

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 quick guide for clinicians responsible for treatment, hereafter the "user", and, therefore, is neither an alternative nor a substitute for specialized training or professional clinical experience.

Ziacom® products must be used according to a suitable treatment plan and adhering strictly to the surgical and prosthetic protocols established by the manufacturer. Read the product-specific surgical and prosthetic protocols as well as the instructions for use and maintenance before using each Ziacom® product. You can find this information on our website, www.ziacom.com, or request it from your nearest authorised Ziacom® distributor.

Liability, safety and guarantee.

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 guiding information. 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, their affiliates and/or their 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 professionals 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, their affiliates or authorised distributors).

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

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The Company

Together for health

Ziacom® has been working for more than 15 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 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 started up on an **ambitious growth plan** with new goals of **international expansion**, broadening and **diversification** of its portfolio of **products and services** and a Corporate Identity restyle.

Ziacom® quality

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

The reason why we used 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 SL is a **licensed manufacturer of medical devices** and an AEMPS (Spanish Agency for 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 an unsurpassable quality, all our implants have a **lifetime guarantee**.

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

Grade 5 ELI titanium (Extra Low Interstitials)

Ziacom® DSQ orthodontic implants are made of **Titanium Grade 5 ELI (sanitary use) Ti 6Al 4V**, which confers better mechanical properties.

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



FDA Approved*

*See approved models

Thanks to **Titanium Grade 5 ELI**, our implants meet the requirements of ASTM F67 and ISO 5832-3 and are certified in accordance with Council Directive 93/42/EEC and its amendment Directive 2007/47/EC by

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 ensure the best **advances in dentistry field**.

We therefore work closely with **training centres, universities and scientific bodies** to create a practical and specialised teaching environment 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® around the world

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 we our products are already available** and to add **new growth 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 headquarter

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Please see the up-to-date list of Ziacom® distributors at www.ziacom.com or email us at 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

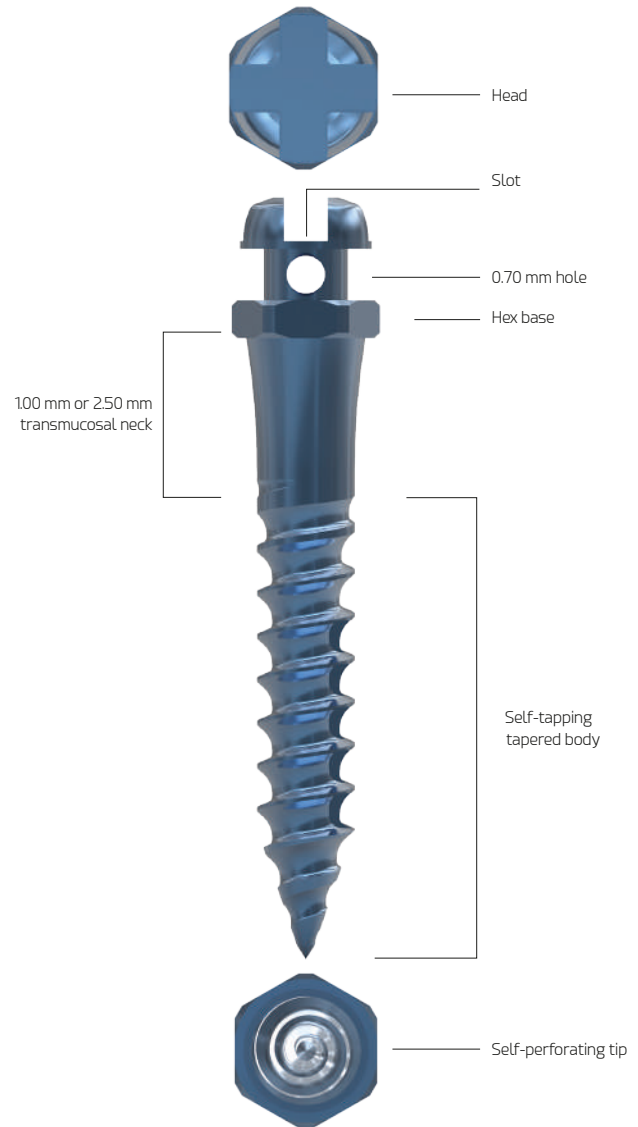
- Conical body with self-tapping thread: aids placement in hard bone and improves stability in soft bone
- Length of active section: 7.00 and 9.00 mm

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

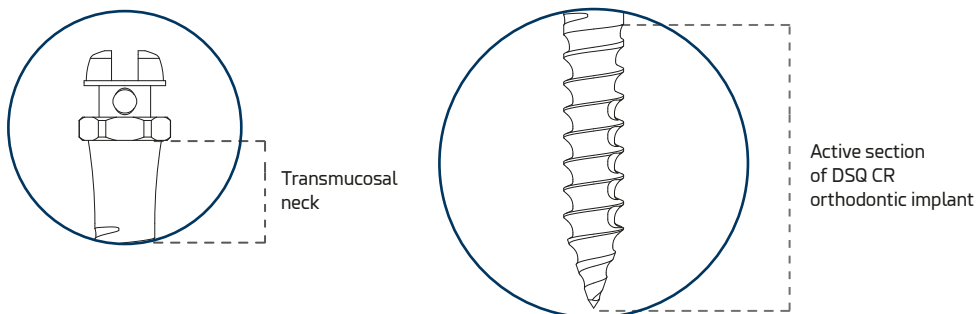
Diameters, lengths and references

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.

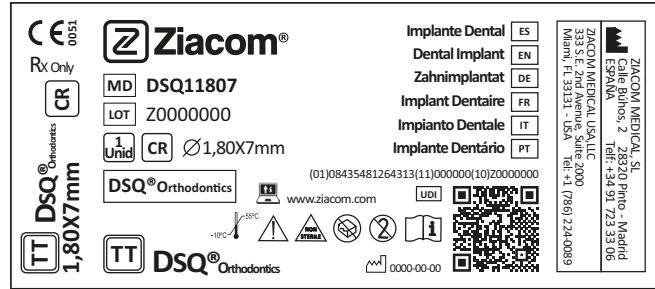


DSQ^{CR} intra-alveolar anchorage system

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 or scan the QR code on the box.

Description of the symbology used

- | | |
|---|---|
| <ul style="list-style-type: none"> CE MDD CE certification and notified body MD Name of the medical device LOT Number of product batch Website Patient information website UDI Unique device identification STERILIZED Sterilised using radiation Temperature restriction Caution, consult accompanying documents Do not resterilise | <ul style="list-style-type: none"> 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 Titansure surface treatment Titansure Active surface treatment Rx Only Caution: federal law prohibits dispensing without prescription |
|---|---|

Instructions for removing the DSQ orthodontic implant



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

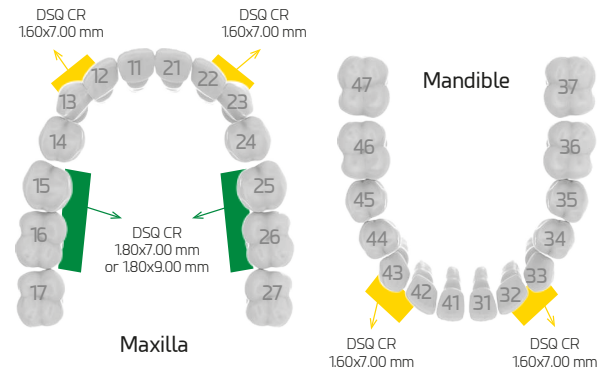
The area of choice for placement of DSQ CR orthodontic implants in the mandible is the labial side of the alveolar process. It is important to take into consideration neighbouring anatomical structures, especially in the premolar and molar area.

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

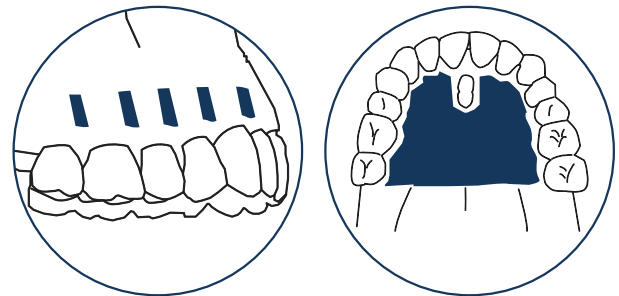
NOTE

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.



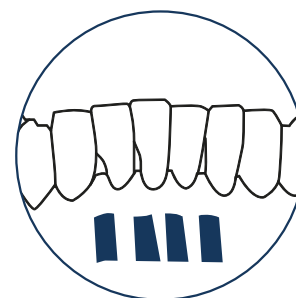
INTRA-ALVEOLAR USE

MAXILLA



■ MOST COMMON AREA

MANDIBLE



■ MOST COMMON AREA

DSQST 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

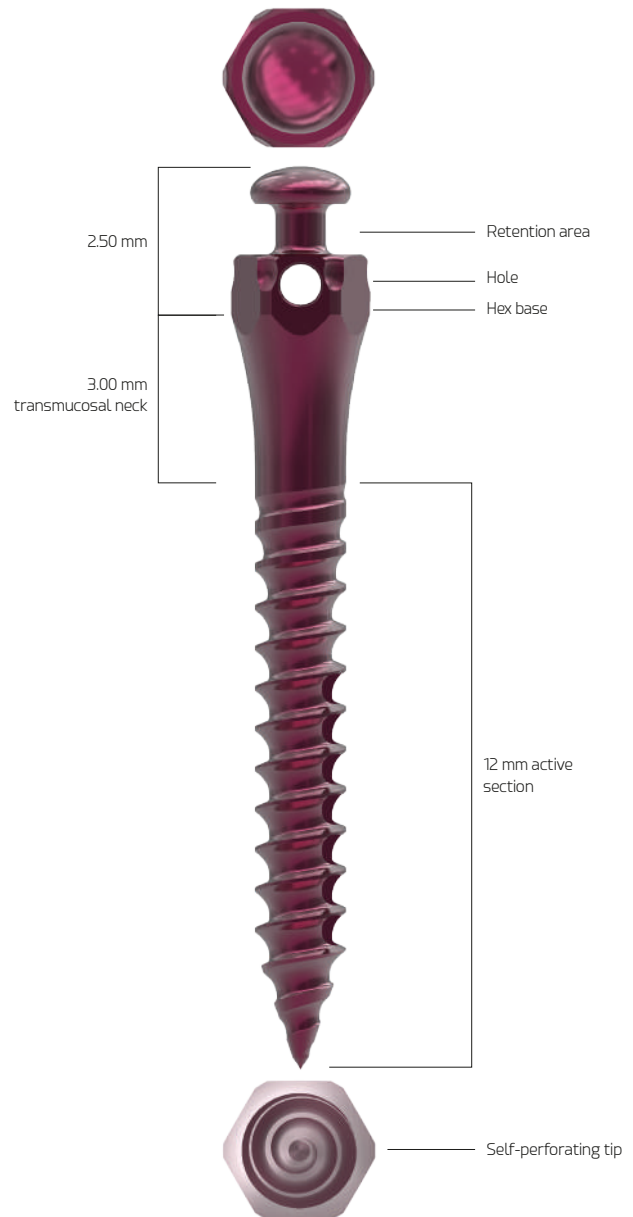
- 12 mm conical body with self-tapping thread: aids placement in hard bone and improves stability in soft bone
- Length of active section: 7.00 and 9.00 mm

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

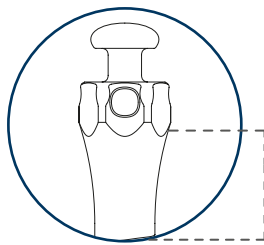


DSQ ST 1.80 x 12 mm implant

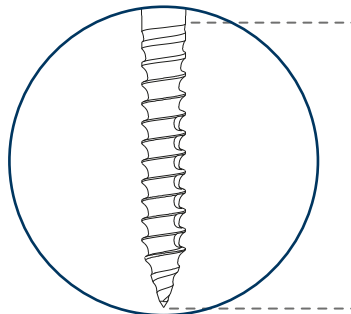
Diameters, lengths and references

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

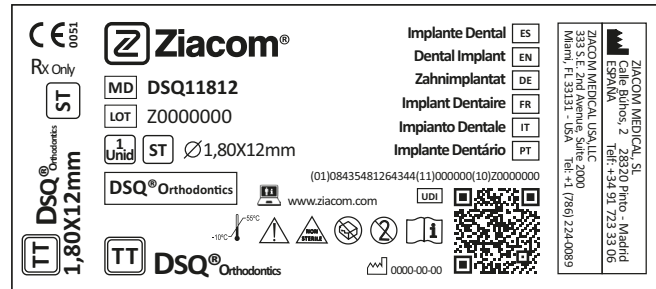


DSQST extra-alveolar anchorage system

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 or scan the QR code on the box.



Description of the symbology used

- | | |
|---|--|
| <ul style="list-style-type: none"> CE MDD CE certification and notified body MD Name of the medical device LOT Number of product batch Patient information website UDI Unique device identification STERILIZED Sterilised using radiation Temperature restriction Caution, consult accompanying documents Do not resterilise | <ul style="list-style-type: none"> 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 Titanium surface treatment Titanium Active surface treatment Rx Only Caution: federal law prohibits dispensing without prescription |
|---|--|

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. Retire con cuidado el precinto del blíster.
3. Retire del blíster el soporte plástico donde esta el implante de ortodoncia DSQ.
4. Retire el implante ortodoncia DSQ de su soporte plástico, tomándolo por el cuello transmucoso utilizando unas pinzas y colóquelo en la caja quirúrgica de implantes DSQ. Esterilice esta caja según las instrucciones de uso.
5. Una vez esterilizado el instrumental, use la llave de inserción en el puño o la llave de inserción a contra ángulo para coger el implante para su uso clínico.
6. Recuerde retirar las etiquetas identificativas del implante de ortodoncia DSQ para pegarlas en la historia clínica del paciente y mantener de esta forma la trazabilidad del producto.

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.

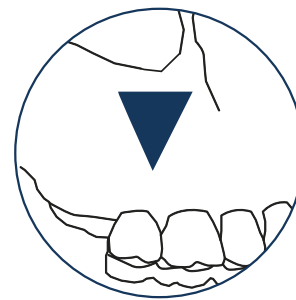
Due to their length, DSQ ST orthodontic implants are indicated for placement in the mandibular ramus, retromolar space, external oblique ridge and mandibular symphysis, although special care should be taken with neighbouring anatomical structures.

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

- Lingual or palatal alveolar process
- Buccal alveolar process

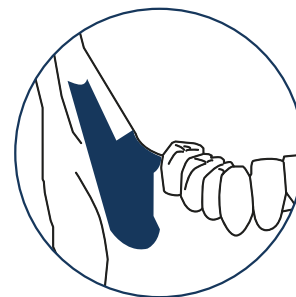
INTRA-ALVEOLAR USE

MAXILLA



■ MOST COMMON AREA

MANDIBLE



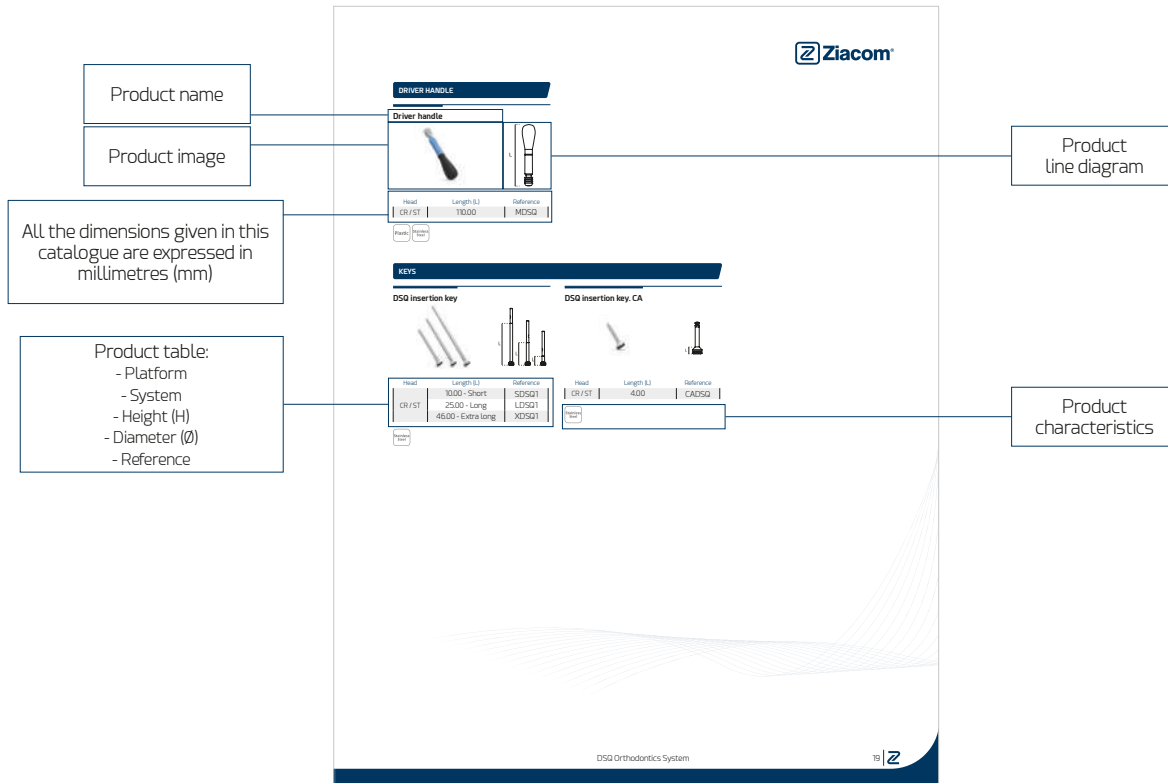
■ MOST COMMON AREA

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

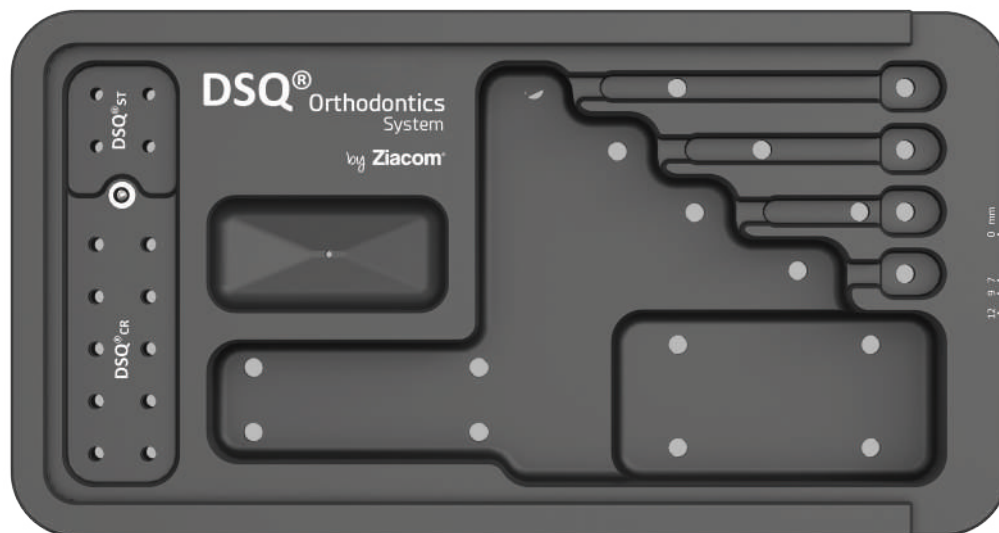
Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Rotatory element		Tx30 connection		Made from cobalt chromium + castable plastic
	Non-rotatory element		Size in millimeters		Made from cobalt chromium
	Use with manual torque		45° screw support		Made from PEEK
	Maximum operating torque		90° screw support	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

Surgical instruments



Surgical instruments

Surgical boxes



Available Ziacom® DSQ boxes

Contents	Reference
Empty	BOXDSQ
Complete	BOXDSQ1
Mini	BOXDSQ2

134°
SSS

Material: plastic + aluminium.

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

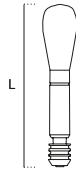
Contents of surgical boxes

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

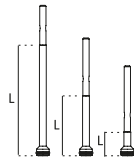


Head	Length (L)	Reference
CR / ST	110.00	MDSQ



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

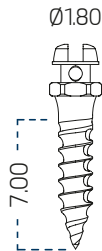
Steps for placing the DSQ CR orthodontic implant

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



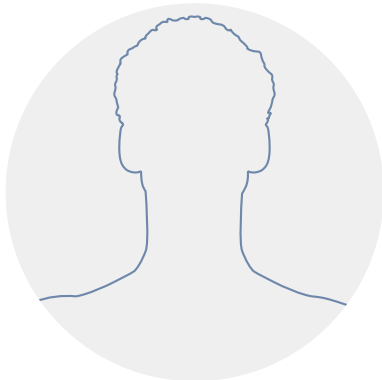
INSTRUMENTS REQUIRED

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.



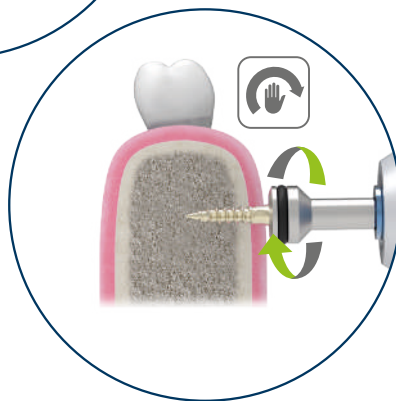
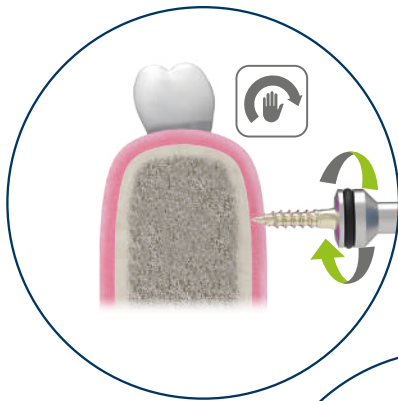
STEP 2 | Inserting the DSQ CR orthodontic implant by hand

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.



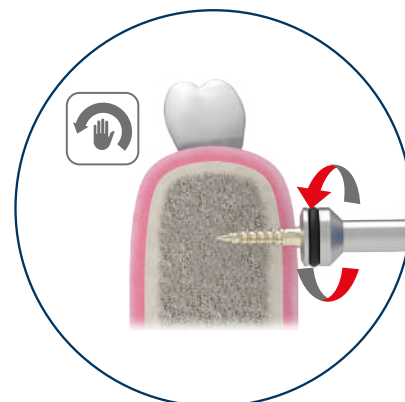
Protocol for removing the DSQ CR orthodontic implant

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

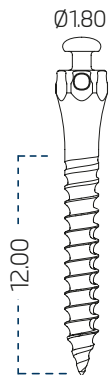
Steps for placing the DSQ ST orthodontic implant in the maxilla

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



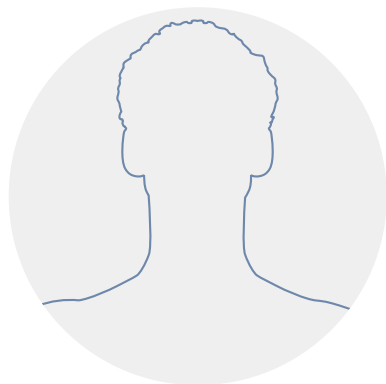
INSTRUMENTS REQUIRED

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.



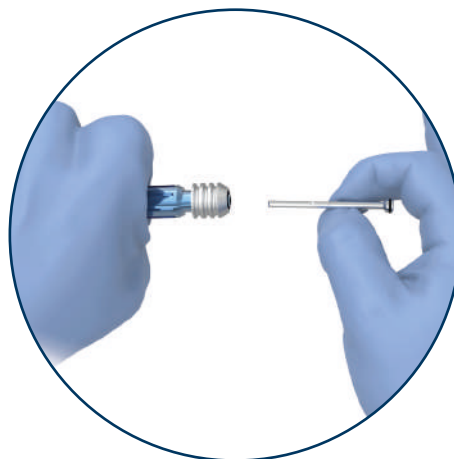
STEP 1 | Attaching the driver to the handle

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.



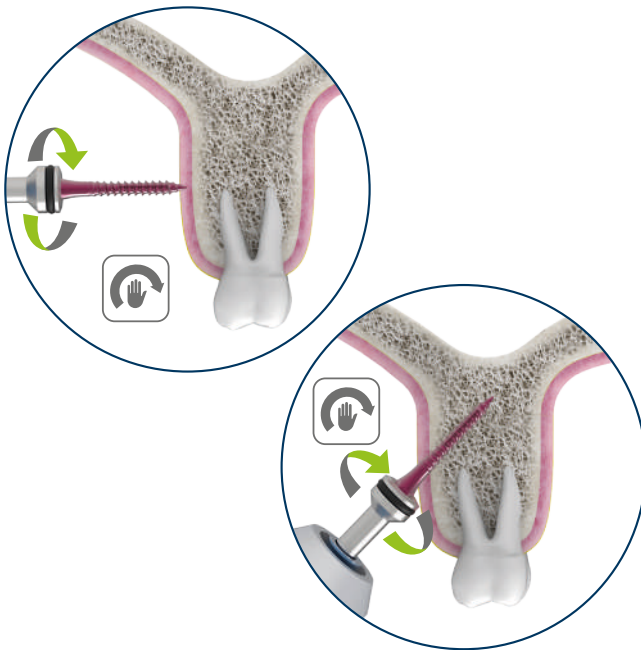
STEP 2 | Inserting the DSQ ST orthodontic implant by hand

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°). 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° or 70° from the occlusal plane of the tooth, taking extreme care with neighbouring anatomical structures.

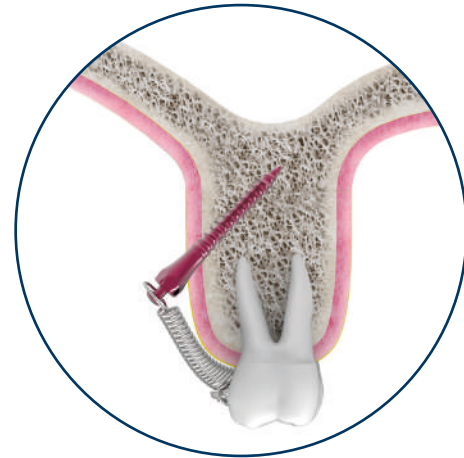
NOTE

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.



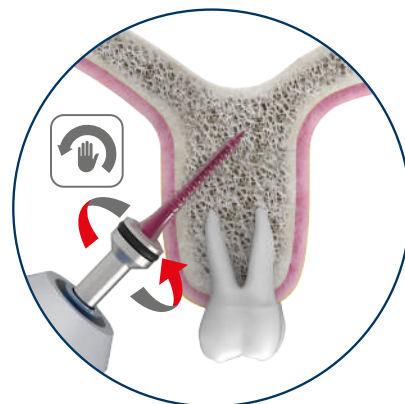
Protocol for removing the DSQ ST orthodontic implant

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.



Surgical protocol

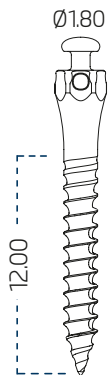
Steps for placing the DSQ ST orthodontic implant in the mandible

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



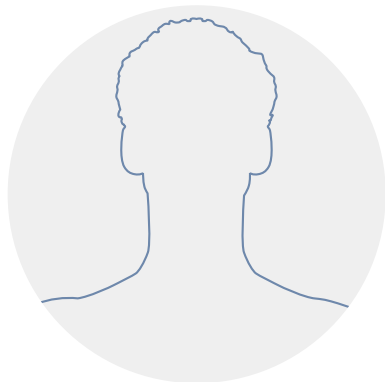
INSTRUMENTS REQUIRED

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.



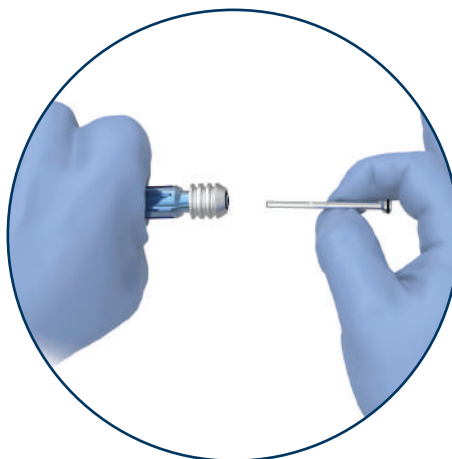
STEP 1 | Attaching the driver to the handle

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.



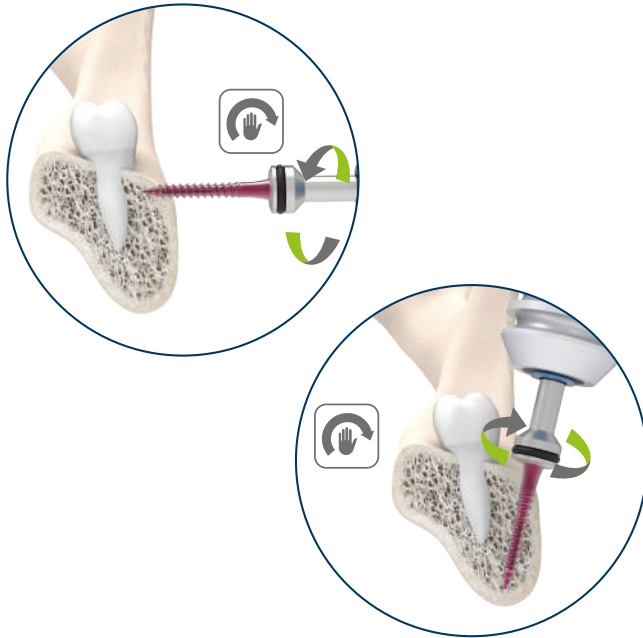
STEP 2 | Inserting the DSQ ST orthodontic implant by hand

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 here in.

Cleaning and disinfection instructions

Applicable for instruments, surgical and prosthetic boxes and plastic retainer caps.

■ Disassembly

1. Dismount* the appropriate instruments, for example manual ratchets, drills or drill stops.
2. Remove the various components from the surgical or prosthetic box for correct cleaning.

■ Cleaning and disinfection

For disinfecting instruments and surgical 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 the surgical and prosthetic boxes, always use a pH-neutral detergent and non-abrasive utensils to avoid damaging the surface of the boxes.
5. Dry the materials with disposable cellulose, lint-free clothes or compressed air.

For disinfecting plastic caps and spacers:

1. Submerge in a neat benzalkonium chloride solution for 10 minutes.
2. Rinse with distilled water.
3. Dry the caps and spacer before 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 procedure.
3. Check that the instruments and the surgical and prosthetic boxes are perfectly dry before reassembling the parts and proceeding to their sterilisation.

* See the assembly disassembly manuals at 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 autoclave

Applicable to orthodontic implants, abutments, and surgical and prosthetic instruments and boxes.

1. Introduce each material separately in individual sterilisation bags, then seal the bags. For joint sterilisation, place the instruments in their surgical box, introduce the box into a sterilisation bag and seal the bag.
2. Place the bags 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) and at 2 atm. Torque wrenches must be sterilised in 3 vacuum cycles at 132°C/270°F for a minimum of 1.5 minutes and vacuum-dried for a minimum of 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 min and with the drying time of at least 15 - 30 min.

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 bags 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

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

General recommendations

- Never use damaged or dirty material; never reuse single-use products. The user is responsible for following the instructions described in this document correctly.
- The 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 agent.
- The product's sterility cannot be guaranteed if the sterilisation bag is open, damaged or damp.
- Respect all stages of the sterilisation process. If the materials or sterilisation bags 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 boxes are supplied UNSTERILISED and must always be sterilised before use and cleaned and disinfected after use.
- The 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 www.ziacom.com/biblioteca for the latest version of the cleaning, disinfection and sterilisation instructions.





DSQ orthodontic implants by Ziacom®

The development of orthodontic implants (OI) and temporary anchorage devices (TADs) has created a before and after in the way in which we understand and apply orthodontic biomechanics, allowing us to simplify and significantly shorten treatments, increase their efficiency or cost-effectiveness and make dental and skeletal changes there were unthinkable just a few years ago. Many clinicians, including myself, cannot understand contemporary orthodontics without the routine and invaluable help of intra- and extra-alveolar OIs. Not only are OIs here to stay, but with every day and every patient we see, we are constantly surprised by their versatility and superior efficiency in terms of anchorage genesis, easier orthodontic tooth movement, non-surgical rapid maxillary expansion, even in adults, molar distalisation or vertical control, both during tooth eruption and dentofacial growth.

I dare say that not systematically using intra- or extra-alveolar OIs today is equivalent to limiting our therapeutic objectives and risking our clinic becoming obsolete. OIs contribute to our professional practice's success, not only by creating a modern and differentiating element, which is positively perceived by our patients, but also by allowing us to simplify our biomechanics and drastically reduce the use of complex or uncomfortable dental and mucosal devices. Any adult patient is comforted when a pair of small micro-screws (placed simply by the orthodontist with only two or three drops of anaesthetic) replaces a palatal bar, a Nance button, an expensive distalizer or a Hilgers pendulum appliance, not to mention extraoral appliances in adolescents.

OIs contribute to our clinical success by eliminating, in many cases, the need for patient collaboration when it comes to using intermaxillary elastics or removable devices. In orthodontic biomechanics, we have always had to worry about who was on the other end of the wire or polymer that applies the force, with problems of action-reaction (i.e. not moving those teeth that we do not want to move) being one of the most important biomechanical issues. IOs release us in part from Newton's third law by creating an excellent and temporary resistance in the adjacent bone without any toll or negative effect on neighbouring teeth or the opposing arch. Extra-alveolar and infrazygomatic orthodontic implants, which we have tried to simplify in terms of their insertion, loading and handling, facilitate the mass movement of arches without any interference from teeth.

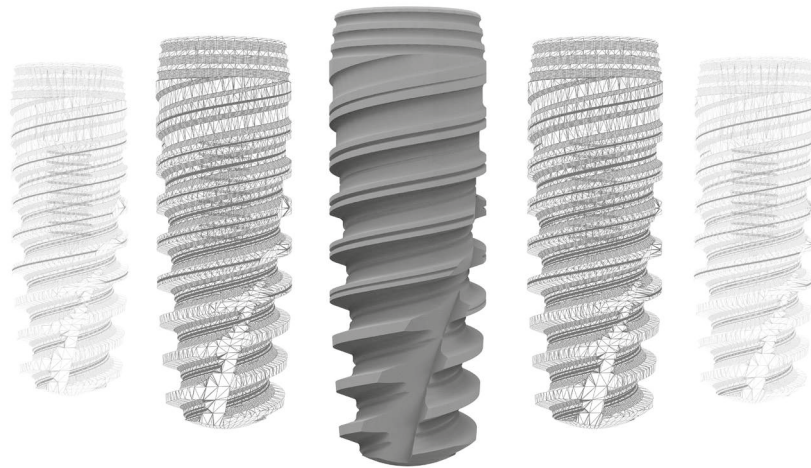
My successful experience with orthodontic implants and my work as an orthodontist for more than 30 years, together with the passion

and professionalism of Alejandro del Valle, CEO of Ziacom®, along with his entire team of young, dynamic and proactive professionals, has led us to develop an R&D&I project based on clinical efficiency and scientific evidence which has resulted in the creation of DSQ orthodontic implants.

With these new IOs, we have tried to combine the quality of Ziacom® (they are made from grade 5 titanium and have a self-perforating, self-tapping morphology) with an elegant and multi-purpose design of both the orthodontic implants themselves and their driver and surgical box. At a time when the purchase and use of low-cost steel orthodontic implants of unknown origin is a temptation experienced by many professionals, to the misfortune of their patients, we want to move away from the spirit of this type of professional practice by focusing on what patients deserve and value most: highly aesthetic European materials of certified and approved quality with an impeccable clinical presentation that the patient can see and a surgical box with an innovative design that includes a driver with an ergonomic handle, designed for different hand sizes, which simplifies the placement and removal of orthodontic implants and eliminates the need for drills and rotary instruments. In summary, our orthodontic implants are designed for professionals with high demands.

This Ziacom® - DSQ project is the start of a product line that we hope to expand on by developing new extra- and intra-alveolar orthodontic implants of different shapes and sizes, by studying their application in children and young people and their use as an effective weapon in the new dentofacial orthopaedics of adults, and by implementing new biomechanical designs both in traditional orthodontics (with brackets and wires), orthodontics with removable appliances and plastic orthodontics (with digital polymeric aligners). We want you to get involved in this project and trust in us by using our comprehensive DSQ orthodontic implant system and we will put all our energy and effort into not letting you down.

Thank you very much
Dr David Suárez Quintanilla



See the latest version of the general conditions of sale on our website www.ziacom.com.

Check the availability of each product in your country.

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See the latest version of the catalogues available at www.ziacom.com.

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