX20/MMEX34/MMEX50 for CA, to adjust the implant end-position



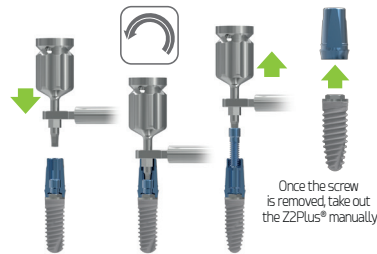
ZIACOM[®] implant platforms should be placed at bone crest level.

* Mount disassembly

Removing the screw

Lock Z2Plus[®]

Remove screw



REF. SMSD/LMSD with 01MOHW

Important: in case the Mount Z2Plus[®] is retained with the implant, use the extractor screw to facilitate its extraction: with RP and WP, ref.: EDSZ34

TAP AND CORTICAL DRILL

INSERTION AND REMOVAL OF THE MOUNT

Very important: consult the warnings about insertion and torque

1 Tap usage

Depending on bone type:

Contra-angle (CA)	Total
Type I	Total
Type II	2/3
Type III-IV	Not necessary

The maximum speed limit must be taken into account.

2 Cortical drill usage

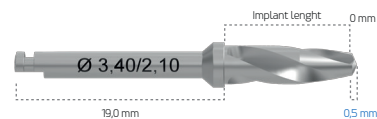
Depending on bone type:

Type I	Necessary
Type II	Depending on the cortical thickness
Type III-IV	Not necessary

Drills measures

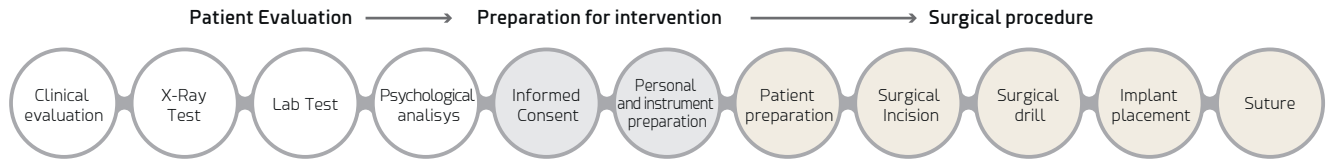
ZIACOM[®] drills have their dimensions laser marked on the shaft: diameter and/or length. Conical: for tapered implants we have one per size for the necessary diameters and lengths, avoiding the control of laser marks and the use of stops.

Important: When measuring during preparation of the implant site, please note the +0,5mm cutting tip on all burs, which provides more efficient cutting and reduces thermal growth. The cutting tip is not included in the nominal length.



General recommendations

Treatment Planning

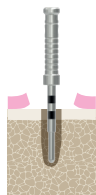


Supplementary instrument



Paralleling pin

To check the surgical site axis, the paralleling pins have different diameters according to the drilling sequence.



Depth gauge

Check the surgical site depth, especially if stoppers were not used.

Consider during intervention



Surgical drills should be inserted in the contra-angle with the surgical motor stopped, ensuring correct anchoring and rotation before starting drilling. Treat the drills with great care: the slightest damage to the tips can compromise their effectiveness.



Each instrument must be used only for the specific use recommended by the manufacturer.

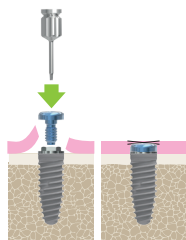


Damaged instruments must be disposed according to the regulations established by the manufacturer.



The clinician must keep in the patient's file the identification label supplied with the product, for proper traceability.

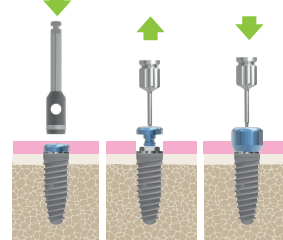
Cover screw handling



Remove the cover screw from its vial using the hexagonal screwdriver anti-clockwise. Approach the implant avoiding the fall and accidental ingestion of the screw. Insert it into the implant until it closes, with manual torque and clockwise.

Second phase surgical procedure

Healing abutment placement



The healing abutment should correspond to the implant platform, considering the option of applying the platform switch technique with anatomical abutments and be in accordance with the height of the gingival tissue to avoid abutment occlusion. Excessive height could expose the implant to premature loading, compromising the osseointegration process.

IMPORTANT WARNINGS

About implant placement

Excessive compression to the bone can lead a non-osseointegration of the implant.

Failure to follow the steps described in the surgical sequence may result in:

- Lack of primary stability due to loss of support bone.
- Difficulties during the implant placement.

Exceeding the torque (50 Ncm) at the implant insertion can produce:

- Irreversible distortions in the internal/external connection.
- Irreversible deformations in the instruments indicated for insertion of the implant.
- Difficulty of disassembling the instrument/implant assembly

Maximum insertion torque and speed

The recommended insertion torque is between **35 and 50 Ncm** according to each case without being limited to a single torque [1], [2]



The **Implant placement should be performed** with controlled torque and according to the density and bone quality of the receptor bed:

Without dismantling your multifunction Mount, partially or totally, in **type III and IV bones** respectively, with recommended torque from **35 [3], [4], [5] to 50 [6], [7], [8] Ncm** to avoid deformation of the Mount or cold welding with the implant.

By disassembling its multi-function Mount and with a direct key to implant, partially or totally, in **type II and I bones** respectively, with recommended torque from **35 [3], [4], [5] to 50 [6], [7], [8] Ncm** to avoid deformation of the connection and excess bone compression.

Insertion instruments or contra-angle (CA) screwdrivers use maximum speed of:



You can consult the bibliography at the end of this catalogue.

ZM4^{MT} / ZM1[®] implants

The ZIACOM[®] surgical protocol establishes crestal position of the implant platform.

In order to avoid cortical stress and deformation of the key and/or implant connection, as well as Mount seizure, during insertion with contra-angle (CA) the recommended maximum speed (**25 Rpm**) and maximum torque (**50 Ncm**) must be respected.

For ratchet use, it is necessary to monitor the resistance that may cause an excessive compression in the bone. In case of perceiving this, it is recommended to remove the implant twice (to release the bone from the tension) and, after a few seconds, you may keep following with the insertion and make the process again as many times as necessary.

Instructions for cleaning and disinfection of: instruments and boxes (surgical and prosthetic)

Protocol to be carried out by qualified personnel for the preparation of instruments and surgical/prosthetic boxes for use.

ATTENTION: the instruments and surgical/prosthetic boxes must be cleaned and disinfected after each use and sterilised before their next use. Pay attention to sharp elements, the use of gloves is recommended to avoid accidents during handling when following these instructions. Do not clean or disinfect instruments of different materials together.

Cleaning and disinfection of instruments

1- Disassembly

- Disassemble the instruments that require it such as manual ratchets (see diagram below), drills and drill stops.
- Disassemble the surgical/prosthetic boxes into their components for proper cleaning.
- Uncouple the micro-implants insertion key from the handle (see diagram below).

2- Cleaning

- Immerse the instruments in a solution of a cleaning agent suitable for dental instruments to facilitate the removal of adhering biological debris.
- Remove biological residue manually with a soft brush and pH-neutral detergent.
- Rinse with plenty of water.
- Perform a final rinse with deionised water.
- Always use pH-neutral detergents and non-abrasive tools to clean surgical/prosthetic boxes so as not to damage the surfaces of the box.

3- Disinfection

- Immerse the instruments in a disinfectant explicitly indicated for dental instruments.
- For disinfection with ultrasonic equipment immerse the material in the ultrasonic bath.
- Rinse with plenty of deionised water to remove any residues of the disinfectant.
- Dry the material with filtered compressed air.

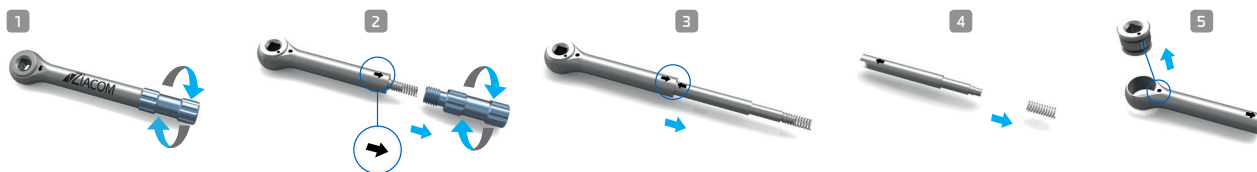
IMPORTANT:

- Follow the instructions of the disinfectant manufacturer to determine concentrations and times.
- Follow the instructions of the manufacturer of the ultrasound equipment to determine temperature, concentration and times.

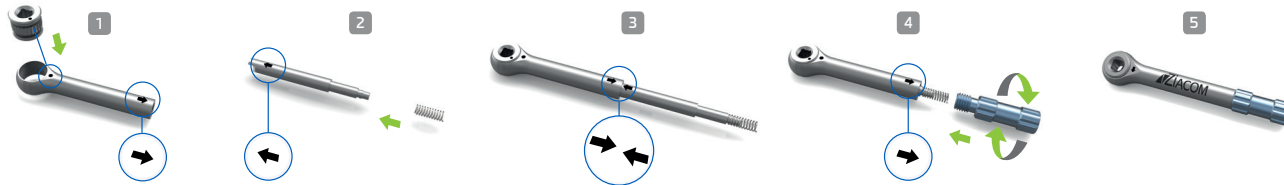
4- Inspection

- Check that the instruments are perfectly clean, otherwise repeat the above cleaning and disinfection steps.
- Discard instruments that show damage and replace them for the next surgery.
- Verify that the instruments and surgical/prosthetic boxes are perfectly dry before assembly and sterilisation.

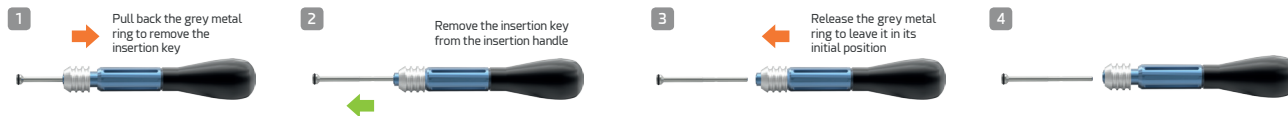
Disassembly of ZIACOM® ratchets



Assembly of ZIACOM® ratchets



Disassembly of DSQ® micro-implant insertion handle



Assembly of DSQ® micro-implant insertion handle



Sterilisation instructions for: orthodontic micro-implants, abutments, instruments and boxes (surgical and prosthetic)

Protocol to be carried out by qualified personnel for the sterilisation of micro-implants, abutments, instruments and surgical/prosthetic boxes for use.

ATTENTION: all micro-implants, abutments, instruments and surgical/prosthetic boxes are supplied NON-STERILE. They should be sterilised as directed before the first clinical use.

They must be removed from their original packaging for sterilisation prior to first clinical use. Surgical/prosthetic instruments and boxes should be cleaned and disinfected after each use and sterilised prior to use. Do not sterilise instruments of different materials together, unless the corresponding surgical/prosthetic box is used correctly.

Steam autoclave sterilisation: sterilisation of micro-implants, abutments, instruments and boxes

- Insert the material individually into sterilisation bags and seal the bags.
For joint sterilisation: assemble the instruments in their corresponding surgical box, insert the box in a sterilisation bag and seal the bag.

- Place the bags to be sterilised in the autoclave.

- Sterilise in steam autoclave at 134°C/273°F (max. 137°C/276°F), for 4 min (minimum) and 2 atm of pressure.

Only for USA: the validated and recommended sterilisation cycle is in a steam and gravity autoclave at 132°C/270°F, minimum 15 minutes and drying time 15-30 minutes.

IMPORTANT:

- Make sure that the drying phase is completed to prevent the products from coming out wet.
- Check the sterilisation equipment if the sterilisation material or bags are wet at the end of the sterilisation.
- Carry out the maintenance of the autoclave with the established periodicity and the necessary actions, following the manufacturer's instructions.

Conservation of ZIACOM® products (micro-implants, abutments, instruments and boxes)

- Keep the products in the original ZIACOM® packaging in a dry and clean environment until use.
- After sterilisation, keep the products (micro-implants, instruments, abutments and surgical boxes) in their sealed sterilisation bags and in a dry and clean environment.
- Never exceed the expiration dates determined by the manufacturer of the sterilisation bags.

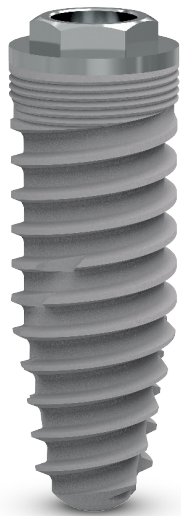
IMPORTANT:

- Follow the instructions of the manufacturer of the sterilisation bags.

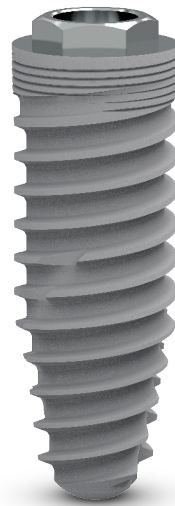
General recommendations

- Never use damaged or dirty material. Never reuse products indicated for a single use, the user is responsible for the correct follow up of the instructions described in this document.
- Always wear gloves when cleaning the material.
- Follow the safety instructions given by the manufacturer of the disinfection agent.
- Sterility cannot be guaranteed if the sterilisation bag is open, damaged or wet.
- Respect all phases of the steriliser. If the sterilisation material or bags have water or moisture residues, check the autoclave and dry the bags.
- Carry out the maintenance of the autoclave according to its manufacturer, with the established periodicity.
- The sterilisation, cleaning and disinfection processes progressively deteriorate the instruments. Inspect the instruments carefully for signs of deterioration.
- Ziacom Medical SLU recommends following these instructions to avoid impairing the purpose and safety of its products. If alternative procedures are used, it is the responsibility of the user to ensure that the chosen cleaning, disinfection and sterilisation procedure achieves the desired results without affecting the products.

Note. For the most up-to-date version of the cleaning, disinfection and sterilisation instructions, please visit our website www.ziacom.es



ZM4[®]MT



ZM1[®]



General sales conditions

Consult the general sales conditions updated in our web www.ziacom.es

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Important

- For the latest version of our catalogues, please visit our website at www.ziacom.es
- Check the availability of each product for country.



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