

Contents

01 Introduction to Digital Lab Analog

- 1-1. Purposes of Digital Lab Analog
- 1-2. Digital Lab Analog Product Line-up

02 User Guide of Digital Lab Analog

- 2-1. How to Register Library_3Shape
- 2-2. How to Design Prosthesis
- 2-3. How to Design Model Build
- 2-4. 3D Printing
- 2-5. Workflow of Digital Lab Analog
- 2-6. Checking the Fit of Final Prosthesis

03 Precautions for Digital Lab Analog

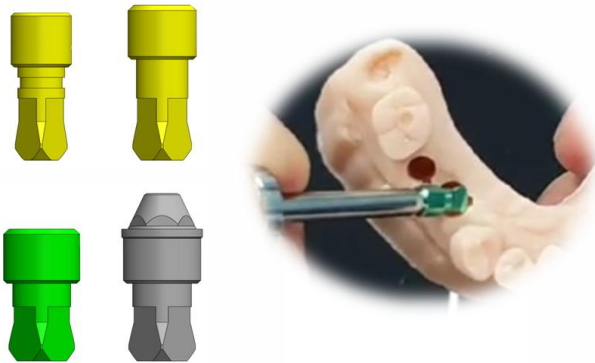
- 3-1. Precautions for Reamer
- 3-2. Understanding Hex(Direction)
- 3-3. Precautions for Separating Digital Lab Analog

Introduction to Digital Lab Analog

01

1. Introduction to Digital Lab Analog

1-1. Purposes of Digital Lab Analog



Digital Lab Analog

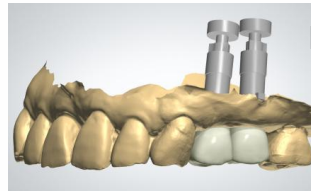
< Purpose & Function >

- Digital Lab Analog is used in 3D printed Working Models for implant digital prosthesis process.

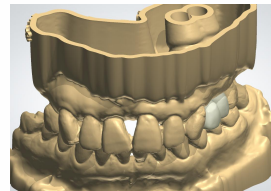
Check Scan Body Specification



Design Prosthesis



Design Digital Working Model



3D Printing



Connect Lab Analog



Check Final Prosthesis Fit

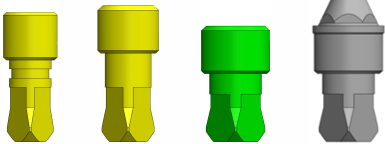
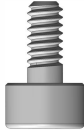
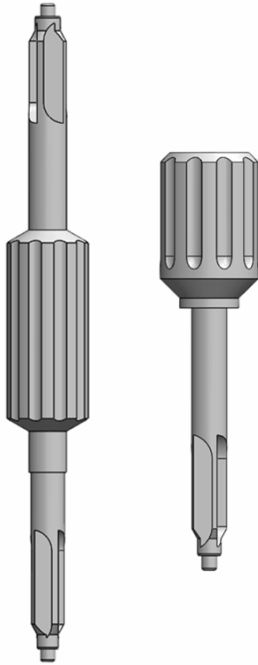
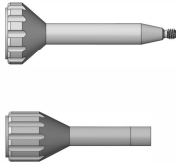


OSSTEM[®] Confidential

OSSTEM[®] Confidential

1. Introduction to Digital Lab Analog

1-2. Digital Lab Analog Product Line-up

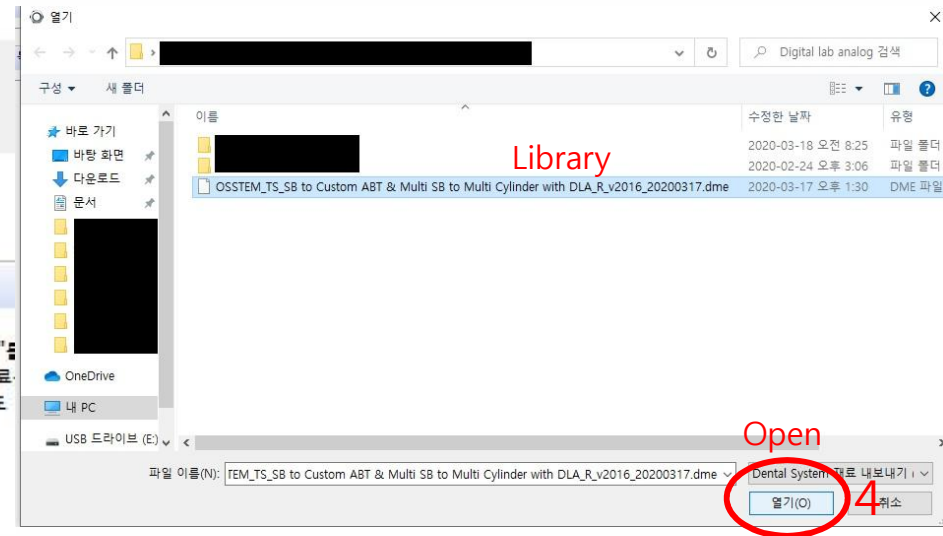
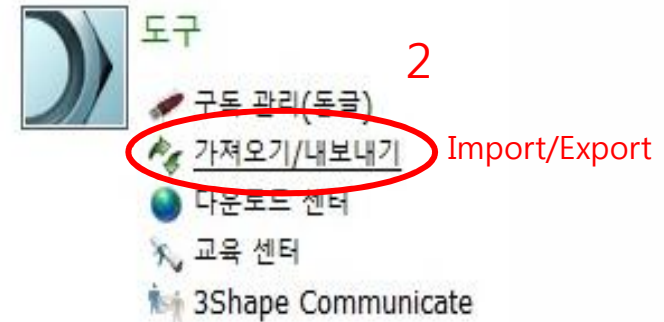
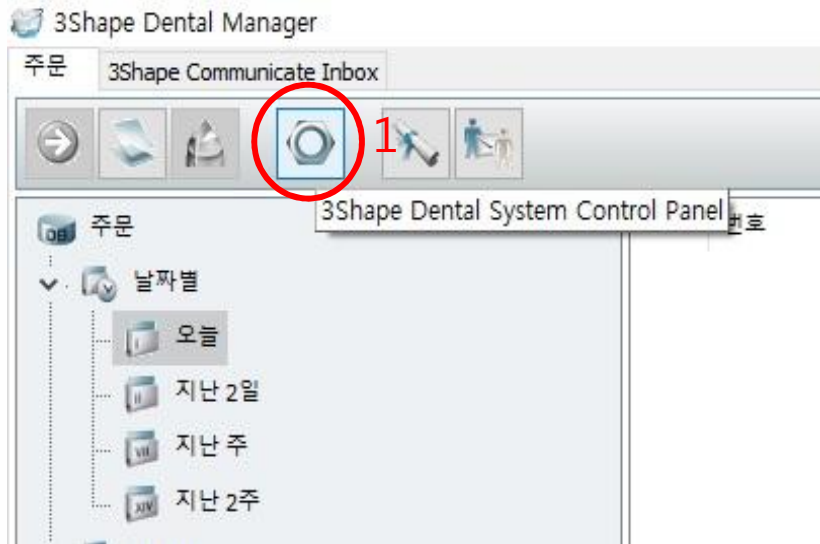
	Digital Lab Analog	Tools (TS / SS / US)		Positioning Jig
		Screw	Reamer	
OSSTEM [®] Confidential TS				

User Guide of Digital Lab Analog

02

2. User Guide of Digital Lab Analog

2-1. How to Register Library_3Shape



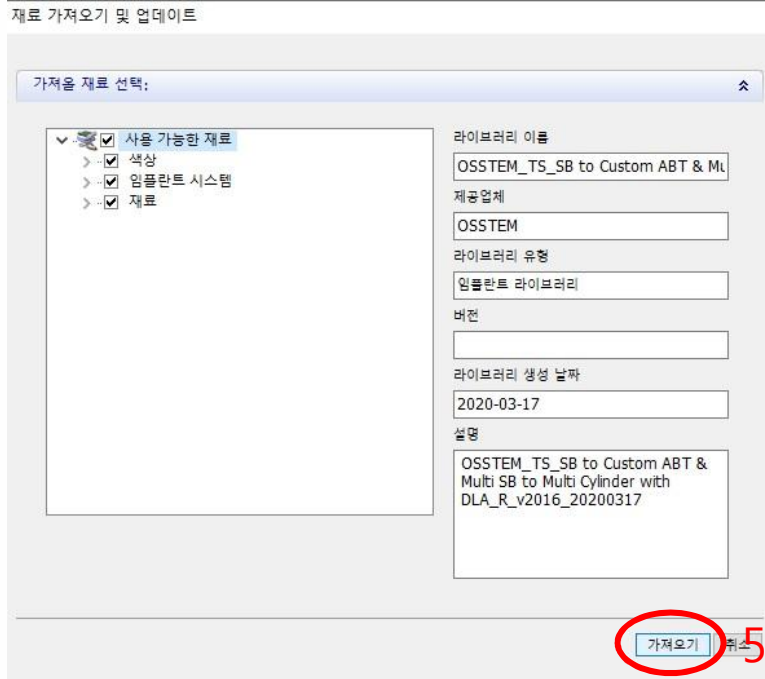
OSSTEM Confidential

OSSTEM Confidential

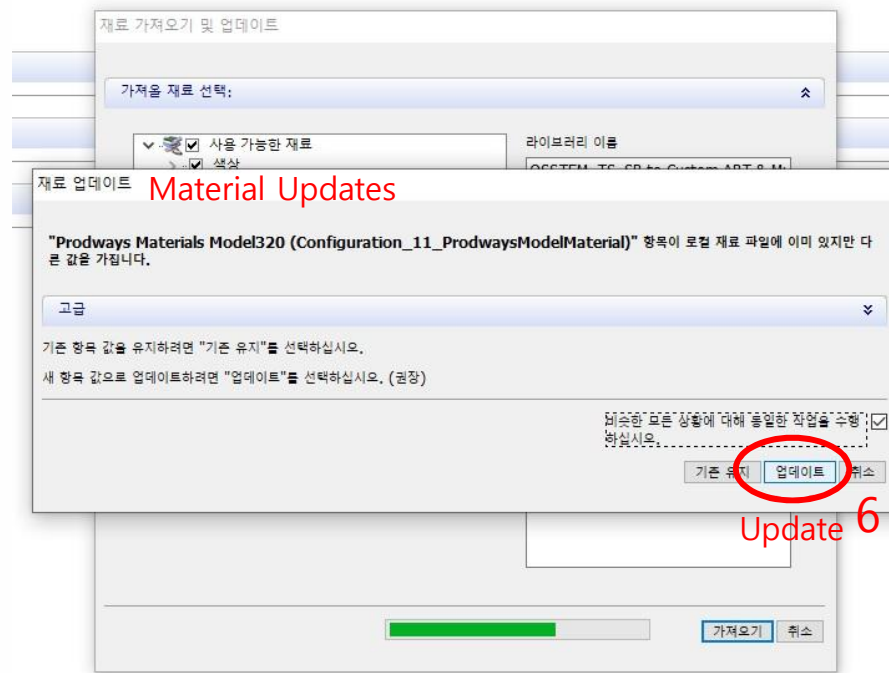
2. User Guide of Digital Lab Analog

2-1. How to Register Library_3Shape

Import Materials and Updates



Import



Update 6

정보 Materials has been successfully imported.



재료를 성공적으로 가져왔습니다.



OK

OSSTEM Confidential

OSSTEM Confidential

2-2. How to Design Prosthesis

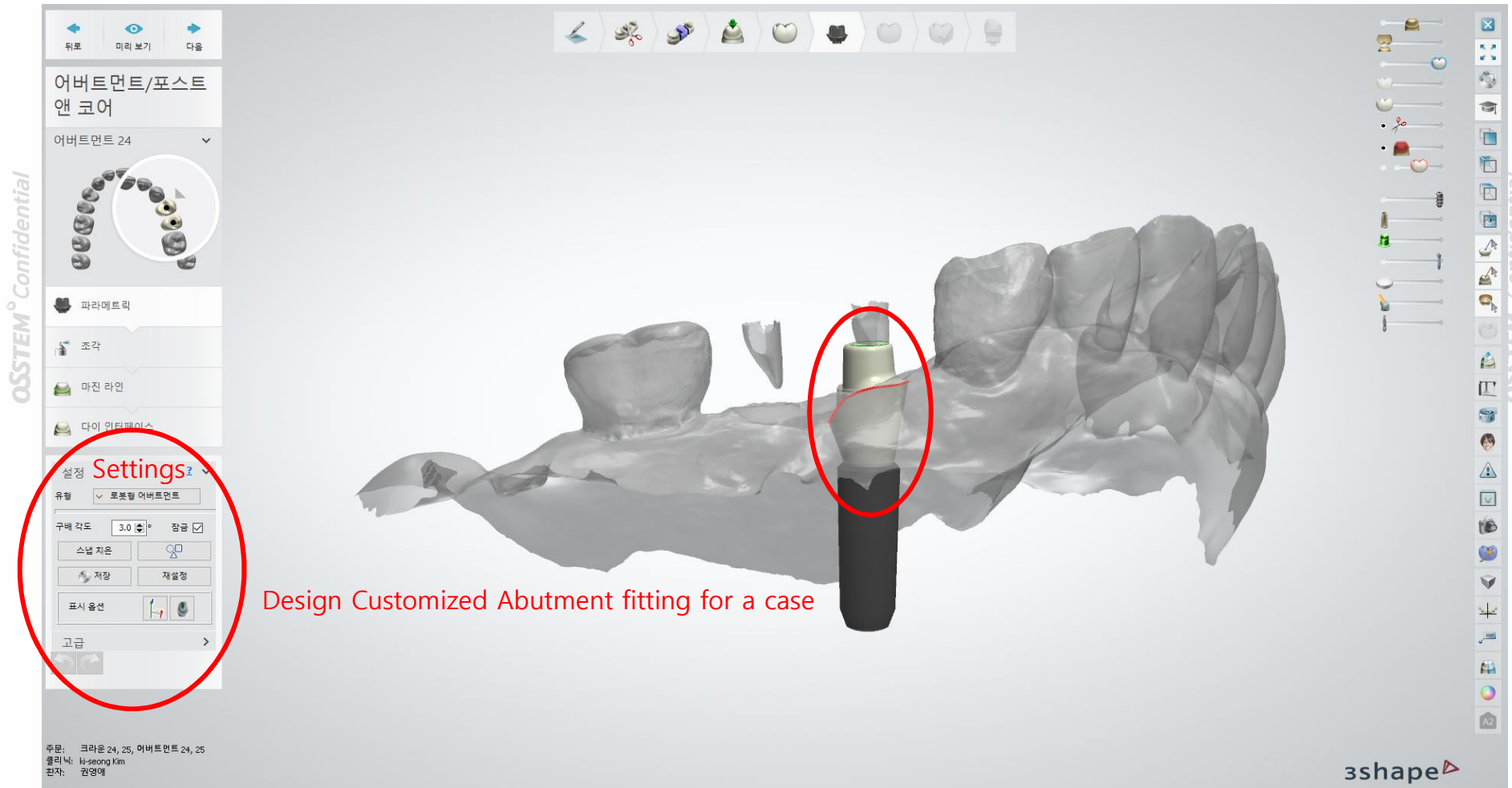
1) Selecting Scan Body



2. User Guide of Digital Lab Analog

2-2. How to Design Prosthesis

2) Designing Customized Abutment

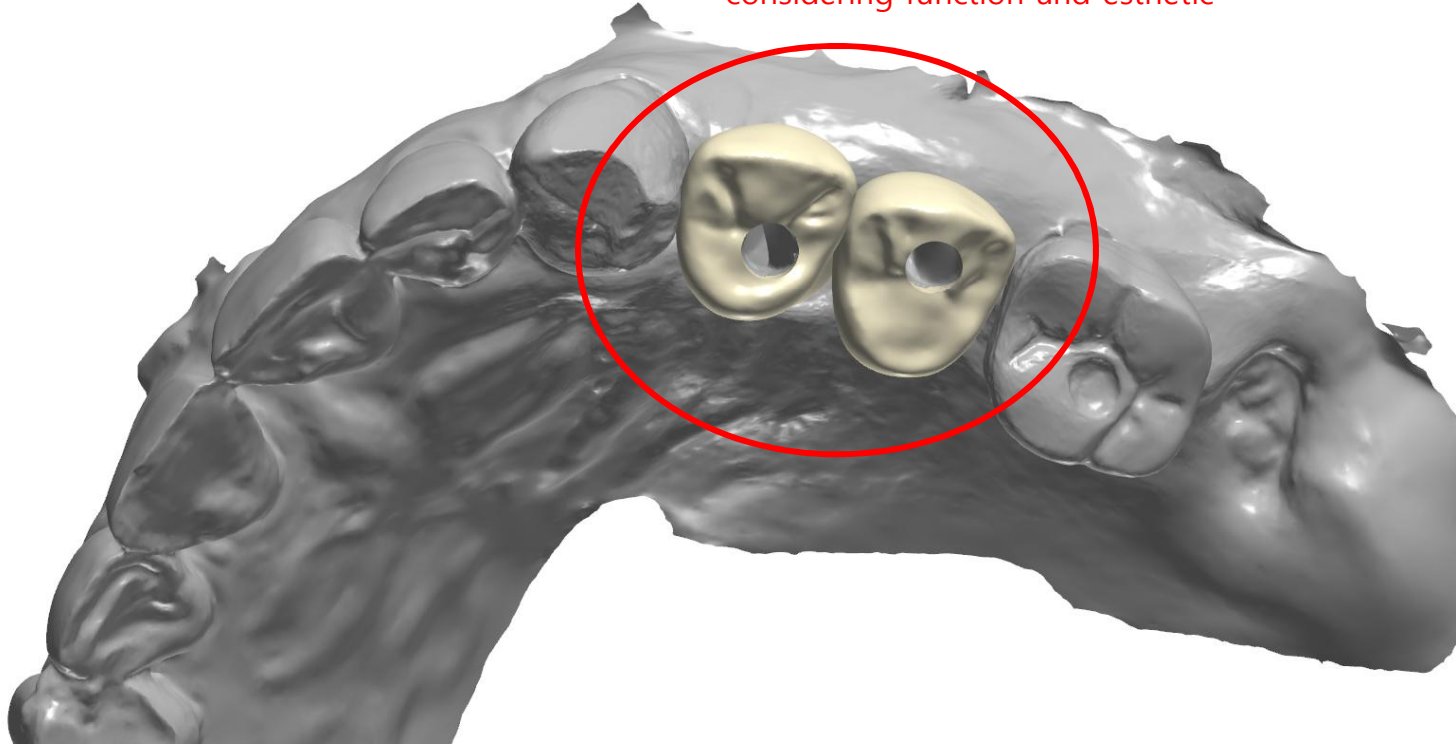


2. User Guide of Digital Lab Analog

2-2. How to Design Prosthesis

3) Designing Crown Prosthesis

Design Crown Prosthesis
considering function and esthetic

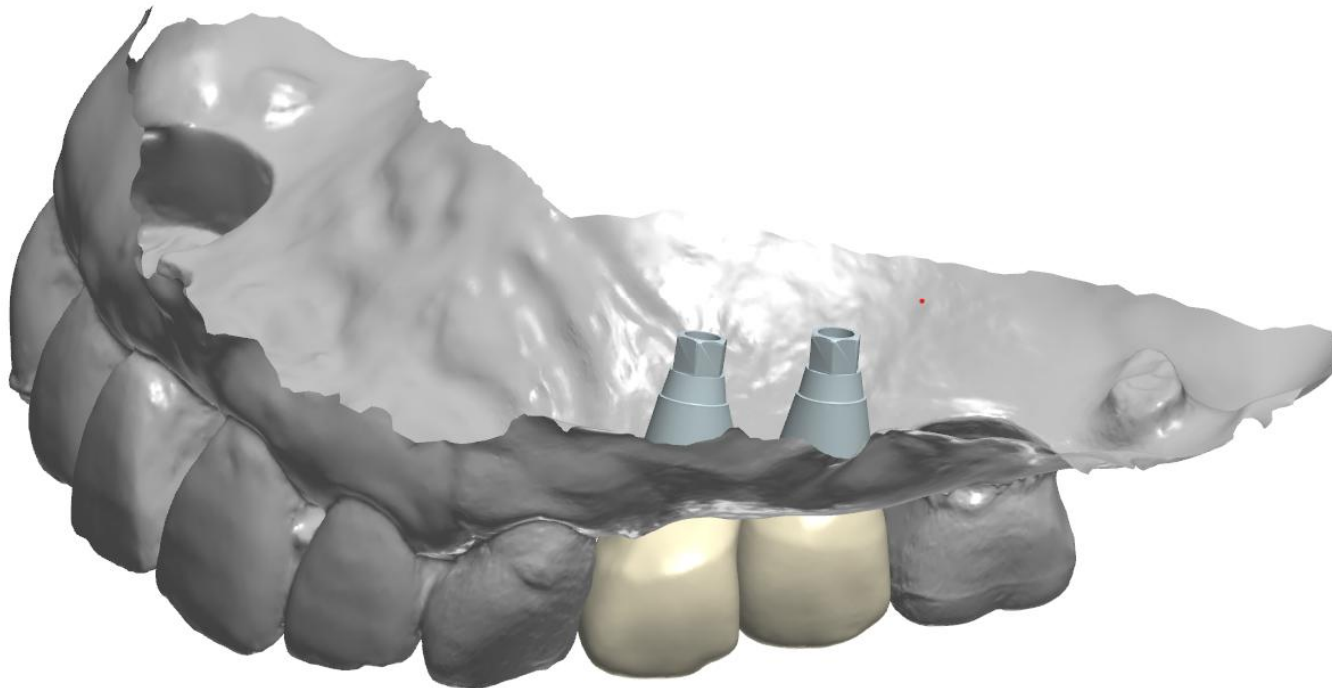


2. User Guide of Digital Lab Analog

2-2. How to Design Prosthesis

4) Finishing the Design

OSSTEM[®] Confidential



OSSTEM[®] Confidential

2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

1) Setting up Model Builder

1. Click "File"

2. Click "Virtual Trim Settings"

가상 다듬기 기본 설정 Virtual Trimming Preferences

모델 유형 Model Types

핀 유형 PinCylindrical

핀 갠기

핀 없는 구멍 유형 CADCylindricalBottomHole

측면 방출 구멍 유형 CADCylindricalSideEjection3x3mm

밀기 새김는 유형

핀 모양 밀기 새김는

다이 Dies Interface

인터페이스 Interface

Die interface	Value	Unit
모델 간격에 다이	0.000	mm
포스트와 모델 간격	0.100	mm
마찰 바 오버랩	0.010	mm
마찰 바 너비	0.700	mm
다이 각도 조정	0.000	
다이 크기 조정	0.000	
마찰 바 수	8	

Analog interface

레벨 조정	Value	Unit
유사물과 모델 간격	0.000	mm
마찰 바 오버랩	0.020	mm
마찰 바 너비	0.800	mm
마찰 바 수	8	

모델 제조

Osstem Digital Model

확인(O)

OSSTEM Confidential

OSSTEM Confidential

OSSTEM[®] Confidential

1. Click "Interface"

2. Adjust scale of "Analog to Model Spacing"

Set up the adequate space between Model and Analog depends on 3D Printer/Materials
Example] OSSTEM's O2-Printer & Nextdent's Model Material's Recommendation Scale is 0.08mm)

2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

1) Setting up Model Builder

ModelBuilder - [c:\3shape\38911_20191206_1623_권영애\38911_20191206_1623_권영애.xml]

스캔 준비 Prepare Scans

가상 다듬기 기본 설정 Virtual Trimming Preferences

Model Types

모형 유형 PinCylindrical

핀 유형 PinCylindrical

핀 갠기

핀 없는 구멍 유형 CADCylindricalBottomHole

측면 방출 구멍 유형 CADCylindricalSideEjection3x3mm

필기 세김는 유형 핀 모양 필기 세김는

다이 Dies Interface

인터페이스

모형 제조

비공격

표면 두께 1.50 mm

가변 두께 사용

하단 배출 구멍 크기 0 mm

빈 다이

측면 방출 구멍 유형 없음

가운데 높이 3.0 mm

거리 10.0 mm

드릴 보정

드릴 보정 사용

드릴 반경 0.15 mm

최소 모델 베이스 높이 4.00 mm

일반 간격 0.10 mm

디자인과 모델 간 간격 0.100 mm

Osstem Digital Model

확인(O) 취소

OK

3shape

OSSTEM Confidential

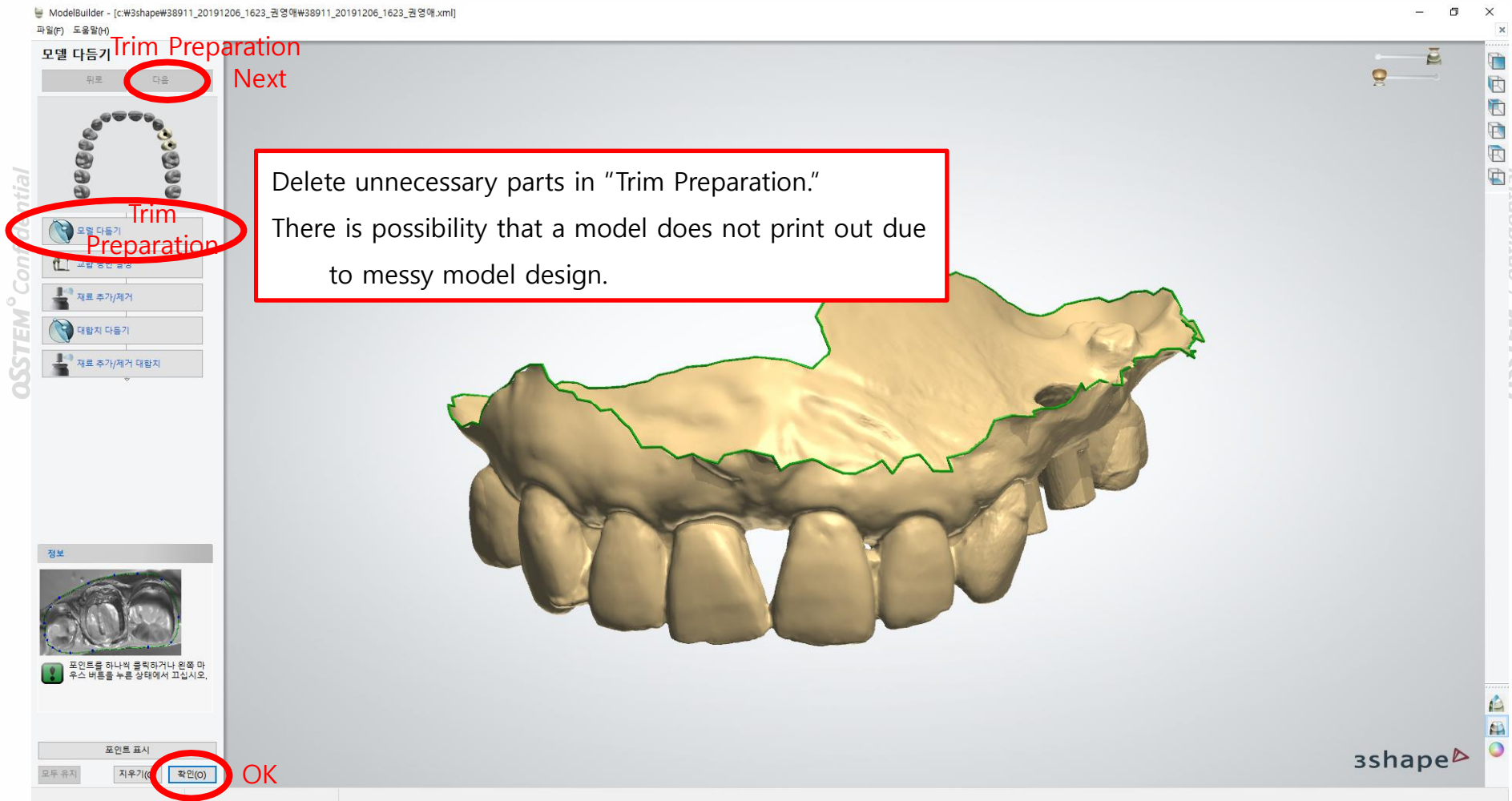
OSSTEM Confidential

1. Click "Model Manufacture"
2. Recommended Surface Thickness: 1.5mm
3. Click "Hollow Dies"
(To Reduce Material Consumption)
4. OK

2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

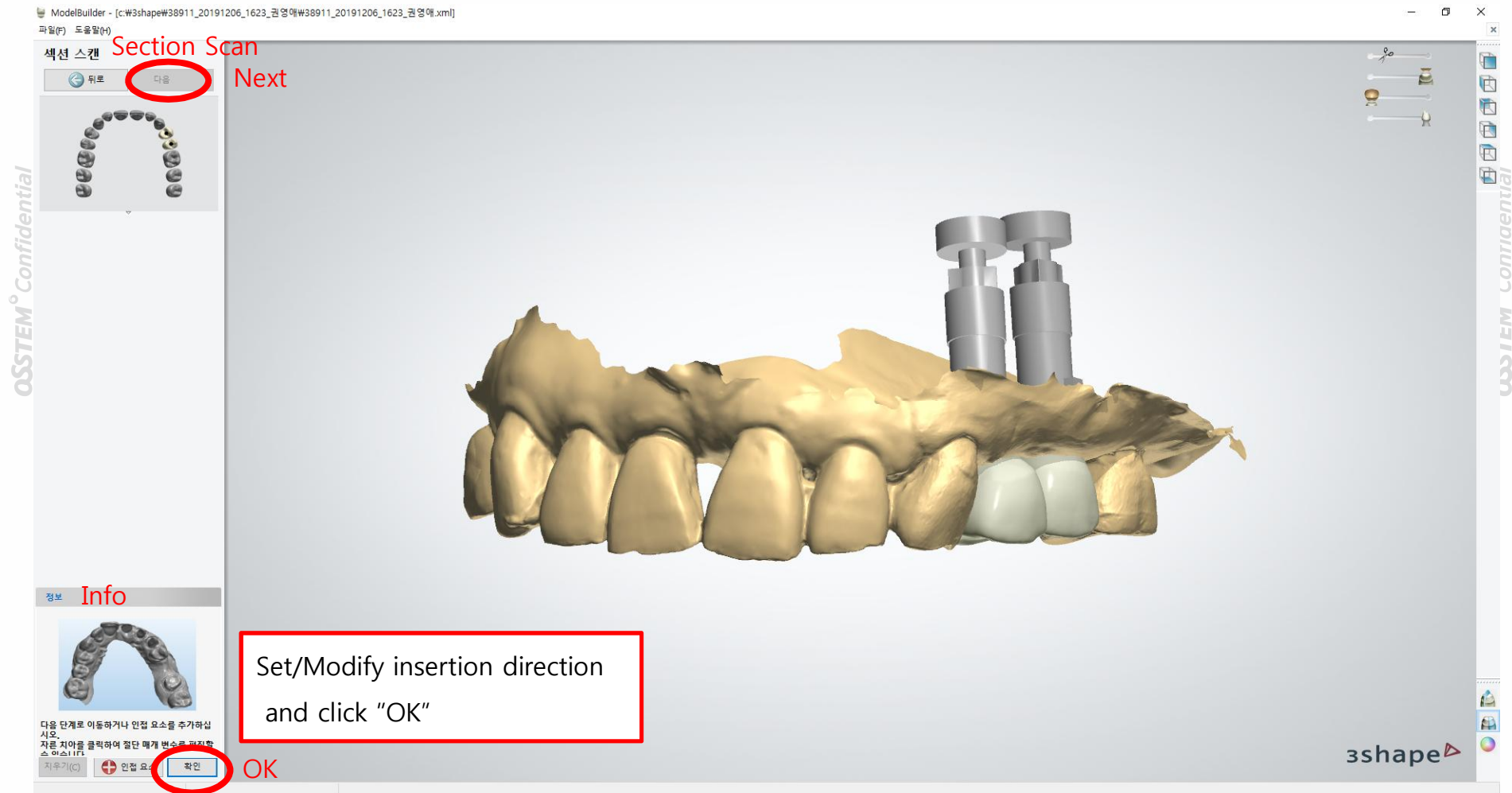
2) Trim Preparation



2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

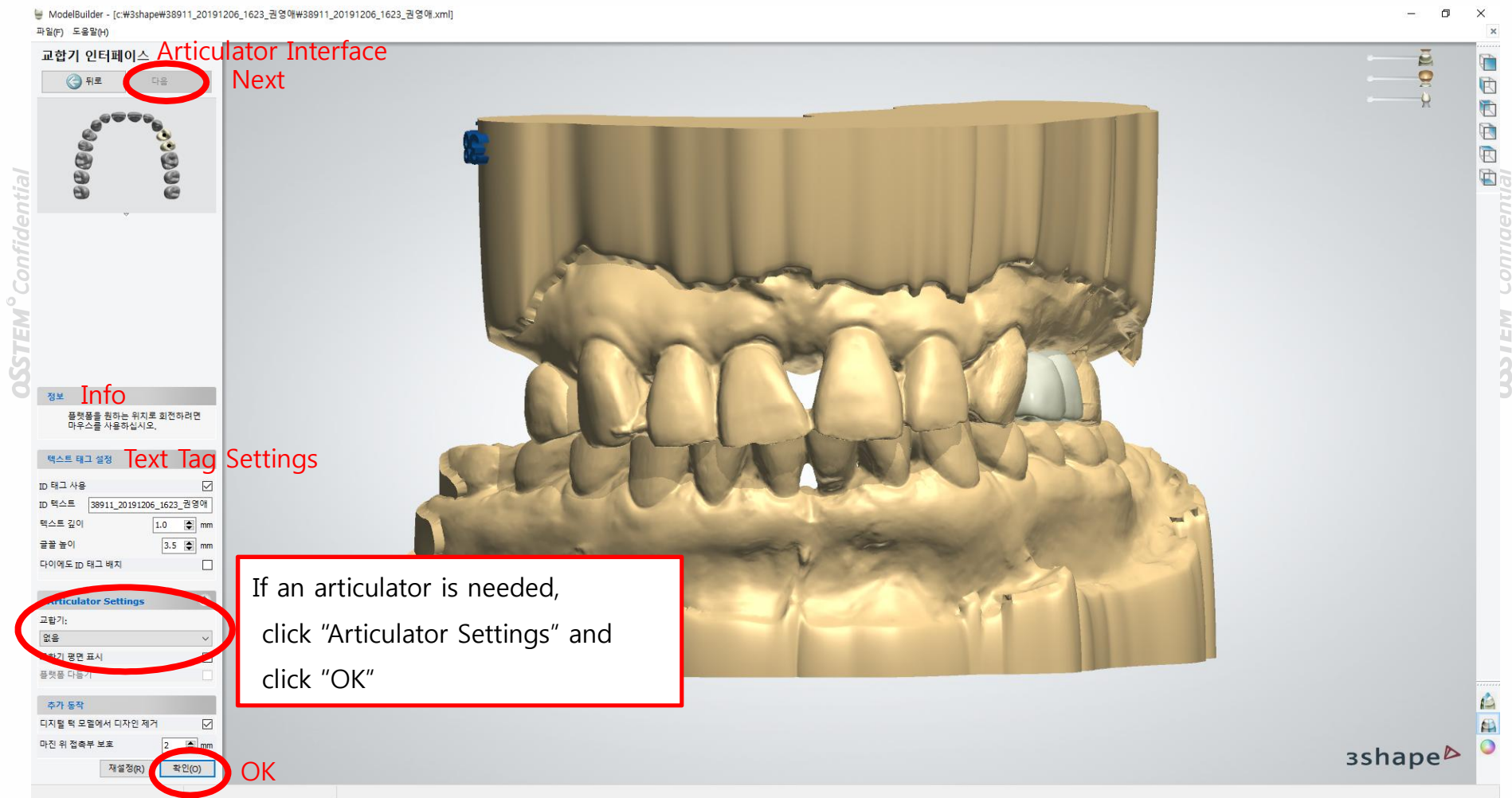
3) Creating Die



2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

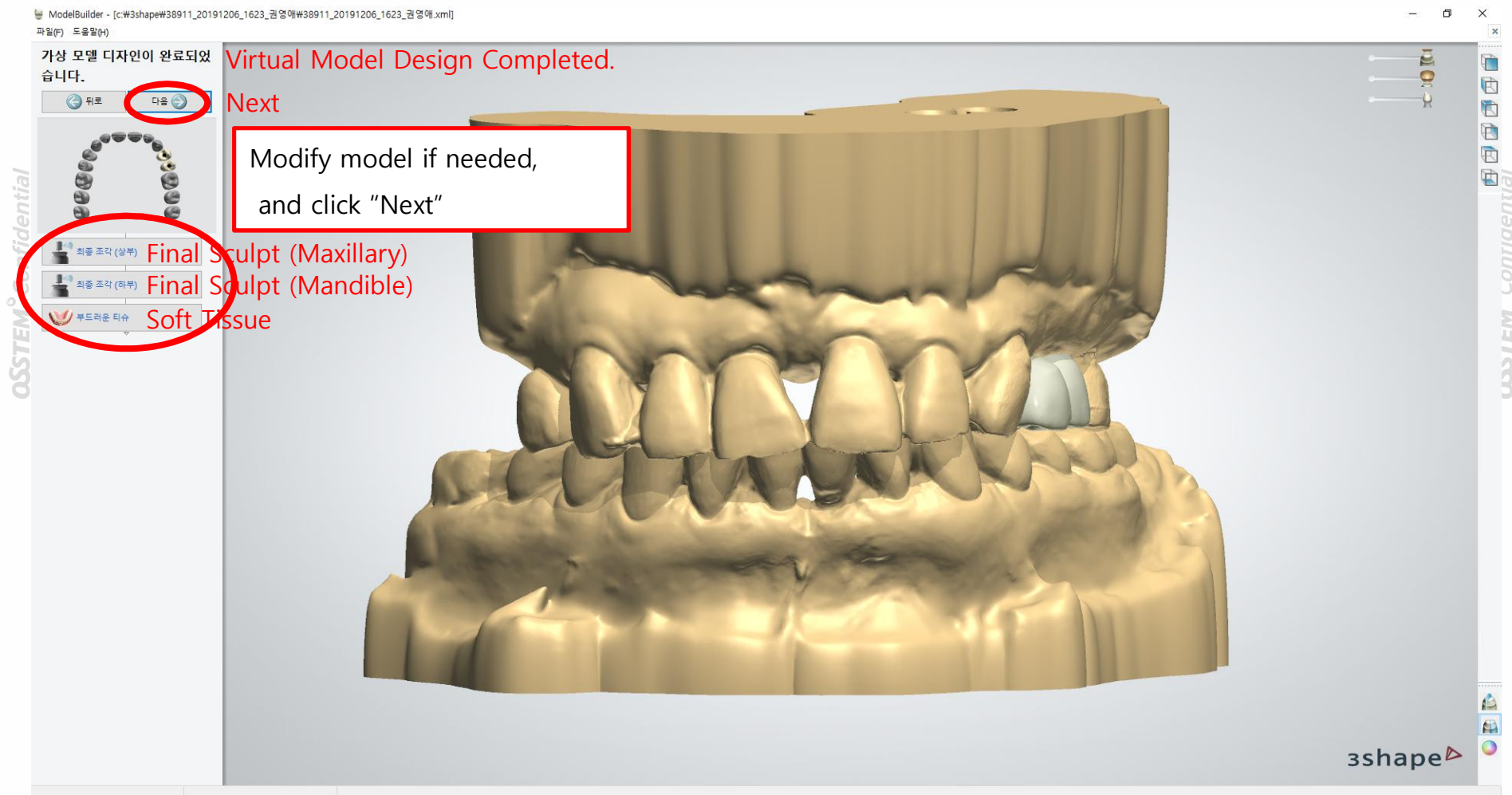
4) Articulator Interface



2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

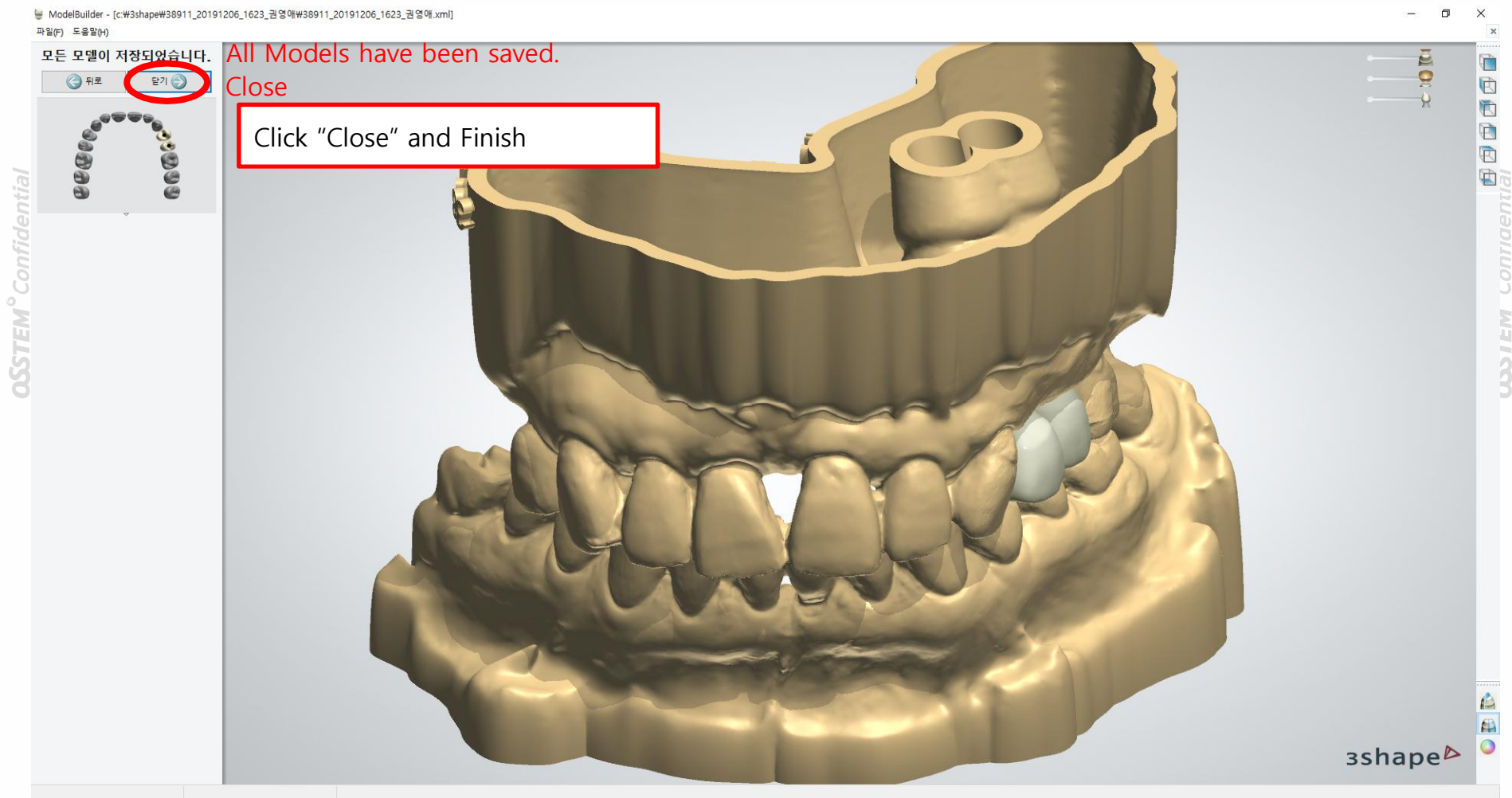
5) Completing Virtual Model Design



2. User Guide of Digital Lab Analog

2-3. How to Design Model Build

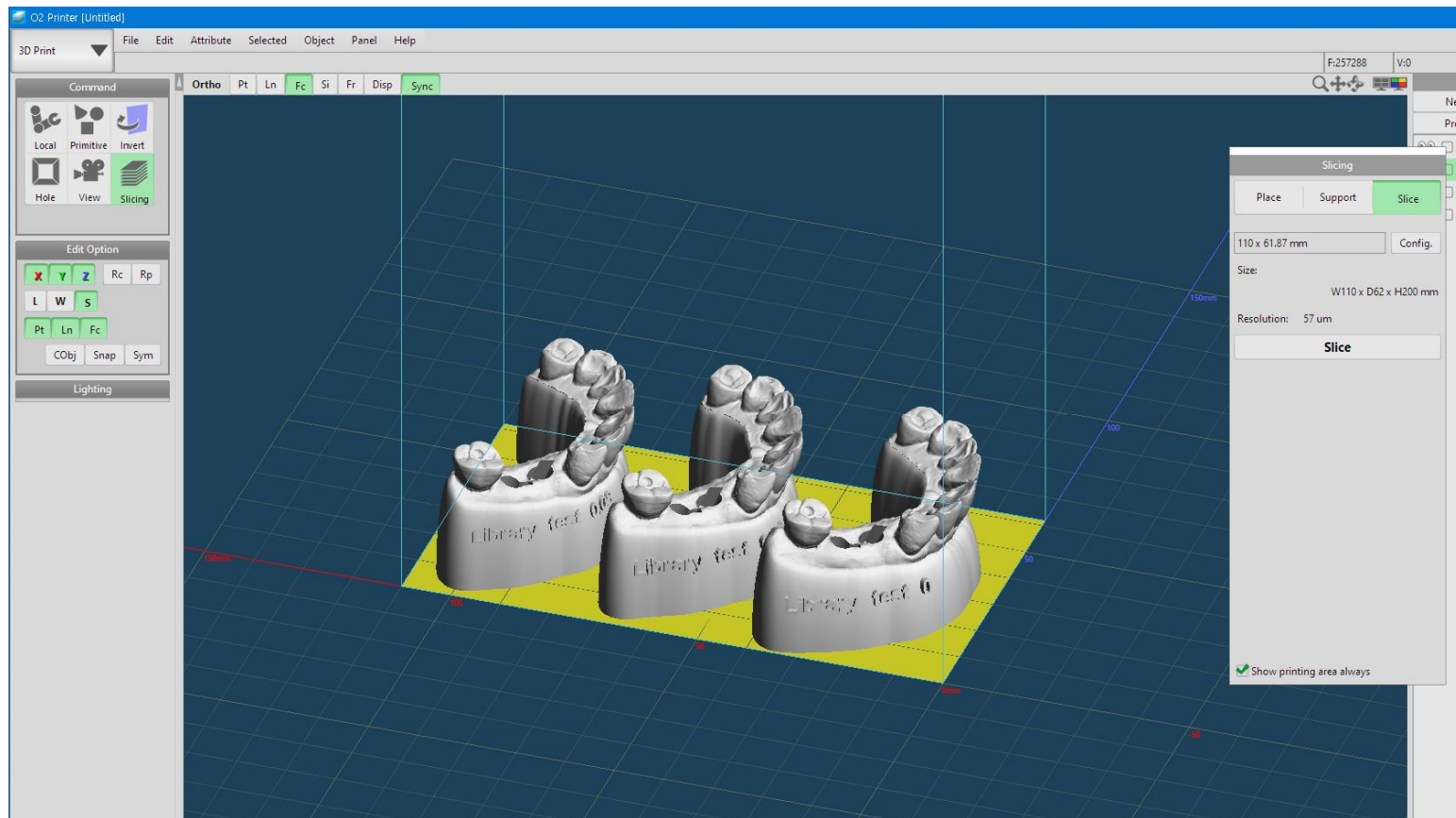
5) Completing Virtual Model Design



2. User Guide of Digital Lab Analog

2-4. 3D Printing

1) Place STL files -> Create Support -> Create Slicing File (Based on O2-Printer)



✓ Please refer to the “O2-Printer User Manual” for more details.

2-4. 3D Printing

2) Post Treatment (Based on O2-Printer)

(1) Eliminate Build Plate

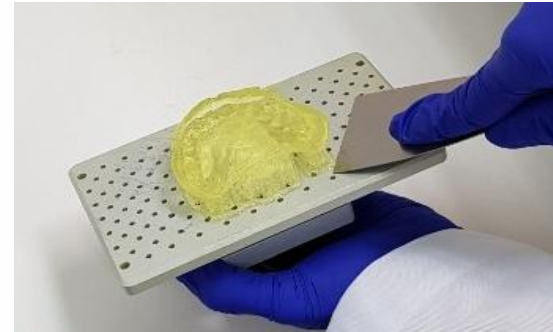
- Turn Fixing Handel to clockwise and pull the plate forward for the detachment



※ Caution : Without any bowls, liquid from printing bed could drop inside 3D Printer.

(2) Separate Printouts

- Use Steel Scraper to separate printed model from the Build Plate



※ Caution : Build Plate should be kept clean, otherwise it will affect outcomes of next printing.

(3) Cleanse Printouts



(4) Curing Printouts

- Use Curing Machine to cure printouts (10 mins)



OSSTEM[®] Confidential

OSSTEM[®] Confidential

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

1) Use **Reamer** to correct internal holes

OSSTEM[®] Confidential

For Mini Platform, Groove is marked on the Reamer

OSSTEM[®] Confidential

If Reamer is properly used and done its job well, the tip of the Reamer will be shown at the bottom of the 3D Printed Model.

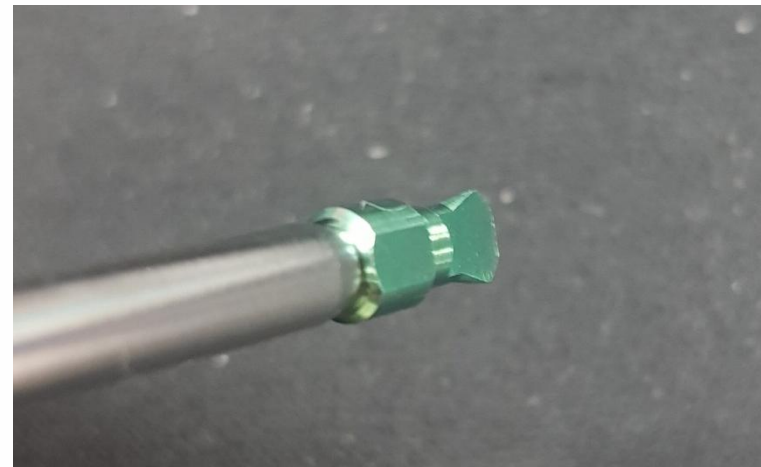
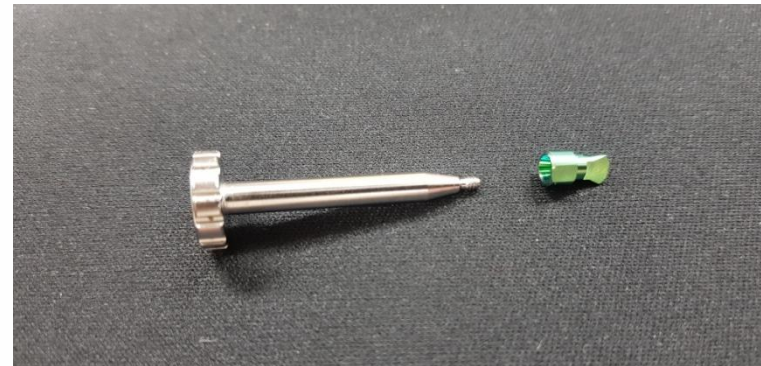
22/35

OSSTEM[®] Confidential

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

2) Connect **Positioning JIG – Analog**



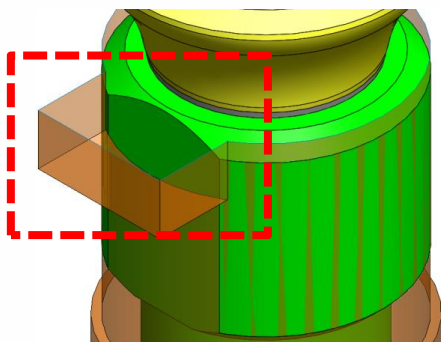
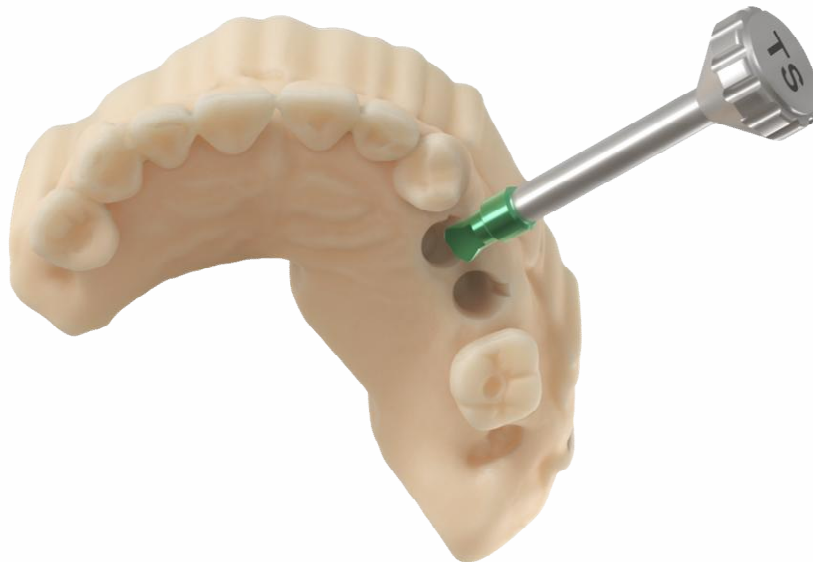
OSSTEM[®] Confidential

OSSTEM[®] Confidential

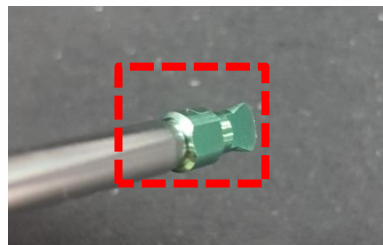
2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

3) Insert Analog to 3D Printed Models



Check Hex Direction
Marking Groove



Use Positioning Jig and Press in Digital
Lab Analog Considering Hex Direction



After Pressing Digital Lab Analog in,
Check the Fit and Gap

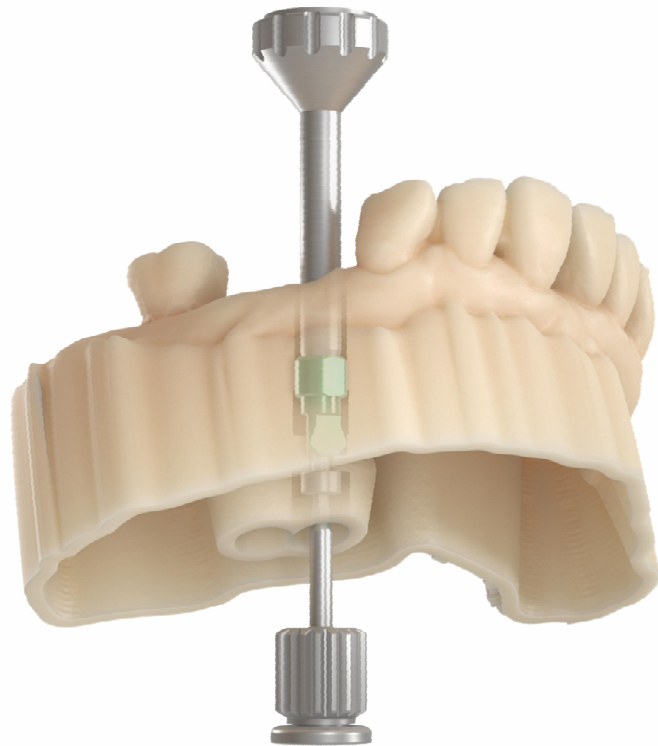
OSSTEM[®] Confidential

OSSTEM[®] Confidential

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

4) Connect **Screw** (with 1.2 Hex Driver) + Separate Positioning Jig

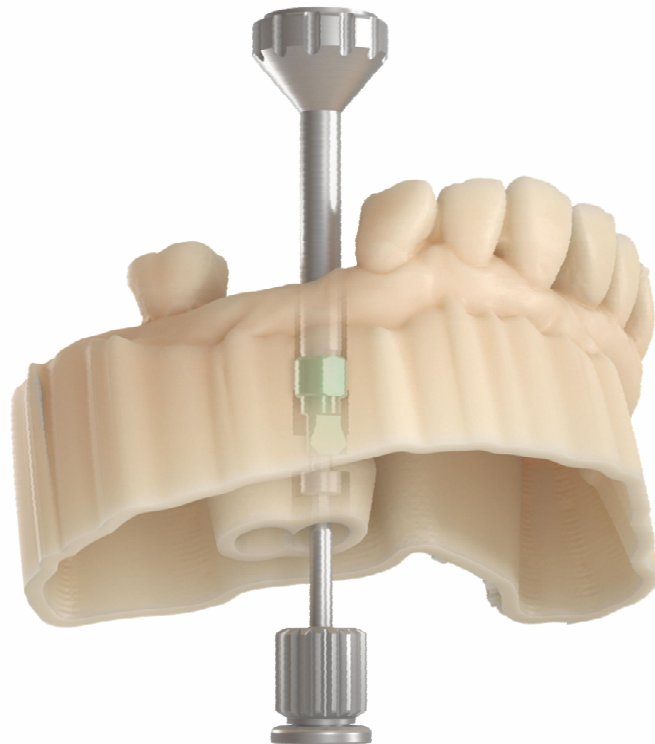


Connect the Screw when Positioning Jig is still fixed on the 3D Printed Model

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

4) Connect **Screw** (with 1.2 Hex Driver) + Separate Positioning Jig



When Positioning Jig is pressed in the model,
it is not perfectly fixed.

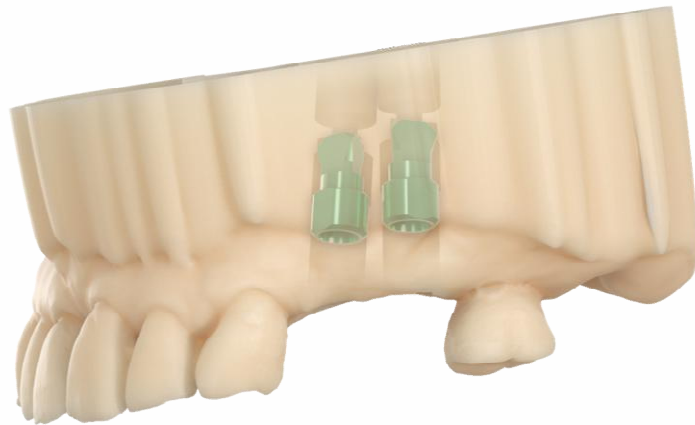
Use 1.2 Hex Driver to tighten Screw firmly
to eliminate gap between 3D Printed Model
and Digital Lab Analog

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

4) Connect **Screw** (with 1.2 Hex Driver) + Separate Positioning Jig

OSSTEM[®] Confidential



OSSTEM[®] Confidential

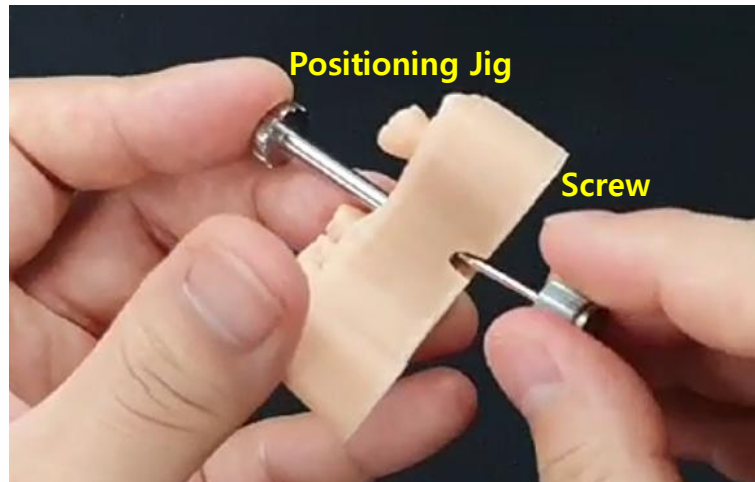
2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

5) Separating Digital Lab Analog
after work on the 3D Printed Model is done



▲ 3D Printed Model with Digital Lab Analog



▲ Fix Positioning Jig to Digital Lab Analog
and Use 1.2 Hex Driver to remove Screw

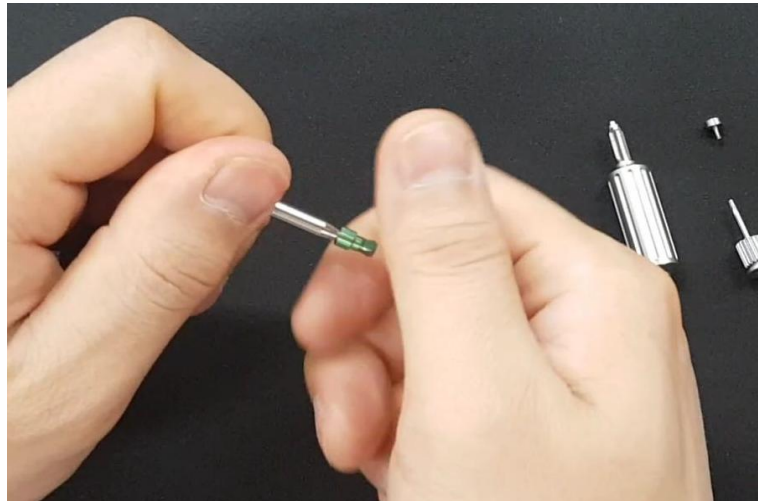


▲ Use Positioning Jig to remove Digital Lab Analog

2. User Guide of Digital Lab Analog

2-5. Workflow of Digital Lab Analog

- 5) Separating Digital Lab Analog
after work on the 3D Printed Model is done



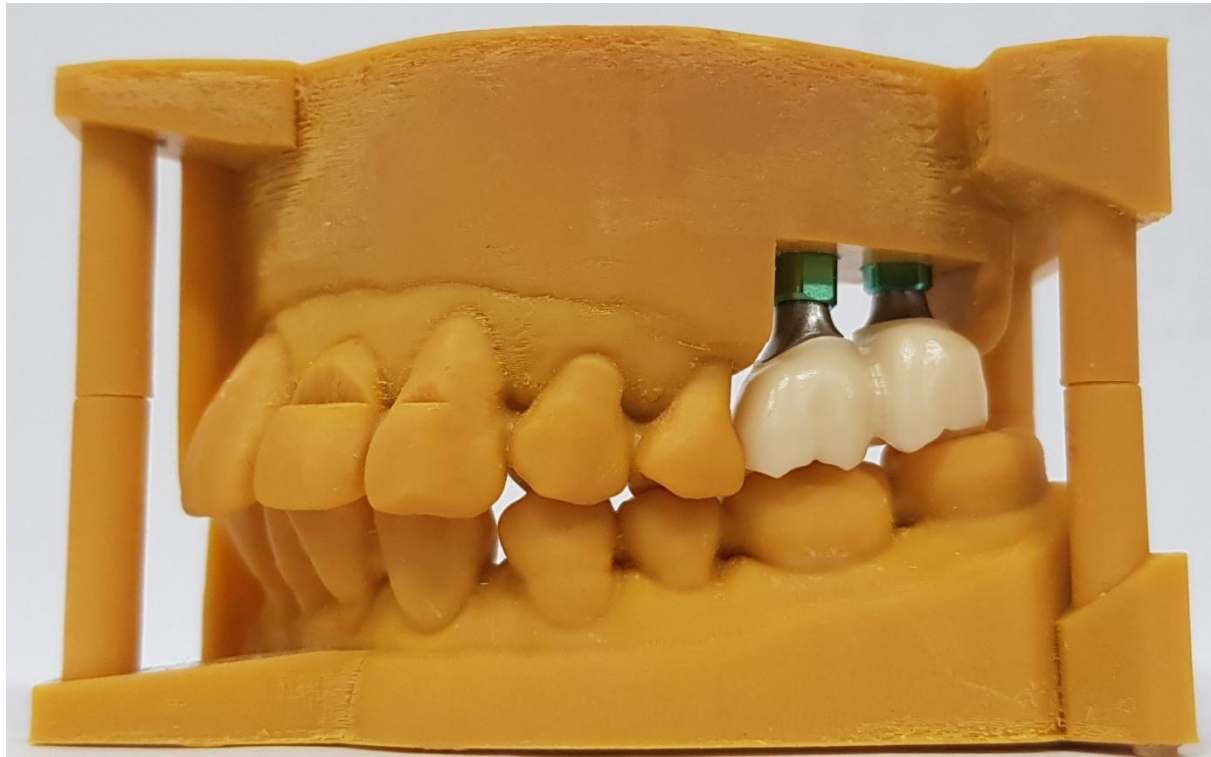
▲ Separate Positioning Jig
and Digital Lab Analog



▲ Positioning Jig and Digital Lab Analog,
which are separated from 3D Printed Model

2. User Guide of Digital Lab Analog

2-6. Checking the Fit of Final Prosthesis



OSSTEM[®] Confidential

OSSTEM[®] Confidential

Precautions for Digital Lab Analog

03

3. Precautions for Digital Lab Analog

3-1. Precautions for Reamer



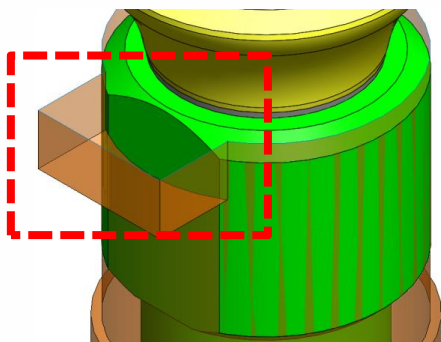
- ✓ Use Reamer to correct/modify Digital Lab Analog holes
- ✓ Blow Air in the corrected/modified holes so that there is no remaining
- ✓ If there is remaining inside holes, it is hard to connect Digital Lab Analog

3. Precautions for Digital Lab Analog

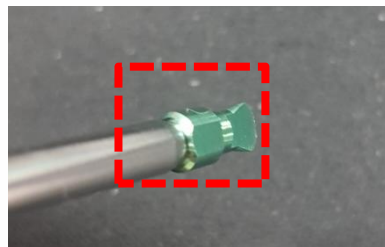
3-2. Understanding Hex(Direction) (The contents are the same as the page 24)



OSSTEM[®] Confidential



Check Hex Direction
Marking Groove



Use Positioning Jig and Press-in Digital Lab Analog Considering Hex Direction

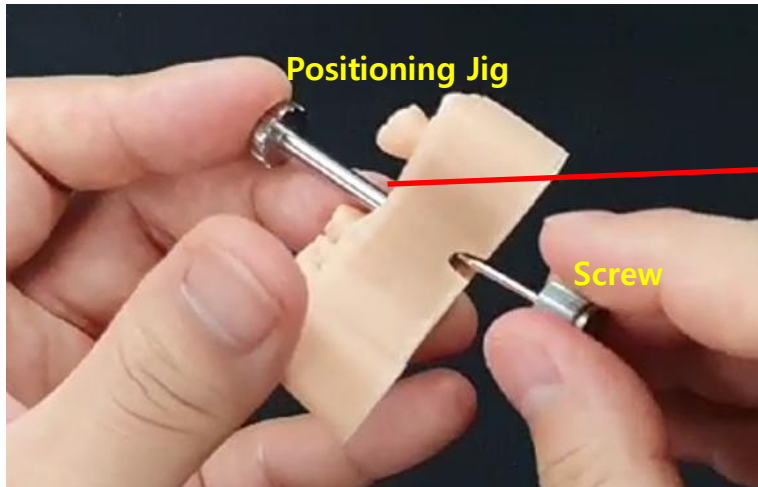
OSSTEM[®] Confidential



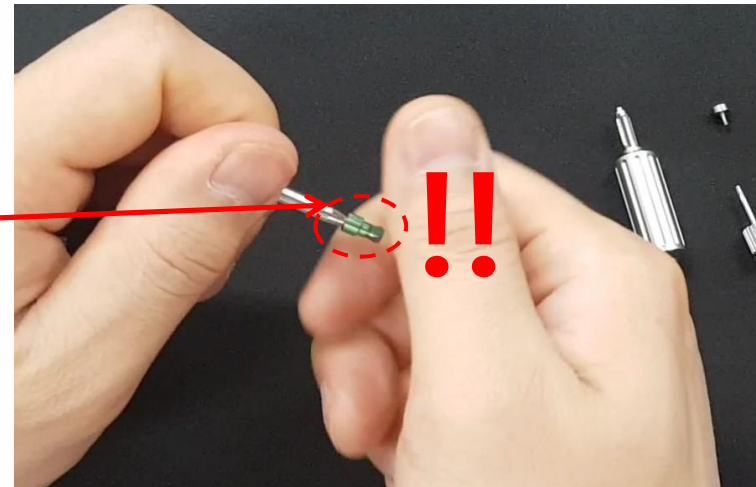
After Pressing Digital Lab Analog in,
Check the Fit and Gap

3. Precautions for Digital Lab Analog

3-3. Precautions for Separating Digital Lab Analog



Fix Positioning Jig to Digital Lab Analog and Use 1.2 Hex Driver to remove Screw



If Positioning Jig and Digital Lab Analog are connected too firmly, fingers can be hurt by sharp edges of Digital Lab Analog during the separation process.

Tip!

- In order to disconnect Positioning Jig and Digital Lab Analog easier and safer, do not completely tighten up Positioning Jig and Digital Lab Analog when connecting.
- Digital Lab Analog will be easily removed from 3D Printed Model after Screw is removed with 1.2 Hex Driver, therefore, just enough to hold Digital Lab Analog to pull out from 3D Printed Model is required when connecting Positioning Jig and Digital Lab Analog.