

# DSQ

Orthodontic implants





# DSQ

Orthodontic implants





# Important information

Please read carefully before using Ziacom® products

## General information

This document contains basic information on the use of original Ziacom® dental implant systems, hereafter referred to as "Ziacom® dental implants" or simply "Ziacom® products". This document has been created as a quick guide for clinicians responsible for treatment, hereafter the "user", and therefore, is neither an alternative nor a substitute for specialised training or professional clinical experience.

Ziacom® products must be used according to a suitable treatment plan and in strict compliance with the manufacturer's surgical and prosthetic protocols. Carefully read the product-specific surgical and prosthetic protocols and the instructions for use and maintenance before using any Ziacom® product. You can find this information on our website, [www.ziacom.com](http://www.ziacom.com), or request it from your nearest authorised Ziacom® distributor.

## Liability, safety and warranty

The instructions for the use and handling of Ziacom® products are based on internationally published literature, current clinical standards and our clinical experience so they should be understood as general guidance. The handling and use of Ziacom® products is the sole responsibility of the user as it is outside the control of Ziacom Medical SL. Ziacom Medical SL, its subsidiaries and/or its authorised distributors disclaim all responsibility, whether explicit or implicit, total or partial, for possible damage or injury caused by poor handling of the product or any other situation not considered in their protocols and manuals for the correct use of their products.

The user must ensure that the Ziacom® product is appropriate for the intended procedure and end purpose. Neither these instructions for use nor the work or handling protocols for the products release the user from this obligation. Ziacom® products must be used, handled and applied by clinicians with the appropriate training and qualifications required according to current legislation in each country.

The total or partial use, handling and/or application of Ziacom® products at any stage of their implementation by personnel who are unqualified or lack the necessary training will automatically void any type of warranty and may cause severe damage to the patient's health.

Ziacom® products are part of their own system, with their own design characteristics and work protocols, including dental implants, abutments or prosthetic components and surgical or prosthetic instruments. The use of Ziacom® products in combination with elements or components from other manufacturers could result in treatment failure, damage to tissues or bone structures, inadequate aesthetic outcomes and severe damage to the patient's health. Therefore, only original Ziacom® products should be used.

The clinician in charge of the treatment is solely responsible for ensuring the use of original Ziacom® products and that they are used according to the corresponding instructions for use and handling protocols throughout the implant procedure. The use of any other non-original Ziacom® components, instruments or products, whether alone or in combination with any original Ziacom® products, will immediately void the warranty of the original Ziacom® products.

See the Ziacom Medical SL Warranty Programme (available on the website or by contacting Ziacom Medical SL, its subsidiaries or authorised distributors).

**Warning.** Not all Ziacom® products are available in all counties. Check availability in your country.

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# The Company

## Together for health

Ziacom® has been working for more than 20 years to improve the **oral health** and well-being of patients around the world by **designing and manufacturing innovative**, high-quality dental implant, prosthetic component, surgical instrument and biomaterial solutions.

The company was founded in 2004 with **100% Spanish capital** and began its activity as a manufacturer of dental implants and attachments for several European companies before later launching its own **brand of implant systems** in 2006.

In 2015, Ziacom® introduced its **diversification strategy** with the development of **new business lines** and new product lines and the launch of a **new portfolio**, which helped the company achieve a **15% share of the Spanish market** in 2016 with the sale of more than 230.000 implants.

In 2022, the company began an **ambitious growth plan** with new goals of **international expansion**, broadening and **diversification** of its portfolio of **products and services** and a change in corporate identity.

## Ziacom® quality

Commitment to **quality and innovation** has been part of the values and the essence of Ziacom® since the beginning.

That is why we use state-of-the-art technology in **every stage of our products' production cycle**, from **design and manufacture to quality assurance, cleaning and packaging**. All of our products are also manufactured using only **high-quality raw materials** after applying **strict controls to select** our main suppliers.

Ziacom Medical S.L. is a **licensed manufacturer of medical devices** and an **AEMPS (Spanish Agency of Medicines and Medical Devices) 6425-PS marketing authorisation holder**. Our **quality management**

**system is certified** in accordance with the requirements of ISO standards 9001:2015 and 13485:2018, and is also GMP 21 CFR 820 compliant.



Thanks to our ceaseless endeavours to offer our clients unsurpassable quality, all our implants have a **lifetime guarantee**.

See the General Conditions for Accessing the Warranty for Ziacom® products.

## Grade 5 ELI titanium (Extra Low Interstitials)

Ziacom® DSQ orthodontic implants are made using **Grade 5 ELI titanium (medical grade) Ti 6Al 4V** which provides improved mechanical properties.

CE marking from notified body 0051. The DSQ orthodontic implants which are supplied **unsterilised**.



\*See approved models

Thanks to the **Grade 5 ELI titanium**, our implants meet the requirements of standards ASTM F136 and ISO 5832-3 and comply with the requirements of EU Regulation 2017/745, attaining the corresponding

### IMPORTANT

All the products listed in this Ziacom® catalogue are supplied unsterilised and must be sterilised before use.



## Investment in innovation and training

In order to always offer the very best solutions for the **well-being of every patient**, and thanks to the experience and dedication of our **highly-qualified professionals** and **innovative Technological Centre**, our R&D&I team works incessantly in the field of **research and innovation** to **improve** our products and develop **new solutions** to meet the demands and needs of both patients and dentists.

We also invest in **research** and **ongoing training** as a way of providing **scientific support to the sector** and we firmly believe in training **young professionals** to best ensure **advances in the dentistry field**.

We therefore work closely with **training centres, universities and scientific bodies** to create a practical and specialised teaching envi-

ronment to promote and strengthen their knowledge, abilities and professional growth.

In order to enhance our investment in the training and **development of dental professionals**, we have **specific areas at our facilities for hands-on training and practicals**, **state-of-the-art** training equipment and also a **physical and virtual showroom** where professionals can see all our dental solutions first hand.

## Ziacom® across the globe

We are committed to making oral health available to patients all over the world and have a solid **internal growth and expansion plan** to increase the company's **international presence** in those **areas where our products are already well-established** and to **expand into new areas**.

In order to achieve this, we offer our **international associates** a **trusting and collaborative** partnership by adapting to their **local needs** and providing solutions that are specific to each market.

As part of our commitment to meet the specific **quality, regulatory and legal requirements of each country**, for both the registration and distribution of our products, we have **specific certifications** from each of the countries in which we trade.

### Regional headquarters

### Ziacom Medical

Madrid - SPAIN  
Calle Búhos, 2 - 28320 Pinto  
☎ +34 91 723 33 06

### Subsidiaries

#### Ziacom Lusobionic

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☎ +593 96 368 0879

Please see the up-to-date list of Ziacom® distributors at [www.ziacom.com](http://www.ziacom.com) or email us at [export@ziacom.com](mailto:export@ziacom.com)



# DSQ CR intra-alveolar anchorage system

## Characteristics

### RETENTION AREA

- Round head: prevents tissue laceration
- Retention slot for orthodontic accessories: wires, metal ligatures, ligature ties, chains or springs
- 0.70 mm retention hole for wires and ligatures
- 2.50 mm hex base
- 1.00 mm or 2.50 mm transmucosal neck

### BODY

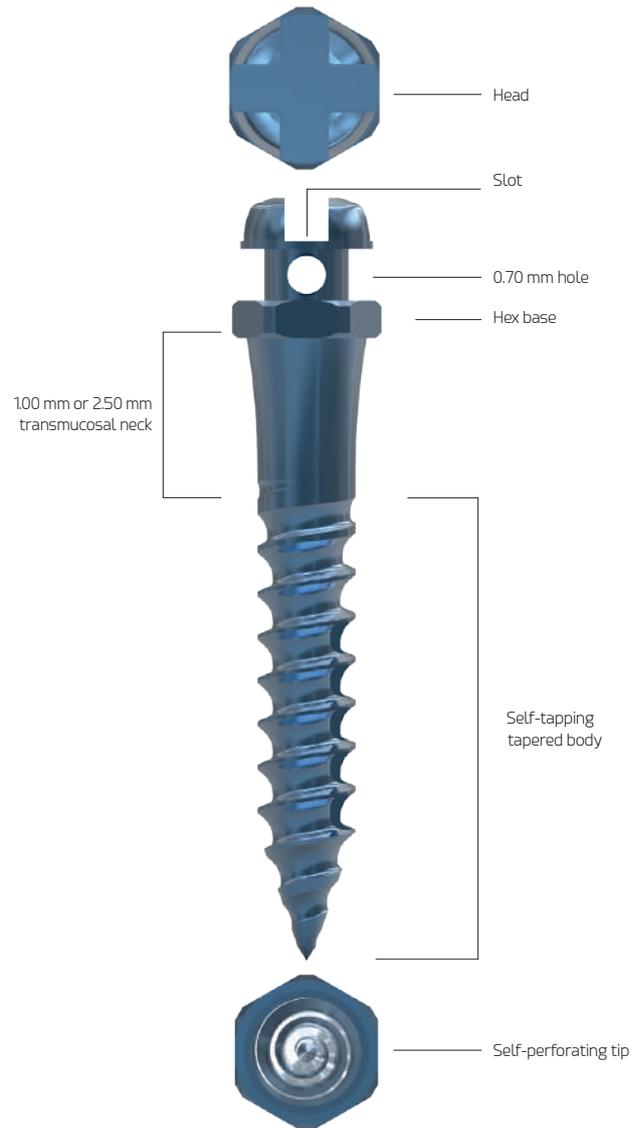
- Conical body with self-tapping thread: aids placement in hard bone and improves stability in soft bone
- Length of active section: 7.00 and 9.00 mm

### TIP

- Self-perforating tip: facilitates insertion in alveolar bone without the need for a pilot drill

### MATERIAL

- Grade 5 ELI titanium (medical use), Ti6Al4V



DSQ CR 1.80 x 9.00 mm implant

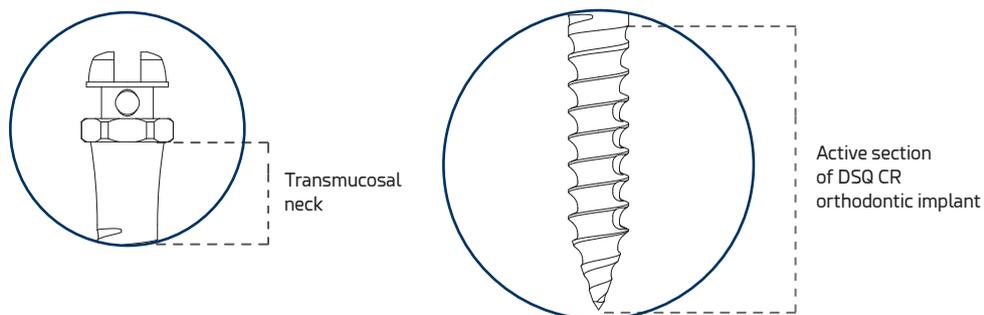
# Diameters, lengths and references

Ø DIAMETER	TRANSMUCOSAL NECK HEIGHT	ANODISING	LENGTH (L)			REFERENCES	
			7	9	9	1 UNIT	5 UNITS
160	100	Yellow		-	-	DSQ11607	DSQ51607
	100	Light blue	-		-	DSQ11609	DSQ51609
	250	Light blue	-	-		DSQ11629	DSQ51629
180	100	Old gold		-	-	DSQ11807	DSQ51807
	100	Ziacom® blue	-		-	DSQ11809	DSQ51809
	250	Ziacom® blue	-	-		DSQ11829	DSQ51829

Dimensions in mm.

**NOTE**

9.00-mm long DSQ CR orthodontic implants are available with transmucosal neck lengths of 1.00 or 2.50 mm.

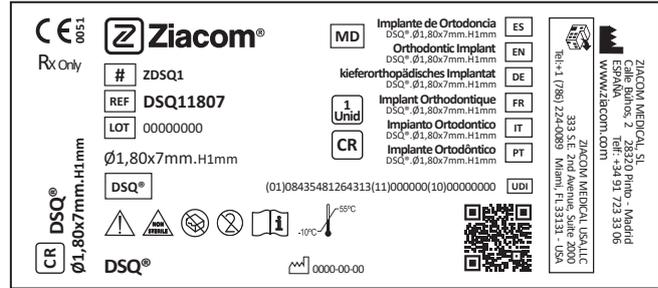


# DSQ<sup>CR</sup> intra-alveolar anchorage system

## Product presentation

DSQ orthodontic implants are supplied in a sealed cardboard box (carton) with a product label allowing immediate identification. The carton contains:

- **DSQ orthodontic implant blister pack:** heat sealed, with product labels allowing the product to be easily traced. The box flap allows easy opening in the clinic while preventing accidental opening.
- **Product label information:** product reference number, diameter and length of the DSQ orthodontic implant, product description, lot number, product manufacturer, date of manufacture and product identification symbols.



For full details on the product presentation and instructions for use (IFU) see [www.ziacom.com/ifus](http://www.ziacom.com/ifus) or scan the QR code on the box.

### Description of the symbology used

- |  |  |  |                                    |
|--|--|--|------------------------------------|
|  | CE marking (MDR) and notified body number. |  | Do not use if package is damaged.  |
|  | Medical device symbol.                     |  | Single-use product.                |
|  | Model code.                                |  | Consult instructions for use.      |
|  | Product name.                              |  | Product use-by date.               |
|  | Product batch number.                      |  | Date of manufacture.               |
|  | Unique device identifier.                  |  | Manufacturer.                      |
|  | Sterilised by radiation.                   |  | Titanium surface treatment.        |
|  | Temperature limit.                         |  | Titanium Active surface treatment. |
|  | Caution, consult attached documentation.   |  | Prescription only.                 |
|  | Do not resterilise.                        |  | Product distributor.               |

## Instructions for removing the DSQ orthodontic implant

1. Press the word "PRESS" and open the carton. Remove the top of the carton and take out the blister pack.
2. Carefully remove the seal from the blister pack.
3. Remove the plastic holder containing the DSQ orthodontic implant from the blister pack.
4. Remove the DSQ orthodontic implant from its plastic holder by grasping the transmucosal neck with some tweezers and place it in the DSQ implant surgical box. Sterilise this box according to the instructions for use.
5. Once the implant has been sterilised, use the insertion key in the handle or the contra-angle insertion key to pick it up for clinical use.
6. Remember to remove the labels from the DSQ orthodontic implant and to adhere them to the patient's medical record to ensure that the product is traceable.

**IMPORTANT**  
DSQ implants are not supplied sterilised and should not be sterilised in their original packaging or in the plastic holder.

# Recommendations for use

DSQ CR orthodontic implants are designed as intra-alveolar temporary anchorage devices for orthodontic treatment. Their use allows movements to be limited to one or more teeth or to have an overall effect on the entire arch. They can also be used for retraction of the maxillary and mandibular incisor or incisor-canine groups.

## GENERAL INDICATIONS FOR USE

- Retrusion of the maxillary and mandibular incisor or incisor-canine groups
- Premolar and molar mesialisation and distalisation
- Intrusion of posterior molars to control posterior vertical dimension
- Intrusion of incisors in cases of overbite and reduced vertical dimension
- Incisor extrusion in cases of open bite
- Individual management of teeth in all three planes of space (intrusion, extrusion, proclination or lingualisation)
- Traction of impacted teeth

## INDICATIONS FOR USE IN THE MAXILLA

The areas of choice for placement of DSQ CR orthodontic implants in the maxilla are the labial or palatal sides of the alveolar process. Extreme care should be taken with neighbouring dental and anatomical structures.

Other less common areas for placement of DSQ CR orthodontic implants in the maxilla are:

- Anterior nasal spine
- Canine fossa
- Anterior and medial area of the palate

It is not recommended that DSQ CR orthodontic implants be inserted into:

- Maxillary tuberosity
- Palatal area posterior to the second molars
- Zygomatic process

## INDICATIONS FOR USE IN THE MANDIBLE

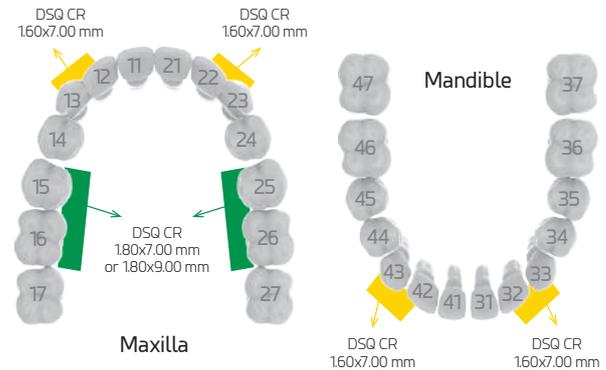
The area of choice for placement of DSQ CR orthodontic implants in the mandible is the labial side of the alveolar process. It is important to take into consideration neighbouring anatomical structures, especially in the premolar and molar area.

It is not recommended that DSQ CR orthodontic implants be inserted into:

- Lingual side of the mandible due to causing discomfort to the tongue and the risk of injury to neighbouring anatomical structures
- Mandibular ramus
- Retromolar space
- External oblique ridge

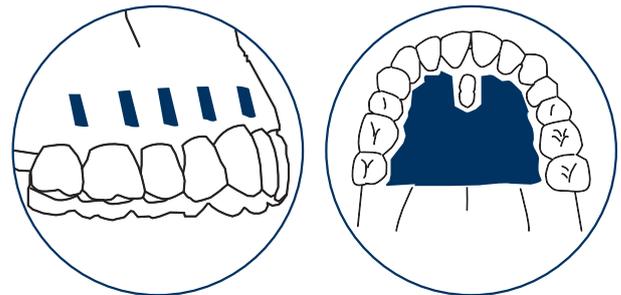
## NOTE

DSQ CR orthodontic implants should not be used for more than 12 months. It is recommended that orthodontic implants be turned once anti-clockwise and then once clockwise every 4 months to prevent osseointegration.



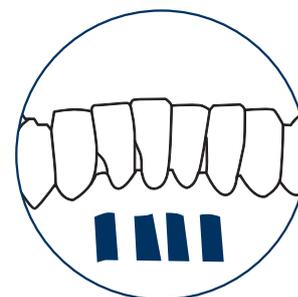
## INTRA-ALVEOLAR USE

### MAXILLA



MOST COMMON AREA

### MANDIBLE



MOST COMMON AREA

# DSQ<sup>ST</sup> extra-alveolar anchorage system

## Characteristics

### RETENTION AREA

- Button head: prevents tissue laceration
- Retention area for use with orthodontic accessories: wires, metal ligatures, ligature ties, chains or springs
- 0.70 mm retention hole for wires and ligatures
- 2.50 mm hex base
- 3.00 mm transmucosal neck

### BODY

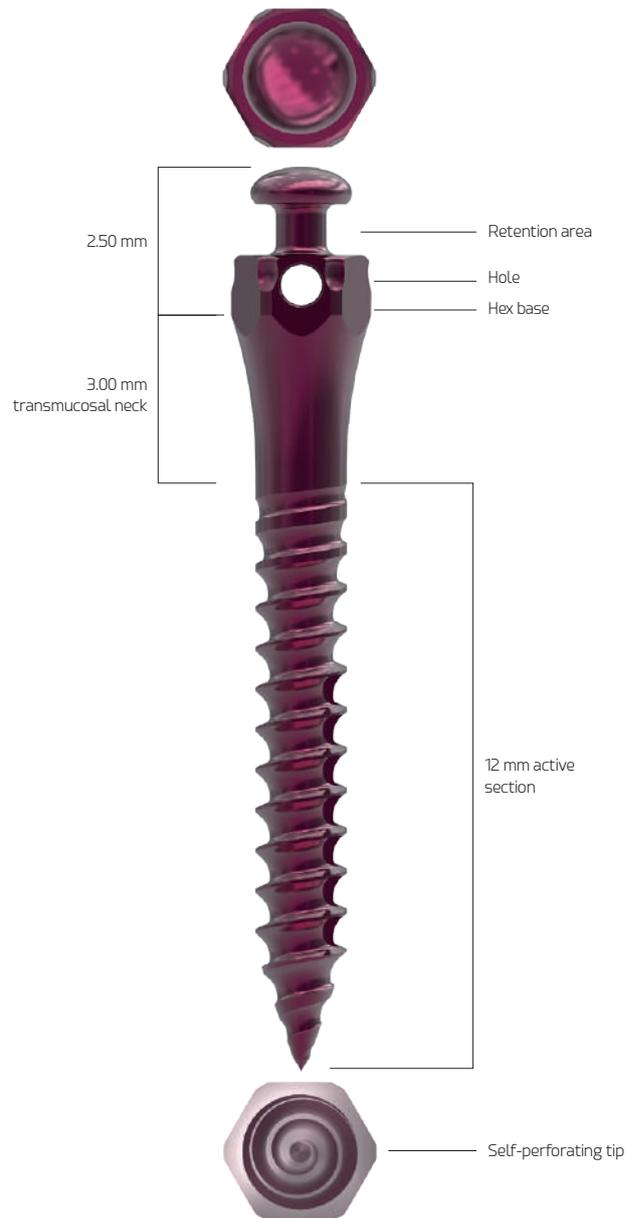
- 12 mm conical body with self-tapping thread: aids placement in hard bone and improves stability in soft bone
- Length of active section: 7.00 and 9.00 mm

### TIP

- Self-perforating tip: facilitates insertion in maxillary and mandibular bone without the need for a pilot drill

### MATERIAL

- Grade 5 ELI titanium (medical use), Ti6Al4V

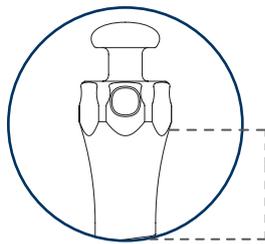


DSQ ST 1.80 x 12 mm implant

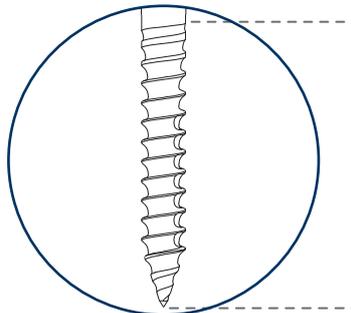
# Diameters, lengths and references

Ø DIAMETER	TRANSMUCOSAL NECK HEIGHT	ANODISING	LENGTH (L)	REFERENCES	
			12	1 UNIT	5 UNITS
1.80	3.00	 Burgundy		DSQ11812	DSQ51812

Dimensions in mm.



Transmucosal neck



Active section of DSQ ST orthodontic implant

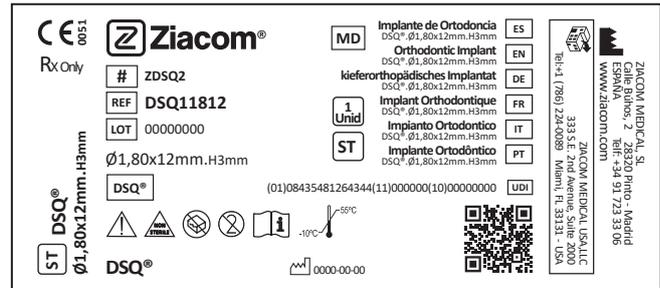


# DSQ<sup>ST</sup> extra-alveolar anchorage system

## Product presentation

DSQ orthodontic implants are supplied in a sealed cardboard box (carton) with a product label allowing immediate identification. The carton contains:

- **DSQ orthodontic implant blister pack:** heat sealed, with product labels allowing the product to be easily traced. The box flap allows easy opening in the clinic while preventing accidental opening.
- **Product label information:** product reference number, diameter and length of the DSQ orthodontic implant, product description, lot number, product manufacturer, date of manufacture and product identification symbols.



For full details on the product presentation and instructions for use (IFU) see [www.ziacom.com/ifus](http://www.ziacom.com/ifus) or scan the QR code on the box.



### Description of the symbology used

	CE marking (MDR) and notified body number.		Do not use if package is damaged.
	Medical device symbol.		Single-use product.
	Model code.		Consult instructions for use.
	Product name.		Product use-by date.
	Product batch number.		Date of manufacture.
	Unique device identifier.		Manufacturer.
	Sterilised by radiation.		Titansure surface treatment.
	Temperature limit.		Titansure Active surface treatment.
	Caution, consult attached documentation.		Prescription only.
	Do not resterilise.		Product distributor.

## Instructions for removing the DSQ orthodontic implant



### IMPORTANTE

Los implantes DSQ no se suministran estériles y no deben ser esterilizados en su envase original ni con el soporte plástico.

# Recommendations for use

DSQ ST orthodontic implants are designed as extra-alveolar temporary anchorage devices for orthodontic treatment.

Their use allows movements to be limited to one or more teeth or to have an overall effect on the entire arch.

## GENERAL INDICATIONS FOR USE

- Retrusion of the maxillary and mandibular incisor or incisor-canine groups
- Premolar and molar mesialisation and distalisation
- Extrusion of posterior molars to control posterior vertical dimension
- Incisor extrusion in cases of open bite
- Individual management of teeth in all three planes of space (intrusion, extrusion, proclination or lingualisation)
- Traction of impacted teeth

## INDICATIONS FOR USE IN THE MAXILLA

The area of choice for placement of DSQ ST orthodontic implants in the maxilla is the buccal side, more specifically in the zygomatic process.

Other less common areas for placement of DSQ ST orthodontic implants in the maxilla are:

- Maxillary tuberosity
- Canine fossa

It is not recommended that DSQ ST orthodontic implants be inserted into:

- Palatal area
- Alveolar process

## INDICATIONS FOR USE IN THE MANDIBLE

As in the maxilla, the area of choice for placement of DSQ ST orthodontic implants in the mandible is the buccal bone tissue.

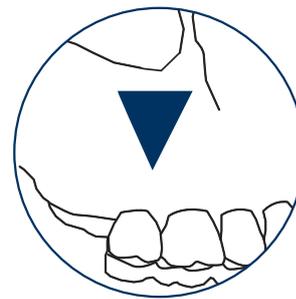
Due to their length, DSQ ST orthodontic implants are indicated for placement in the mandibular ramus, retromolar space, external oblique ridge and mandibular symphysis, although special care should be taken with neighbouring anatomical structures.

It is not recommended that DSQ ST orthodontic implants be inserted into:

- Lingual or palatal alveolar process
- Buccal alveolar process

## INTRA-ALVEOLAR USE

### MAXILLA



■ MOST COMMON AREA

### MANDIBLE



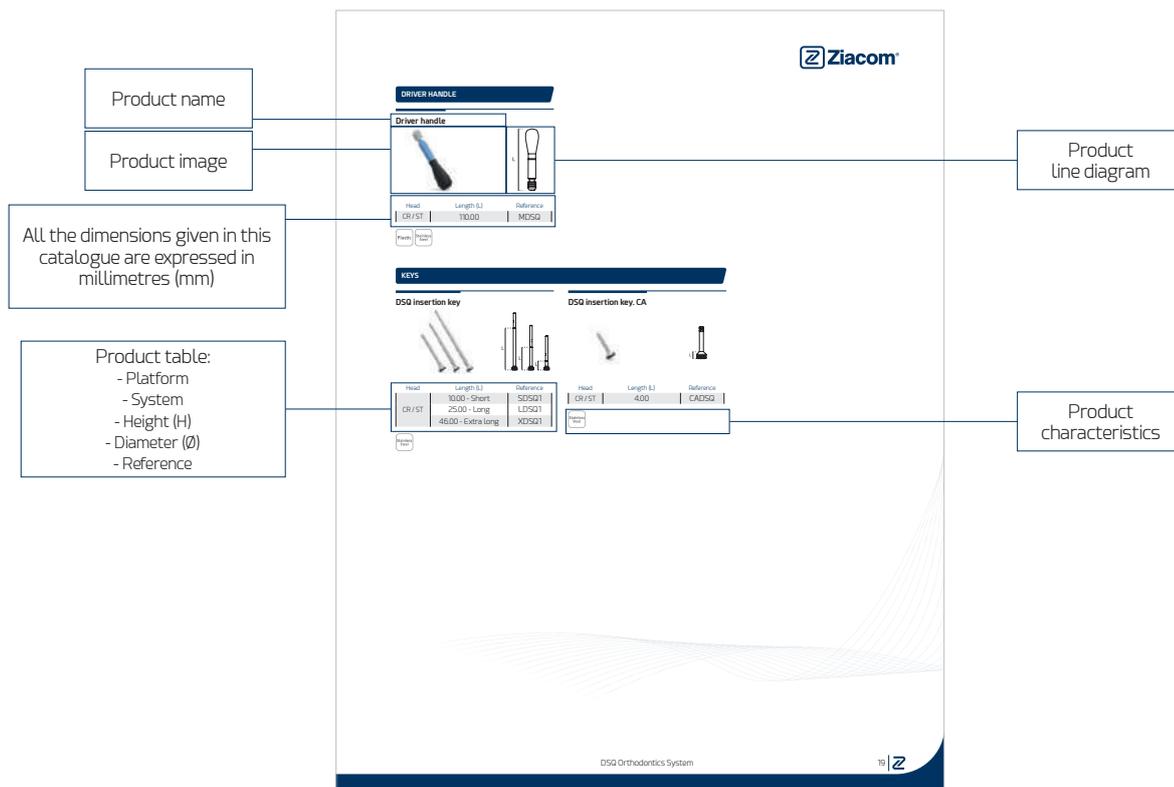
■ MOST COMMON AREA

## NOTE

DSQ ST orthodontic implants should not be used for more than 12 months. It is recommended that orthodontic implants be turned once anti-clockwise and then once clockwise every 4 months to prevent osseointegration.

# How to use this catalogue

## Product sheet



## Symbology

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Rotatory element		Tx30 connection		Made from steel
	Non-rotatory element		Size in millimetres		Made from cobalt-chromium + castable plastic
	Use with manual torque		45° screw support		Made from cobalt-chromium
	Maximum operating torque		90° screw support		Made from PEEK
	Ratchet torque range		Use in rotation with a CA		Made from castable plastic
	Galaxy connection		Maximum rotation speed		Made from plastic
	Screw connection		Maximum number of uses		Recommended sterilisation temperature
	Kirator connection		Single-use product		Unsterilised product
	Nature connection		Made from grade 5 ELI (extra-low interstitial) titanium		Use with abundant irrigation
	Basic connection		Made from grade 2 titanium		Maximum angle
	XDrive connection		Made from stainless steel		



# Surgical instruments

## Surgical box



### ■ Available Ziacom® DSQ boxes

Contents	Reference
Empty	BOXDSQ
Complete	BOXDSQ1
Mini	BOXDSQ2



Material: plastic + aluminium.

Ensure boxes do not touch the walls of the autoclave to avoid damage.

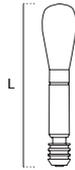
### ■ Contents of surgical boxes

REF	Description
MDSQ	Driver handle. Manual. Plastic + stainless steel
SDSQ1	DSQ insertion key. Short. Manual. Stainless steel
LDSQ1	DSQ insertion key. Long. Manual. Stainless steel
XDSQ1	DSQ insertion key. Extra long. Manual. Stainless steel
CADSQ	DSQ insertion key. CA. Stainless steel



## DRIVER HANDLE

### Driver handle

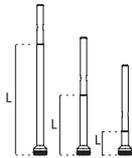


Head	Length (L)	Reference
CR / ST	110.00	MDSQ



## KEYS

### DSQ insertion key



Head	Length (L)	Reference
CR / ST	10.00 - Short	SDSQ1
	25.00 - Long	LDSQ1
	46.00 - Extra long	XDSQ1



### DSQ insertion key. CA



Head	Length (L)	Reference
CR / ST	4.00	CADSQ





**DSQ**

Surgical  
protocol



# Surgical protocol

## Steps for placing the DSQ CR orthodontic implant

It is important to note that DSQ CR orthodontic implants should be placed in alveolar bone and that their placement protocol will depend on the anchorage position to be used and the position of tooth roots and other anatomical structures.



DSQ CR

- **EXAMPLE:**  
Orthodontic implant  
Ø1.80x7.00 mm



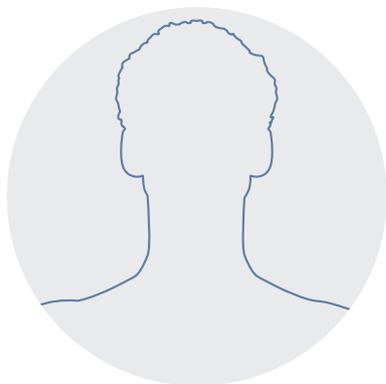
### INSTRUMENTS REQUIRED

1. **Driver handle**  
(Ref. MDSQ)
2. **DSQ insertion key, short**  
(Ref. SDSQ1)
3. **DSQ insertion key, long**  
(Ref. LDSQ1)
4. **DSQ insertion key, extra long**  
(Ref. XDSQ1)
5. **DSQ insertion key, CA**  
(Ref. CADSQ)



### PRELIMINARY STEP | Patient diagnosis

The orthodontist must correctly diagnose the patient by assessing the patient's overall health, occlusion, periodontal health and oral hygiene. X-rays and scans (panoramic, periapical or computerised tomography) should be taken into account to determine the morphology of tooth roots and the location of anatomical structures near the orthodontic implant placement site.



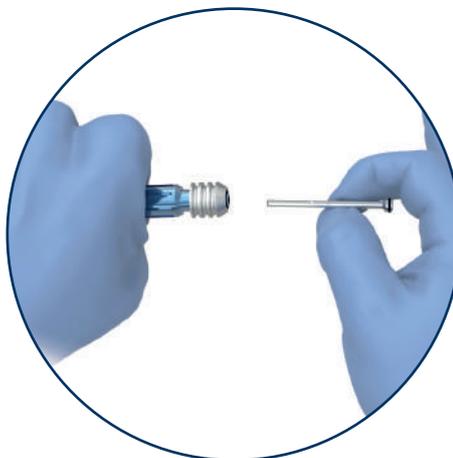
### STEP 1 | Attaching the driver to the handle

Hold the widest section of the driver in the palm of your hand, use your index finger and thumb to pull back the ring, insert the insertion key until it is properly seated and release the ring.

Use the insertion key in the handle or the contra-angle insertion key to lift the head of the DSQ CR implant by its hex base, making sure the implant is properly attached to the driver.

#### NOTE

If using the DSQ CR contra-angle insertion key, it is necessary to apply torque at 15 Ncm and 25 rpm.



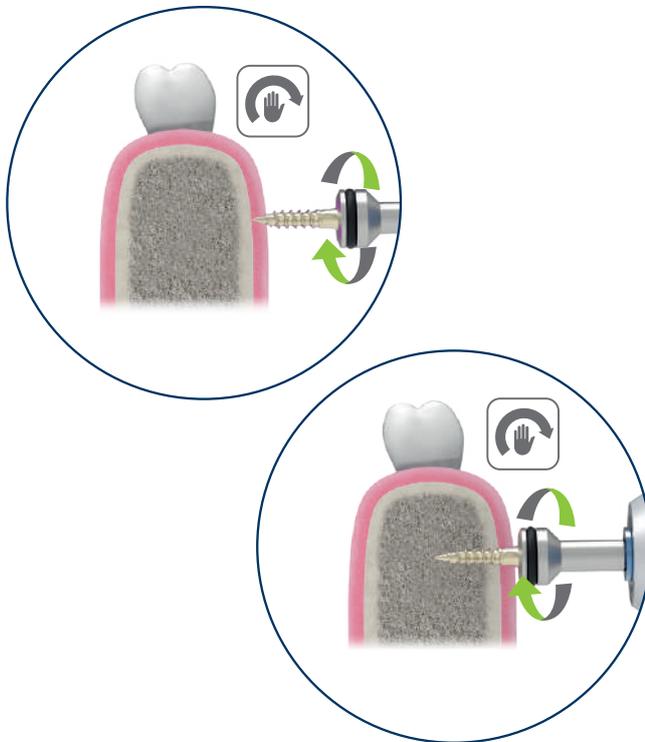
### STEP 2 | Inserting the DSQ CR orthodontic implant by hand

Without making any type of incision or drilling, place the orthodontic implant perpendicular to the bone, taking extreme care with the tooth roots.

Apply firm pressure while either rotating the handle **clockwise** by hand or while rotating the insertion key in the contra-angle at a speed of **25 rpm** at no more than **15 Ncm** torque.

**NOTE**

Take an X-ray to confirm that the DSQ CR orthodontic implant is in the correct position.



### STEP 3 | Loading the DSQ CR orthodontic implant

Check the three-dimensional stability (i.e. coronal-apical, mesial-distal and buccal-lingual) of the DSQ CR orthodontic implant. If the implant is stable, it can be immediately loaded, with loading not exceeding 300 grams.



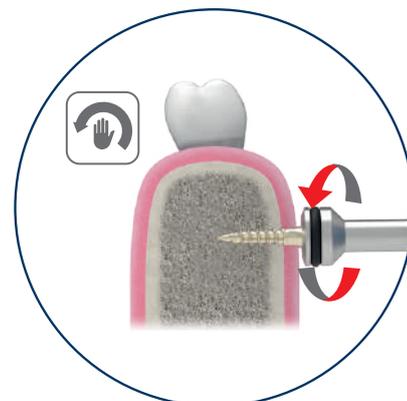
## Protocol for removing the DSQ CR orthodontic implant

### STEP 1 | Removing the DSQ CR orthodontic implant

To remove the DSQ CR orthodontic implant, the adapter should be placed on the head of the implant and the adapter handle rotated **anti-clockwise** until the implant is completely removed.

**NOTE**

It is recommended that the head of the DSQ CR orthodontic implant be secured with dental floss prior to removing the implant in order to prevent aspiration or ingestion by the patient.



# Surgical protocol

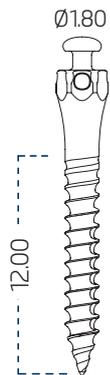
## Steps for placing the DSQ ST orthodontic implant in the maxilla

It is important to note that DSQ ST orthodontic implants should be placed in the maxillary bone, more specifically the zygomatic process. The placement protocol will depend on the anchorage position to be used and the position of the tooth roots and other anatomical structures.



DSQ ST

- **EXAMPLE:**  
Orthodontic implant  
Ø1.80x12.00 mm



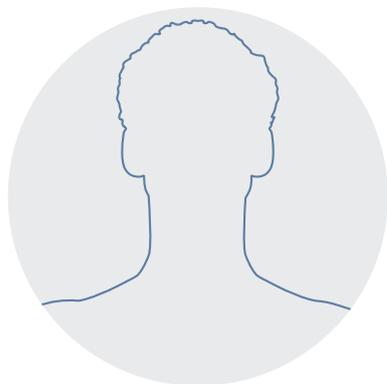
### INSTRUMENTS REQUIRED

1. **Driver handle**  
(Ref. MDSQ)
2. **DSQ insertion key, short**  
(Ref. SDSQ1)
3. **DSQ insertion key, long**  
(Ref. LDSQ1)
4. **DSQ insertion key, extra long**  
(Ref. XDSQ1)
5. **DSQ insertion key, CA**  
(Ref. CADSQ)



### PRELIMINARY STEP | Patient diagnosis

The orthodontist must correctly diagnose the patient by assessing their overall health, occlusion, periodontal health and oral hygiene. X-rays and scans (panoramic, periapical or computerised tomography) should be taken into account to determine the morphology of tooth roots and the location of anatomical structures near the orthodontic implant placement site.



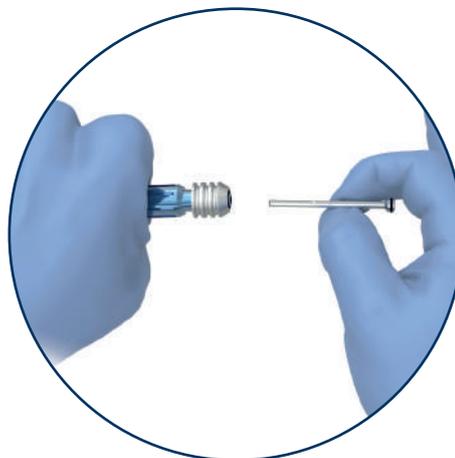
### STEP 1 | Attaching the driver to the handle

Hold the widest section of the driver in the palm of your hand, use your index finger and thumb to pull back the ring, insert the insertion key until it is properly seated and release the ring.

Use the insertion key in the handle or the contra-angle insertion key to lift the head of the DSQ ST implant by its hex base, making sure the implant is properly attached to the driver.

#### NOTE

If using the DSQ ST contra-angle insertion key, it is necessary to apply torque at 15 Ncm and 25 rpm.



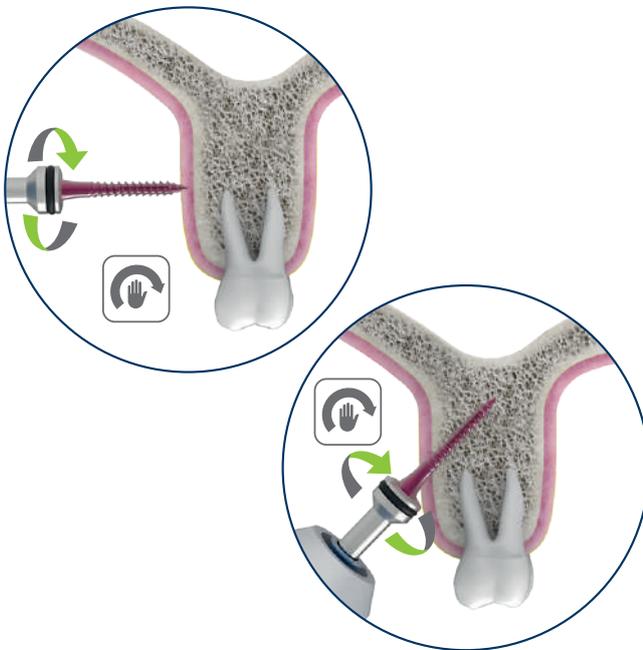
### STEP 2 | Inserting the DSQ ST orthodontic implant by hand

Without making any type of incision or drilling, locate the zygomatic process (between the first and second molars) and place the DSQ ST orthodontic implant perpendicular to the bone (at an angle of  $90^\circ$ ). Apply firm, controlled pressure while either rotating the insertion key in the handle **clockwise** or while rotating the insertion key in the contra-angle at a speed of **25 rpm** at no more than **15 Ncm torque**.

As the DSQ ST orthodontic implant is inserted into the bone, the angle should be changed slightly to  $60^\circ$  or  $70^\circ$  from the occlusal plane of the tooth, taking extreme care with neighbouring anatomical structures.

#### NOTE

Take an X-ray to confirm that the DSQ ST orthodontic implant is in the correct position.



### STEP 3 | Loading the DSQ ST orthodontic implant

Check the three-dimensional stability (i.e. coronal-apical, mesial-distal and buccal-lingual) of the DSQ ST orthodontic implant. If the implant is stable, it can be immediately loaded, with loading not exceeding 300 grams.



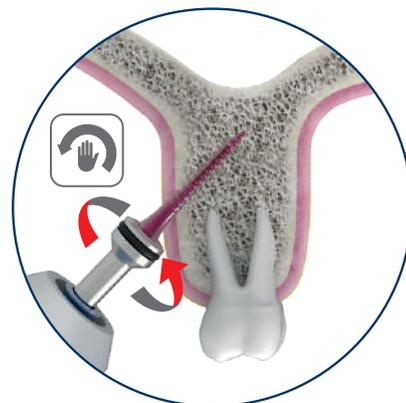
## Protocol for removing the DSQ ST orthodontic implant

### STEP 1 | Removing the DSQ ST orthodontic implant

To remove the DSQ ST orthodontic implant, the adapter should be placed on the head of the implant and the adapter handle rotated **anti-clockwise** until the implant is completely removed.

#### NOTE

It is recommended that the head of the DSQ ST orthodontic implant be secured with dental floss prior to removing the implant in order to prevent aspiration or ingestion by the patient.



# Surgical protocol

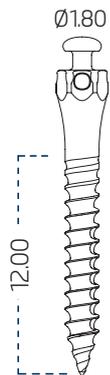
## Steps for placing the DSQ ST orthodontic implant in the mandible

It is important to note that DSQ ST orthodontic implants should be placed along the external oblique ridge of the mandible. The placement protocol will depend on the anchorage position to be used and the position of the tooth roots and other anatomical structures.



DSQ ST

- **EXAMPLE:**  
Orthodontic implant  
Ø1.80x12.00 mm



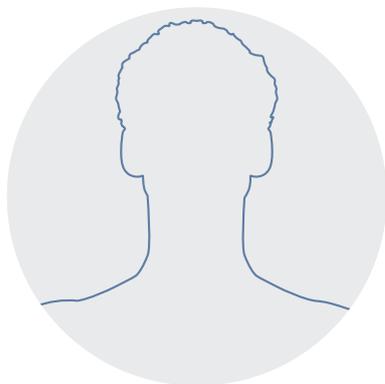
### INSTRUMENTS REQUIRED

1. Driver handle  
(Ref. MDSQ)
2. DSQ insertion key, short  
(Ref. SDSQ1)
3. DSQ insertion key, long  
(Ref. LDSQ1)
4. DSQ insertion key, extra long  
(Ref. XDSQ1)
5. DSQ insertion key, CA  
(Ref. CADSQ)



### PRELIMINARY STEP | Patient diagnosis

The orthodontist must correctly diagnose the patient by assessing their overall health, occlusion, periodontal health and oral hygiene. X-rays and scans (panoramic, periapical or computerised tomography) should be taken into account to determine the morphology of tooth roots and the location of anatomical structures near the orthodontic implant placement site.



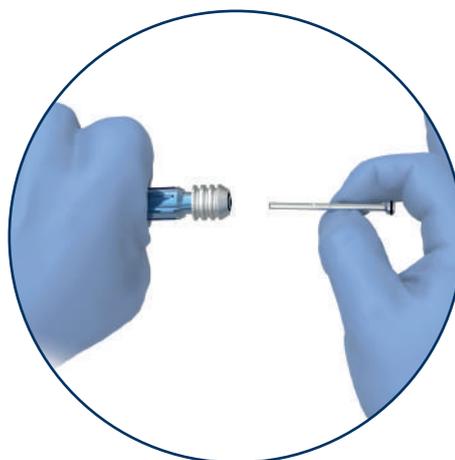
### STEP 1 | Attaching the driver to the handle

Hold the widest section of the driver in the palm of your hand, use your index finger and thumb to pull back the ring, insert the insertion key until it is properly seated and release the ring.

Use the insertion key in the handle or the contra-angle insertion key to lift the head of the DSQ ST implant by its hex base, making sure the implant is properly attached to the driver.

#### NOTE

If using the DSQ ST contra-angle insertion key, it is necessary to apply torque at 15 Ncm and 25 rpm.



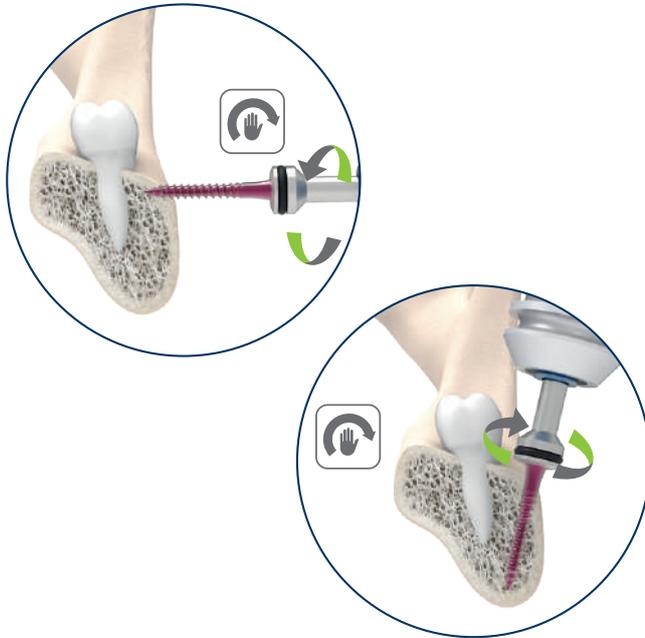
### STEP 2 | Inserting the DSQ ST orthodontic implant by hand

Without making any type of incision or drilling, locate the external oblique ridge and place the DSQ ST orthodontic implant perpendicular to the bone (at an angle of 90°). Apply firm, controlled pressure while either rotating the driver in the handle **clockwise** or while rotating the driver in the contra-angle at a speed of 25 rpm at no more than 15 Ncm torque.

As the DSQ ST orthodontic implant is inserted into the bone, the angle should be changed slightly to 60° or 70° from the occlusal plane of the tooth, taking extreme care with neighbouring anatomical structures.

#### NOTE

Take an X-ray to confirm that the DSQ ST orthodontic implant is in the correct position.



### STEP 3 | Loading the DSQ ST orthodontic implant

Check the three-dimensional stability (i.e. coronal-apical, mesial-distal and buccal-lingual) of the DSQ ST orthodontic implant. If the implant is stable, it can be immediately loaded, with loading not exceeding 300 grams.



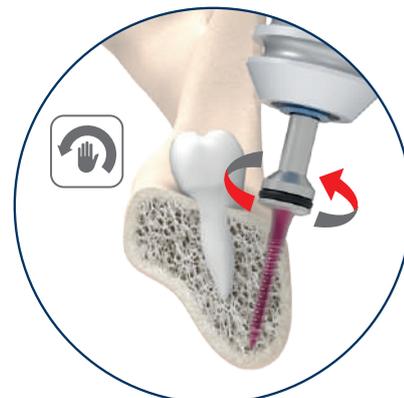
## Protocol for removing the DSQ ST orthodontic implant

### STEP 1 | Removing the DSQ ST orthodontic implant

To remove the DSQ ST orthodontic implant, the adapter should be placed on the head of the implant and the adapter handle rotated **anti-clockwise** until the implant is completely removed.

#### NOTE

It is recommended that the head of the DSQ ST orthodontic implant be secured with dental floss prior to removing the implant in order to prevent aspiration or ingestion by the patient.



# Cleaning, disinfection and sterilisation

The protocols described in this section must only be carried out by personnel qualified to clean, disinfect and sterilise the dental materials specified herein.

## Cleaning and disinfection instructions

Applicable for surgical and prosthetic instruments and boxes.

### ■ Disassembly

1. Disassemble\* the instruments that need to be cleaned and disinfected, such as manual ratchets, drills or drill stops.
2. Remove all the different components from the surgical or prosthetic kit box for correct cleaning.

### ■ Cleaning and disinfection

For disinfection of instruments and surgical kit boxes:

1. Submerge the instruments in a detergent/disinfectant solution\*\* suitable for dental instruments to help eliminate any adhered biological residues. If an ultrasound bath is available\*\*\*, confirm that the detergent/disinfectant solution is indicated for use with this type of equipment.
2. Manually remove any biological residues with a non-metallic brush and pH-neutral detergent.
3. Rinse with copious water.
4. When cleaning surgical and prosthetic kit boxes, always use a pH-neutral detergent and non-abrasive tools to avoid damaging the surface of the boxes.
5. Dry the materials with disposable, lint-free, cellulose cloths or compressed air.

For disinfection of plastic caps and the protective disk:

1. Submerge for 10 minutes in a neat benzalkonium chloride solution.
2. Rinse with distilled water.
3. Dry the caps and disk prior to use.

### ■ Inspection

1. Check that the instruments are perfectly clean; if not, repeat the cleaning and disinfection steps.
2. Discard any instruments with imperfections and replace them before the next surgery.
3. Check that the instruments and surgical and prosthetic kit boxes are perfectly dry before reassembling the parts and proceeding with sterilisation.

\* See the assembly and disassembly manuals at [www.ziacom.com/biblioteca](http://www.ziacom.com/biblioteca)

\*\* Follow the instructions from the disinfectant's manufacturer to determine the correct concentrations and times.

\*\*\* Follow the instructions from the ultrasound bath's manufacturer to determine the correct temperature, concentration and times.

## Sterilisation instructions for steam autoclaves

Applicable to orthodontic implants, abutments, kit, surgical and prosthetic boxes, pins, fixing screws and mesh membranes.

1. Place the material in individual sterilisation pouches and seal the pouches. For joint sterilisation, place the instruments in their surgical kit box, place the box in a sterilisation pouch and seal the pouch.
2. Place the pouches to be sterilised in the autoclave.
3. Sterilise in a steam autoclave at 134°C/273°F (max. 137°C/276°F) for 4 min (minimum) at 2 atm. Dynamometric torque wrenches must be sterilised in 3 vacuum cycles at 132°C/270°F for at least ≥ 4 minutes and vacuum dried for at least 20 minutes.

**For the United States only:** The validated and recommended sterilisation cycle for the US must be performed in a steam autoclave at 132°C/270°F for at least 15 minutes with a drying time of at least 15-30 minutes.

#### IMPORTANT

Make sure the drying stage is allowed to run to completion, otherwise the products may be damp.

Check the sterilisation equipment if the materials or sterilisation pouches are damp at the end of the sterilisation cycle.

Perform the necessary maintenance actions on the autoclave according to the established periodicity and following the manufacturer's instructions.



## Storage of Ziacom® products

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- Store the products in their original packaging in a clean, dry place until they are to be used.
- After sterilisation, keep the products in the sealed sterilisation pouches in a clean, dry location.
- Never exceed the use by date indicated by the manufacturer of the sterilisation pouches.
- Always follow the instructions of the manufacturer of the sterilisation pouches.

## General recommendations

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- Never use damaged or dirty material; never reuse single-use products. The user is responsible for following the instructions described in this document correctly.
- Pay attention to piercing or sharp elements. Gloves should be worn when cleaning the materials to avoid accidents during handling.
- Follow the safety instructions indicated by the manufacturer of the disinfectant.
- The product's sterility cannot be guaranteed if the sterilisation pouch is open, damaged or damp.
- Respect all stages of the sterilisation process. If the materials or sterilisation pouches contain traces of water or moisture, check the autoclave and repeat the sterilisation.
- Orthodontic abutments and implants are supplied UNSTERILISED and must always be sterilised before use.
- Instruments and surgical and prosthetic kit boxes are supplied UNSTERILISED and must always be sterilised before use and cleaned and disinfected after use.
- Sterilisation, cleaning and disinfection processes gradually deteriorate the instruments. Inspect the instruments thoroughly to detect any signs of deterioration.
- Avoid contact between products made from different materials (steel, titanium, etc.) during the cleaning, disinfection and sterilisation processes.
- Ziacom Medical SL recommends these instructions are implemented for the correct maintenance and safety of their products; accordingly, the company refuses any liability for any damage to the products that could arise if the user applies alternative cleaning, disinfection and sterilisation procedures.

See the latest version of the cleaning, disinfection and sterilisation instructions at [www.ziacom.com/biblioteca](http://www.ziacom.com/biblioteca)





See the updated general conditions of sale at [www.ziacom.com](http://www.ziacom.com).

Check the availability of each product in your country.

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