

OSSTEM[®]
IMPLANT

Surgical Manual

485 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

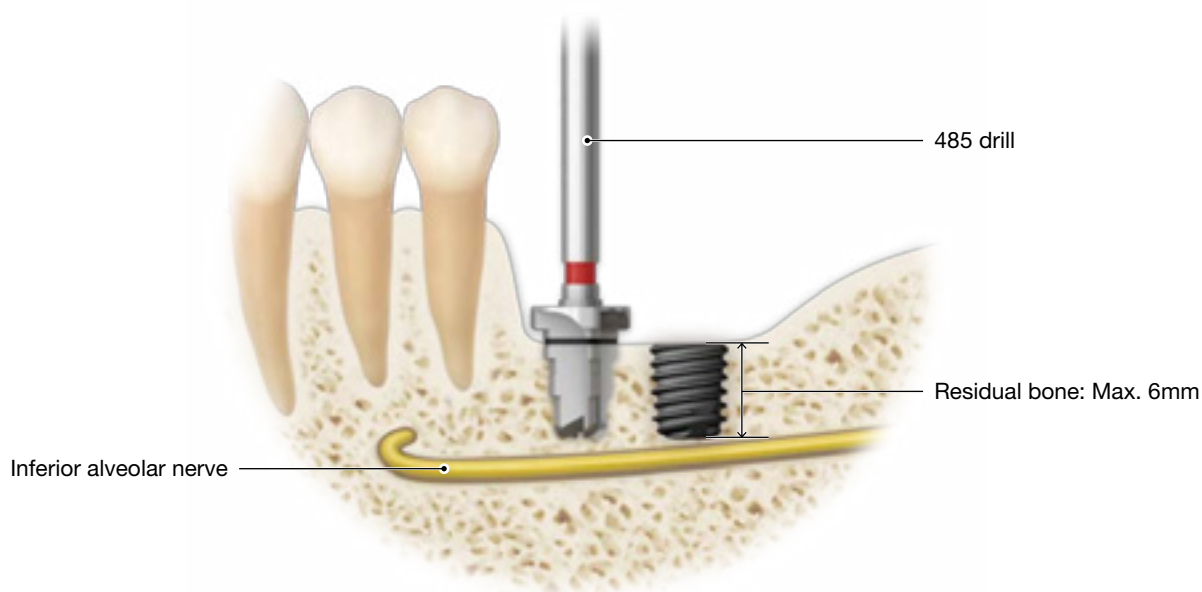
Publication date: April 2026

Publisher: Osstem Europe s.r.o.
Radlická 740/113c
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.*

485 KIT

A KIT capable of safely placing a Implant with a length of 4 to 8.5 mm in the mandible (protect the inferior alveolar nerve)



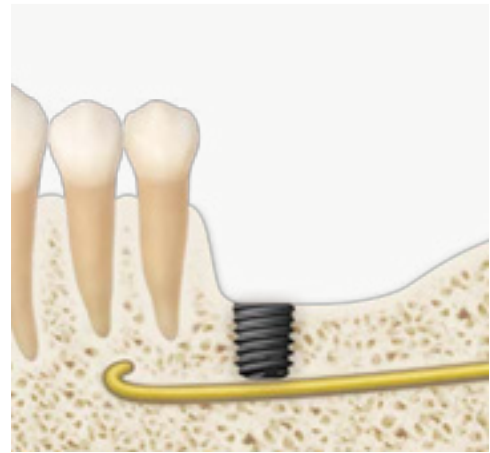
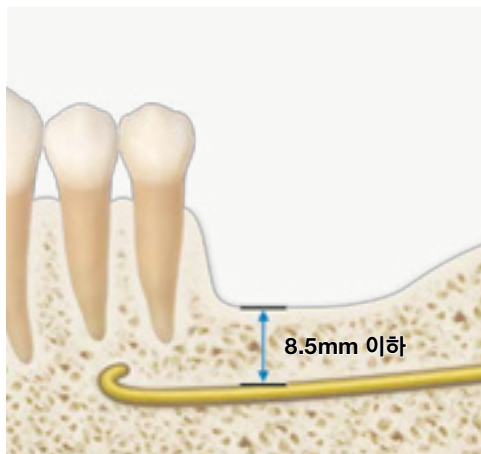
· Available Implants: 4mm~8.5mm

System	D \ L		Extra Short (excluding bevel)		Short	Normal	
	D	L					
 TSIII	Ø4.0			7(6)mm		7mm	8.5mm
	Ø4.5			7(6)mm		7mm	8.5mm
	Ø5.0		6(4)mm	6(5)mm	6mm	7mm	8.5mm
	Ø5.5				6mm	7mm	8.5mm
 SSIII	Ø4.0			7(6)mm		7mm	8.5mm
	Ø4.5			7(6)mm		7mm	8.5mm
	Ø5.0		6(4)mm (wide)	6(5)mm (wide)	6mm	7mm	8.5mm
 USIII	Ø4.0					7mm	8.5mm
	Ø4.5					7mm	8.5mm
	Ø5.0				6mm	7mm	8.5mm

1 Indication

A When placing a short Implant

- When the residual bone mass is less than 8.5 mm after securing a safe distance from the inferior alveolar nerve

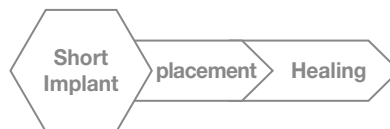


B When placing a short Implant without additional bone grafting

- Shorten treatment period and reduce cost.



Short Implant placement



Follow regular Implant placement method after bone grafting.



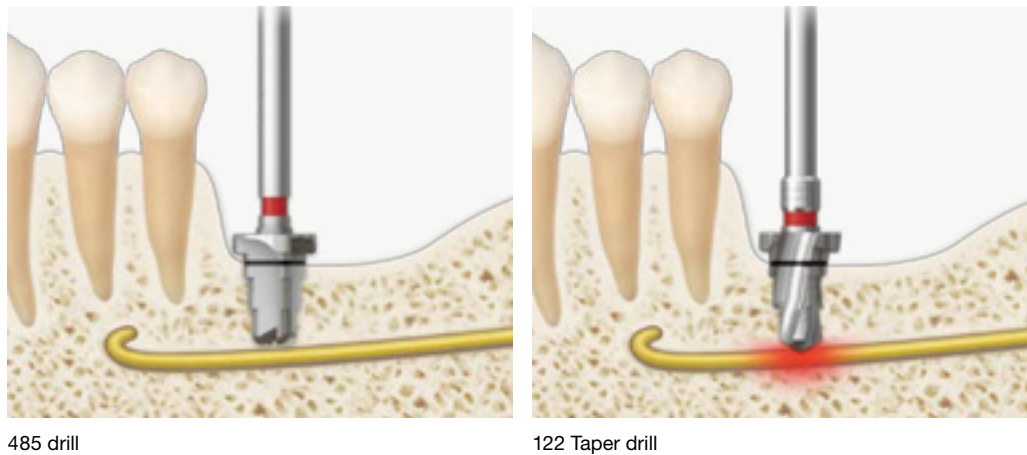
2 Features

A Prevent damage to the inferior alveolar nerve

- The round shape of the tip of the 485 drill allows stable access to the inferior alveolar nerve.

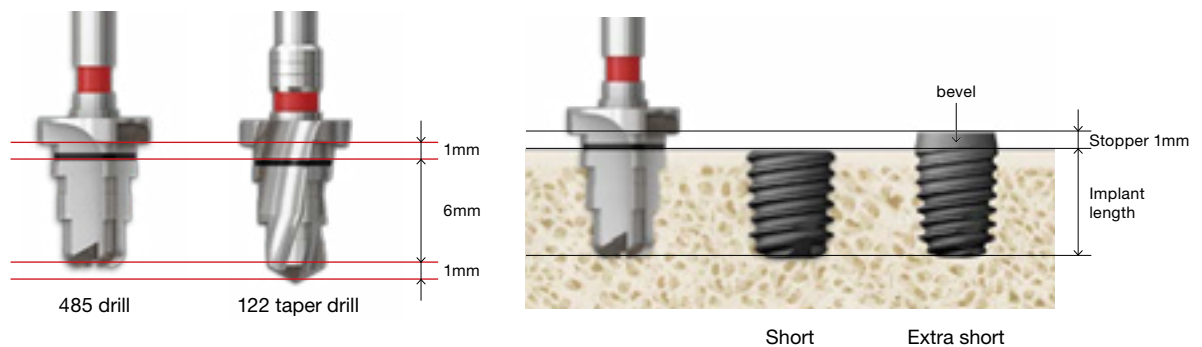


- Can drill without nerve damage even in cases where there is insufficient vertical bone mass under 6mm of residual bone




B Accurate drilling depth adjustment


- No Y-dim (precise drilling depth adjustment)
- Stopper enables stable drilling to fit the length of the short implant.
- Minimize interference with surrounding bone with 1mm extra stopper.




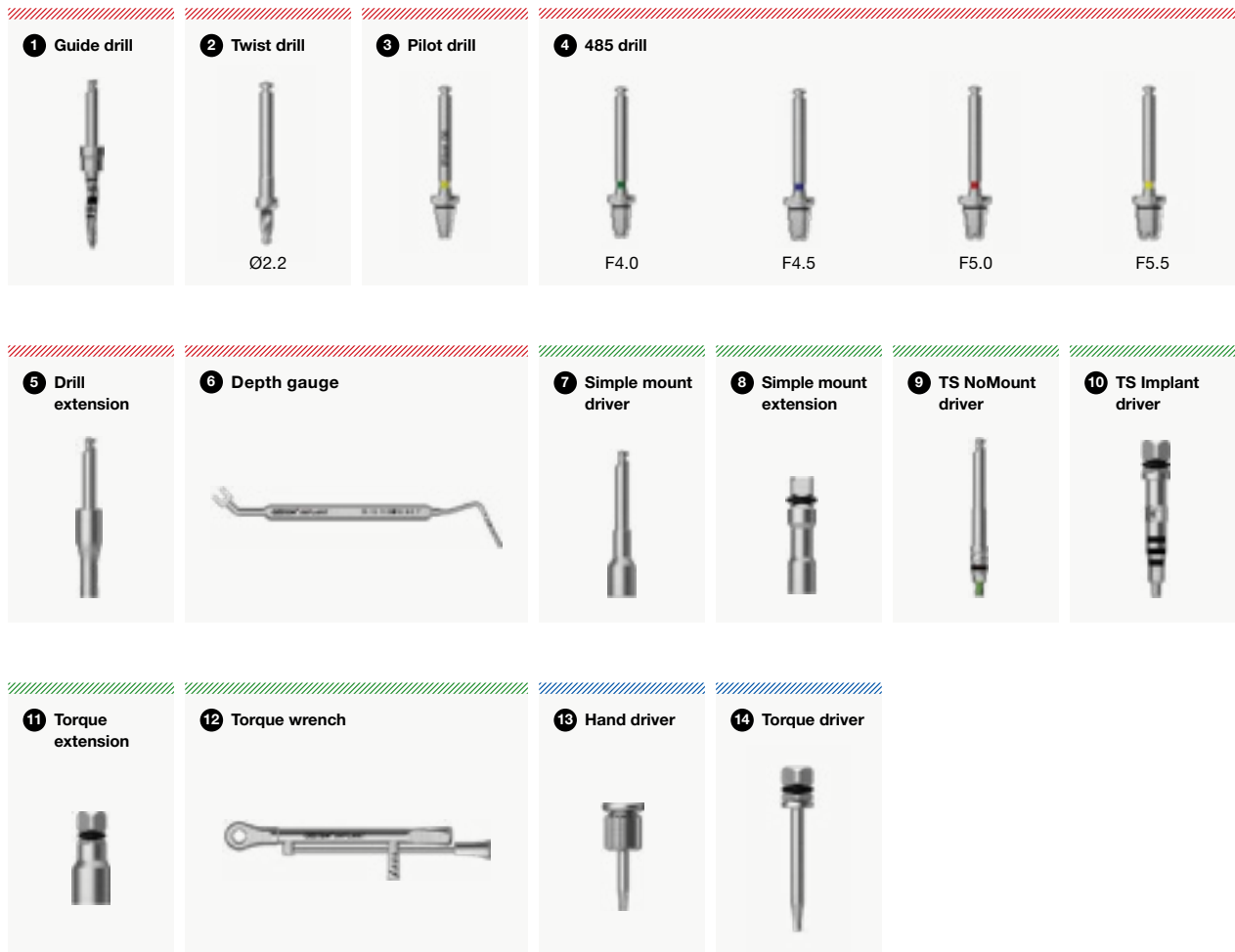
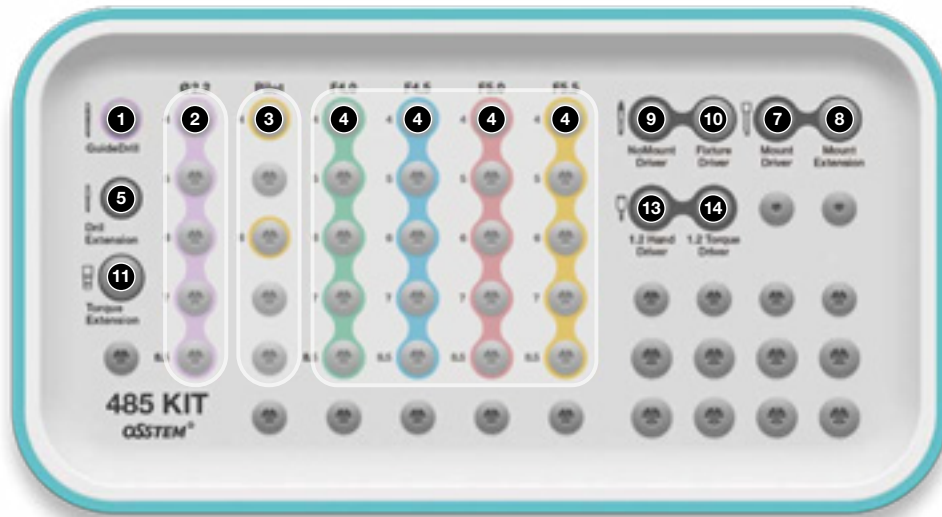
3 KIT (included components)

485 KIT

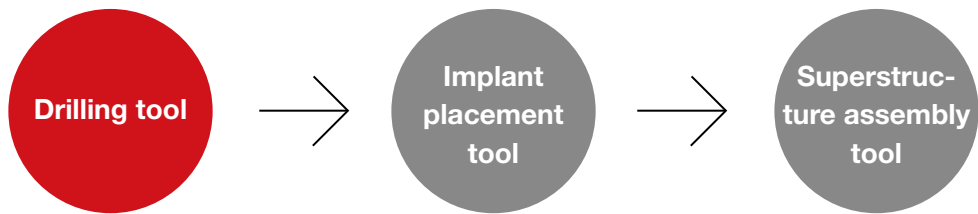
 Drilling Tool
(1~6)

 Implant placement tool
(7~12)

 Superstructure assembly tool
(13, 14)



4 KIT (User instructions)



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



1 Guide drill



2 Ø2.2 twist drill



3 Pilot drill



4 485 drill



5 Drill extension



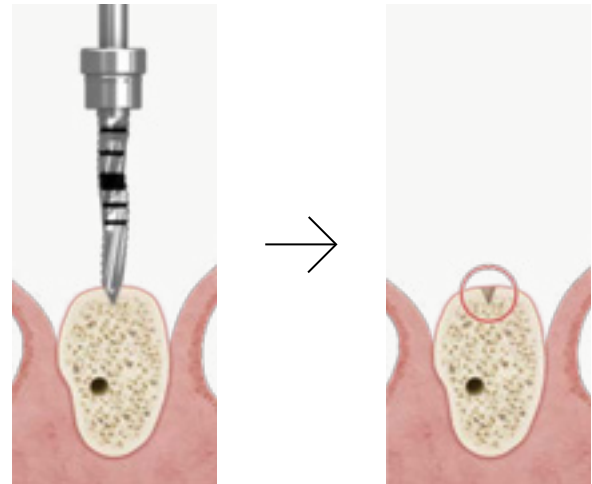
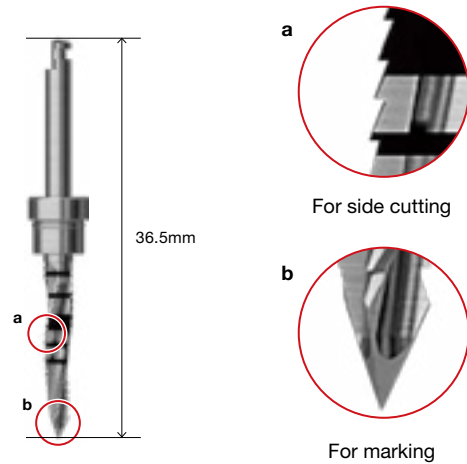
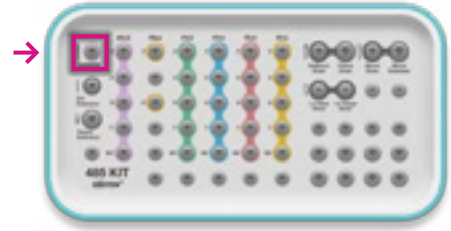
6 Depth gauge

1 Guide 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.
- Drill up to the marking line that matches the length of the Implant to be implanted.
- Can be used when reaming a drilling hole, to clean up the bone when modifying a path, or when cleaning up the septal bone from an extraction site. (SideCut drill function)
- Recommended RPM is 1,200~1,500rpm.
- Available diameters: Ø2.0



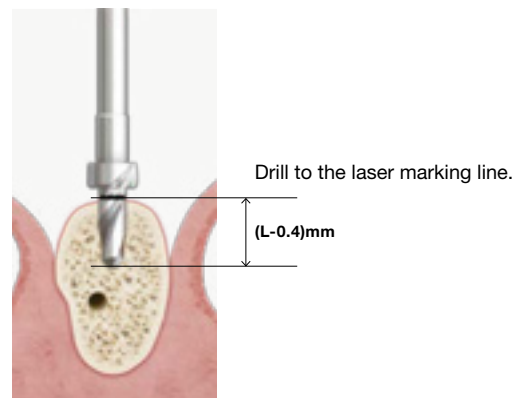
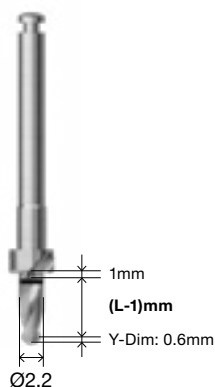
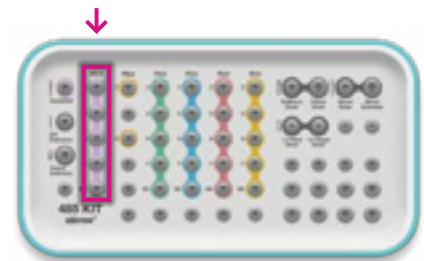
Mark the Implant's placement position (marking)

2 Ø2.2 Twist drill

Dedicated initial drill for the 485 KIT

User instructions

- Assemble the drill of the same length as that of the Implant to the handpiece.
- Drill down to the laser marking line. (0.4mm shorter than other drills)
- Recommended RPM (depending on bone tissue): 800~1,200rpm
- Available length specifications: 4, 5, 6, 7, 8.5mm

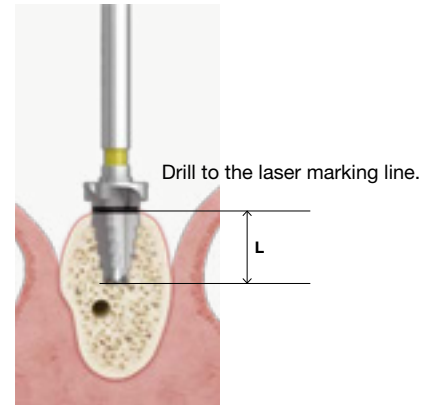
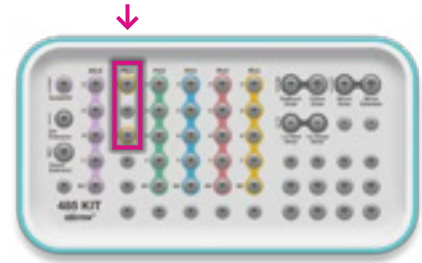


3 Pilot drill

A drill to go from Ø2.2 to F4.0 to F5.0.

User instructions

- Assemble the drill to the handpiece.
- Drill down to the laser marking line.
- Recommended RPM is 800~1,200rpm.
- Available length specifications: 4, 5mm
- Use a 4mm pilot drill when placing 4 or 5mm Implants, and a 6mm pilot drill when placing 6, 7, or 8.5mm Implants.

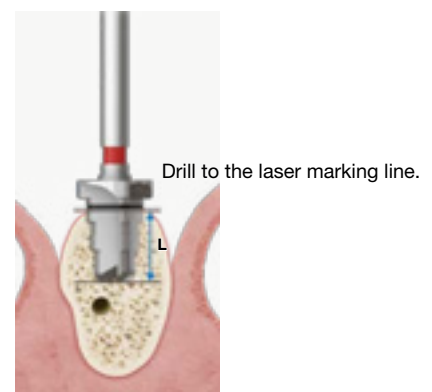
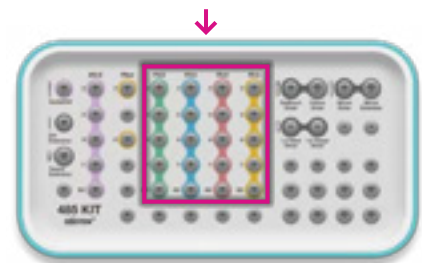
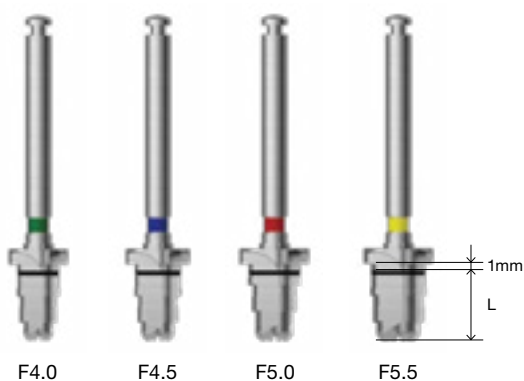


4 485 drill

Drill for mandibular short implant placement that can form a Implant placement hole while minimizing damage to the lower alveolar nerve.

User instructions

- Select a drill suitable for the diameter and length of the Implant to be placed.
- Assemble the drill to the handpiece.
- Drill down to the laser marking line.
- Recommended RPM is 800~1,200rpm.
- The tip of the drill has a round shape to prevent damage to the inferior alveolar nerve.
- Available length specifications: 4, 5, 6, 7, 8.5mm
- Diameter specifications: F4.0, F4.5, F5.0, F5.5

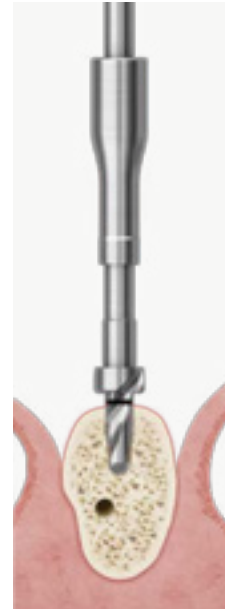
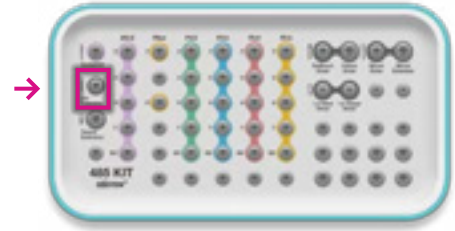
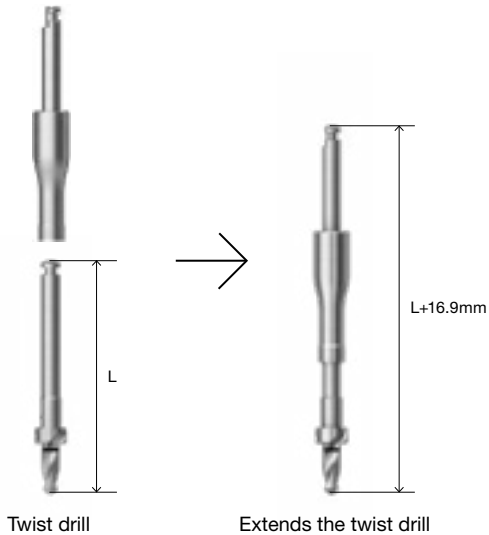


5 Drill extension

Use to extend the length of drills and other handpiece-using tools when the short length 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.

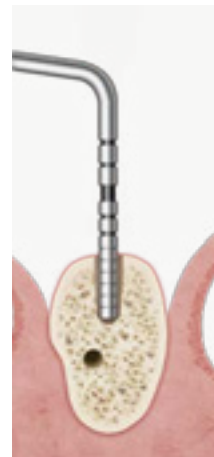
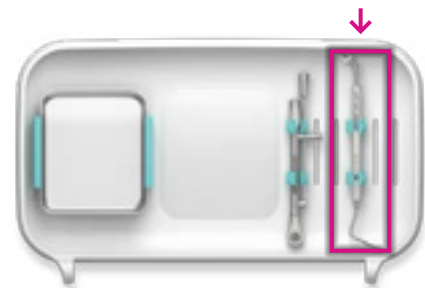
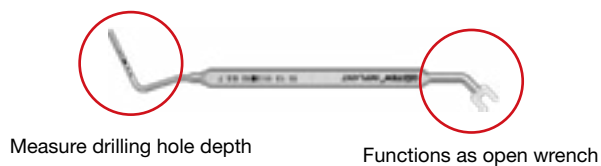


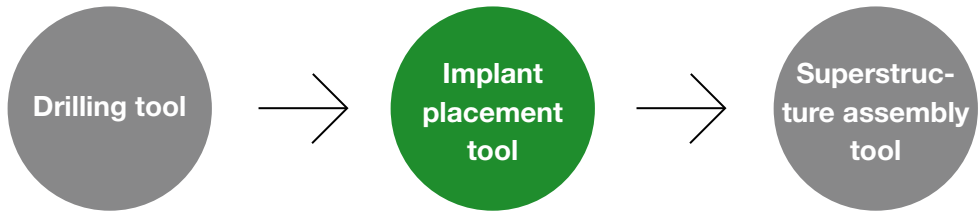
6 Depth gauge

Use when measuring the depth of the drilling hole.
Use other end as an open wrench.

User instructions

- Used when measuring drilling depth. (grooves in 1mm increments)
- Marking lines of 10mm and 11.5mm are made with thick lines to make length distinction easier.
- Grip the upper octa part of the mount with an open wrench so that no torque is applied to the Implant when removing the Implant mount.





Features a driver and torque wrench for placing pre-mount Implants and NoMount Implants during implant placement,



7 Simple mount driver



8 Simple mount extension



9 NoMount driver



10 Implant driver



11 Torque extension



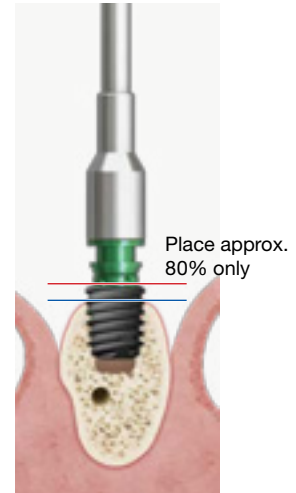
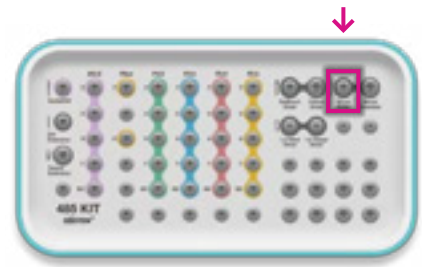
12 Torque wrench

7 Simple mount driver

Used when installing a pre-mount Implant using an engine

User instructions

- Assemble the mount driver to the handpiece.
- Assemble the mount driver to the Implant mount and take out the Implant.
- When moving the Implant into the mouth, move it with the Implant facing up so that it does not fall off.
- Place only approx. 80% of the Implant, and adjust the additional depth with the torque wrench.
- Recommended RPM: Max. 50rpm/ Recommended torque: 40Ncm
- Long specification available.

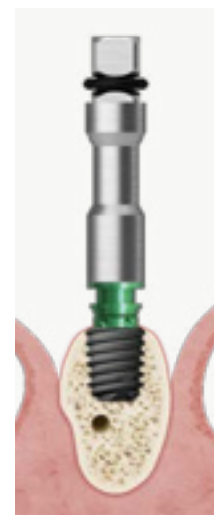
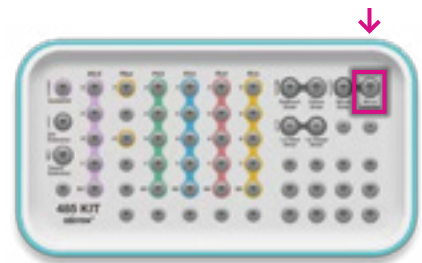


8 Simple mount extension

Tool for adjusting the additional placement depth of pre-mount Implants (instrument for torque wrench)

User instructions

- Tighten the torque wrench and mount extension.
- Assemble to an implanted Implant mount for additional depth control.
- Recommended RPM (depending on bone tissue): 800~1,200rpm
- Available length specifications: 4, 5, 6, 7, 8.5mm

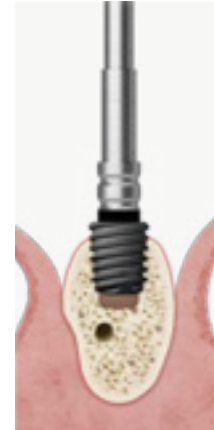
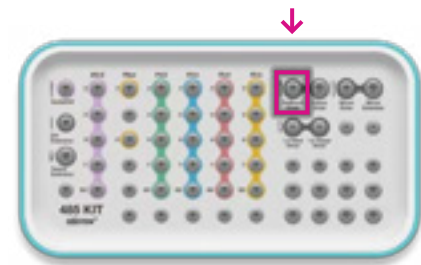


9 TS NoMount driver

Use when installing a NoMount Implant with an engine.

User instructions

- Assemble the Nomount driver to the handpiece.
- Assemble the Nomount driver to the Nomount Implant and take out the Implant.
- When moving the Implant into the mouth, move it with the Implant facing up so that it does not fall off.
- Place only approx. 80% of the Implant, and adjust the additional depth with the torque wrench.
- Place the Implant at an RPM of 50rpm and torque of 40Ncm.
- Regular (long) specification available.

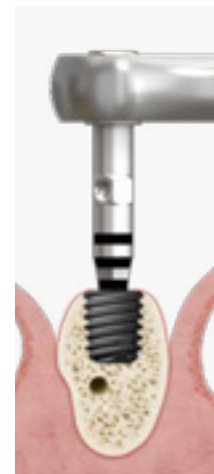
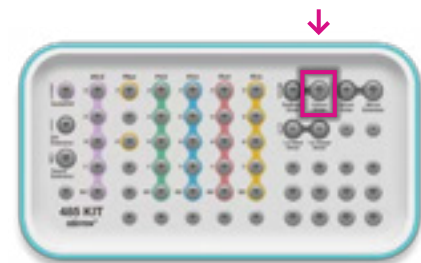
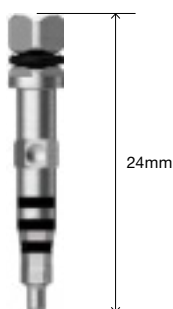


10 TS Implant driver

Driver used to adjust the additional insertion depth and hex direction of the Implant using a torque wrench. (instrument for torque wrench)

User instructions

- Select a Implant driver that meets the Implant specifications and connect it to the torque wrench.
- Assemble to an implanted Implant for additional depth control.
- Keep torque up to max. 30Ncm when placing the Implant.
- Regular (long) specification available.

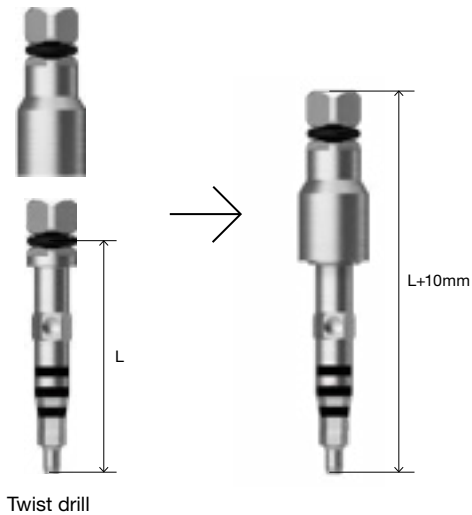
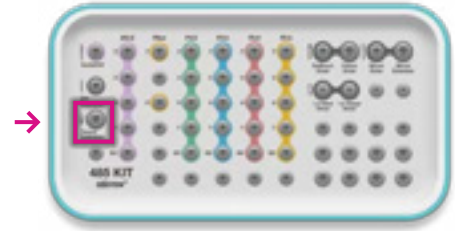


11 Torque extension

A tool that extends the length of the instrument by 10mm by connecting it to the torque wrench (instrument for torque wrench).

User instructions

- Assemble the torque extension to the torque wrench.
- Assemble to the torque wrench tool to extend the length and apply the torque.

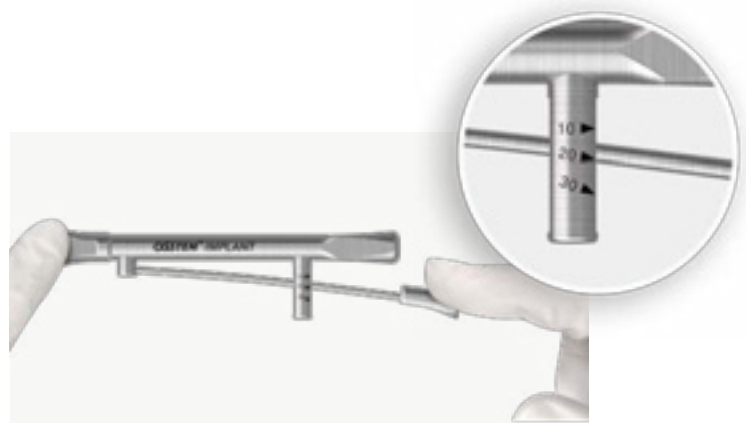
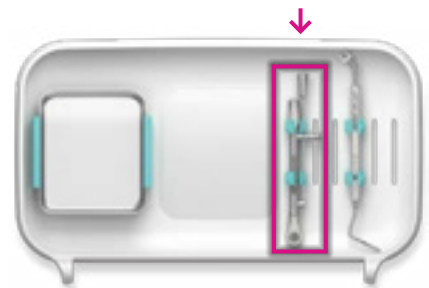


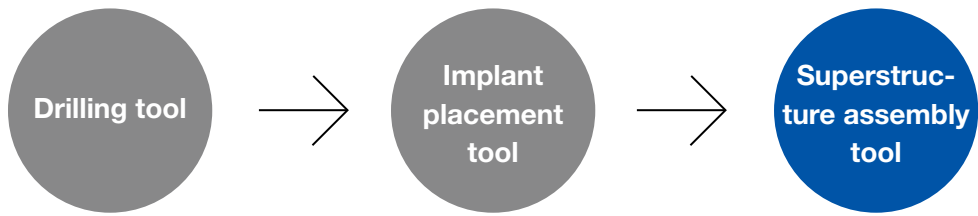
12 Torque wrench

Adjust the implant placement depth or adjust the Abutment, screw, etc.
Tool used to increase torque.

User instructions

- Pull the bar and adjust the center of the bar to the torque value to be applied and turn it clockwise to apply the torque.
- Torque of 10, 20, and 30Ncm can be applied.
- Keep torque up to max. 30Ncm when placing the Implant.





Includes a tool used to fasten or remove the cover screw, healing Abutment, and Abutment screw after installation of the Implant.



13 Hand driver



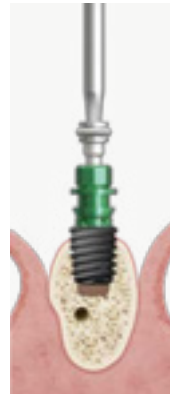
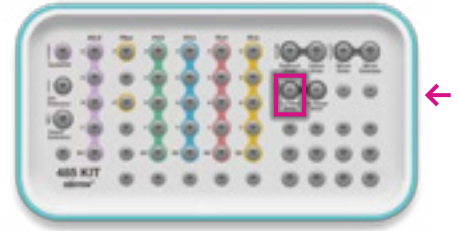
14 Torque driver

13 Hand driver

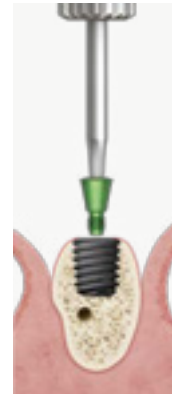
A driver used to tighten or loosen the cover screw, healing Abutment, and Abutment screw by hand after Implant placement.

User instructions

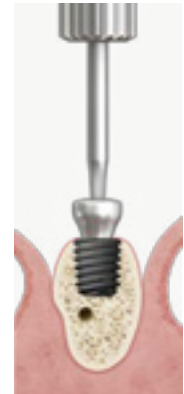
- Insert the hand driver hex with the cover screw or healing Abutment hex.
- To tighten, turn clockwise at 5~8Ncm.
- To loosen, turn counterclockwise.
- If excessive force (above 20Ncm) is applied, hex slip may occur at the tip of the driver or the screw head. Be careful of torque overload.
- When an adult male wears gloves and tightens with his fingers only, he can generate approx. 12 ~ 18Ncm of force (female: 8 to 12 Ncm).
- 1.2 hex (long) specification available.



Remove mount



Assemble/remove cover screw



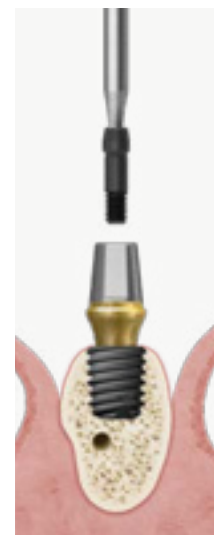
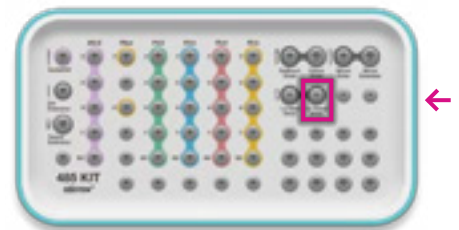
Assemble/remove healing Abutment

14 Torque driver

A driver used to apply torque to the Abutment screw with a torque wrench (instrument for torque wrench)

User instructions

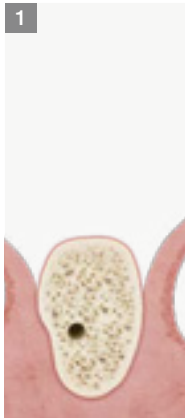
- Assemble the torque driver to the torque wrench.
- To fasten the Abutment screw, turn it clockwise. To loosen the Abutment screw, turn it counterclockwise.
- 1.2 hex (long) specification available.



5 KIT sequence

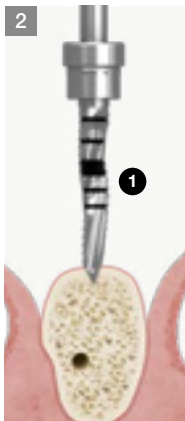
Normal bone TSIII Ø5.0×6mm placement

N: Tool number



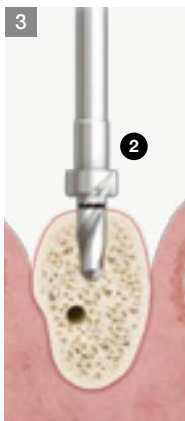
1 Gingival incision

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



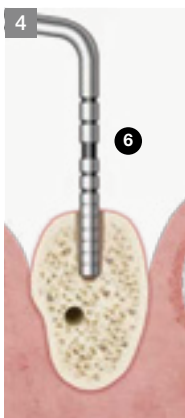
2 Mark drilling position (Guide drill)

- Use the Guide drill to mark the area where the cortical bone will be drilled by 2~3mm.
- Recommended RPM: 1,200~1,500rpm



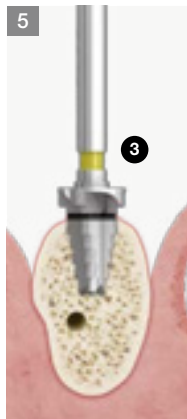
3 Initial drilling (Ø2.2 twist drill)

- Drill the cortical bone using a Ø2.2 twist drill.
- Recommended RPM: 800~1,200



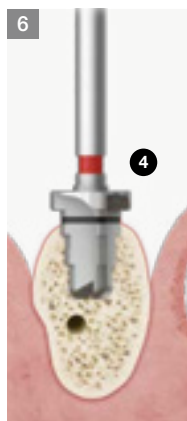
4 Check depth (Depth gauge)

- After initial drilling, check the depth of the hole and the condition of the bottom.
- * Marking line: Use lower border. When marking line is 10, 11.5mm, it is easier to check length.



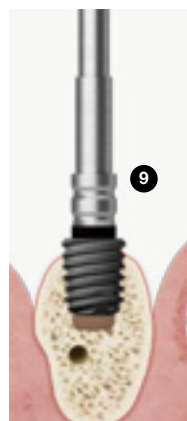
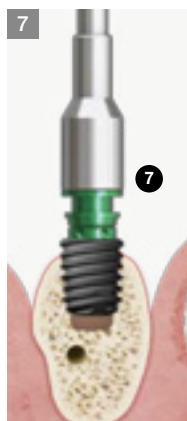
Drilling hole reaming ($\text{Ø}5.0 \times 6\text{mm}$ pilot drill)

- Drill to the laser marking line using a 6mm pilot drill.
- Use by connecting a drill extension when caught on adjacent teeth
- If the drill gets stuck during the procedure, reverse the engine to remove the drill, then resume drilling
- Recommended RPM: 800–1,200



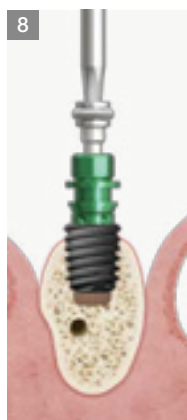
Final drilling ($\text{F}5.0 \times 6\text{mm}$ 485 drill)

- For hard bone, drill a larger diameter hole using a $\text{F}5.5 \times 6\text{mm}$ 485 drill to the laser marking line to place a $\text{Ø}5.0 \times 6\text{mm}$ Implant.
- As it is the final step that determines the size and depth of the hole, exercise extreme precaution.
- Recommended RPM: 800–1,200



Implant placement (TSIII $\text{Ø}5.0 \times 6\text{mm}$)

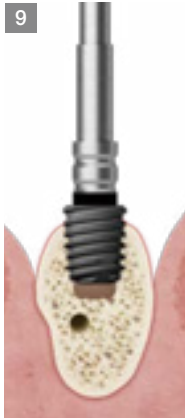
- Place Implant after setting the maximum torque of the engine to 40Ncm
- If the implantation torque is above 55Ncm, bone necrosis or the mount may not be separated.
- If you hear a sound from the bone while placing the Implant, be sure to rotate the driver in reverse before resuming placement.
- Recommended RPM: 50
- * If the handpiece stops due to torque overload, do not rotate further in the direction of Implant placement (do not tighten).
- * Be careful not to apply excessive torque when installing the Implant with a torque wrench.



Remove mount

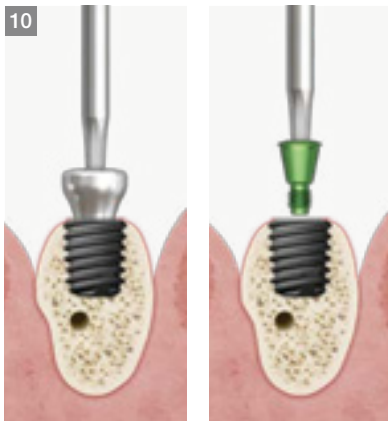
(When placing a pre-mount Implant)

- Remove the mount screw with a 1.2 hex hand driver.
- If the mount screw cannot be removed, remove using a 1.2 torque driver and torque wrench, or a 1.2 machine driver and handpiece.
- When removing the mount screw, fix the top octa part of the mount with an open wrench so that no torque is applied to the Implant, then loosen the screw to remove.



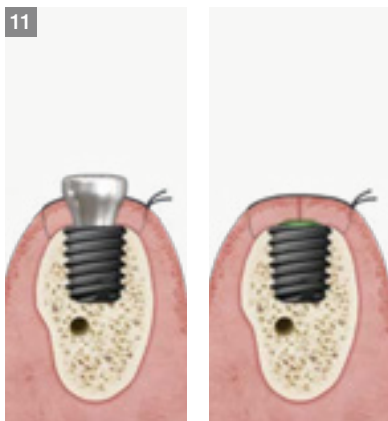
Adjust placement depth (Implant driver)

- Assemble the Implant driver to the torque wrench, then turn it clockwise to place the Implant at the bone level.
- Recommended torque: Max. 30Ncm



Assemble Cover screw or Healing Abutment

- Consider the initial stability, and fasten the cover screw or healing Abutment with a 1.2 hex hand driver.
- Recommended torque: 5~8Ncm



Suture

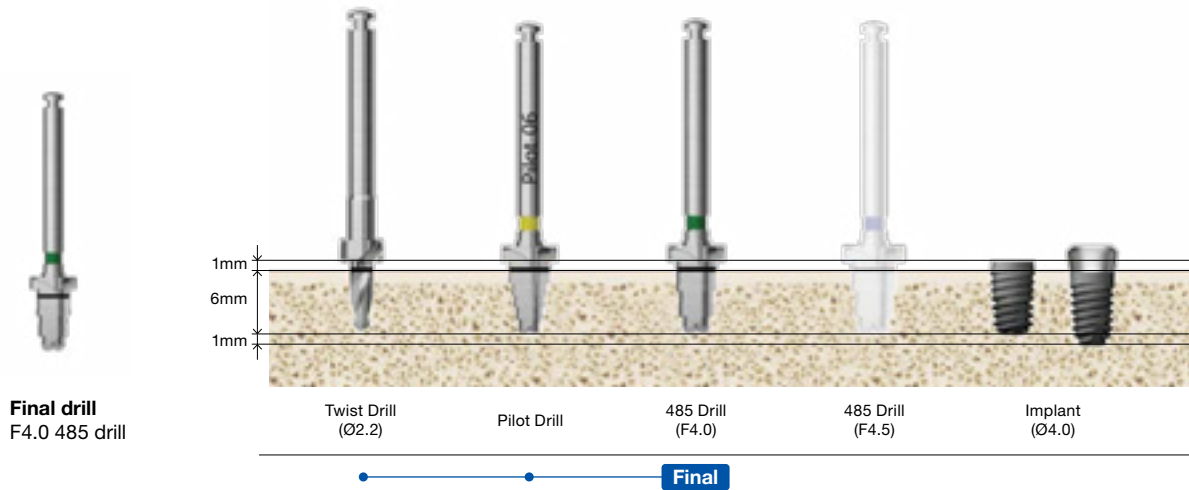
- Suture so that soft tissue is not exposed to strong tension
- * In some cases, suture after releasing incision or GBR

Quick Guide | TSIII, KSIII, SSIII, USIII (Length: 6mm)

Ø4.0x6mm Implant placement

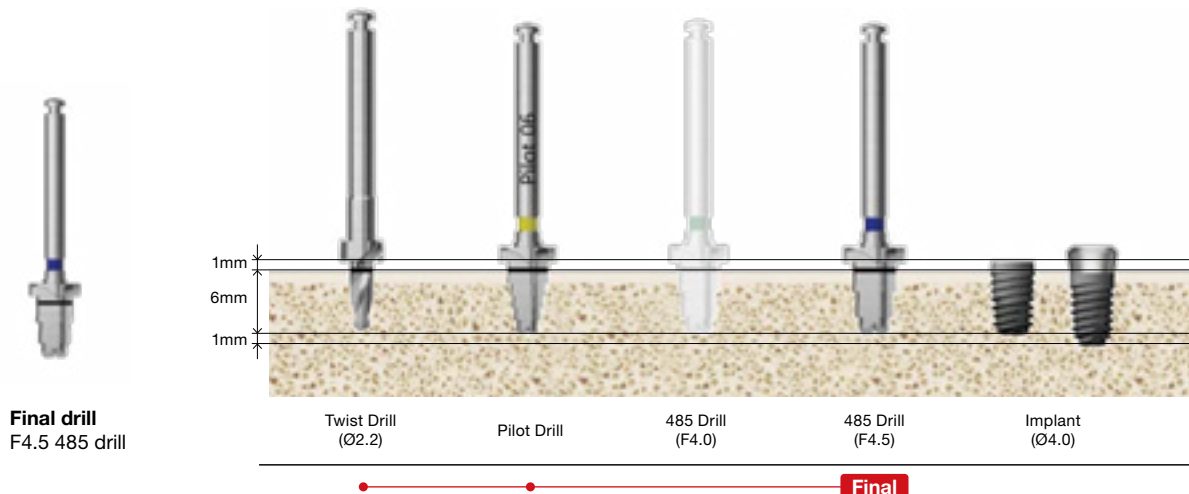
Normal bone Use nominal drill

Since bone tissue is good, use a F4.0 485 drill that fits the Implant's diameter as the final drill to create a drilling hole.



Hard bone Use a drill one size larger than the nominal drill

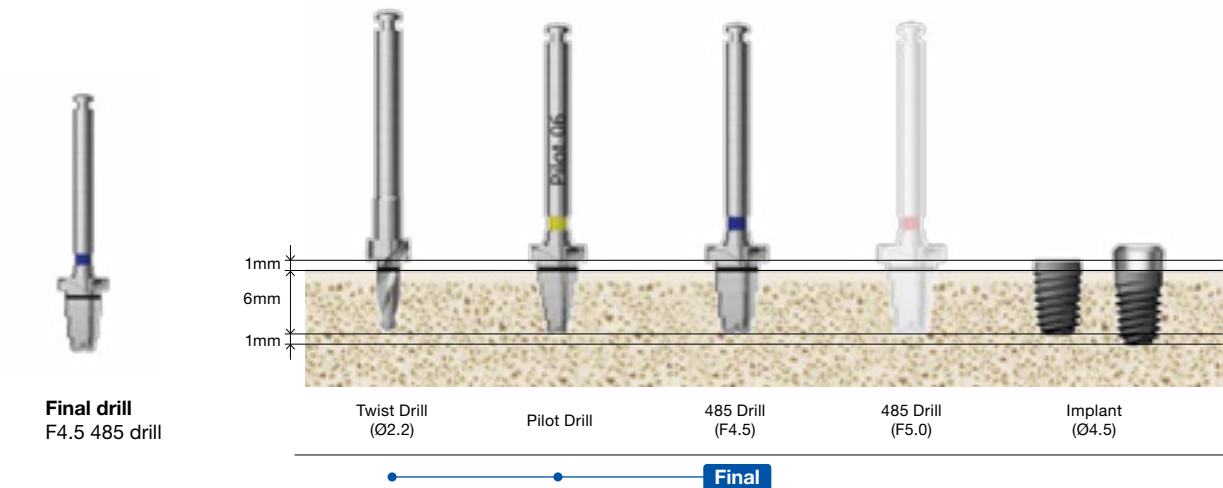
Since bone tissue is hard, use a F4.5 485 drill as the final drill to prevent osteonecrosis and torque overload.



Ø4.5x6mm Implant placement

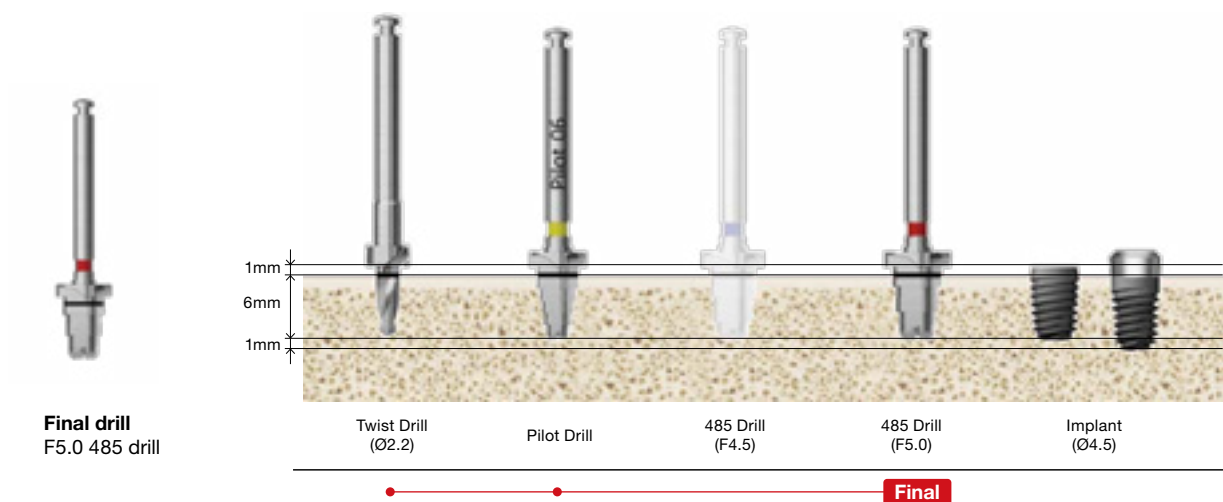
Normal bone Use nominal drill

Since bone tissue is good, use a F4.5 x 10mm drill that fits the Implant's diameter as the final drill to create a drilling hole.



Hard bone Use a drill one size larger than the nominal drill

Since bone tissue is hard, use a F5.0 485 drill as the final drill to prevent osteonecrosis and torque overload.

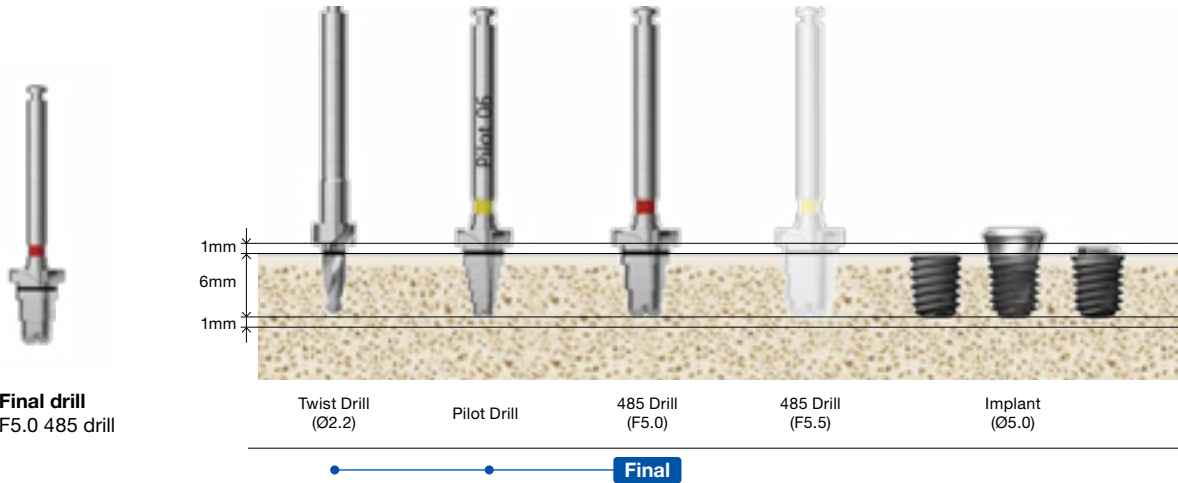


Quick Guide | TSIII, KSIII, SSIII, USIII (Length: 6mm)

Ø5.0×6mm Implant placement

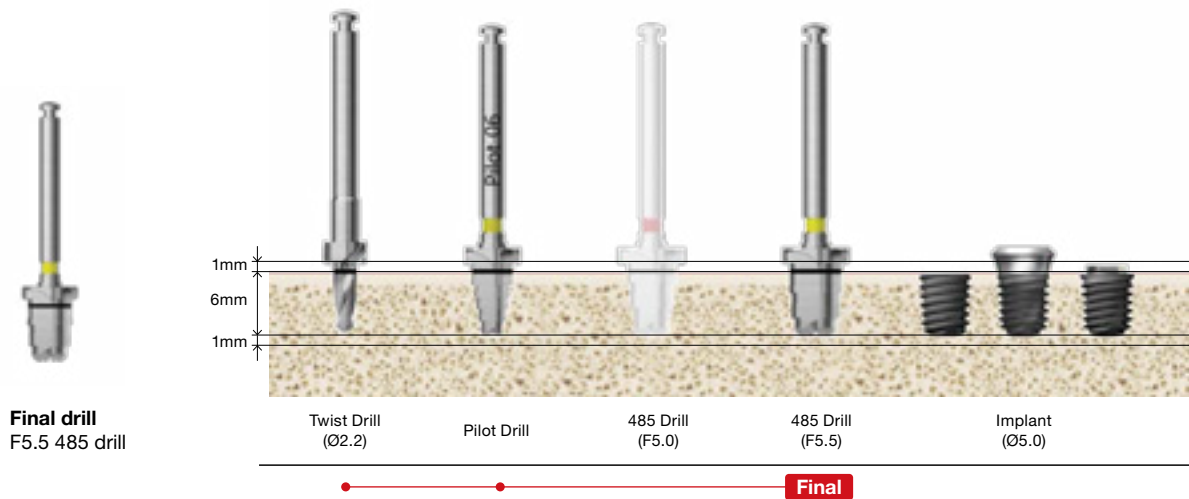
Normal bone Use nominal drill

Since bone tissue is good, use a F5.0 485 drill that fits the Implant's diameter as the final drill to create a drilling hole.



Hard bone Use a drill one size larger than the nominal drill

Since bone tissue is hard, use a F5.5 485 drill as the final drill to prevent osteonecrosis and torque overload.



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.

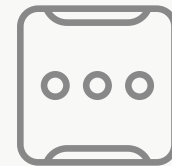
3



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

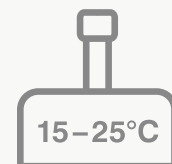
5



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.

Important Contact Information



International HQ

Osstem Implant Co., Ltd.
3, Magokjungang 12-ro, Gangseo-gu
Seoul 07801, Republic of Korea

☎ +82-2-2016-7000

☎ +82-2-2016-7001

🌐 www.osstem.com



European HQ

Osstem Implant s.r.o.
Radlická 740/113c
158 00 Prague, Czech Republic

☎ +420-296-238-800

✉ info@osstem.eu

🌐 www.osstem.eu



Hiossen HQ

Hiossen Implant Inc.
85 Ben Fairless Drive, Fairless Hills
PA 19030, USA

☎ +1-888-678-0001

✉ master@hiossen.com

🌐 www.hiossen.com



Osstem Pharma HQ

Osstem Pharma Co., Ltd.
123, Gasan digital 2-ro, Geumcheon-gu
Seoul 08505, Republic of Korea

☎ +82-70-5118-0330

☎ +82-70-4369-1930

🌐 www.osstempharma.com



Osstem Orthodontic HQ

OSSTEM Orthodontics Inc.
13, Ojeongongeop-gil, Uiwang-si
Gyeonggi-do 16072, Republic of Korea

☎ +82-31-477-9902

☎ +82-31-477-9904

🌐 www.osstemortho.com

WE ARE GLOBAL

Global Leader in Implant Dentistry

Driven by advanced technology and exceptional product quality, we are exporting to more than 90 countries.



We are on Social Media



/osstem
/osstem-europe
/hiossen



/osstem
/osstem.eu
/hiossenimplants



/osstem
/osstem_europe
/hiossen



/osstemglobal
/@osstem_europe
/@hiossenimplants



OSSTEM[®]
IMPLANT

© Osstem Implant Co., LTD. All rights reserved.

Osstem Implant[®] and/or other trademarks and logos of Osstem Implant[®] mentioned herein are trademarks or registered trademarks of Osstem Implant Co., Ltd. and/or its affiliates. For dental professionals only. Informations in this document are provided for general information purposes and do not constitute medical advice. Specifications, content and availability are subject to change without notice. Errors and omissions excepted.