OSSTEM IMPLANT

# Surgical Manual

## MS KIT

# Introduction

**Welcome,**

and thank you for choosing Osstem Implant products. This catalogue is designed to support dental professionals with product information, clinical workflows, and practical guidance for daily use. It is important to inform patients about the option of dental implant treatment and the potential benefits it may provide. For further information, please contact your local Osstem representative.

## Important Notice

This document is provided for **informational and educational purposes only** and does not replace the applicable product label, the current product-specific Instructions for Use (IFU), formal clinical training, or independent professional judgment. All product information, specifications, and protocols are subject to change without notice. Not all products may be approved, cleared, released, licensed, or available in all markets. Product illustrations are not shown to scale. Despite careful preparation of this catalogue, typographical, editorial, translation, or printing errors may occur. **All critical information must be verified against the current product-specific IFU and product label before use.**

## Electronic IFU (per (EU) 2021/2226)

- Surgical Drill & KIT System is eligible for provision of electronic instructions for use (e-IFU) under Regulation (EU) 2021/2226 for professional users.
- e-IFUs are available at [website URL: ifu.osstem.com] in the official languages required by the Member State(s) where the device is placed on the market.
- The e-IFU content is consistent with the paper version; all updates are promptly reflected in both versions.
- If requested, a paper copy of the IFU will be supplied free of charge, within 7 calendar days.
- The e-IFU website maintains historical versions for traceability of all previously applicable instructions.
- Labeling on the product/package indicates the provision of e-IFU and how to access it online.

## Surgical Manual | English Edition


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158 00 Prague, Czech Republic


**Note:** *This brochure is based on the global 2021 Osstem Surgical Manual and has been visually revised and adapted for the European market. Product availability and specifications may vary by country and are subject to change without notice. Images are for illustrative purposes only. For professional use only.*

# MS KIT

**KIT used to place MS implants suitable for narrow spaces and narrow bone widths (e.g. anterior mandibular)**

- Easy surgery with minimal drilling


Lance Drill Ø1.8 Twist Drill Ø2.5 Provisional Ø2.5 Narrow Ridge Ø2.5 Denture

# 1 Indication

## A MS Implant Narrow ridge

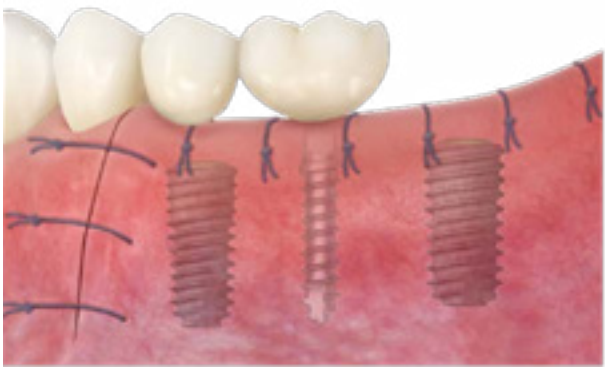
· One body type implant suitable for narrow bone width or narrow interdental cases.

## B MS Implant Denture

· Implant for denture production suitable for edentulous patients with narrow bone width.

## C MS Implant Provisional

· Provisional prosthesis used when prosthesis is required immediately (removed after a set period



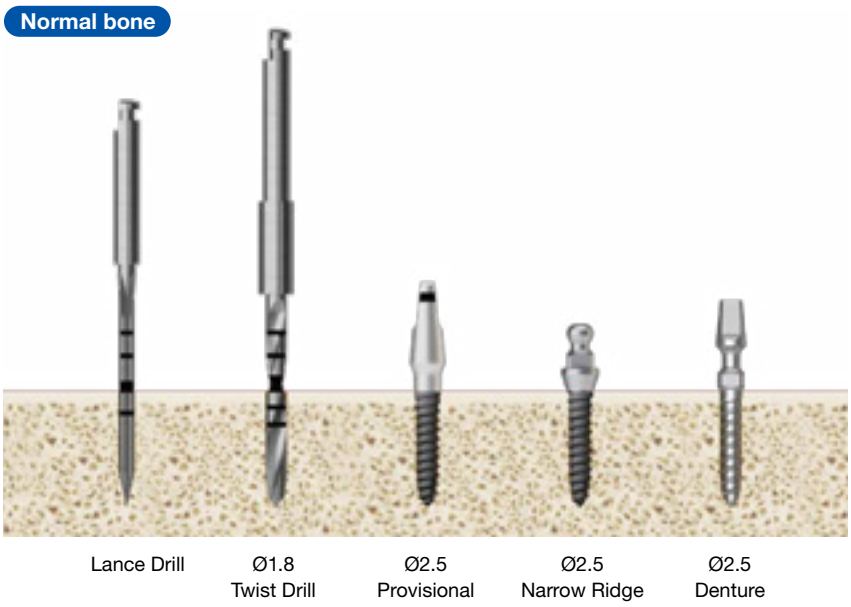
# 2 Features

## A Convenient when designing anterior prostheses with a parallel pin shape considering clinical conditions

· Easy to check the difficult anterior path and design an anterior prosthesis. Designed to protrude when bone resorption occurs in the anterior region.

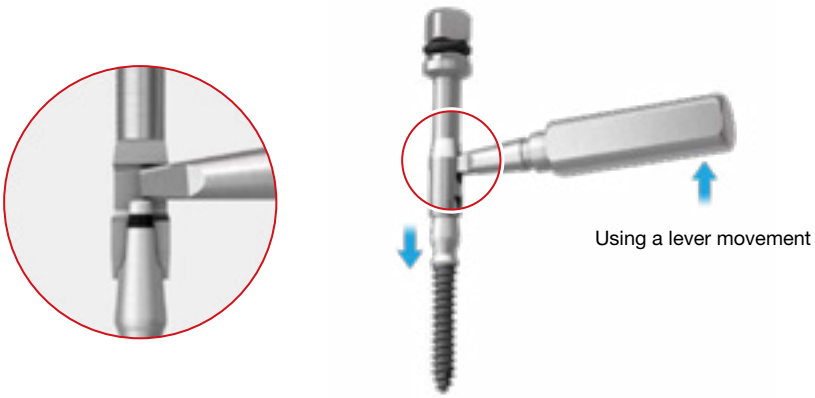
## B Easy drilling sequence

· Makes surgery easy and simple by minimizing the number of drillings.




## C Easy to detach when MS implant and driver jam

· When the driver gets jammed while placing the onebody type MS implant, inserting the driver separator into the groove can detach it conveniently.

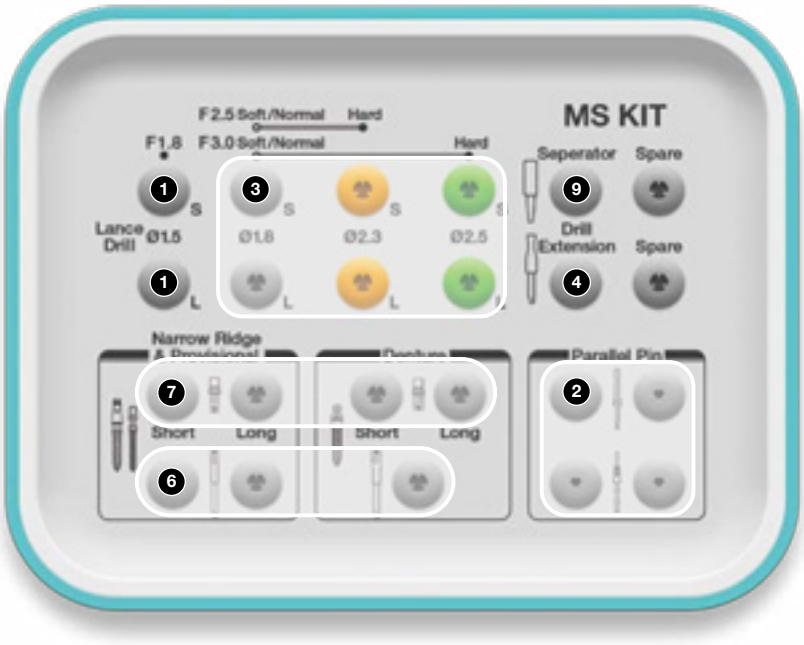


# 3 KIT (included components)

## MS KIT

Drilling Tool (1~5)

Implant placement tool (6~9)




**1 Lance Drill**

**2 Parallel pin**

**3 Twist Drill**

**4 Drill Extension**

**5 Depth Gauge** (top panel component)

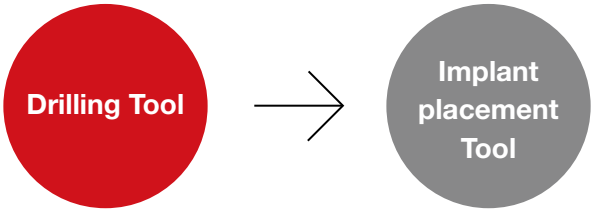
**6 Machine Driver**

**7 Torque Driver**

**8 Ratchet Wrench** (top panel component)

**9 Driver Separator**

# 4 KIT user instructions




The KIT features a surgical drill that creates a drilling hole during implant placement,
a depth gauge that helps check the drilling depth, and a parallel pin that helps check the path.

❶ Lance Drill(S/L)

❷ Parallel Pin

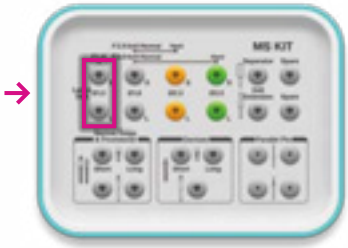
❸ Twist Drill(Ø1.8/2.3/2.5)

❹ Drill Extension

❺ Depth Gauge

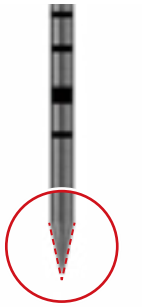
## ❶ Lance drill

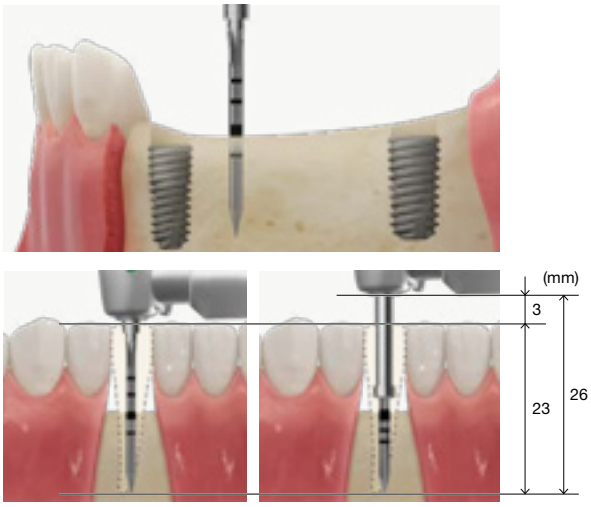
Drill used to mark the Implant's placement position



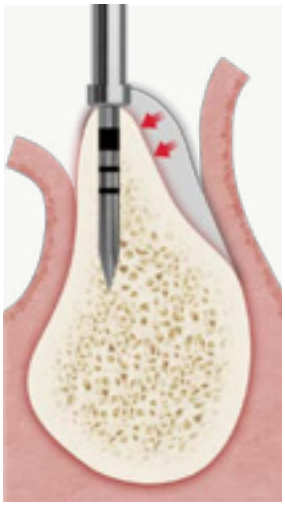
### User instructions

· Assemble the drill to the handpiece.
· Use the tip of the drill to mark the implant's placement position.
· Use as final drill to place Ø1.8 Provisional, Ø2.0 Narrow Ridge.
· When using a Lance Drill of long specification, it is possible to secure a field of view and prevent interference with adjacent teeth.
· Even when bone resorption occurs, it is possible to secure a field of view and prevent interference with adjacent teeth.
· Recommended RPM: Max. 800rpm






Short Non Stopper Long Stopper



## ❷ Parallel pin

Use to check whether the drilling hole is drilled at the desired angle after initial drilling.

### User instructions

· After initial drilling, insert into the drill hole and check whether drilling is performed at the desired depth and angle.

Straight shape

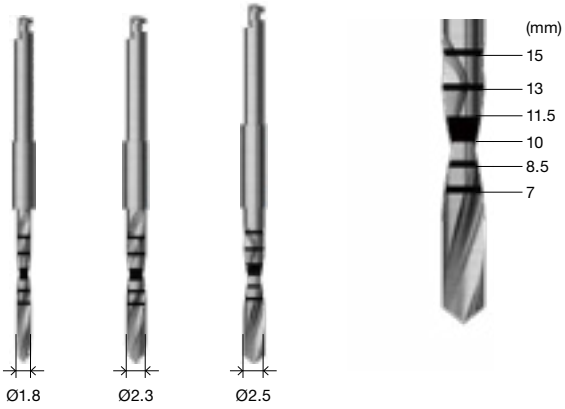
Narrow Ridge shape

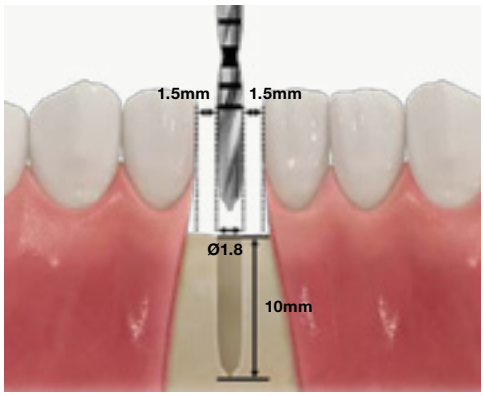
## ❸ Twist Drill(Ø1.8/2.3/2.5)

Drill used to create a hole according to the length and diameter of the Implant.

### User instructions

· Assemble the drill that matches the diameter and length of the Implant to be placed to the handpiece.
· Straight Non Stopper Drill. Carefully check the marking line on the drill and drill according to the correct length.
· Recommended RPM: 1,200rpm~1,500rpm



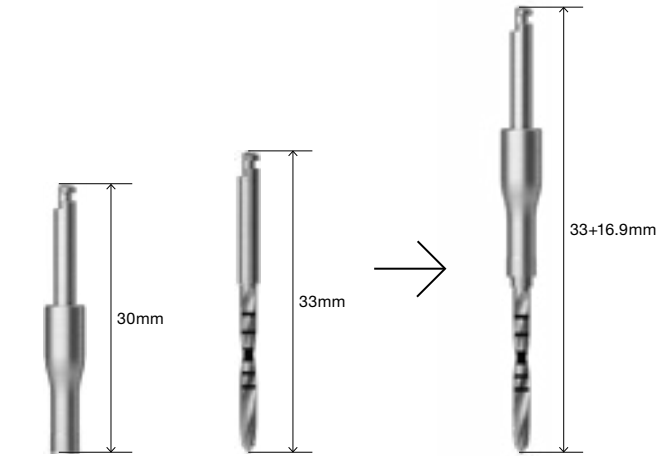



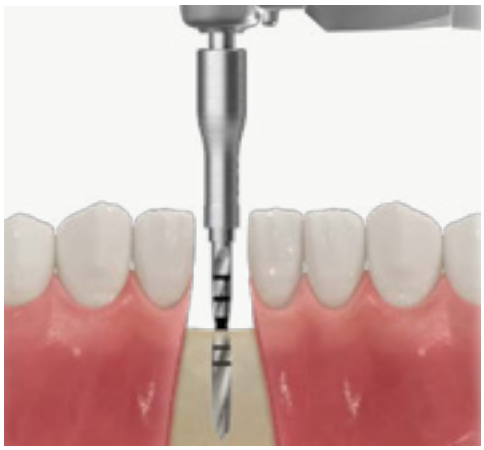

## ❹ Drill Extension

Use to extend the path when the short length of drills and other handpiece-using tools becomes an obstacle to adjacent teeth.

### User instructions

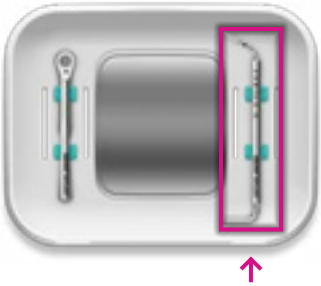
· Assemble the drill extension to the drill and fasten it to the handpiece.
· If a strong force is applied in an inaccurate fastening state, there is a risk of bending or fracture.
· Drill the placement site.
· When using a drill extension, the length of the drill is extended by 16.9mm.



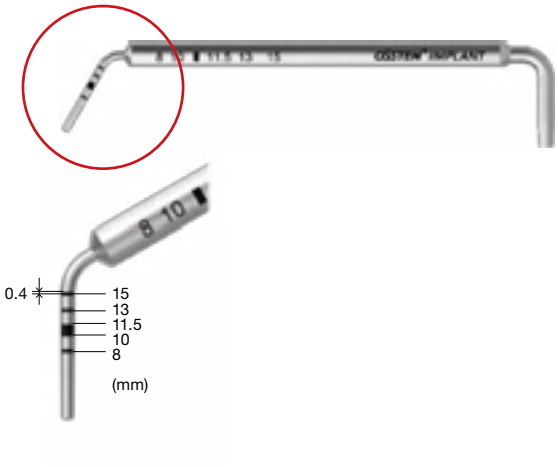
## ❺ Depth Gauge

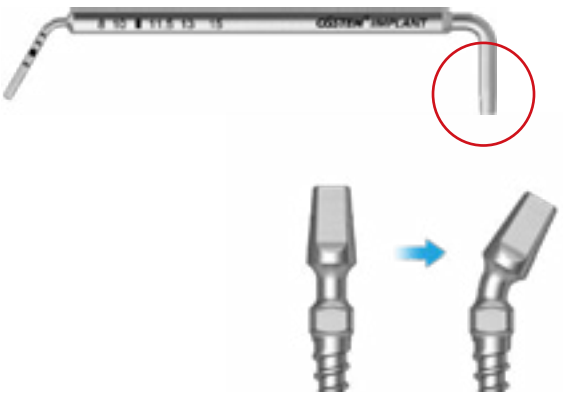
Use to check whether the drilling hole is drilled to the desired depth.
Use the other end when bending MS Provisional type Implants.

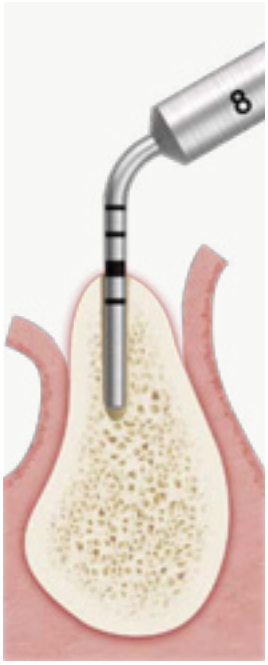


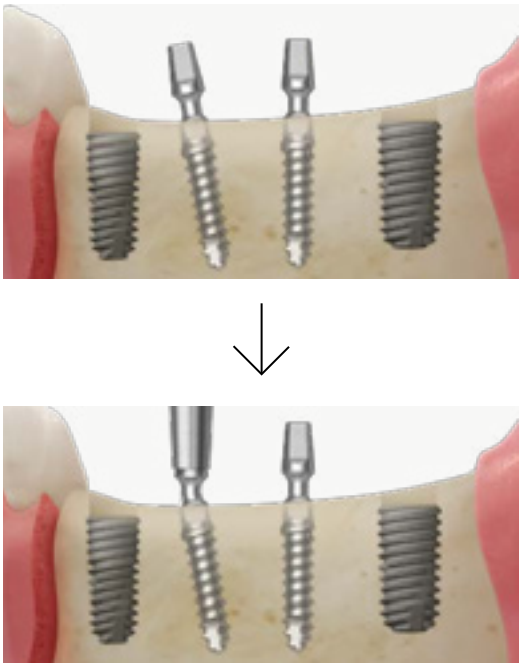
### User instructions

· Insert it into the drilling hole and check the depth.
· When bending the MS Provisional type Implant, assemble the upper part of the Implant to the opposite hole and bend it in the desired direction.





Drilling Tool → Implant placement Tool

Includes a driver used for implant placement, a ratchet wrench, and a driver separator.

For Narrow ridge & Provisional

For Denture

**6 Machine driver**

For Narrow ridge & Provisional

For denture

**7 Torque driver**

**8 Ratchet wrench**

**9 Driver separator**

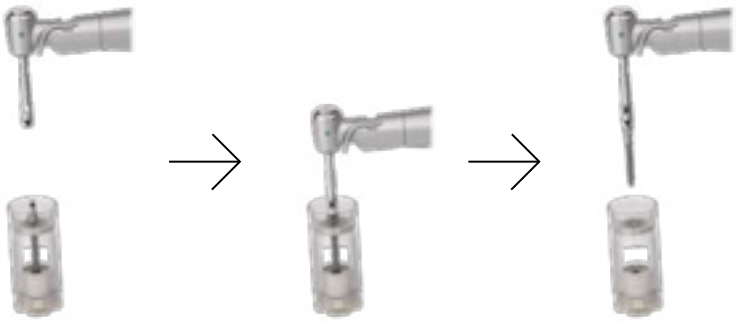
## ❻ Machine driver

Driver that connects to the handpiece and used to place the MS implant.

### User instructions

· Assemble the machine driver suitable for the type of Implant.
· Hold the Implant in the ampoule and move it into the oral cavity.
· When moving the Implant inside the mouth, keep the Implant facing up so that it does not fall off.
· Place the Implant with approx. 1mm left at 25rpm

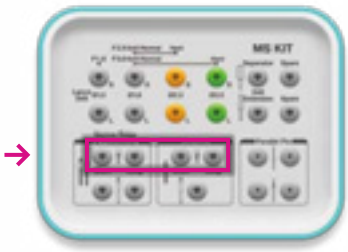
How to remove the Implant



Implant placement

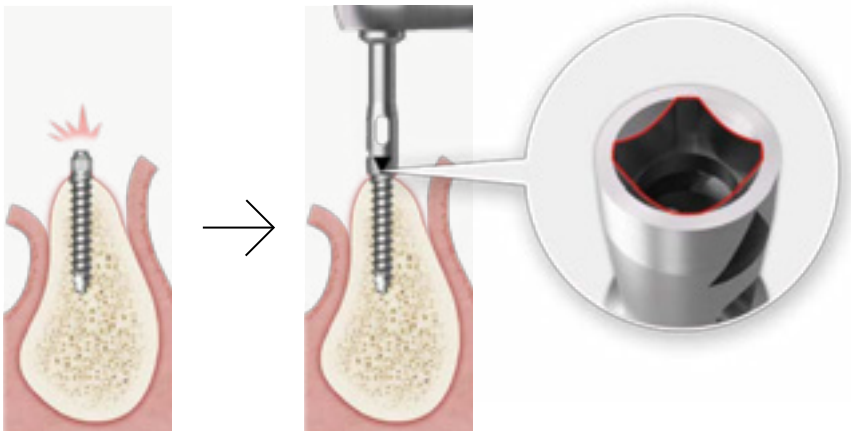
## ❼ Torque driver

Driver that connects to the wrench and used to place the MS implant.



### User instructions

· Assemble the torque driver to the ratchet wrench.
· Assemble on the MS implant, then turn the ratchet wrench clockwise to place the Implant.
· Since a window is formed in the driver, it can be easily separated using a driver separator in case of jamming.
· Short/Long specifications available.
· If the provisional type neck is broken, remove by connecting the denture driver to the provisional type square and rotating it counterclockwise.



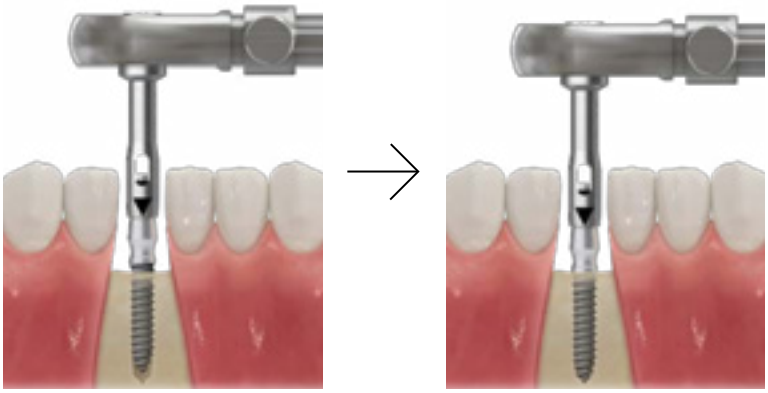
Brocken provisional type neck

## ❽ Ratchet wrench

Wrench that can apply an unlimited amount of torque.
Mainly used for final depth adjustment after Implant placement with engine.

### User instructions

· Assemble the torque driver to the ratchet wrench.
· Turn clockwise to finally adjust the depth.
· To place 1mm, turn one full rotation + 90°.



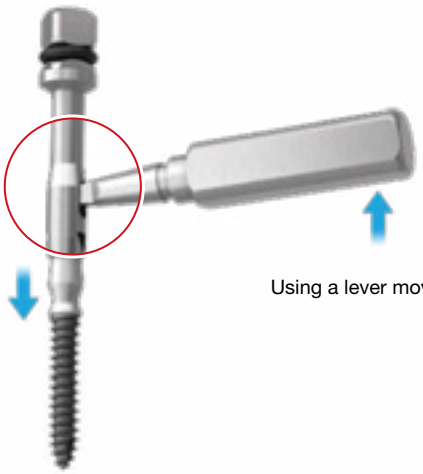
**Precautions**
Pinth 0.8mm. As such,
to place 1mm = Lead 1 ¼

## ❾ Driver separator

Tool to separate by inserting into the driver groove in case of jamming between the Implant and the torque driver.

### User instructions

· Insert the driver separator into the driver home.
· Using a lever action, pushing upwards separates the Implant and torque driver.



Using a lever movement

# 5 KIT sequence

## Hard bone MS Ø2.5×10mm placement

Ⓝ: Tool number

1

### Gingival incision

· After the incision, lift the valve to check the treatment area.

2


### Mark drilling position (Lance drill)

· Use the Lance drill to mark the area where the cortical bone will be drilled by 2~3mm

· Recommended RPM: 800 rpm

3


### Initial drilling (Lance drill)

· Drill the cortical bone up to the 10mm marking line with the lance drill. Or mark on the Implant placement site

· Recommended RPM: 800 rpm

4


### Check position and direction (Parallel pin)

· Insert the parallel pin into the drilling hole to check the location and path.

· Same design as Narrow ridge Implant.

· Ø1.6: Can prevent gingival interference when used for flapless applications.

5


### Final drilling (Ø2.3 twist drill)

· Drill up to the 10mm marking line with a Ø2.3 twist drill to ream the drilling hole.

· Use by connecting a drill extension when caught on adjacent teeth

· Ensure sufficient water supply and pumping during drilling (prevent osteonecrosis)

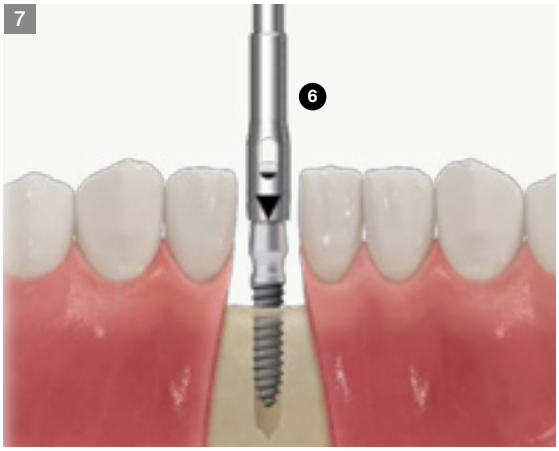
· Recommended RPM: 1,200~1,500rpm

6


## **Check depth** (Depth gauge)

· Check the depth of the drilling hole using a depth gauge.

7



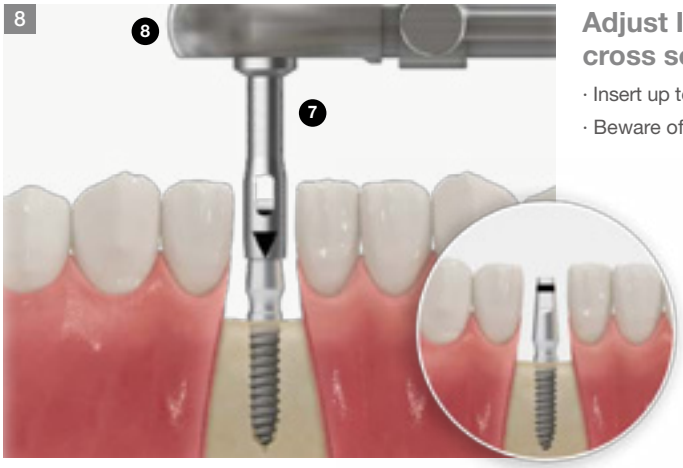

## **Place Implant** (Ø2.5 × 10mm)

· After setting the maximum torque of the engine to 35Ncm, install the Implant by 80%.

· If the bone makes a sound when the Implant is placed, it must be rotated in reverse before resuming.

· Recommended RPM: Max. 25rpm

8

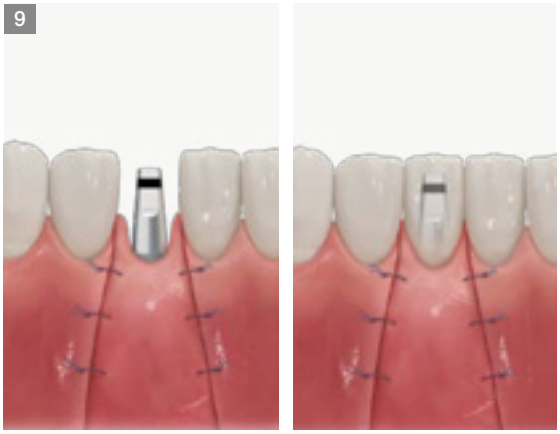



## Adjust Implant placement depth and cross section

· Insert up to the last thread using a torque driver and ratchet wrench.

· Beware of torque overload (35Ncm) during placement.

9



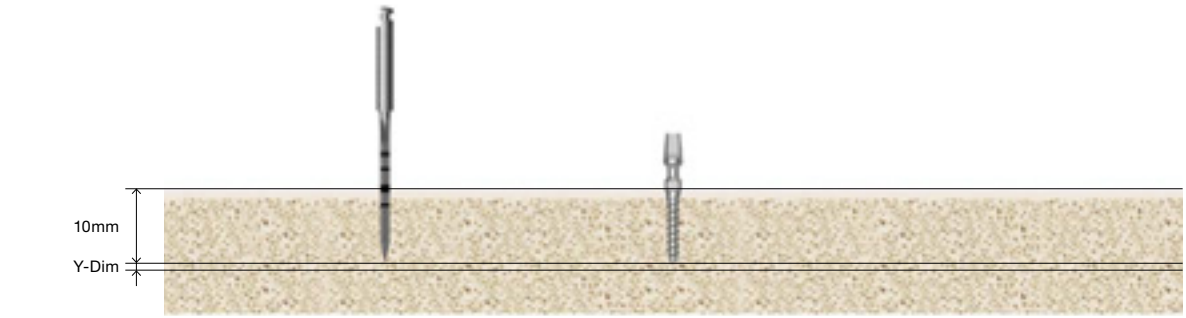
## Suture

· Suture so that soft tissue is not exposed to strong tension.

· When setting a provisional tooth, exercise caution not to apply excessive occlusal force.

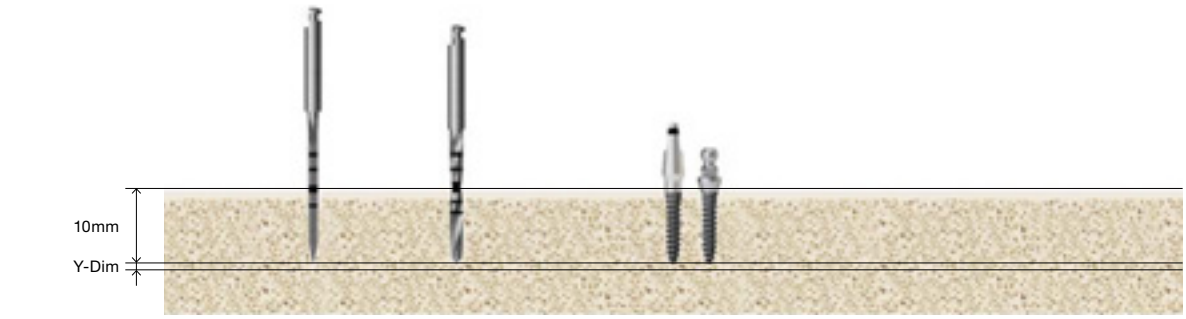
# Quick Guide (Length: 10mm)

## Ø1.8×10mm Implant placement



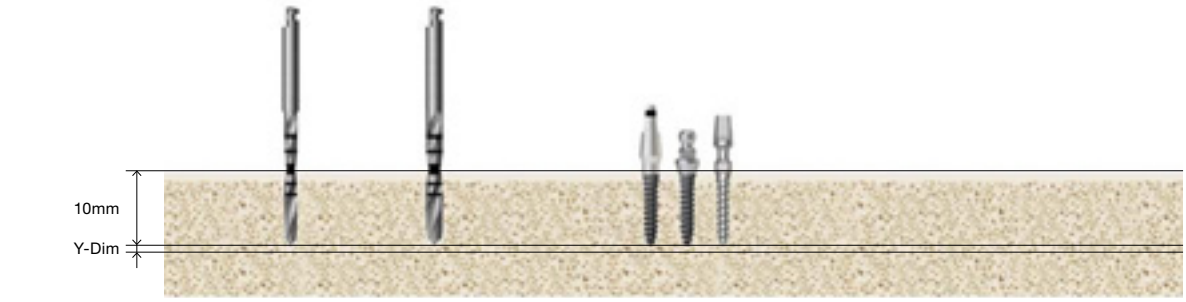

| Bone quality | Lance Drill | Implant (Ø1.8) |
|---|---|---|
| Soft bone | Final | Implant placement |
| Normal bone | Final | |
| Hard bone | Final | |

## Ø2.0×10mm Implant placement



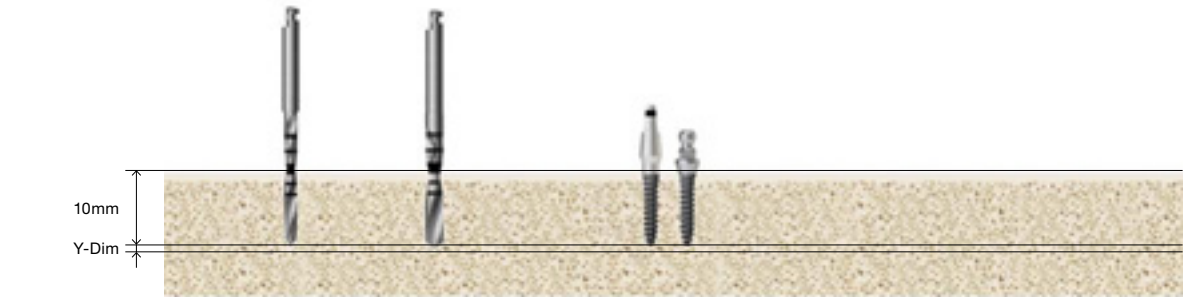

| Bone quality | Lance Drill | Twist Drill (Ø1.8) | Implant (Ø2.0) |
|---|---|---|---|
| Soft bone | Final | | Implant placement |
| Normal bone | Final | | |
| Hard bone | | Final | |

## Ø2.5×10mm Implant placement




| Bone quality | Twist Drill (Ø1.8) | Twist Drill (Ø2.3) | Implant (Ø2.5) |
|---|---|---|---|
| Soft bone | Final | | |
| Normal bone | Final | | Implant placement |
| Hard bone | | Final | |

## Ø3.0×10mm Implant placement




| Bone quality | Twist Drill (Ø1.8) | Twist Drill (Ø2.5) | Implant (Ø3.0) |
|---|---|---|---|
| Soft bone | Final | | |
| Normal bone | Final | | Implant placement |
| Hard bone | | Final | |

* Depending on the surgeon, an intermediate drilling process could be added.

# How to take care of the KITS

1

## Soak (saline/distilled water)

· Soak the surgical instruments in saline or distilled water

2

## Drying (remove moisture)

· Completely dry all drills, drivers, tools, etc by using a towel or fan.

3

## First wash

· After surgery, immediately separate and wash all the used instruments.

4

## Organize instruments in the KIT

· Place the completely dried instruments in the KIT
· Make sure they are properly placed in the correct location
· Refer to the color coding for reference

5

## Second wash

· Thoroughly wash with distilled water or running water to avoid remnants of blood or foreign debris.

6


## Sterilization and storage at room temperature

· Wrap clean kit in a sterilization wrap or pouch and place into sterilizer.
· Sterilize temperature - 121°C to 132°C, time duration 15 - 30 minutes, dried and stored at room temperature.
· KIT re-sterilization is recommended immediately before surgery.
· Before and after sterilization, thoroughly dry (the drills will corrode if not fully dried after sterilization)

# Important Information and Legal Notices 2026.03 ver.1.1

**1. IMPORTANT NOTICE**

This catalogue is intended solely as an informational and educational guide for trained dental professionals. It does not replace the applicable Instructions for Use (IFU), product labelling, formal clinical training, treatment planning, or independent professional judgment.

All clinical protocols, drilling sequences, cleaning instructions, sterilization requirements, torque recommendations, indications, contraindications, warnings, and procedural steps must be verified against the current product-specific IFU and the applicable product label for the relevant REF/product code prior to use.

In the event of any discrepancy between this catalogue and the applicable IFU, product labelling, or other official Osstem documentation, the IFU, labelling, and official product documentation shall prevail.

**2. PRODUCT INFORMATION, CHANGES, AND AVAILABILITY**

All products, specifications, protocols, recommendations, illustrations, and other information contained in this catalogue are subject to change without prior notice.

Not all products may be approved, cleared, released, licensed, or otherwise available in all markets. Product availability, indications, and regulatory status may vary by country. For information on the current product portfolio, approved indications, and local availability, please contact your local Osstem representative or Customer Service and consult the current official Osstem documentation.

**3. PROFESSIONAL USE ONLY**

Osstem Implant products are intended for use by appropriately trained dental professionals only. Dental implant treatment involves complex professional procedures and requires appropriate education, clinical training, patient selection, treatment planning, and radiographic as well as clinical evaluation.

The suitability of any procedure must be assessed individually for each patient, taking into account anatomy, bone quality and quantity, occlusion, systemic conditions, oral hygiene, compliance, and any other relevant clinical factors.

**4. PRODUCT DESCRIPTION AND COMPATIBILITY**

Osstem Implant offers implant fixtures, prosthetic components, surgical instruments, and related materials for dental implant treatment. Product codes, specifications, lot numbers, dates of manufacture, and expiration dates, where applicable, must be checked on the product label before use.

Unless expressly stated otherwise in the applicable product documentation, Osstem Implant abutments, prosthetic components, instruments, and related accessories are intended to be used only with compatible Osstem Implant fixtures and components. Use in combination with components or instruments from other manufacturers may result in improper fit, incomplete locking, loosening, fracture, reduced performance, or other clinical complications.

**5. STERILITY, CLEANING, REPROCESSING, AND STORAGE**

Sterile products supplied in sterile packaging must be used only if the packaging is intact and the expiration date has not passed. If sterile packaging has been opened, damaged, or has expired, the product must not be used.

Single-use products must not be reused, reprocessed, or resterilized.

Reusable instruments must be cleaned, disinfected, inspected, maintained, and sterilized strictly in accordance with the applicable Osstem IFU before reuse.

Products must be stored in accordance with the applicable labelled storage conditions and protected from moisture, contamination, direct sunlight, and other adverse environmental conditions.

**6. CLINICAL PROTOCOLS AND PROCEDURAL GUIDANCE**

Any surgical, prosthetic, drilling, insertion, loading, cleaning, maintenance, or other procedural guidance shown in this catalogue is provided for general informational purposes only and must be adapted to the individual patient, the specific product, and the current approved IFU.

Clinicians remain solely responsible for selecting the appropriate treatment protocol and for determining whether the intended procedure, component selection, loading protocol, and clinical application are appropriate for the individual case and within the approved indications for the relevant product.

**7. WARNINGS, CONTRAINDICATIONS, AND POSSIBLE COMPLICATIONS**

Improper patient selection, inadequate treatment planning, non-compliance with the applicable IFU, improper use, off-label use, product modification, poor oral hygiene, infection, insufficient bone quality or quantity, excessive occlusal loading, or other unfavorable clinical conditions may result in complications or treatment failure.

Possible complications and adverse events may include, without limitation, implant instability or failure, loosening, fracture, bone loss, infection, soft- or hard-tissue complications, prosthetic complications, delayed healing, or the need for revision or removal.

Contraindications and precautions must always be assessed in accordance with the applicable Osstem product documentation and accepted professional standards of care.

**8. INTENDED PURPOSE**

The products are tools and instruments for surgical placement of Osstem implant fixtures. The drill is used to make implant sites. The cortical drill and tap removes cortical bones or forms threads on bone for the purpose of preventing excessive torque generated when implanting a fixture on hard bone. The drivers are for the placement of the fixture, and the prosthesis is used for setting. In addition, other instruments and tools will be used as aids in the Implant procedure.

The applicable product-specific IFU must always be consulted to confirm the intended purpose, indications, limitations, and approved clinical applications of the relevant product.

**9. ACCURACY OF INFORMATION**

Although reasonable care has been taken in preparing this catalogue, typographical, editorial, translation, printing, and formatting errors may occur. Information may also become outdated as a result of product updates, regulatory changes, technical revisions, or clinical developments.

No representation is made that this catalogue is complete, current, or error-free in every respect. Users must verify all critical information against the current IFU, product labels, and other official Osstem documentation before clinical use.

**10. ILLUSTRATIONS AND EXAMPLES**

Product illustrations, diagrams, radiographic examples, case images, and step-by-step demonstrations are for illustrative purposes only. Unless expressly stated otherwise, they are not shown to scale and do not guarantee any clinical outcome.

Example cases do not constitute a promise or representation of treatment success in any individual case.

**11. TRADEMARKS AND COMPANY NAMES**

All trademarks, trade names, product names, brand names, and company names are the property of their respective owners.

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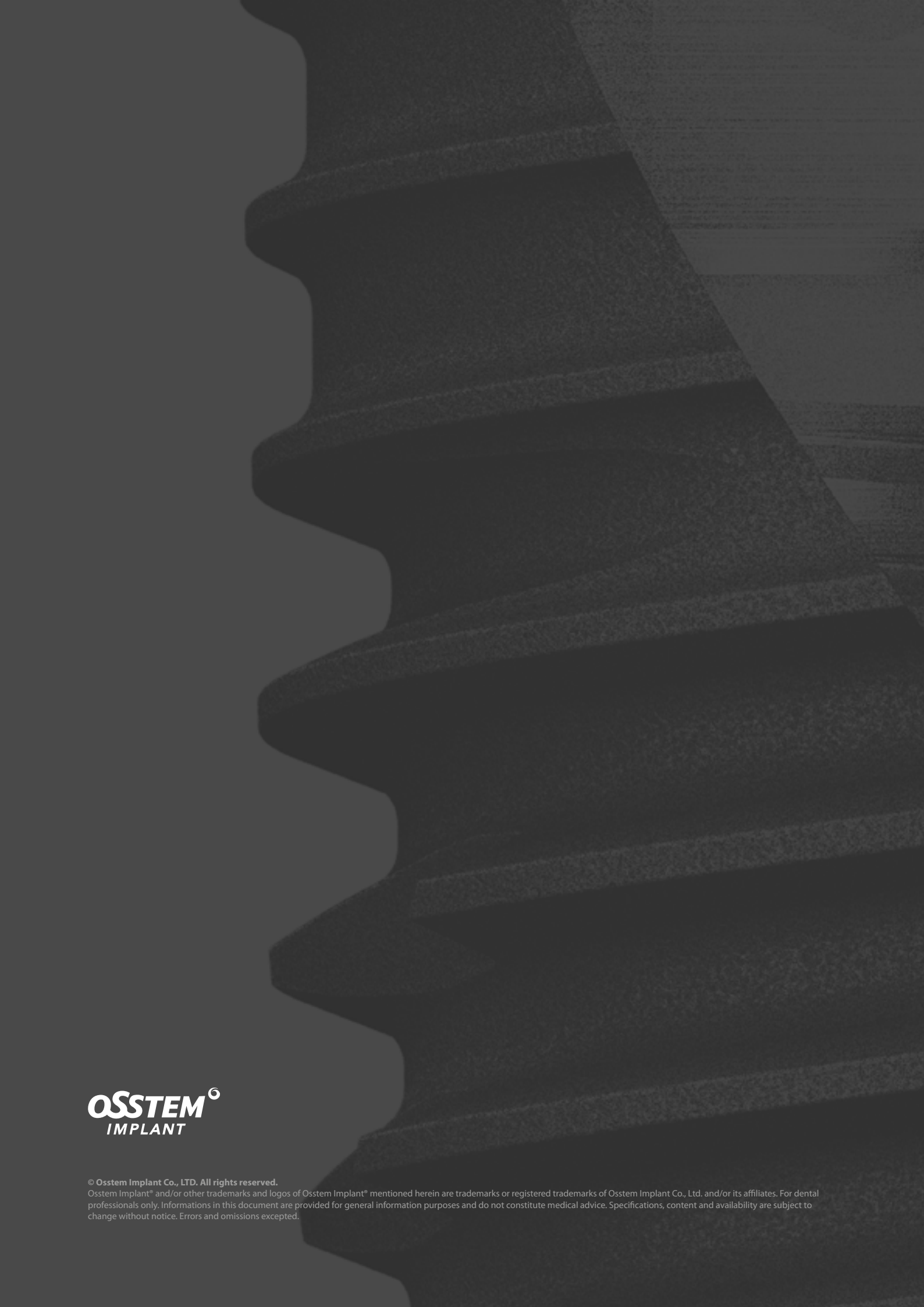

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