

# Osstem Digital Implant Solution



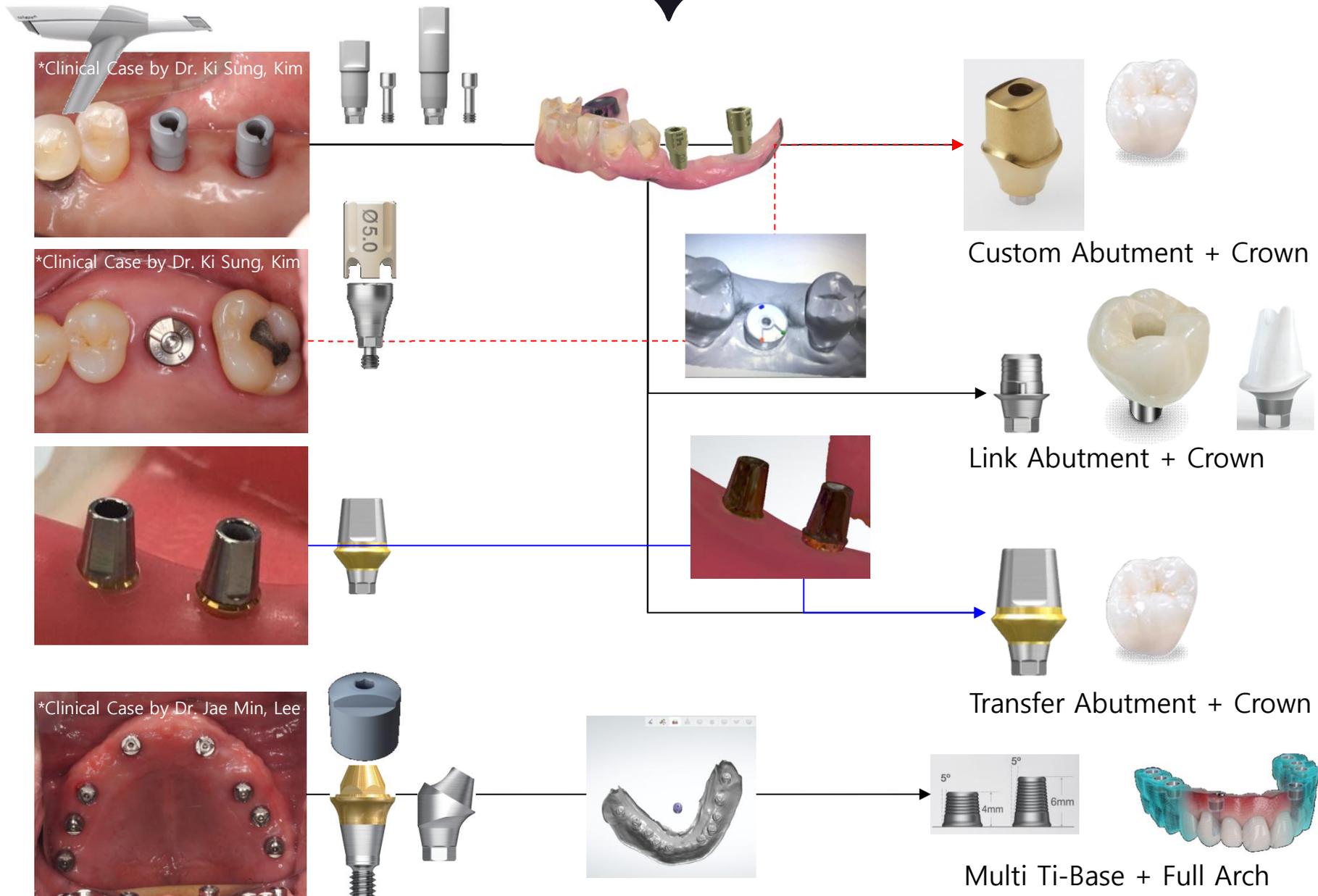
**Andy Ryu**

**Head of Digital implant Product Business Leader(PBL)  
Osstem Implant**

- 1. Library Structure**
- 2. Scan Body**
- 3. Custom Abutment (Link & Premilled)**
- 4. Multi Ti-Base & Scan Body**
- 5. Digital Lab Analog**
- 6. Digital Devices**
- 7. Q&A**

# 1. Library Structure

# 1. Osstem Digital Implant Restoration Option



# 2. Library Structure



Scan body



Short

Long



1. Scan Body(SB) to Custom



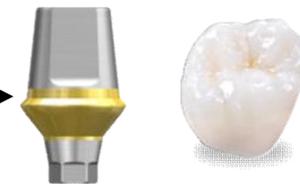
Custom Abutment + Crown

2. Scan Body(SB) to Link



Link Abutment + Crown

3. Scan Body(SB) to Stock



Transfer Abutment + Crown



- \* Share the specification of used Scan Healing Abutment with a dental lab so that a lab technician select the same specification in the library.
- \* Because Scan Healing Abutment has different specification, only the Library for Custom Abutment is available.



Transfer Abutment

Stock to Stock



Transfer Abutment + Crown

- \* **“Stock to Stock” is used when an implant are placed in the right position. In case of multiple cases, maximum three-unit is recommended and in order to use “Stock to Stock,” all implants should be parallel as well as placed in the right position.**
- \* Share the specification of selected Transfer Abutment with a dental lab so that a lab technician selects the same specification in the library.
- \* **Submargined case could be also available, however, when Transfer Abutment was modified from its original shape, digital process cannot be done.**



**\* Scan Body is connected on the top of Multi (Angled) Abutment.**

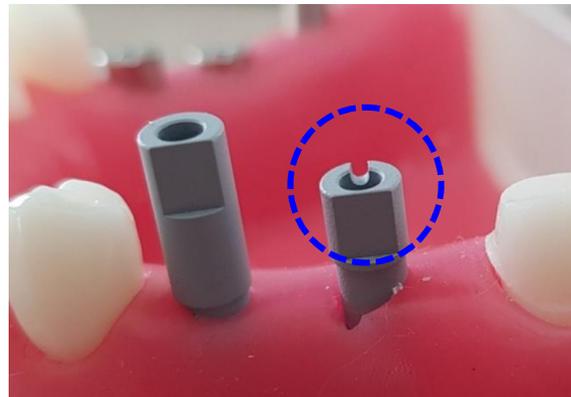
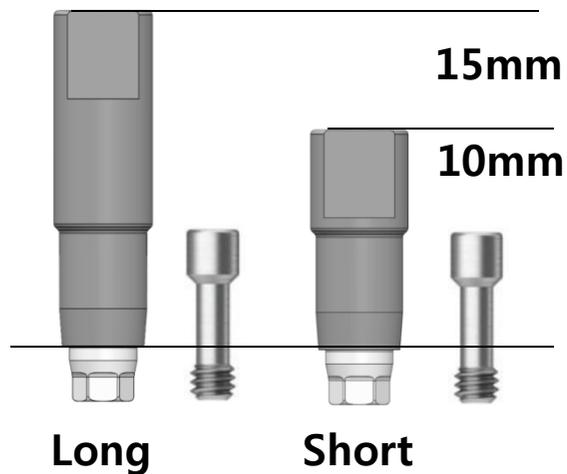
\* A dental lab could choose either 4mm or 6mm Ti Base depending on the condition.

\* CE Registration will be finalized in June 2020.

## 2. Scan Body

## 1) Osstem Scan Body

- ① Line up : Long, Short (Two types / Distinguishable from designs)
- ② Materials : Ti-6Al-4V (Grade V) + Special Coated (Powder Free for IOS)
- ③ Library Options : 3 Options (Custom Abt. / Link Abt. / Stock Abt.)



Long / Short Types  
→ Choose from Library

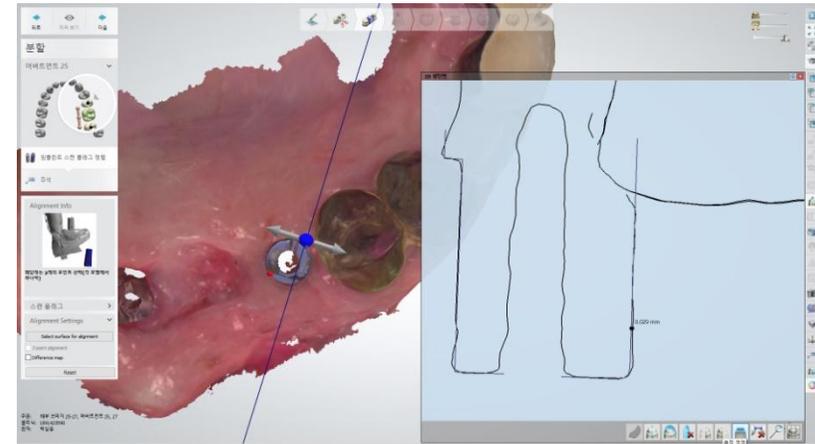


## 2) Improvement of Scan Body Library

Previous



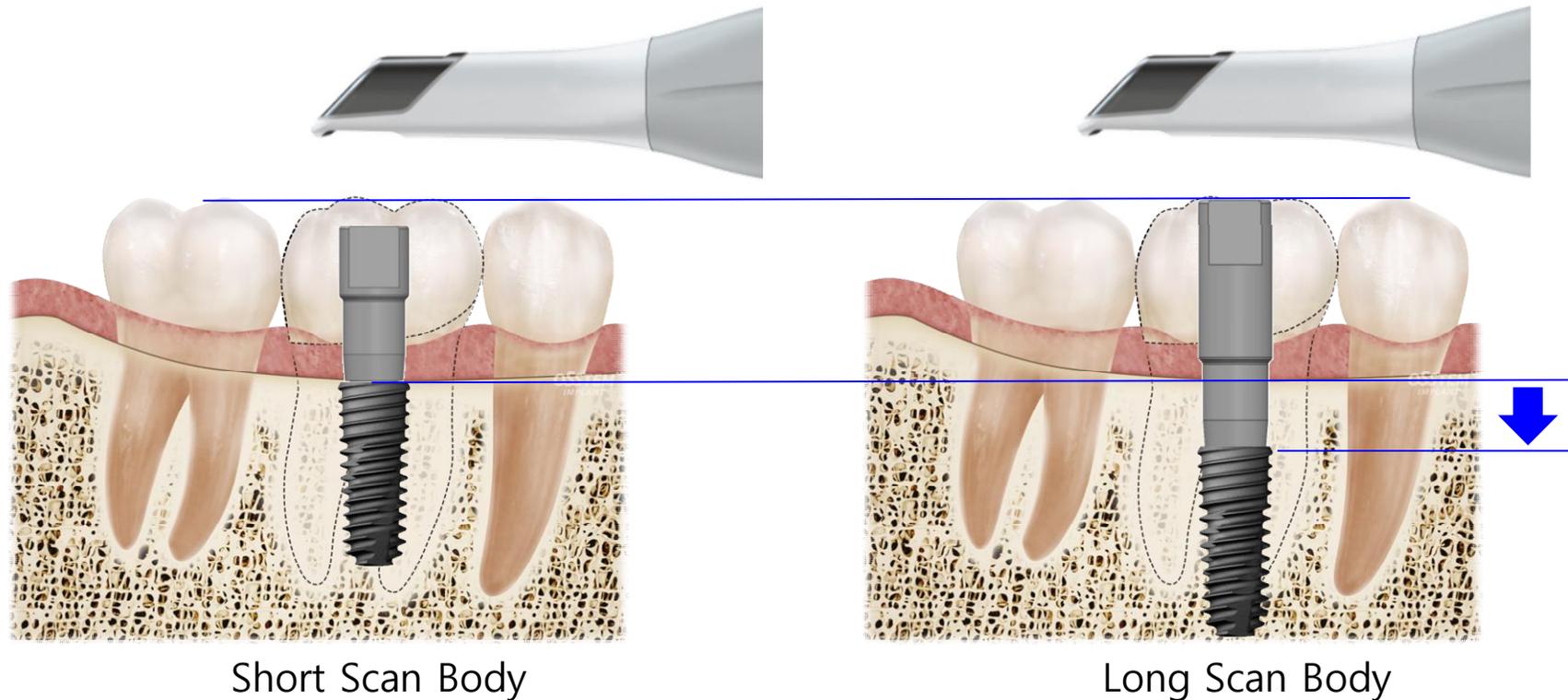
Current



- ✓ More compact mesh structure
- ✓ Library only with actual scanned area
- ✓ Considering a machining tolerance of final products, CAD SW's library has been upgraded which leads the higher accuracy of scanned data and library.

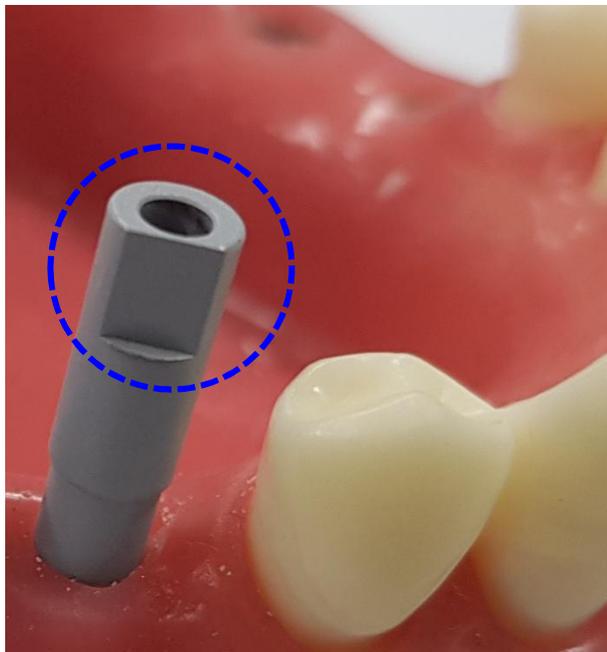
### 1) Choosing the Right Specification

The Top part of Scan Body should be the similar height of occlusal surface of adjacent teeth.

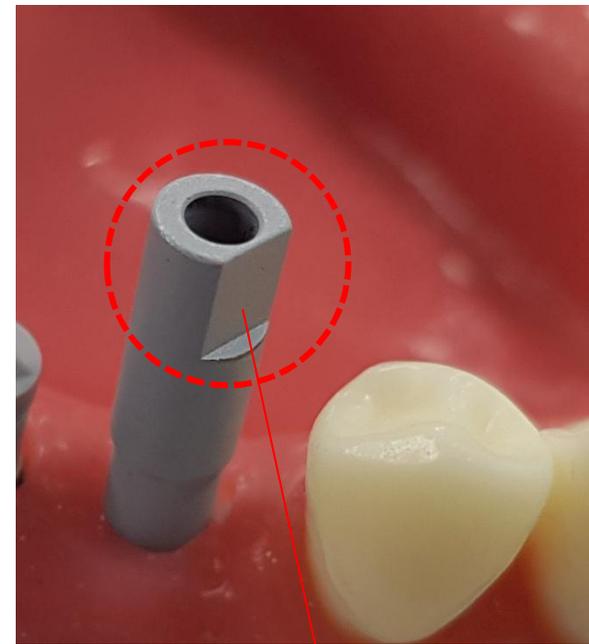


### 2) Direction of Surface

The alignment side on the top of Scan Body should face the buccal/lingual side, not adjacent tooth side.



Good

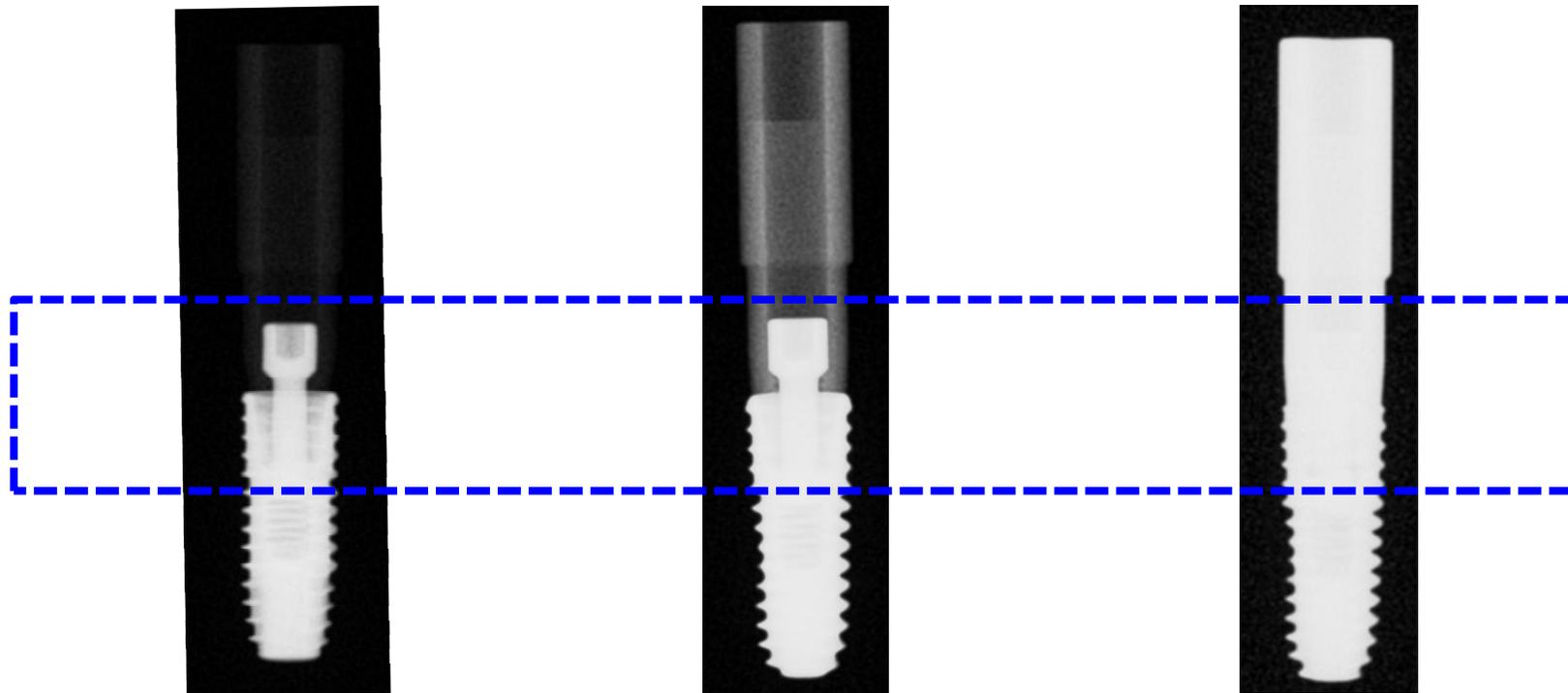


Not Good

→ Scan Body's alignment side is facing adjacent tooth, which will make scanning not accurate

### 3) Checking Fixture-Scan Body Connection

If Fixture-Scan Body fit is not assuring, X-Ray could show whether the fit is accurate or not.



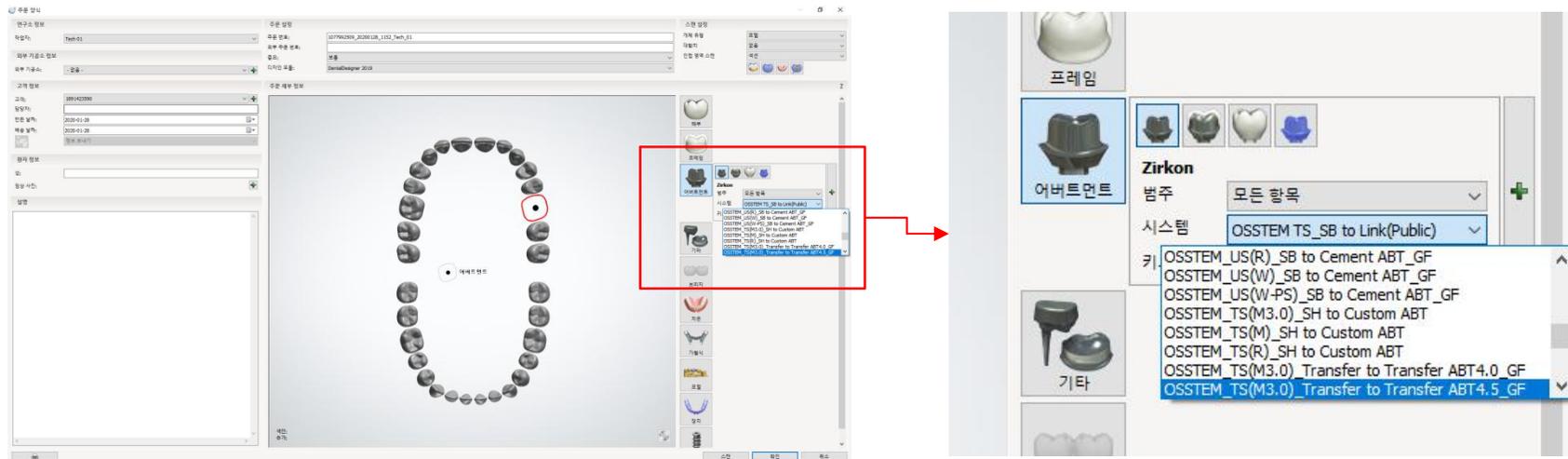
PEEK Scan body

PEEK Scan body

**Titanium Scan body**

### 4) Usage of Library

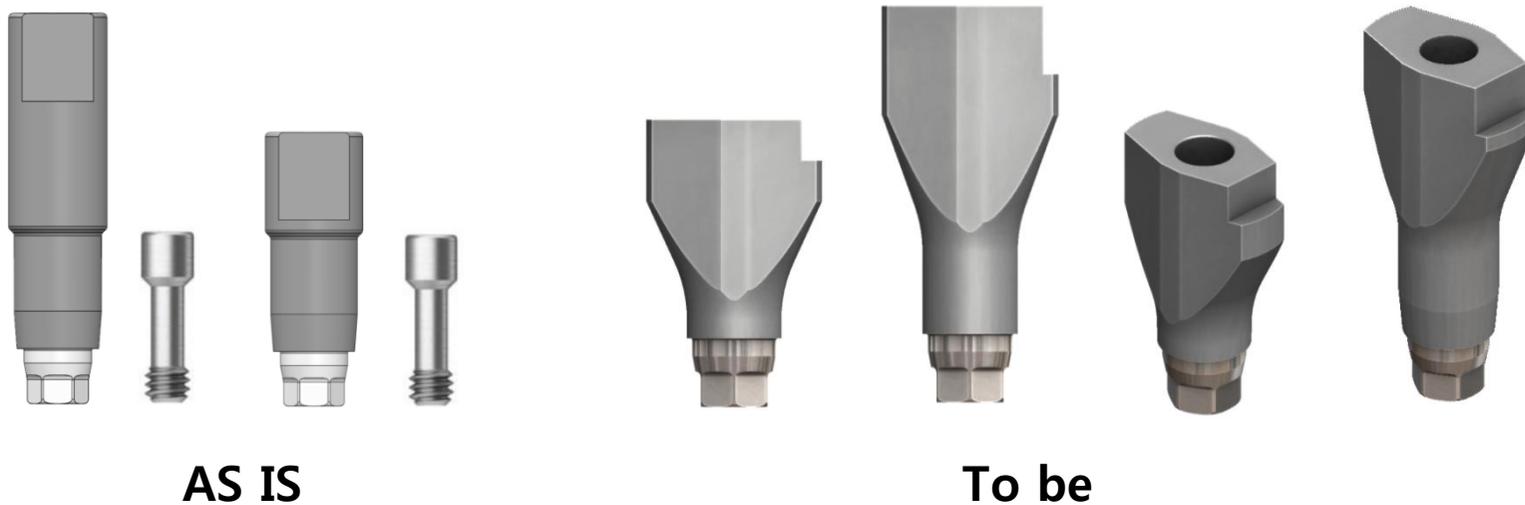
- Available with 3Shape Dental System and exocad.
- Choosing Abt. by analyzing scanned file and considering clinics' requirements.
- Long/Short Scan Body in different design
- Clinic should to inform scan information to Lab. when Scan Healing Abt. or stock abutment are scanned.
- Lower than 3Shape Dental System version 14, specific Library is required.



- 1) By changing the design of Scan Body, **speed of oral scanning is improved.**
- 2) By changing the coating treatment methods, **coating is bonded stronger.**
- 3) After new designed Scan Body is launched, Library will be distributed.

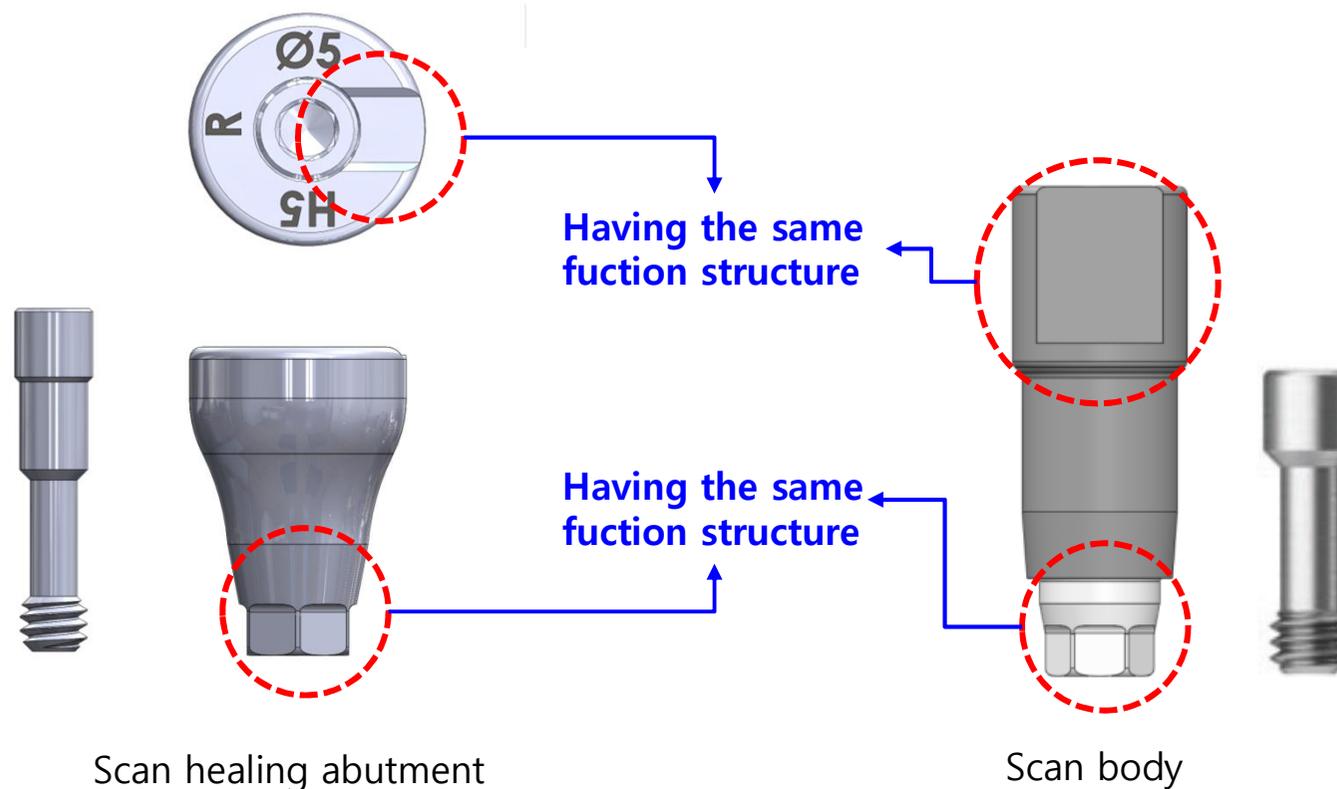
- In Korea, updated Scan Body will be launched in April 2020,

whereas in Europe, the launching is expected in the second half of 2020.



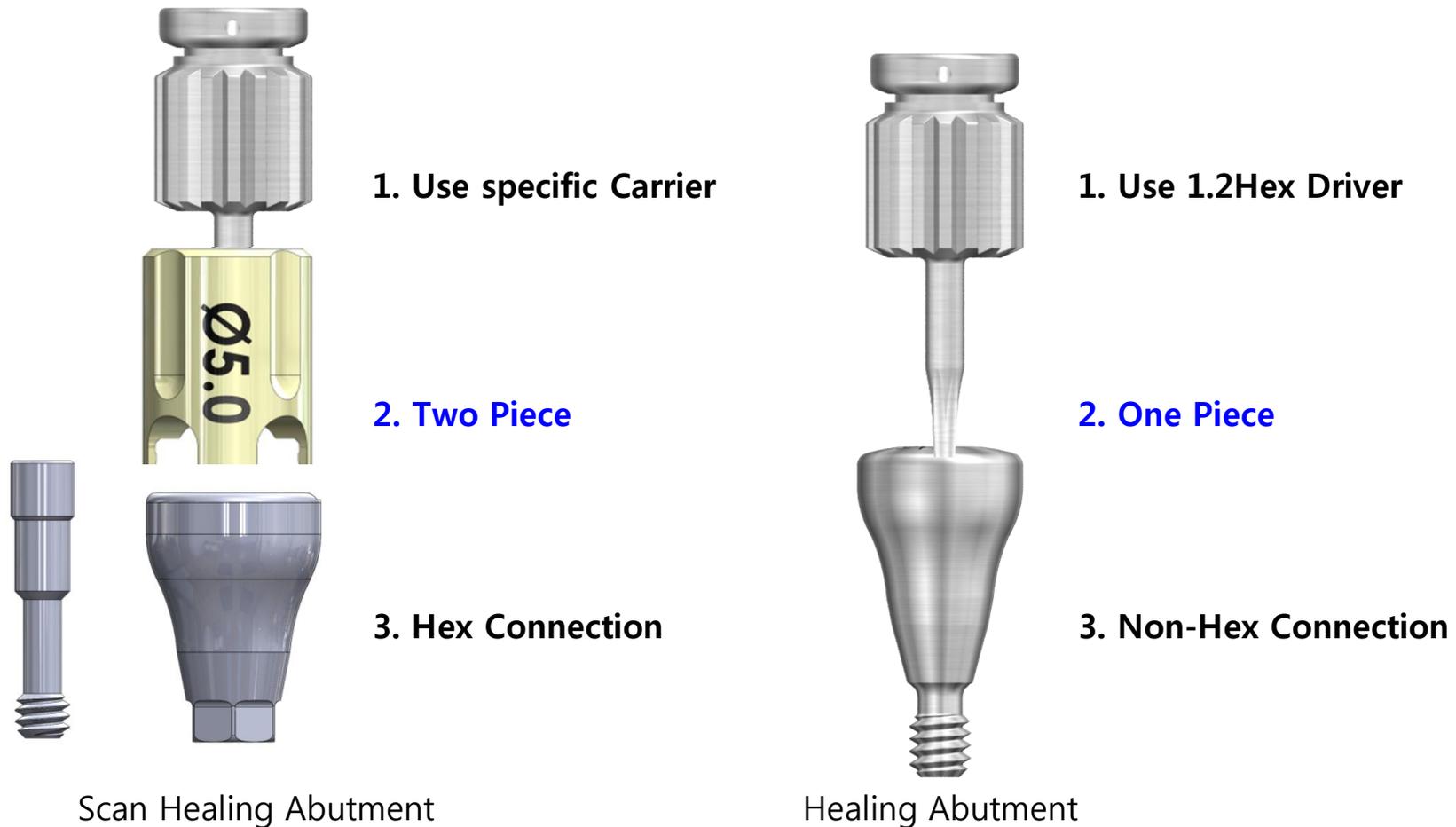
## 1) Feature of Scan Healing Abutment

- By adding functions of Scan Body into Healing Abutment, Healing Abutment could be scanned like Scan Body without using actual Scan Body to process digital restoration.



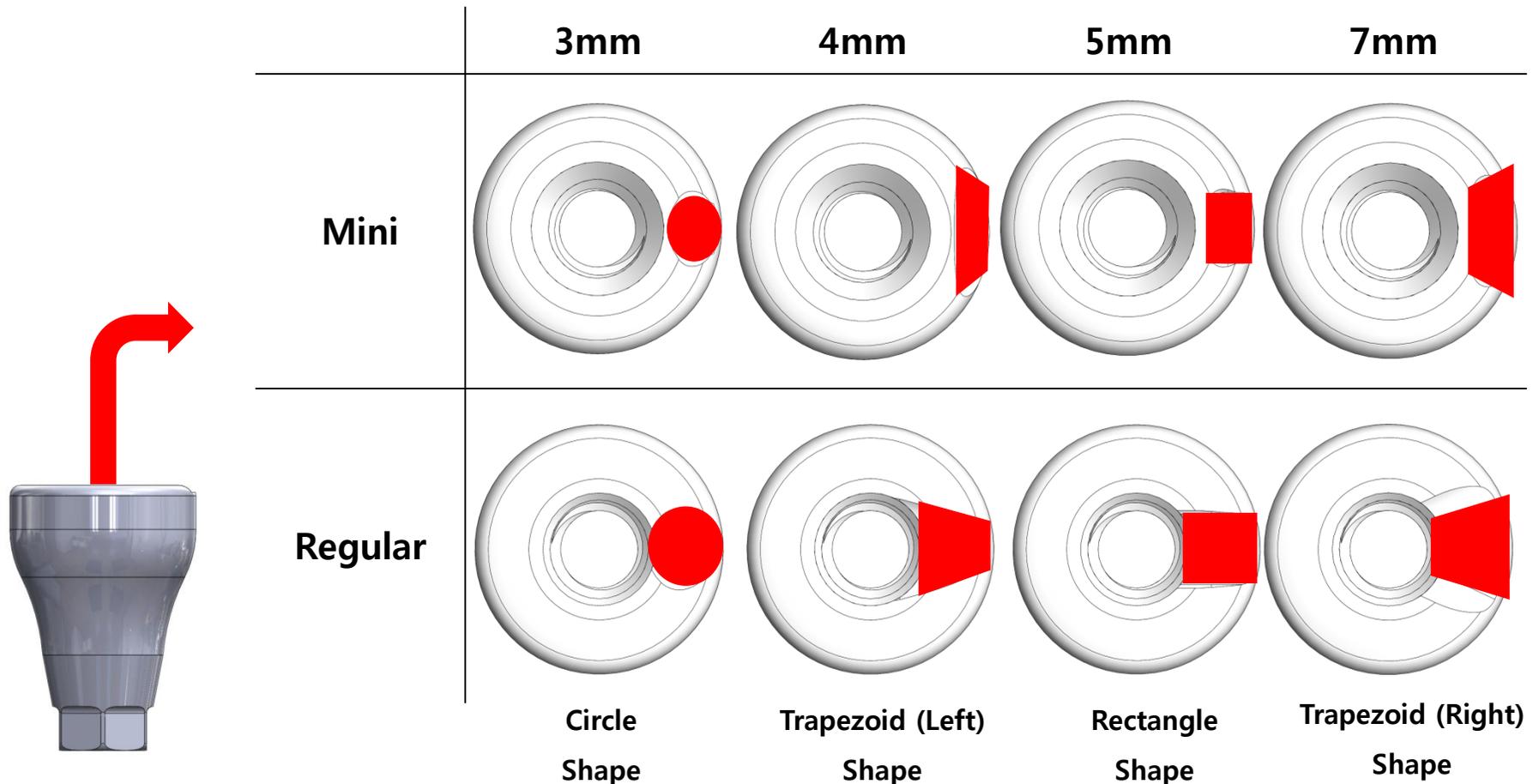
## 2) The Difference between Original and Scan Healing Abutment

- The purpose of using as Healing Abutment itself is the same.
- The structure and the connection way are different.



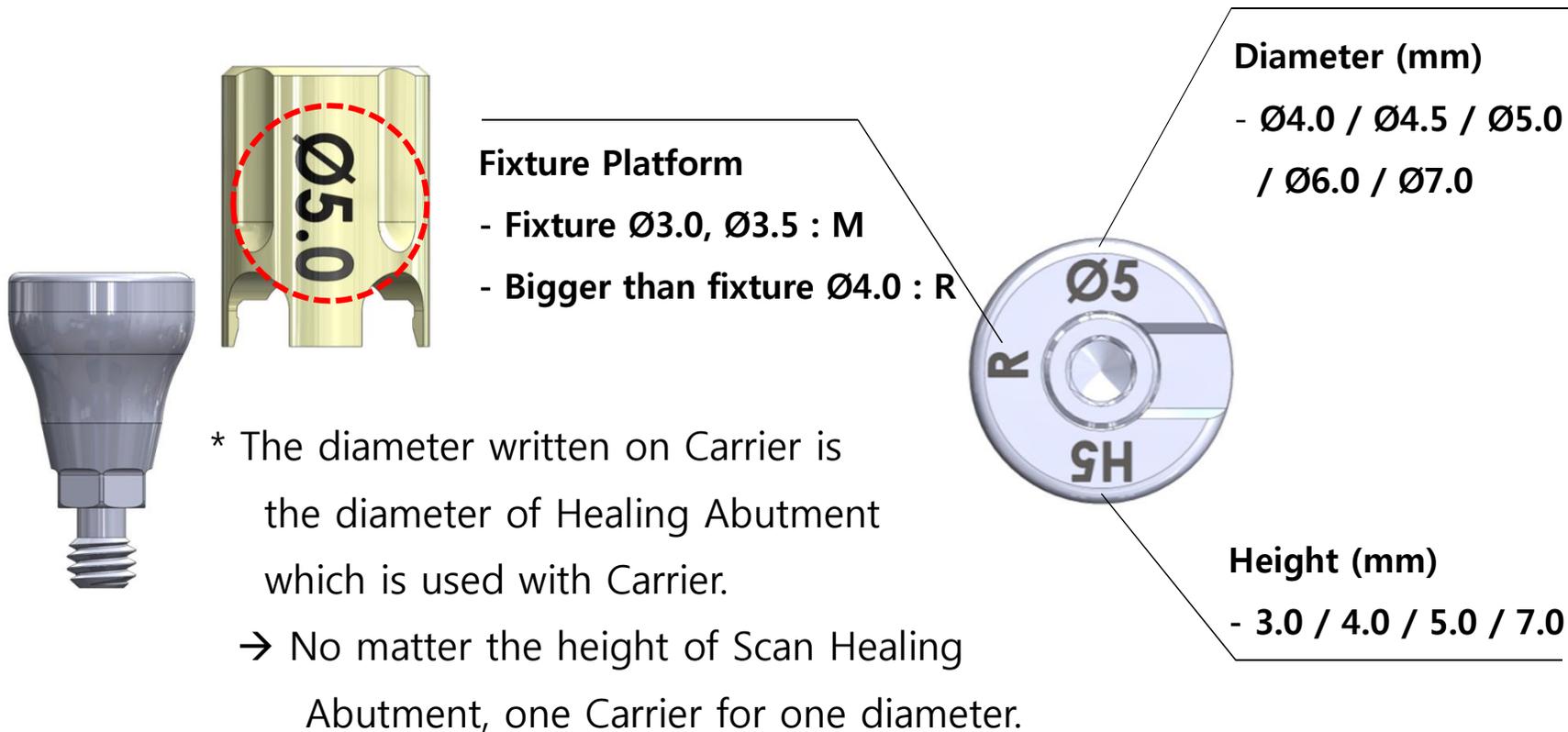
## 3) The Specification of Scan Healing Abutment

In order to differentiate specification, the top part of Scan Healing Abutment has special marking, which will be used in the Library for alignment.



# 1. Osstem Scan Healing Abutment 20

## \* The Meaning of the Top Part of Scan Healing Abutment



## 2. How to use Scan Healing Abutment

### 1) Precautions to Connect Scan Healing Abutment

- Scan Healing Abutment should be seated and connected perfectly.
  - Especially, if Hex is misconnected and then scanning is processed, all restoration should be made again.
- Using Carrier will help Scan Healing Abutment to be fitted correctly.



Connect the Carrier



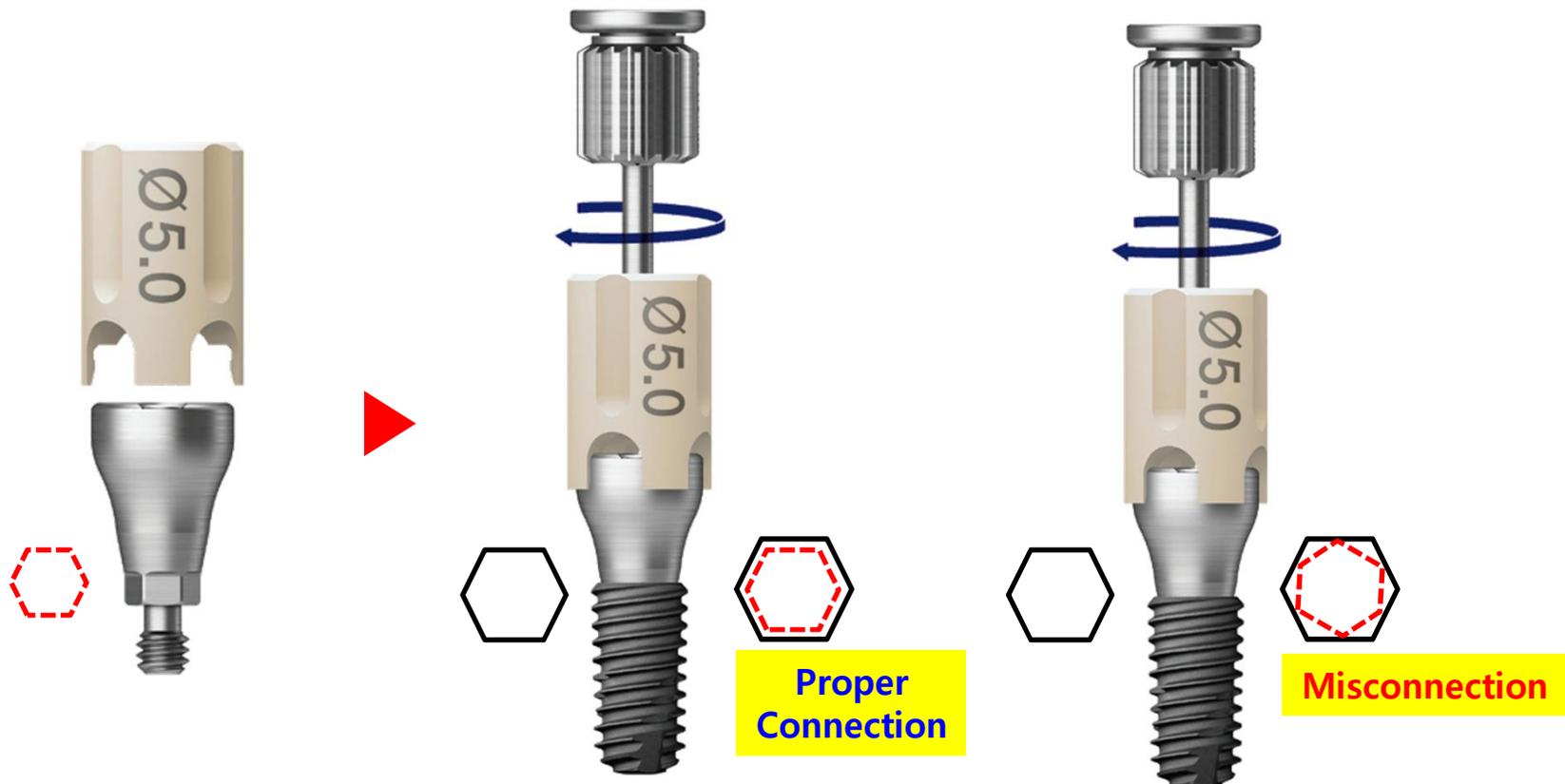
Connect Fixture Hex  
(The proper connection will give you the right feeling.)



Fasten the Screw

## 2. How to use Scan Healing Abutment

\* Using Carrier of Scan Healing Abutment will enable proper Hex connection.

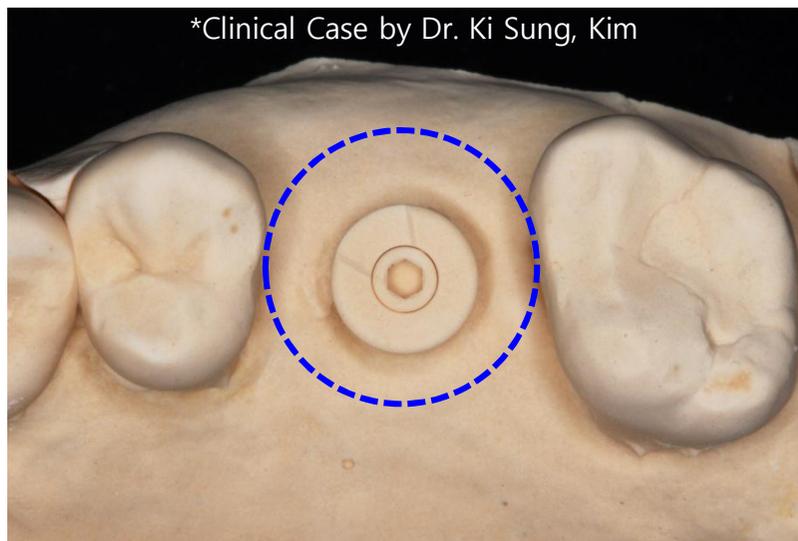


## 2. How to use Scan Healing Abutment

### 2) Choose of height



- ✓ Scan Healing Abutment must be exposed on top of gingiva!!!
- ✓ **Compared to original Healing Abt, choosing + 1mm higher for Scan Healing Abt is recommended.**
- ✓ **Can be used with analog impression**

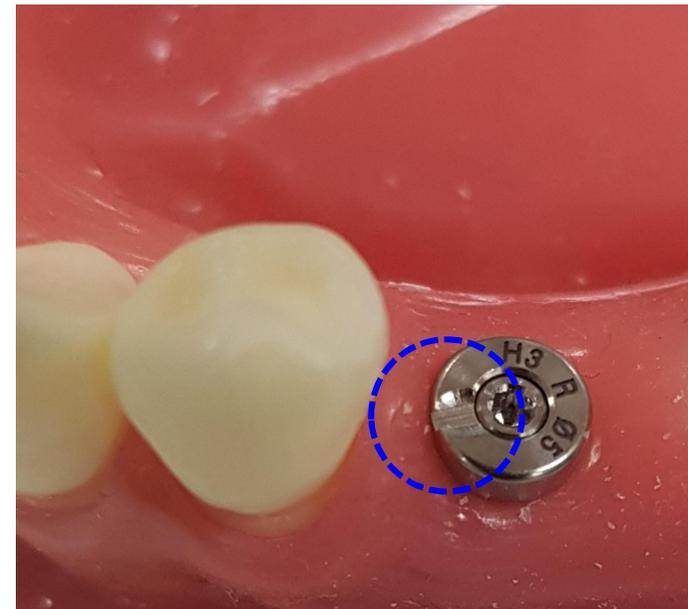


## 2. How to use Scan Healing Abutment

- \* The alignment side on the top of Scan Healing Abutment should face the buccal side, not adjacent tooth side.



Good



Not Good

→ Scan Healing Abutment's alignment side is facing adjacent tooth, which will make scanning not accurate

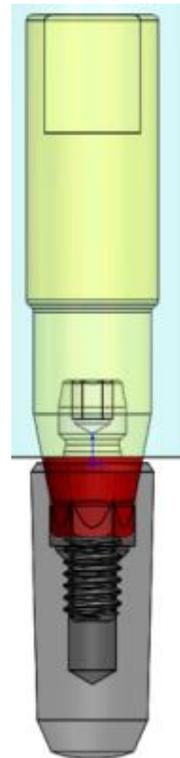
## 2. How to use Scan Healing Abutment

### \* Library of Scan Healing Abutment

Scan Healing Abutment needs its own library, which is different from Scan Body.

Note) Alignment surface of Scan Healing Abt is smaller than that of Scan body, which means compared to Scan Body, the accuracy of Scan Healing abt is lower.

→ In Model-less cases, Temporary Crown is recommended.



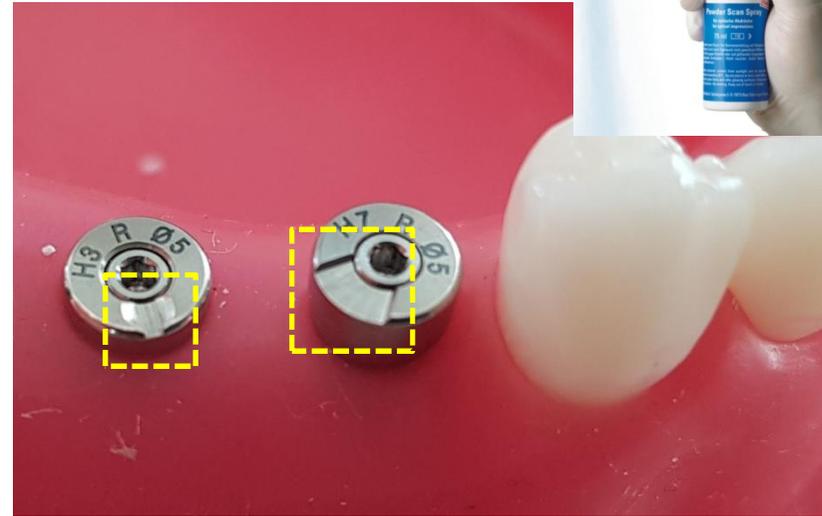
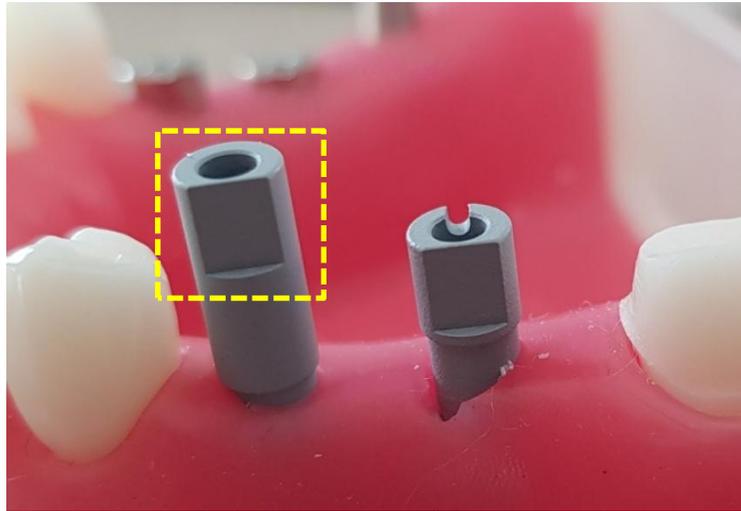
Scan Body  
Library



Scan Healing Abutment  
Library

## 2. How to use Scan Healing Abutment

\* Depends on patients' oral and clinics' condition,  
either Scan Body or Scan Healing Abt could be chosen.



### 1. Scan Body (Long / Short)

- Three Abutment design options
- No limit on adjacent teeth
- No spray treatment is required because surface is already coated
- Choice of two types (Less to consider other conditions)

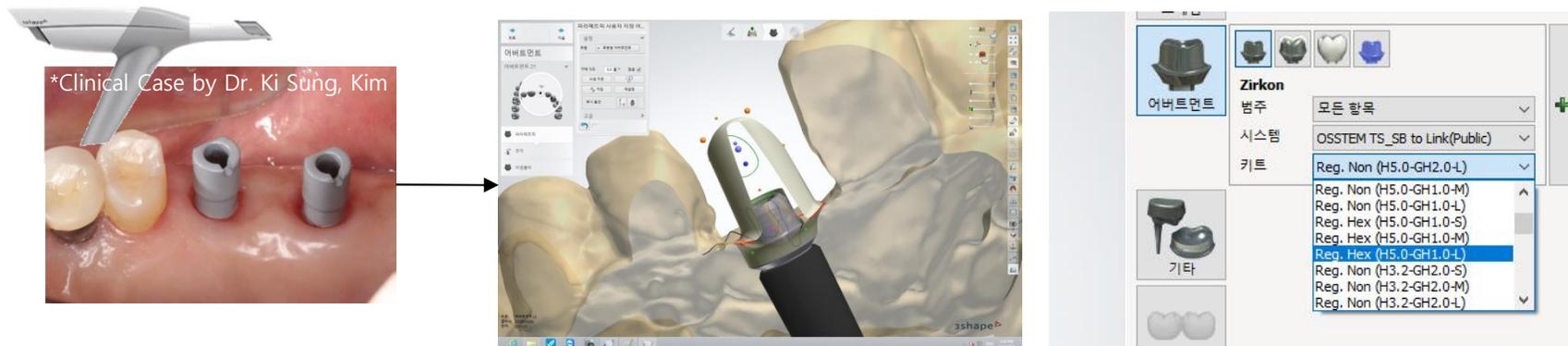
### 2. Scan Healing Abutment

- Only Ti Custom Abutment option
- Need to consider adjacent teeth's interruption to choose the right size of Scan Healing Abutment
- Spray might be required before oral scanning
- The same specification with original Healing Abutment (28 types)
- **No need to take Healing Abutment out**
- **Can be used with analog impression**

### **3. Custom Abutment (Link & Premilled)**

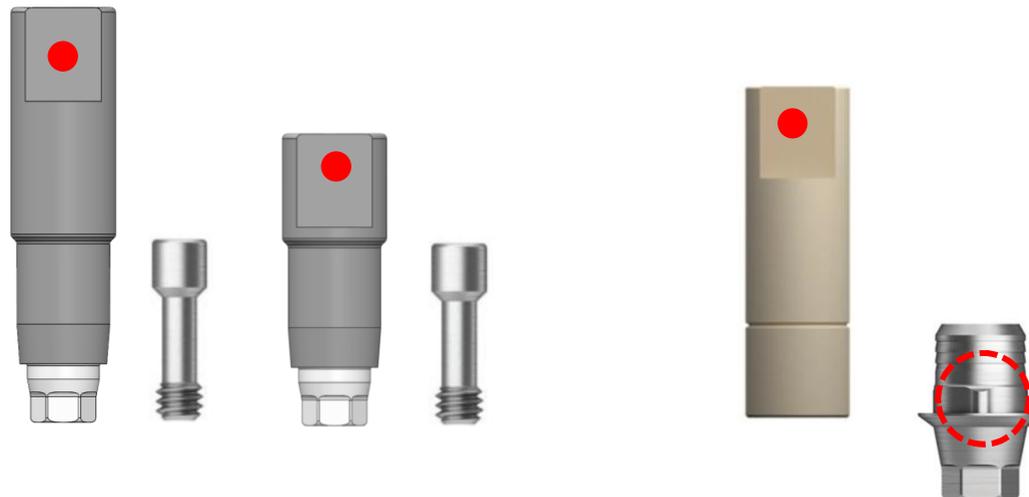
## 1) Feature of Osstem Link Abutment (for Public)

- 1) Abutment Level Scan Body (included in the package) as well as Fixture Level Scan Body (two types: Long and Short)
  - Recommend “Fixture Level Scan Body” to choose Link Abut in CAD SW
- 2) Able to choose three options(S/M/L) for Zr-Ti Base Cementation Gap



### 1) Scan Body's Connection Direction

- Alignment side of Scan Body and Link Abutment's Anti-rotation part is at the same direction. → Be aware to connect Scan Body to the right direction
- Recommend Fixture Level Scan Body even though working Model is used by conventional impression.

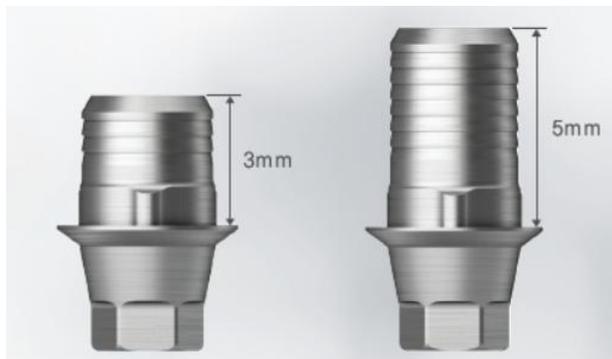


### 2) Choosing the right specification

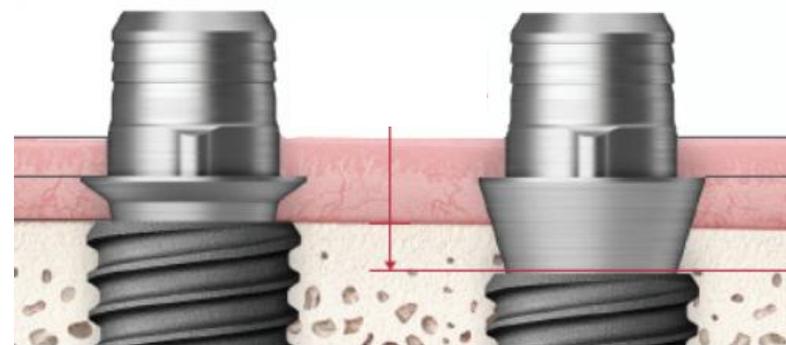
- Length: Recommend 5mm > 3mm (Retention force ↑)
- Gingiva Height (G/H): Recommend 2mm
- In case of anterior or deeply placed fixtures(=impossible to use G/H 2mm)
  - Replace Link Abt. to Transfer Abt.

**Recommended specification : Regular: Ø4.5, 5.5mm (Height) --> G/H : 3~4mm**

**Mini : Ø4.0, 5.5mm (Height) --> G/H : 3~4mm**

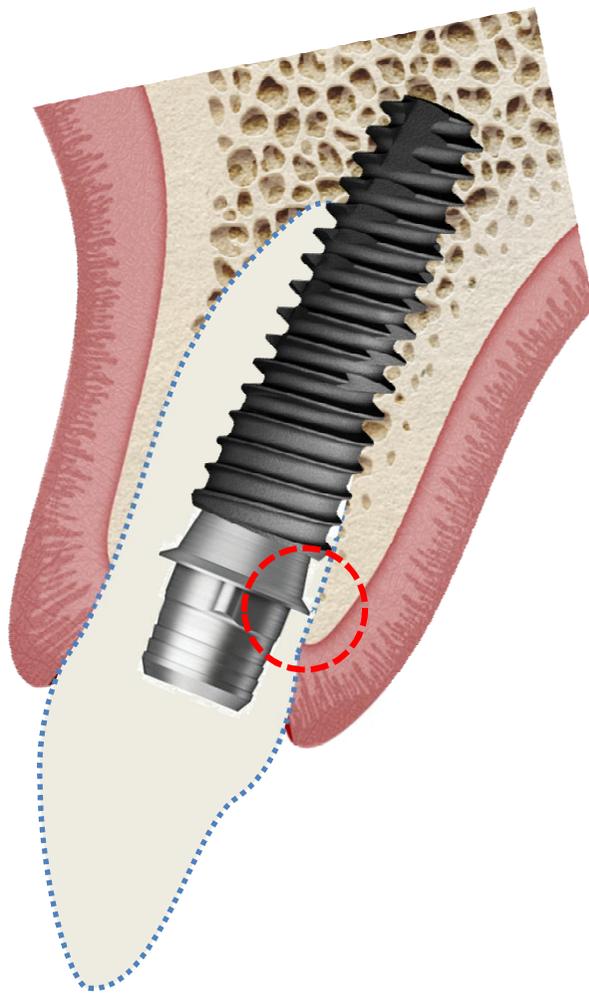


Recommended

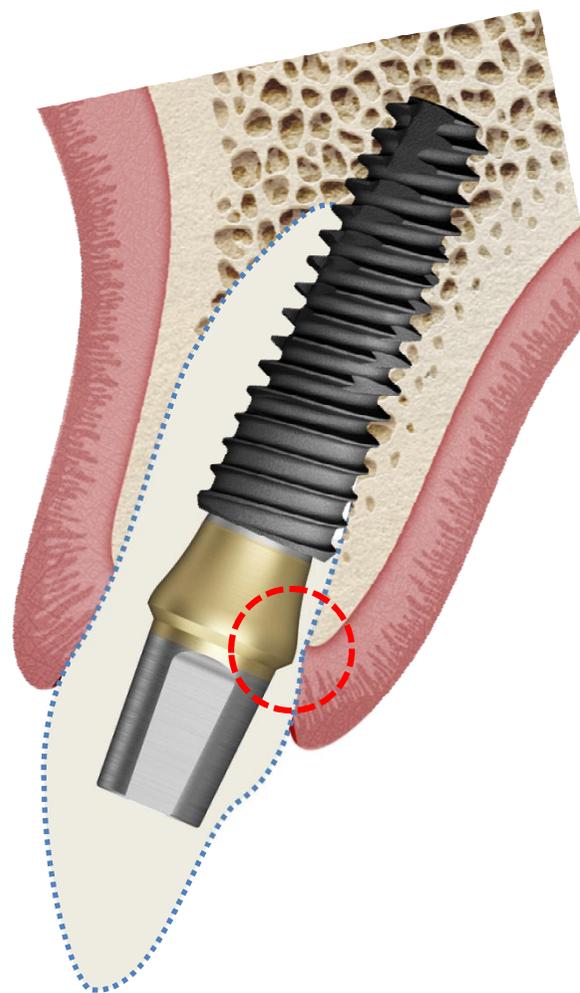


Recommended

Link Abutment G/H 2mm

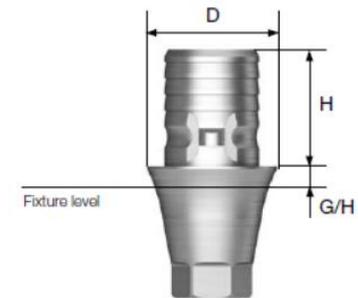


Transfer Abutment Ø4.5, G/H 3mm



## 3) Upgraded Link Abutment (~November 2021)

- Diverse G/H 1, 2, 3, 4 mm and change on Height (from 3,5mm → to 4, 6mm)
- Additional "Open Type" for anterior area
- Abutment Level Scan Body will be discontinued
- Upgraded Link Abt. will be launched in April 2020 in Korea.  
In Europe, the launching date will be in 2021.



### AS IS

**D Ø4.0**  
EbonyGold screw : GSABSM

H \ G/H Type	1.0		2.0	
	Hex	3.0 TSPTB431M	5.0 TSPTB451M	3.0 TSPTB432M
Non-Hex	3.0 TSPTB431MN	5.0 TSPTB451MN	3.0 TSPTB432MN	5.0 TSPTB452MN

**D Ø4.5**  
EbonyGold screw : GSABSS

H \ G/H Type	1.0		2.0	
	Hex	3.0 TSPTB431R	5.0 TSPTB451R	3.0 TSPTB432R
Non-Hex	3.0 TSPTB431RN	5.0 TSPTB451RN	3.0 TSPTB432RN	5.0 TSPTB452RN

### To be

**D Ø4.0**  
EbonyGold screw : GSABSM

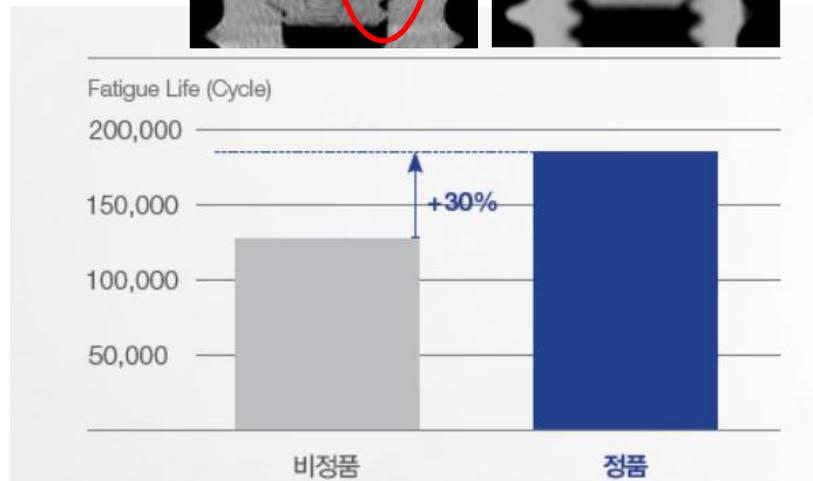
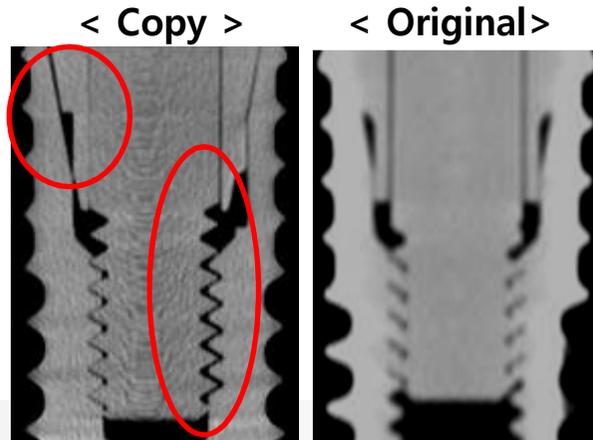
H \ G/H Type	1.0				2.0				3.0				4.0			
	Hex	4.0 Open Type	TSPL4041M	TSPL4042M	TSPL4043M	TSPL4044M	4.0 Cylinder Type	TSPL4041C	TSPL4042C	TSPL4043C	TSPL4044C	6.0 Cylinder Type	TSPL4061M	TSPL4062M	TSPL4063M	TSPL4064M
Non-Hex	4.0 Open Type	TSPL4041MN	TSPL4042MN	TSPL4043MN	TSPL4044MN	4.0 Cylinder Type	TSPL4041CN	TSPL4042CN	TSPL4043CN	TSPL4044CN	6.0 Cylinder Type	TSPL4061MN	TSPL4062MN	TSPL4063MN	TSPL4064MN	

**D Ø4.5**  
EbonyGold screw : GSABSS

H \ G/H Type	1.0				2.0				3.0				4.0			
	Hex	4.0 Open Type	TSPL4541R	TSPL4542R	TSPL4543R	TSPL4544R	4.0 Cylinder Type	TSPL4541C	TSPL4542C	TSPL4543C	TSPL4544C	6.0 Cylinder Type	TSPL4561R	TSPL4562R	TSPL4563R	TSPL4564R
Non-Hex	4.0 Open Type	TSPL4541RN	TSPL4542RN	TSPL4543RN	TSPL4544RN	4.0 Cylinder Type	TSPL4541CN	TSPL4542CN	TSPL4543CN	TSPL4544CN	6.0 Cylinder Type	TSPL4561RN	TSPL4562RN	TSPL4563RN	TSPL4564RN	

## 1) Osstem Premilled Abutment

- Osstem Logo could be found at the Fixture Connection Part representing the original Osstem product
- Original Premilled Abt has 140% higher fatigue life (cycle)



#### 2) Osstem Premilled Abutment for Europe

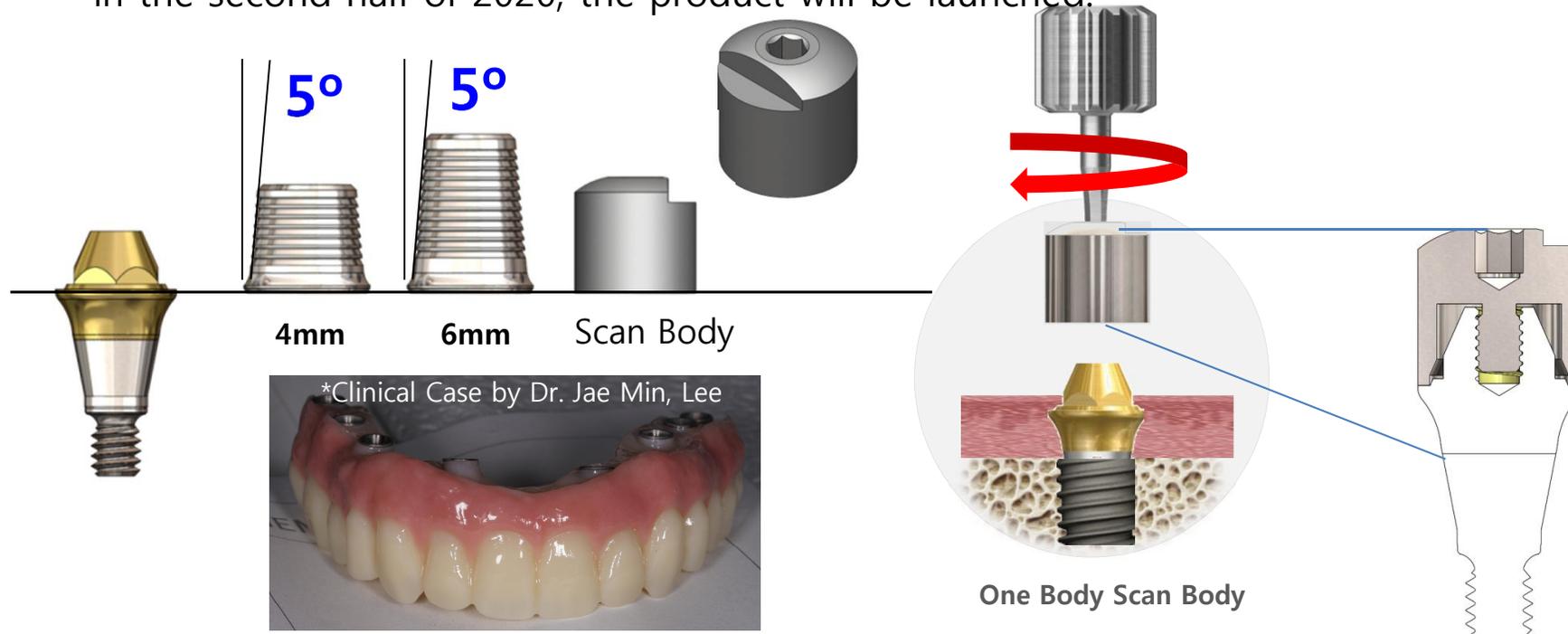
- Premilled Abutment for Europe has the same zig part of Medentika and the product already has CE.



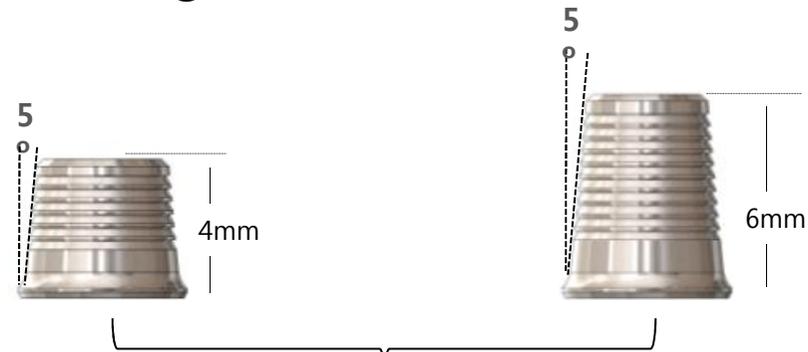
## 4. Multi Ti Base & Scan Body

## 1) Feature of TS Multi Ti Base

- Used with TS Multi, Multi Angled Abutment.
- For Screw Retained Full Arch Implant Restoration, especially for All-on-four/six cases
- Two length types on Ti-Base
  - Using three types of Cementation Gap (S-20 $\mu$ m/M-40 $\mu$ m/L-60 $\mu$ m)
- Scan Body for Multi (Angled) Abutment with special coating on the surface
- Expected to get CE approval in May, therefore, in the second half of 2020, the product will be launched.



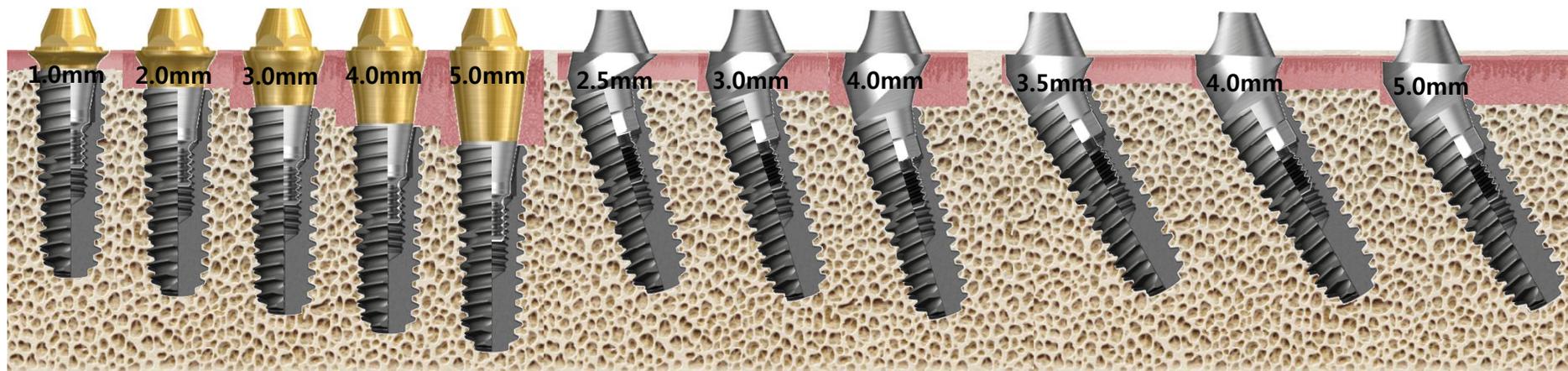
## \* Connection of Multi (Angled) Abutment



Multi  
(Five types)

Multi Angled(15°)  
(Three types)

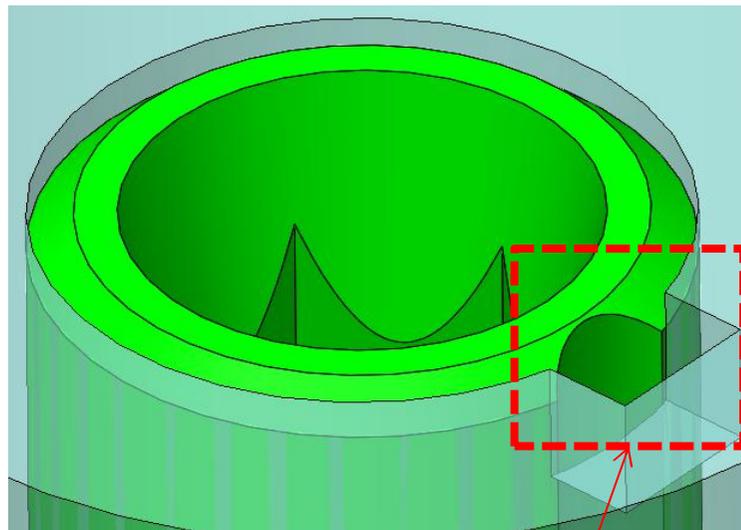
Multi Angled(30°)  
(Three types)



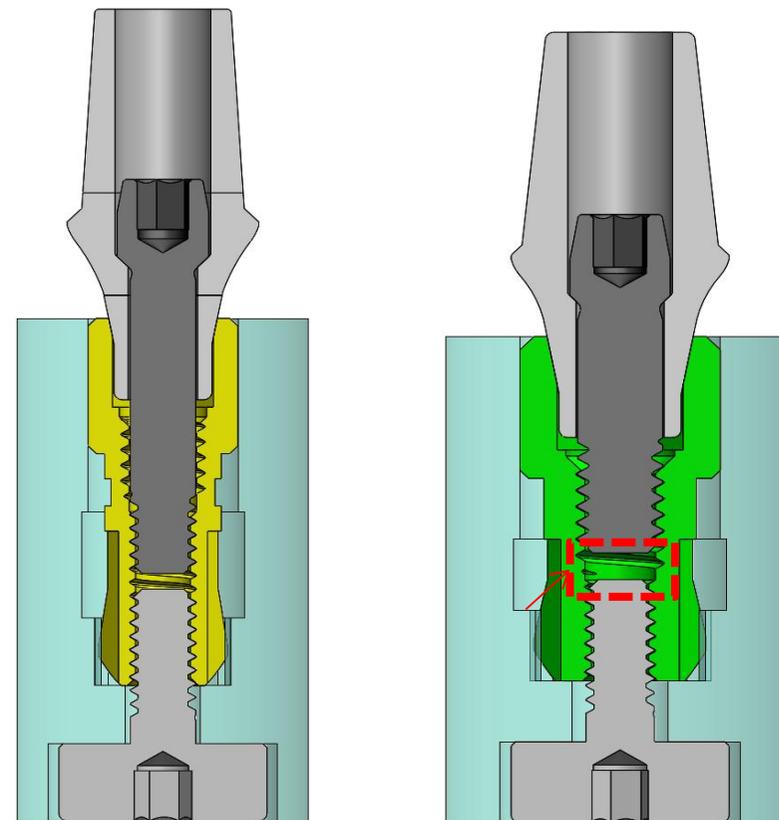
## 5. Digital Lab Analog

## 1. Concept of the Design

- Two-Piece Structure: Body-Screw
- In April 2020, the product will be launched in Korea whereas in Europe, the launching date will be the second half of 2020.



Hex Direction Notch

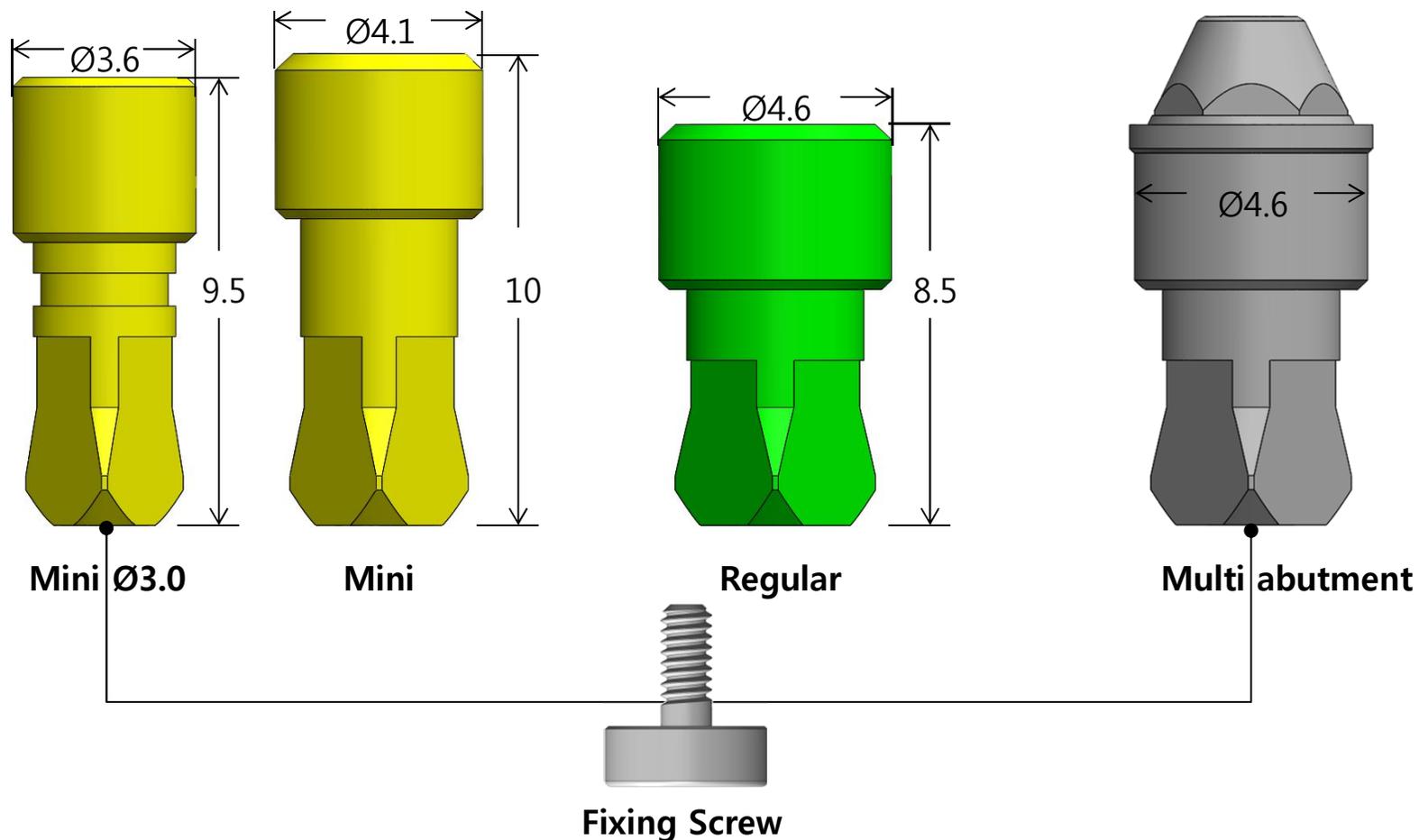


Mini

Regular

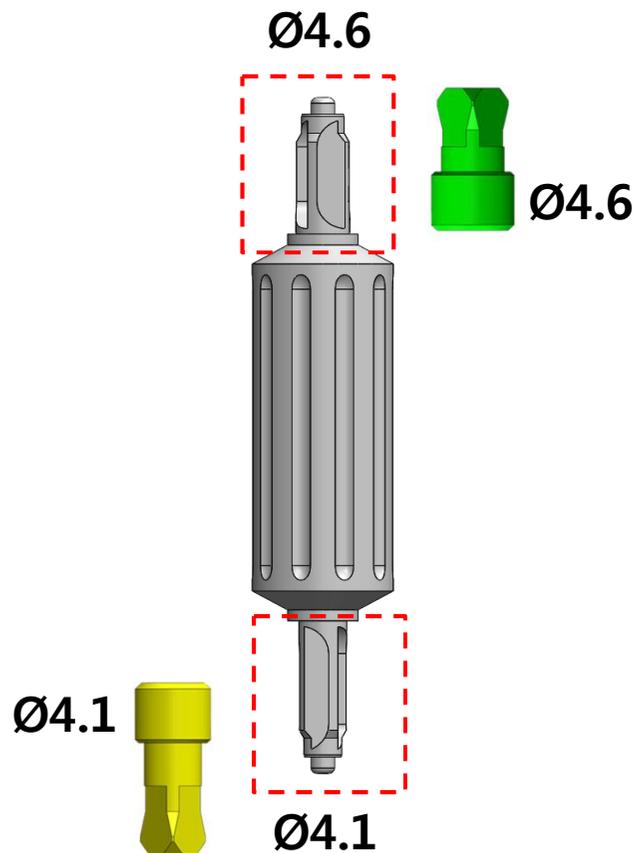
## 2) TS Digital Lab Analog Line-up

- In total, there are four types of Digital Lab Analog
  - Distinguish the products from coloring or size, shape
- One screw for four different Digital Lab Analogs

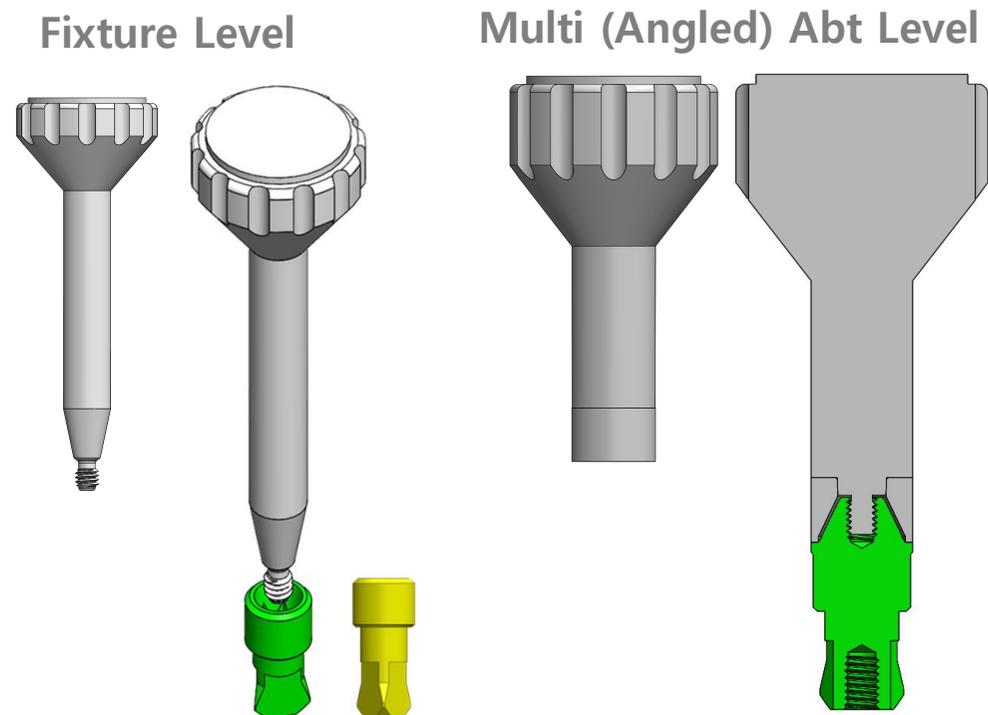


- ✓ Reamer for 3D Printed Models to trim the holes where the Analog will be inserted.
- ✓ Tools to connect Digital Lab Analogs to the 3D Printed Models' holes.

### 1) Reamer for 3D Printed Model

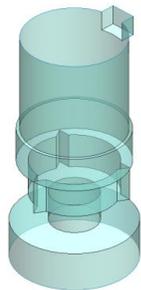
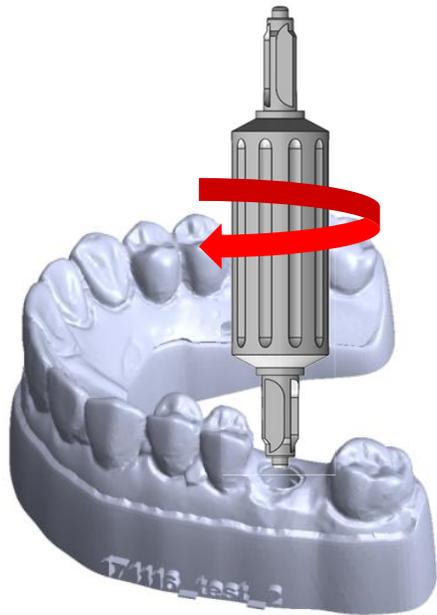


### 2) Tools for Connecting Digital Lab Analogs

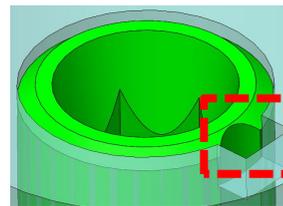
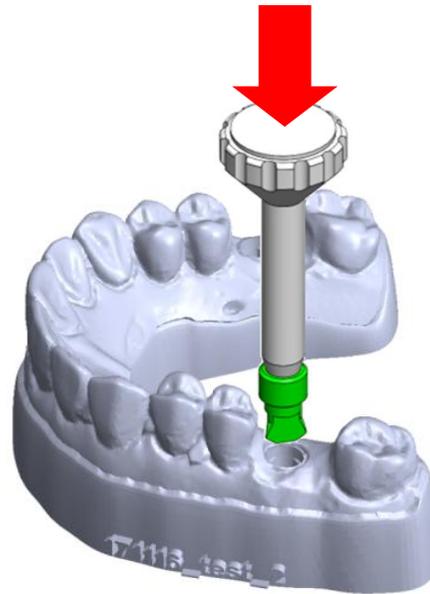


## 2. Working process of Digital Lab Analog

1) Reaming to control a hole size



2) Inserting the Analog



Check Hex Direction

3) Tightening a screw



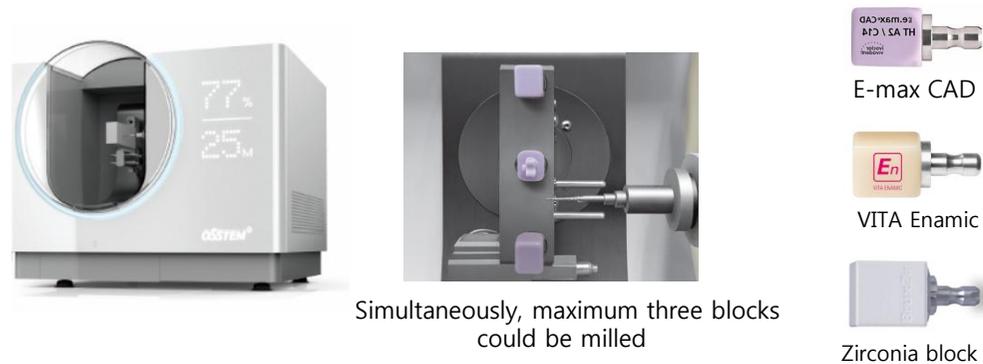
## 6. Digital Device

## 1) OneMill Line-up

	OneMill 4x	OneMill 5x
<b>Launching in Korea</b>	18. 07	<b>20. 01</b>
<b>Axis</b>	4-Axis	5-Axis
<b>Type</b>	Wet	Dry
<b>Materials type</b>	Only block type (Max.3)	Only Disk type
<b>Indication</b>	Inlay, Veneer, Onlay Crown, Bridge (under 2unit)	Inlay, Onlay Crown, Bridge (Full arch) Implant combination type
<b>Materials</b>	Glass ceramic Hybrid Ceramic (Block) Zirconia, PMMA (Block)	Zirconia Hybrid Ceramic PMMA
<b>Size</b>	W:540 x D:460 x H:415	W:540 x D:580 x H:515

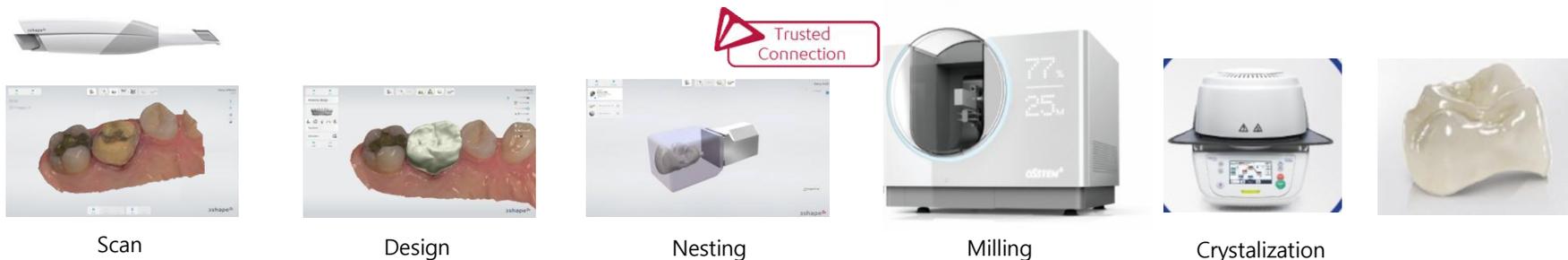
## 2) OneMill4x for Ceramic Materials

- High-precision 10 $\mu$ m, Zirconia Crown for 20 squad, E-Max Inlay 3-40 squad
- In the process of "3Shape TRIOS Trusted Connection" (Expected to be done in December 2020)
- Real-time milling process could be checked from the front transparent display.
- Already launched in Korea and in Europe, the expected launching date will be in 2021.



### \* Continuous process from scanning to milling: full system linked with 3Shape S/W.

- Library of TS Link Abt. and Transfer Abt. will be basic attachment option in 3Shape TRIOS Design Studio.



# 1. Milling Solutions

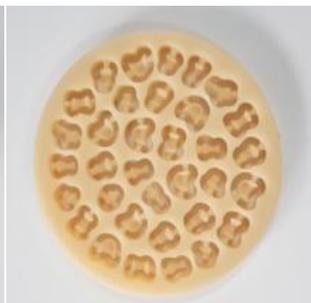
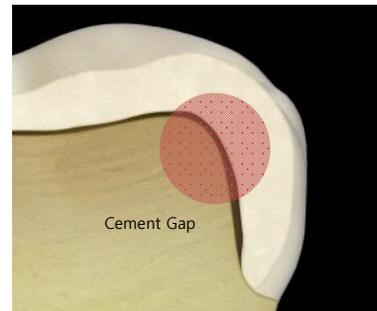
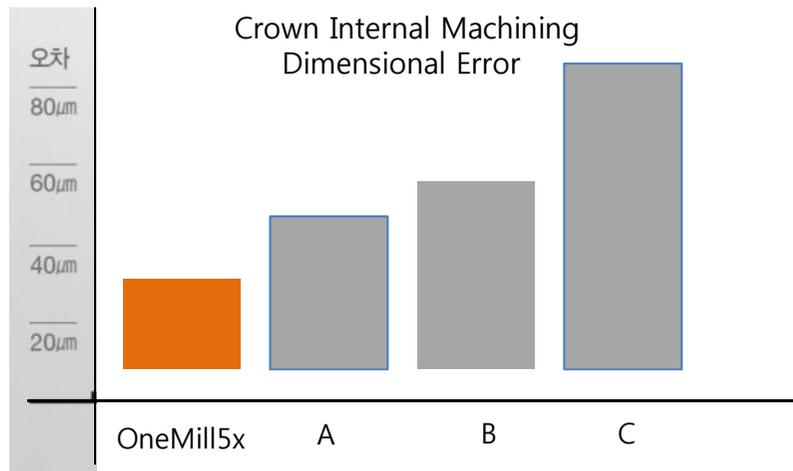
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Osstem Zirconia  
(Launched in January 2020  
in Korea)



## 2. OneMill5x for Zirconia Materials

- High-precision 10 $\mu\text{m}$  → Selected highly precised Spindle and Servo Motor
- The body weight of 120kg could minimize the vibration, which leads minimizing Margin Chipping
- Real-time milling process could be checked from the front transparent display.
- Already launched in Korea and in Europe, the expected launching date will be in 2021.



Company A

OneMill5x

### \* OneJet for 3D Printing Materials

- DLP Type 3D Printer mounted with Materialized Slicing S/W
- Two types of printing mode: high-speed or normal mode (e.g. OneGuide Template with high-speed will take 25 minutes but with normal speed will take 45 minutes.)
- High-speed curing machine(=OneCure) : Curing in 10 minutes.
- In Korea, it will be launched in February 2020 and in Europe, expected launched will be in 2021.



# Q & A