exocad FDA Library
USER GUIDE

Dental Group

DISCLAIMER

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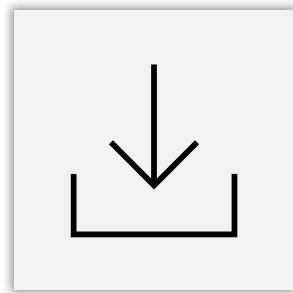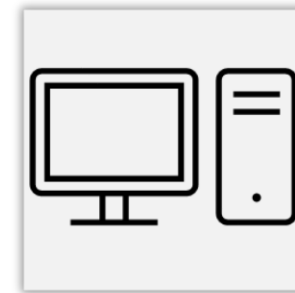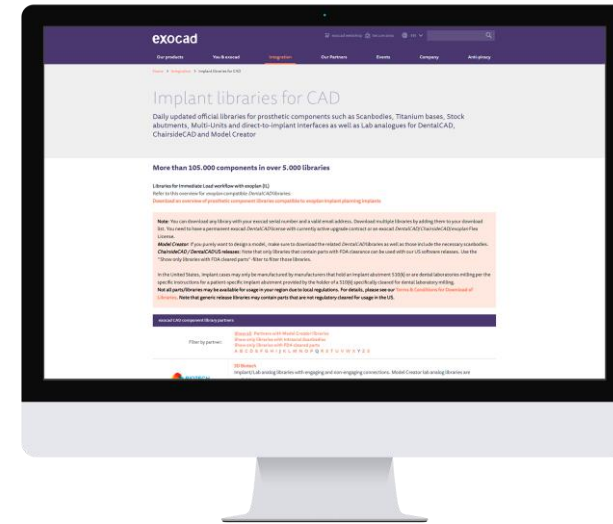
Install

Library types and use

Two different ways to install the library

DentalCADApp
Installation

Exocad
Website

In the "Detect Implant Position" design step, click here to download and install the library from exocad server.

You can also download the library directly from exocad website and install the unzipped files in the correct path:

E.g. C:\exocad-DentalCAD3.2-2023-12-06\DentalCADApp\library\implant

Scan Body types

Scan Abutment

Scan Transfer

Scan Abutment Libraries

Ti-Base level

Implant Level
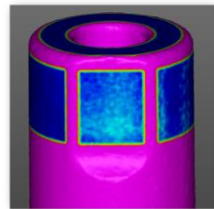
CAD alignment, ASC & design

Library selection

- **E.g. IPD – ZIM TSV ⌀3.5 Custom-TiBase Tol3 FDA:**
  Ti-base level libraries supporting a 30 microns cement gap (usually recommended for single crowns)

- **E.g. IPD – ZIM TSV ⌀3.5 Custom-TiBase Tol5 FDA:**
  Ti-base level libraries supporting a 50 microns cement gap (usually recommended for multiple frameworks)
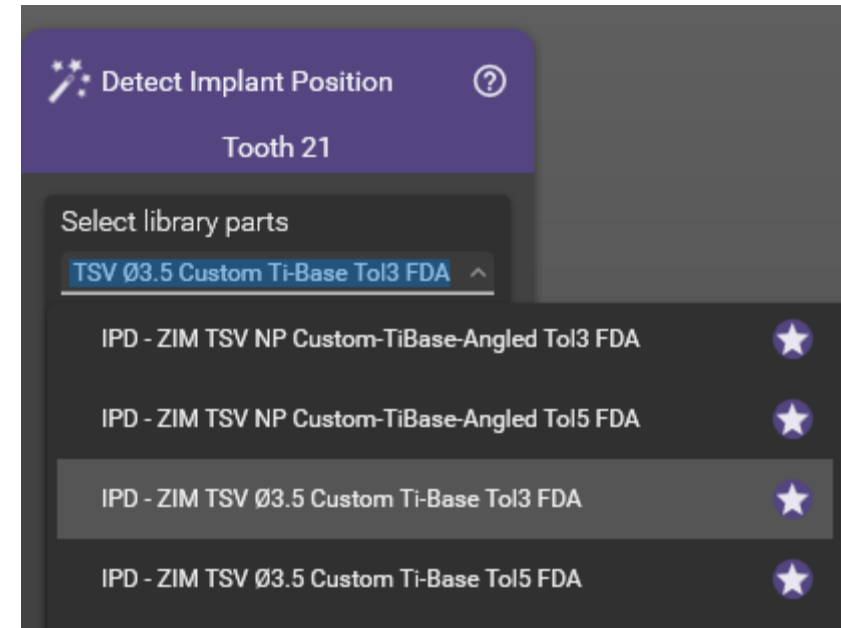
Custom Ti-Base

Custom Ti-Base selection

- **Ti-Base Level**

  All IPD library files are using Scan abutment reference code to drive the whole selection.

  When using Custom Interface Ti-base library, after the Scan Abutment code will be finding additional values as per Ti-base features

$$IPD / FA - SN - 0* \ (H6.5)$$

Brand   Platform

Eng/Non Eng

- 00 → Engaging 10mm Scan Body
- 02 → Engaging 15mm Scan Body
- 01 → Non-Engaging Scan Body

Ti-Base wall Height

ENG: 8 – 6,5 – 5 – 3,5
NON-ENG: 6,5* – 5* – 3,5
*Aviaibility to be confirmed

Custom Ti-Base

Detect Implant Position ⑦

Tooth 21

Select library parts

IPD - ZIM TSV Ø3.5 Custom Ti-Base ⌄

Select an option ⌃

IPD/FA-SN-00 (H8)

IPD/FA-SN-00 (H6.5)

IPD/FA-SN-00 (H5)

IPD/FA-SN-00 (H3.5)

IPD/FA-SN-01 (H6.5)

IPD/FA-SN-01 (H5)

IPD/FA-SN-01 (H3.5)

IPD/FA-SN-02 (H8)

IPD/FA-SN-02 (H6.5)

IPD/FA-SN-02 (H5)

IPD/FA-SN-02 (H3.5)

0,08   0,1

← BACK   NEXT →

Custom Ti-Base selection

- **Gingival height:** Ti-base level libraries supports different gingival heights, represented by the coding **"G0.5"** e.g. (different heights availables depending on brands and connections type)

- **Scan Abutment Tolerance:** IPD libraries supports 7 different library offset to align the Scan Abutment, represented by the coding **"T1"** e.g. (for more information about this topic, visit the "CAD Alignment" section in the manual)
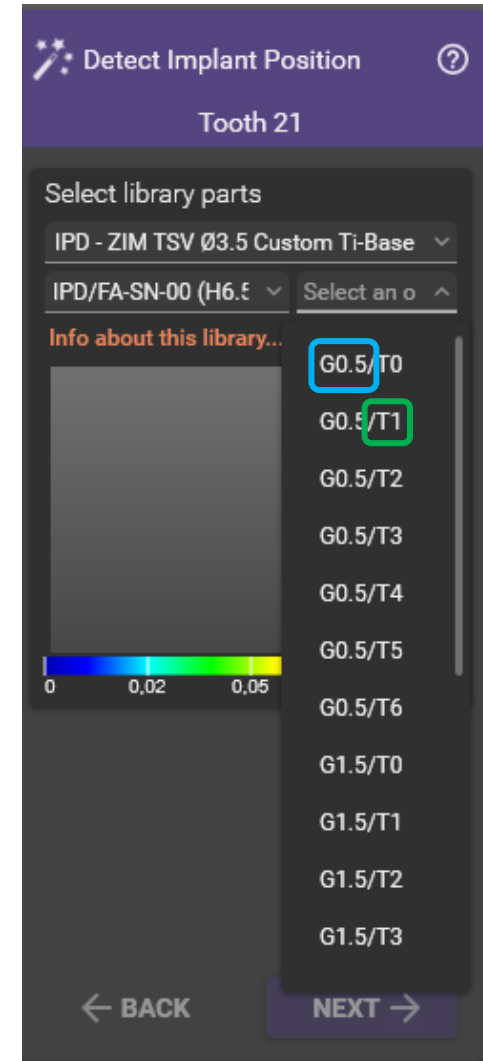
Custom Ti-Base

ASC Library selection

- **E.g. IPD – ZIM TSV ⌀3.5 Custom-TiBase-Angled Tol3 FDA:**
  Angulated Ti-base level libraries supporting a 30 microns cement gap (usually recommended for single crowns)

- **E.g. IPD – ZIM TSV ⌀3.5 Custom-TiBase-Angled Tol5 FDA:**
  Angulated Ti-base level libraries supporting a 50 microns cement gap (usually recommended for multiple frameworks)
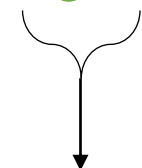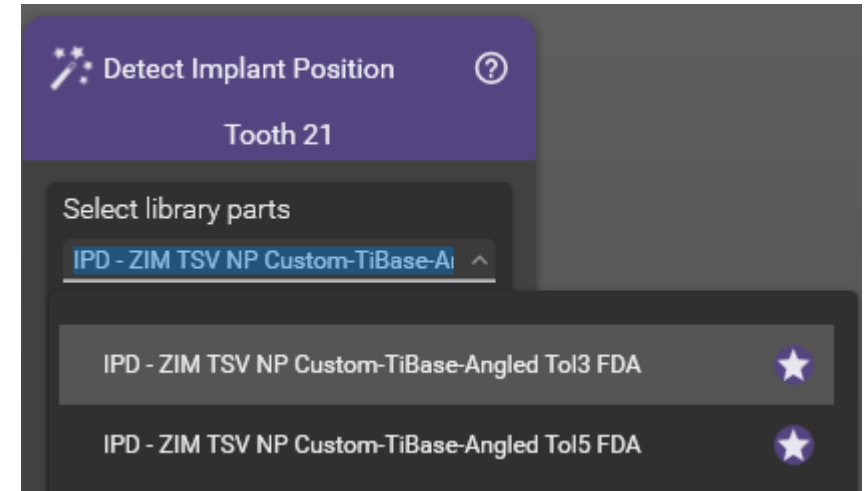
Custom Ti-Base

ASC Custom Ti-Base selection

- **Ti-Base Level**
  All IPD library files are using Scan abutment reference code to drive the whole selection.

  When using Custom Interface Ti-base library, after the Scan Abutment code will be finding additional values as per Ti-base features

Angulation degrees

$$IPD/FA - SN - 0* \ (H6.5/10º)$$

Brand Platform

Eng/Non Eng

- 00 → Engaging 10mm Scan Body
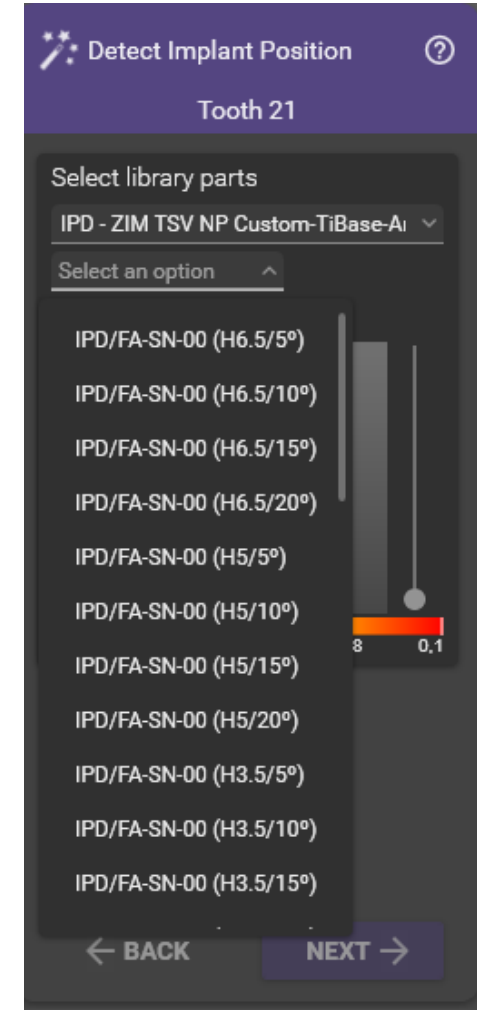- 02 → Engaging 15mm Scan Body
- 01 → Non-Engaging Scan Body

Ti-Base wall Height

ENG: 8 – 6,5 – 5 – 3,5
NON-ENG: 6,5* – 5* – 3,5
*Avialibility to be confirmed

Custom Ti-Base

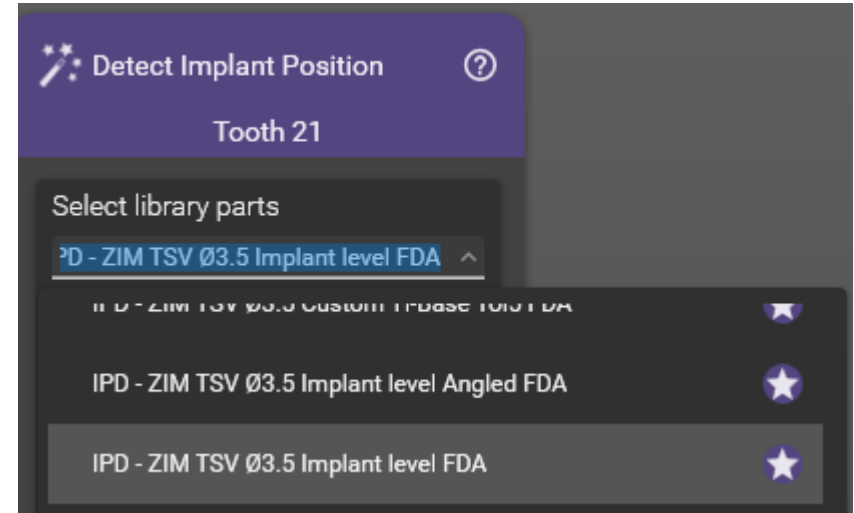# Library selection

- **E.g. IPD – ZIM TSV ⌀3.5 Implant level FDA:**
  Implant level libraries for unitary or multiple frameworks.

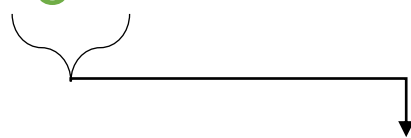**Implant Level**

Implant level selection

- **Implant Level**
  Each of the supported implant systems is
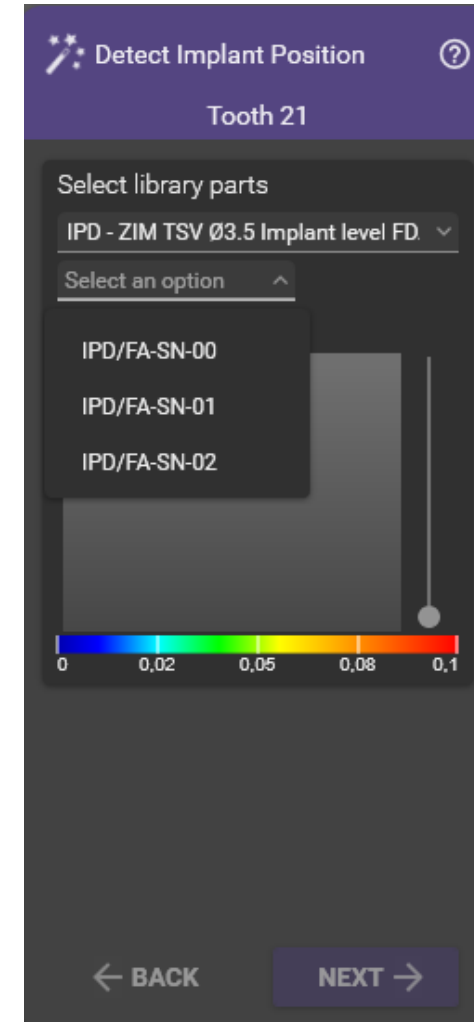 shown through a codding System

$$IPD/FA - SN - 0*$$

Brand   Platform

Eng/Non Eng
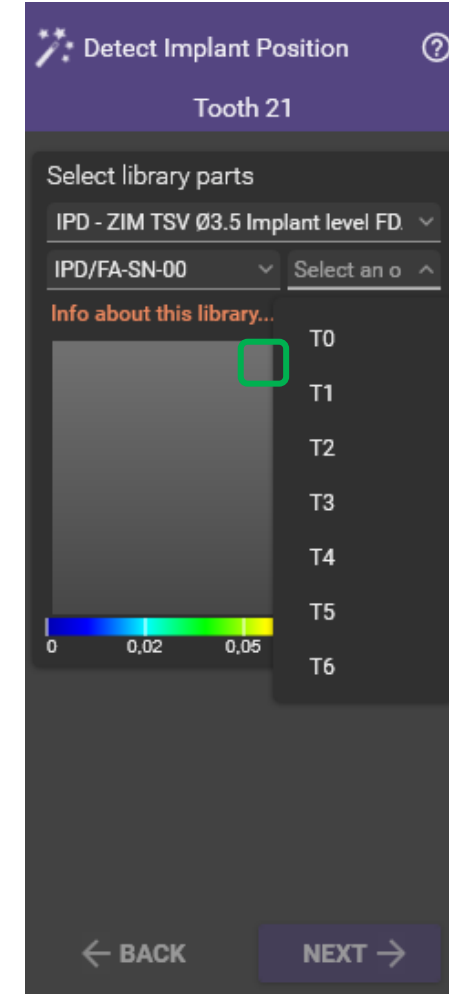
- 00 → Engaging 10mm Scan Body
- 02 → Engaging 15mm Scan Body
- 01 → Non-Engaging Scan Body

Implant Level

Implant level selection

- **Scan Abutment Tolerance:** IPD libraries supports 7 different library offset to align the Scan Abutment, represented by the coding **"T0"** e.g. (for more information about this topic, visit the "CAD Alignment" section in the manual)
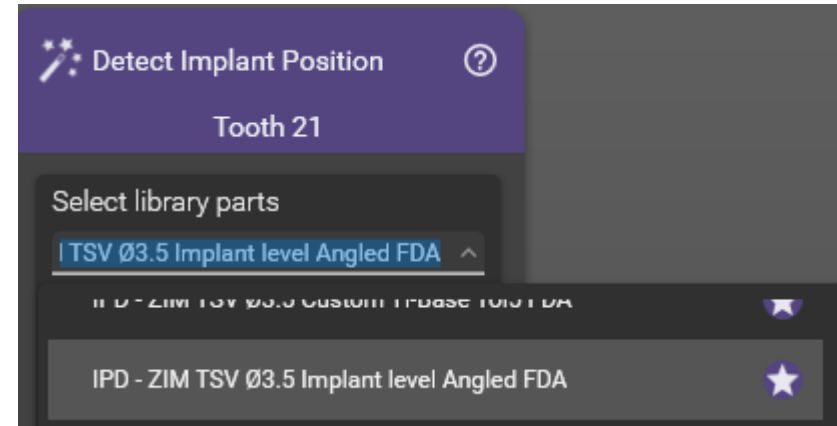
Implant Level

ASC Library selection

- **E.g. IPD – ZIM TSV ∅3.5 Implant level Angled FDA:**
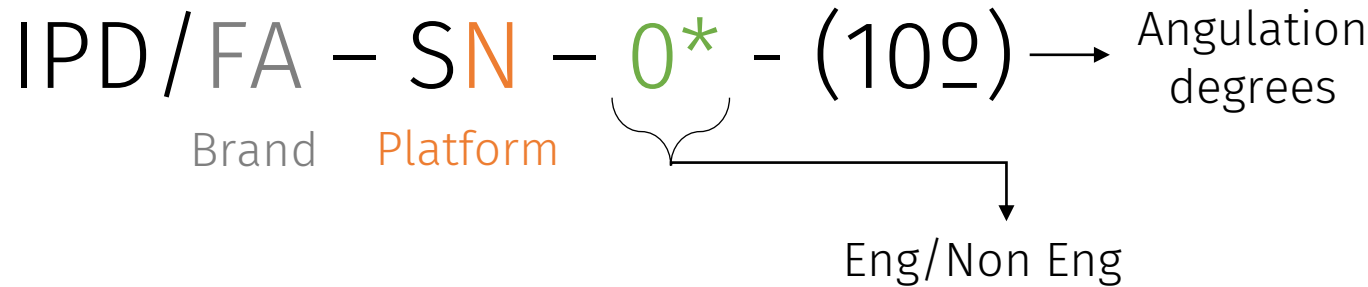 Implant level libraries for unitary or multiple frameworks with angulated screw channel.
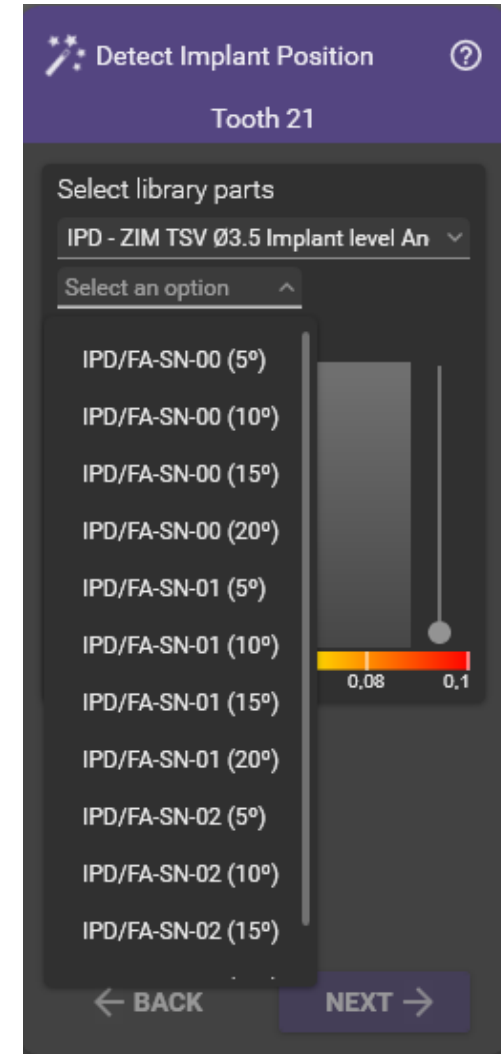

Implant Level

ASC Implant level selection

- **ASC Implant Level**

  Each of the supported implant systems is shown through a codding System

$$IPD/FA - SN - 0^* - (10º) \longrightarrow \text{Angulation degrees}$$

Brand Platform

Eng/Non Eng

- 00 ➜ Engaging 10mm Scan Body
- 02 ➜ Engaging 15mm Scan Body
- 01 ➜ Non-Engaging Scan Body

Implant Level

🪄 Detect Implant Position ⑦

Tooth 21

Select library parts

IPD - ZIM TSV Ø3.5 Implant level An ⌄

Select an option ⌃

IPD/FA-SN-00 (5º)

IPD/FA-SN-00 (10º)

IPD/FA-SN-00 (15º)

IPD/FA-SN-00 (20º)

IPD/FA-SN-01 (5º)

IPD/FA-SN-01 (10º)

IPD/FA-SN-01 (15º)

IPD/FA-SN-01 (20º)

IPD/FA-SN-02 (5º)

IPD/FA-SN-02 (10º)

IPD/FA-SN-02 (15º)

0,08   0,1

← BACK   NEXT →

Library alignment

Select the relevant library and align following exocad instructions.

Detect Implant Position

Tooth 21

Select library parts

IPD - ZIM TSV Ø3.5 Custom Ti-Base

IPD/FA-SN-00 (H6.5   G0.5/T0

Info about this library...

0   0,02   0,05   0,08   0,1

Click on the scanned scan abutment in the area of the red marked point.

View the result of the alignment in false colors.

CTRL

← BACK   NEXT →
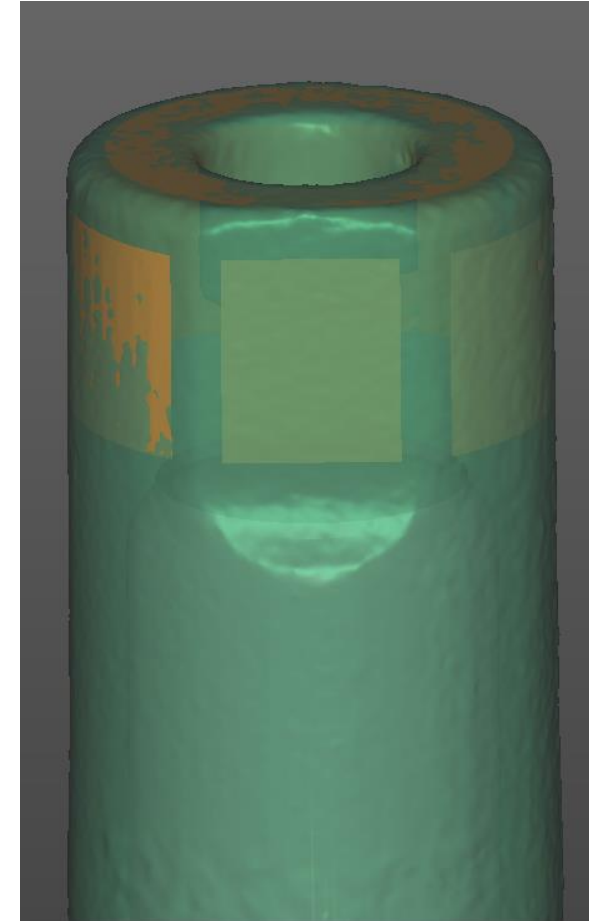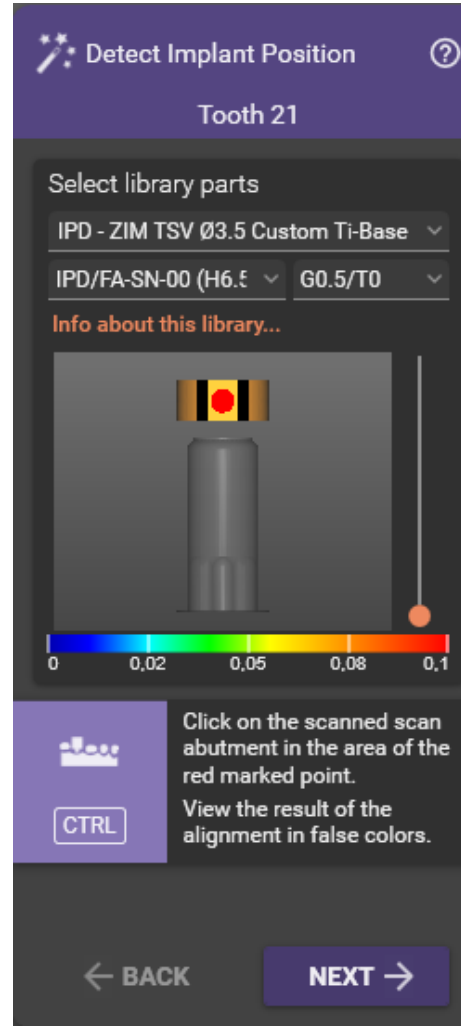
Library alignment

- **Scan Abutment Tolerance tool**

This tool is dedicated to improve the accuracy of CAD alignment. The industry standard is to provide the STL of each Scan Abutment found in a CAD library under its physical measurement, while each scanning device, for different reasons, is leading to a certain degree of oversizing by default.

- **Tolerance assignment protocol during alignment**

The following protocol is used to determine which of the 7 different STL files available for each IPD Scan Abutment is showing the best performance when merging the scanning file with the IPD library kit, improving the CAD alignment accuracy no matter the device used.

When performing the STL alignment, the library file showing the largest merging area with the digital file shall be chosen.
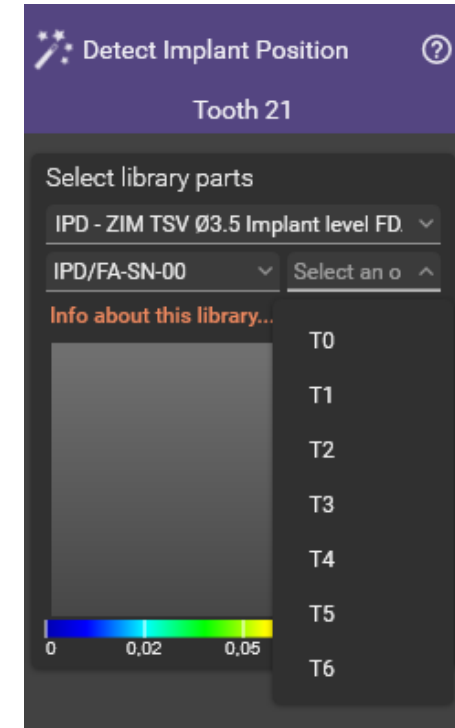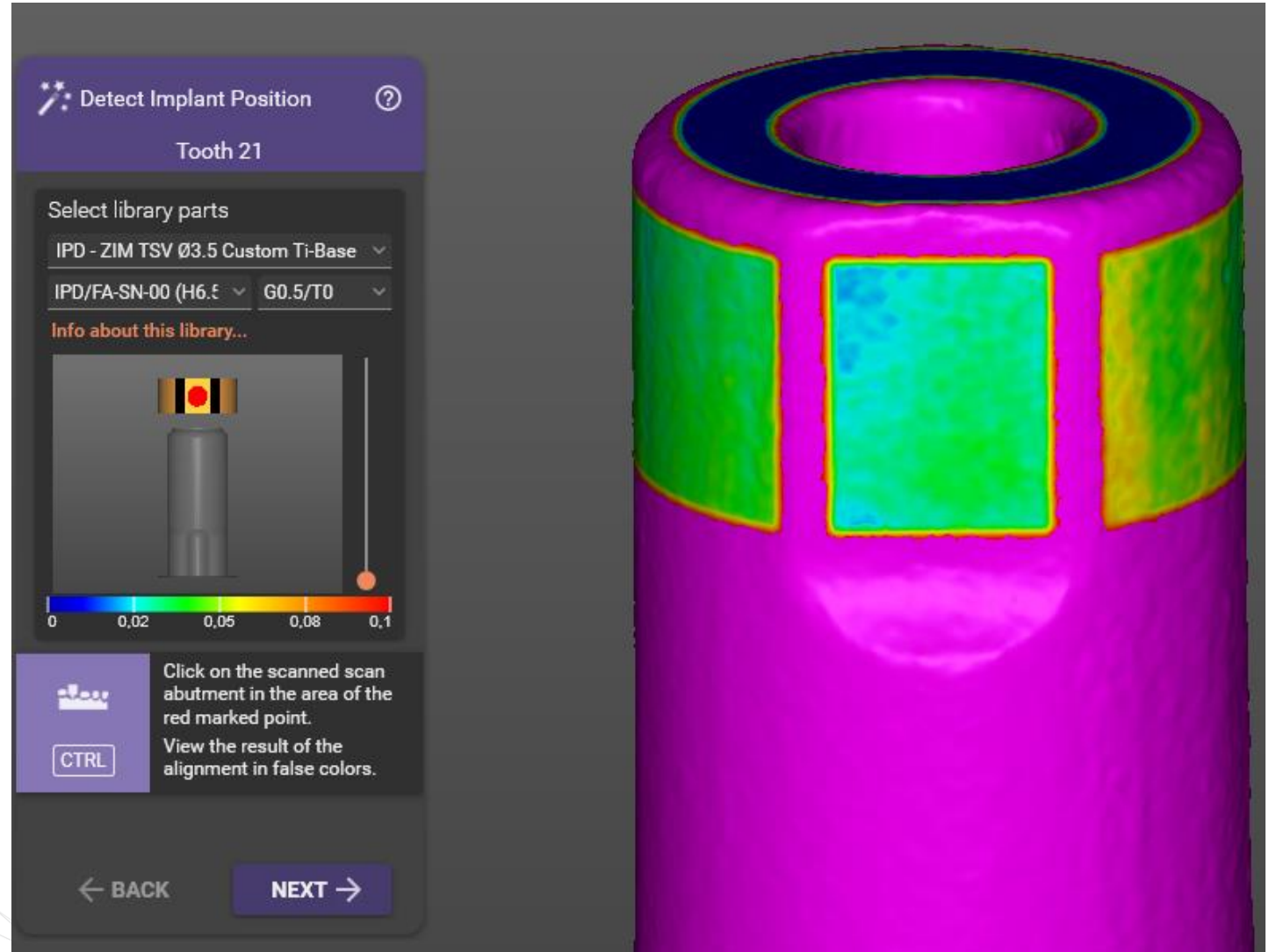

- **T0 - Std STL** (= medida física)
- **T1 -** Std STL + 10 micras
- **T2 -** Std STL + 20 micras
- **T3 -** Std STL + 30 micras
- **T4 -** Std STL + 40 micras
- **T5 -** Std STL + 50 micras
- **T6 -** Std STL + 60 micras

Library alignment

Alingment using "T0" Tolerance

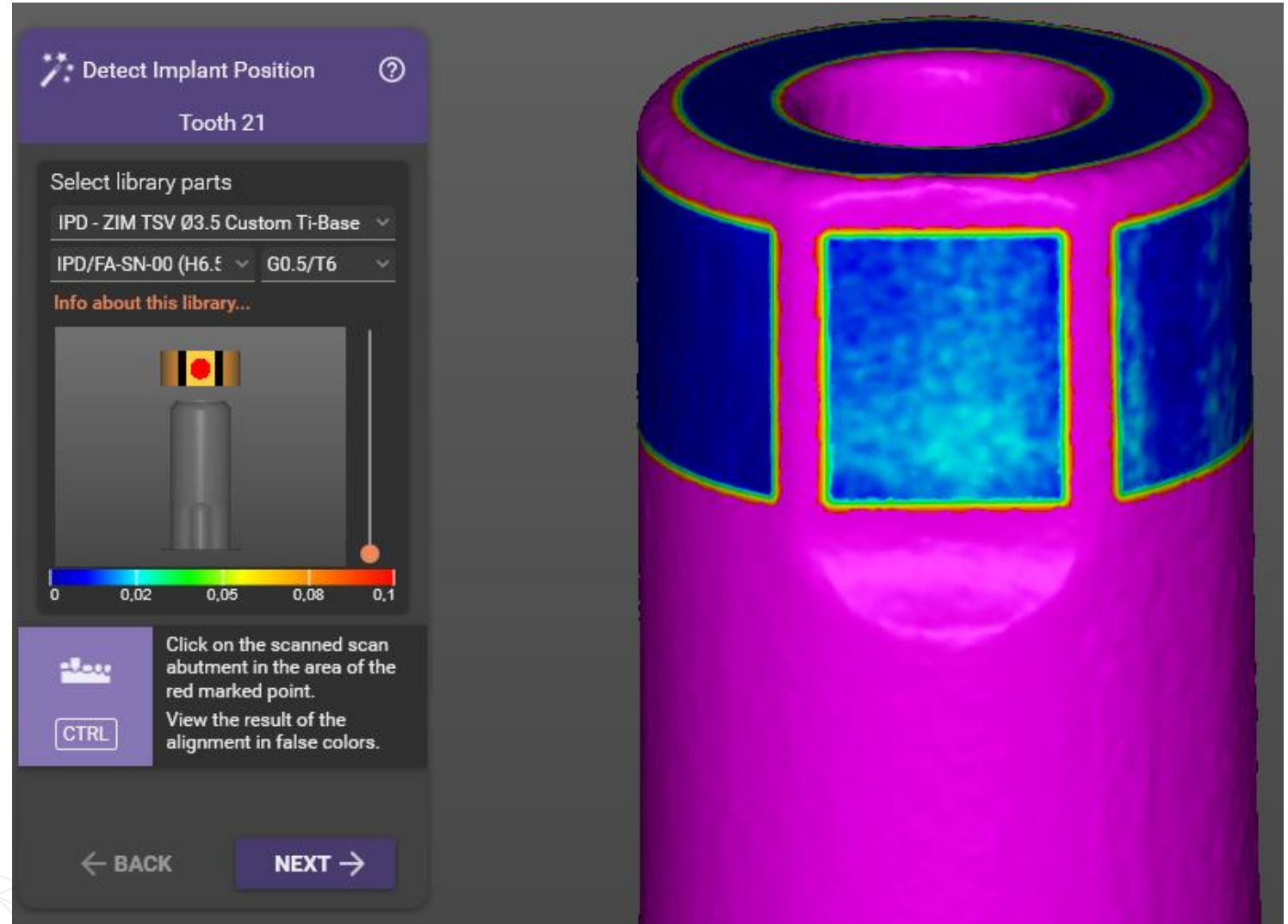The distance map color shows the merging between library and scan file.

Library alignment

Alingment using "T6" Tolerance

The distance map color shows the merging between library and scan file.
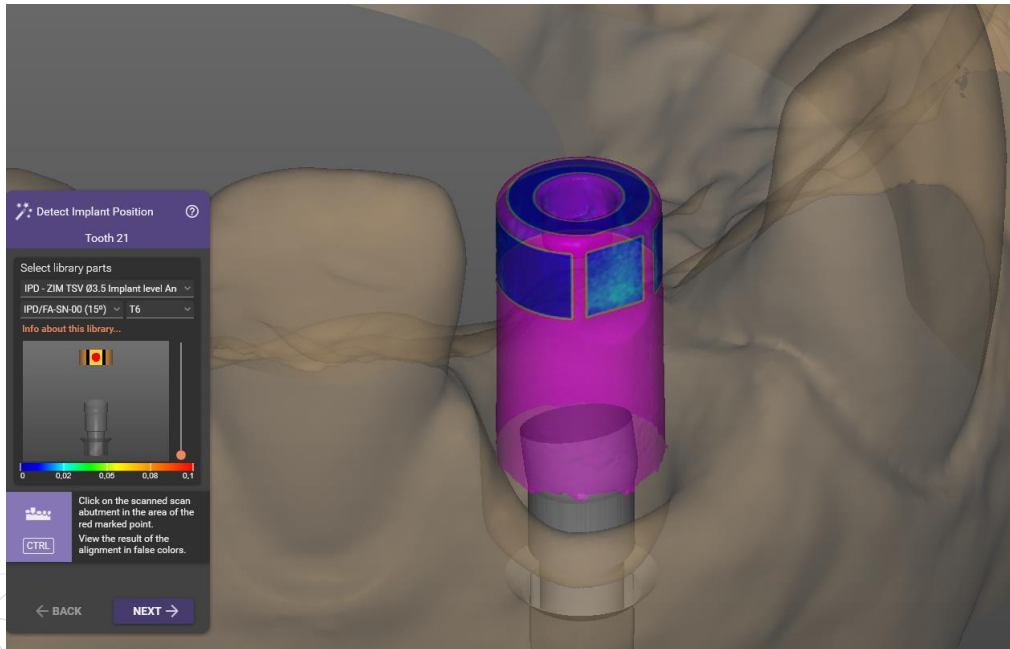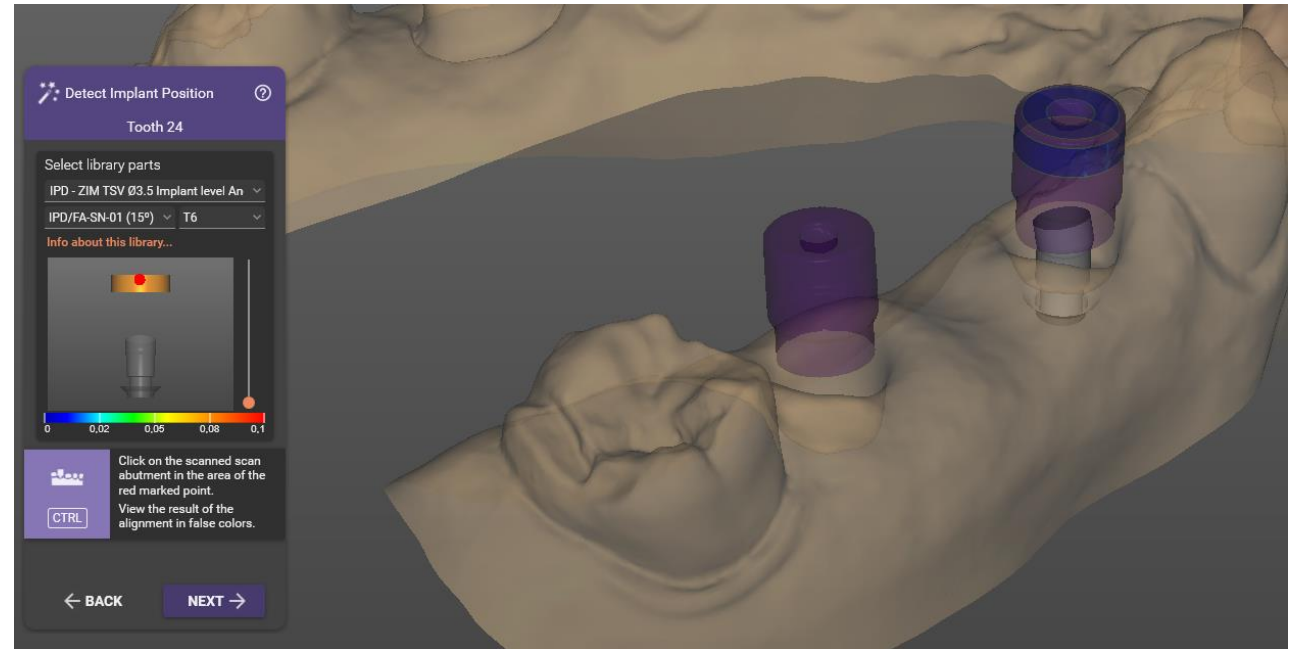
ASC Guidance

- ## ASC Design – Guiding the screw channel
  When usign ASC library, exocad will drive the angulation differently for Engaging and Non-Engaging abutments

Engaging
On single crowns the ASC feature will be related to the Scan Abutment head geometry (flat facet)

Non-Engaging
On multiple frameworks the ASC feature will be free enabling a 360 degrees choose.

ASC Guidance

- ## Engaging

  When usign Engaging ASC library, exocad will drive the angulation in the opposite direction to Scan Abutment facet.

  You can rotate the ASC direction using the bottom connection arrows. The available positions will be related to the corresponding implant system geometry.
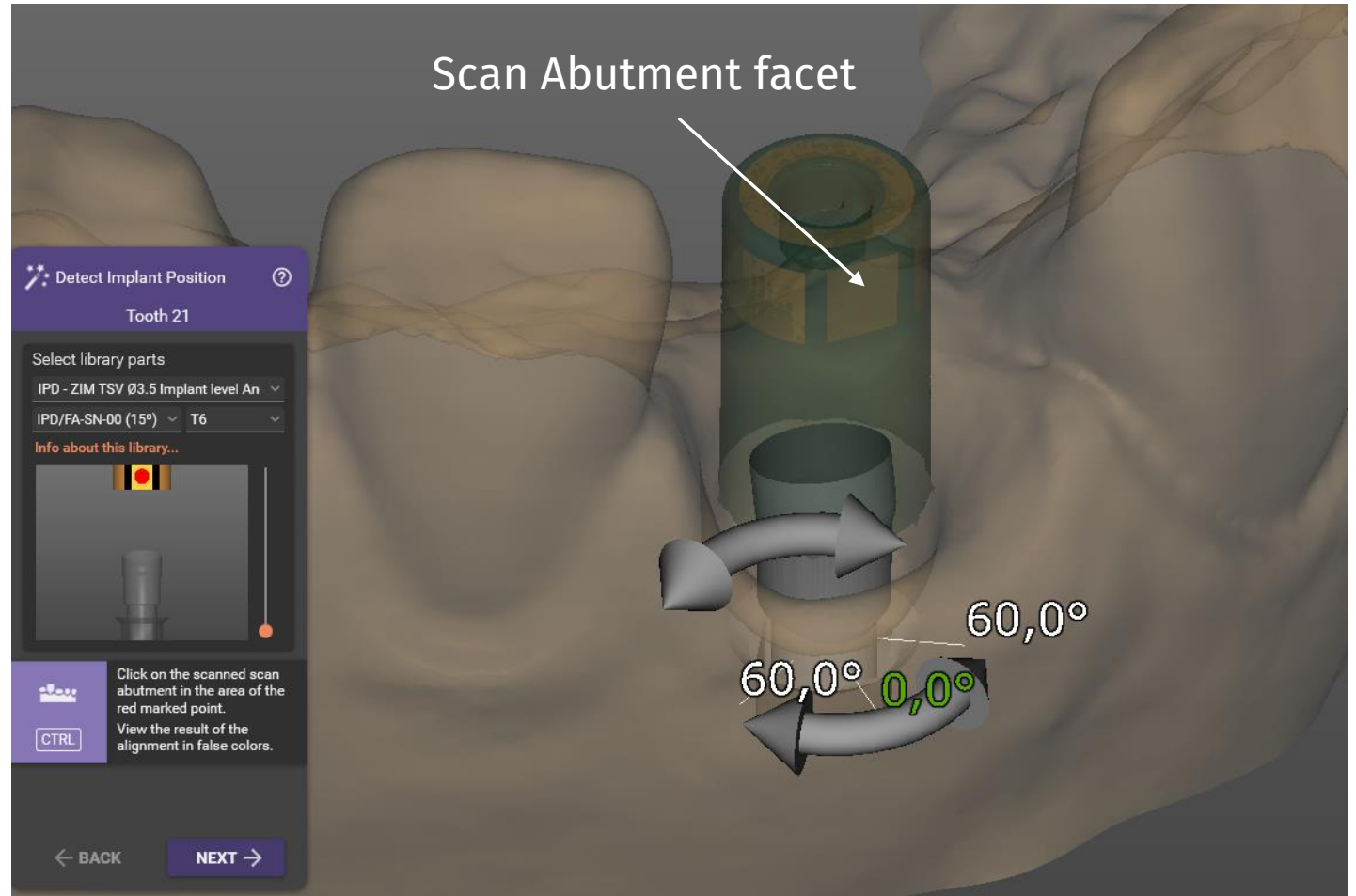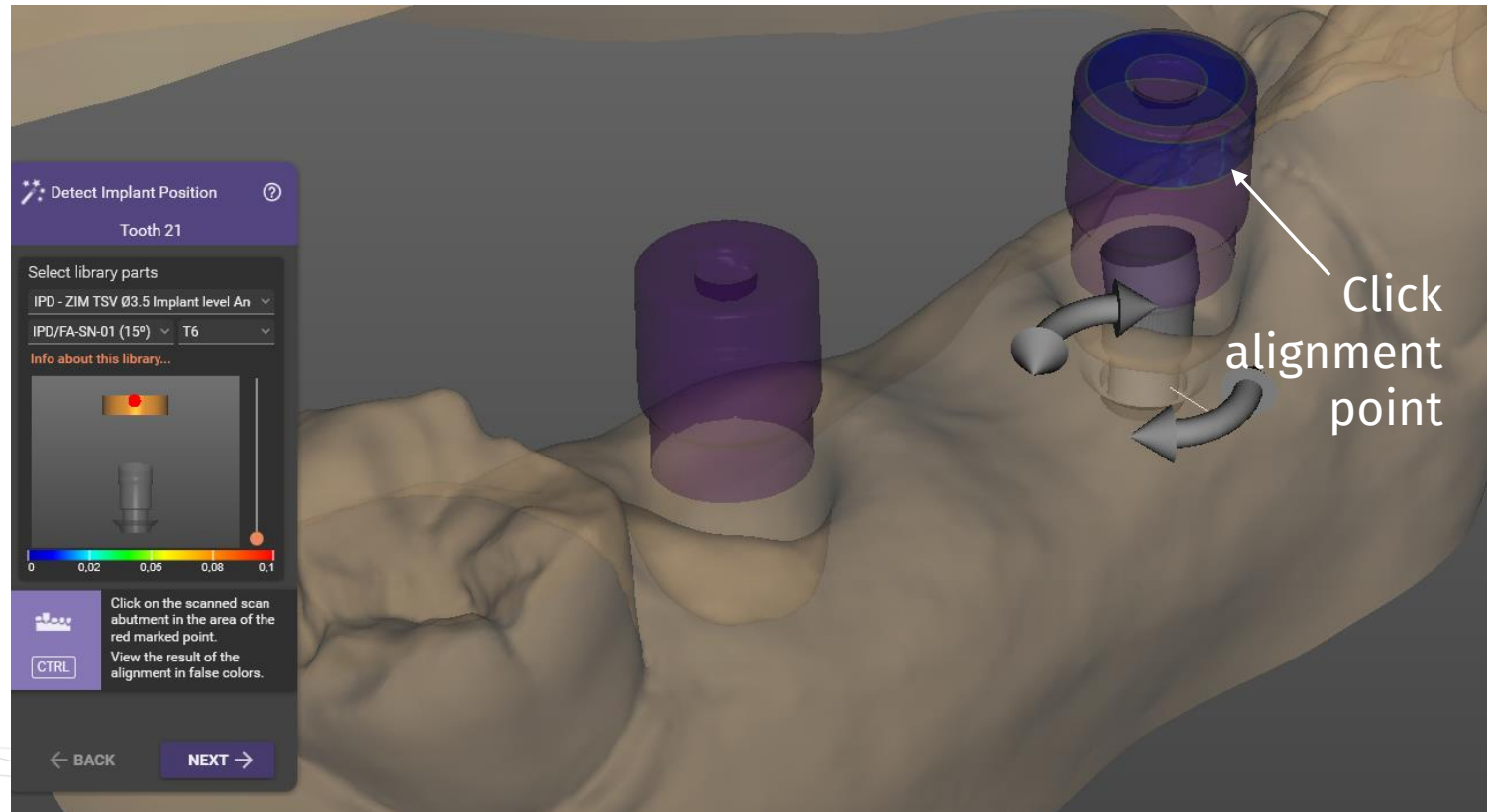
ASC Guidance

- **Non-Enagaging**
  When using Non-Engaging ASC library, exocad will drive the ASC to the opposite were clicking on into the scanning file when aligning. You can rotate 360º the ASC direction using the bottom connection arrows.

Scan Transfer

Scan Transfer Library
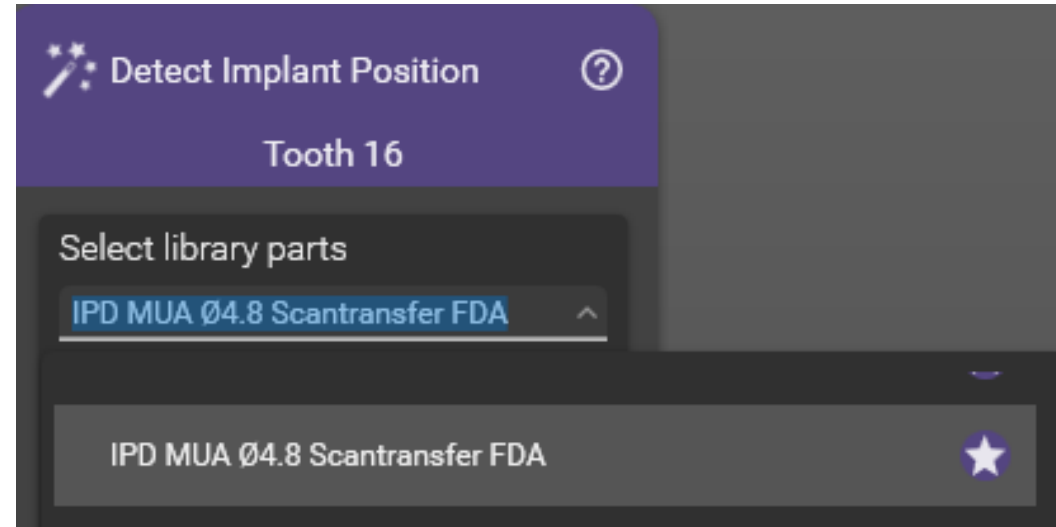
*   **IPD MUA Ø4.8 Scantransfer FDA:**
   Dedicated Scan Transfer Libraries
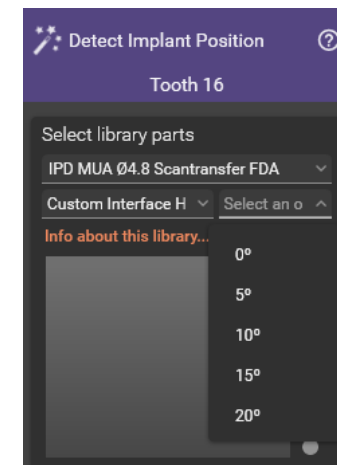

Scan Transfer

Scan Transfer Library selection

Each of the supported options will be shown as follows:

a. **Implant level** (At MUA level without abutment/ASC supported)

b. **Implant level PMMA** (At MUA level without abutment for temporary frameworks/ASC supported)

c. **Custom Interface** (Non-ENG, H6.5-H3.5, Tol3-Tol5/ASC supported)

d. **Temporary abutment** (Supporting different heights H9-H6.5-H4)

e. **Cylinder for retention bar** (when designing splinting guides)
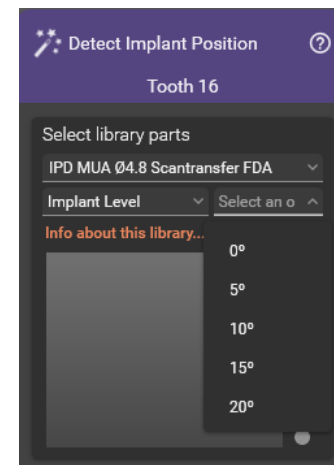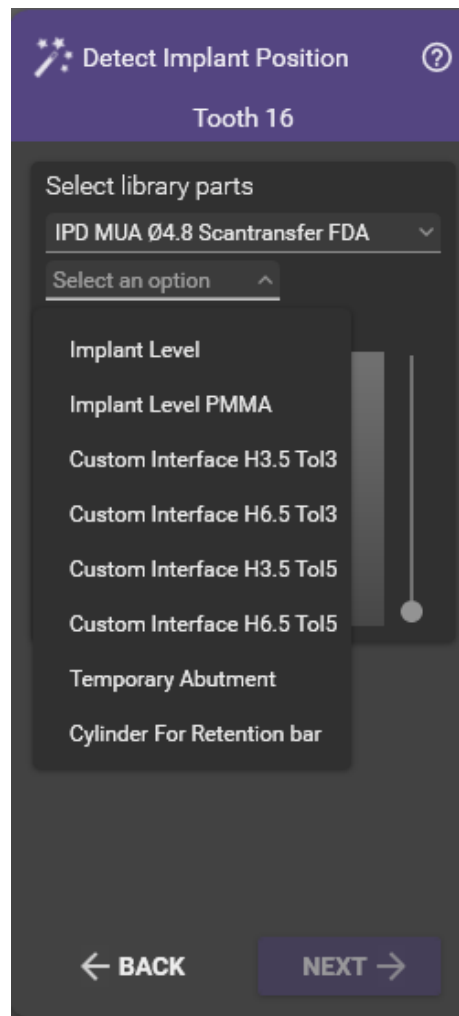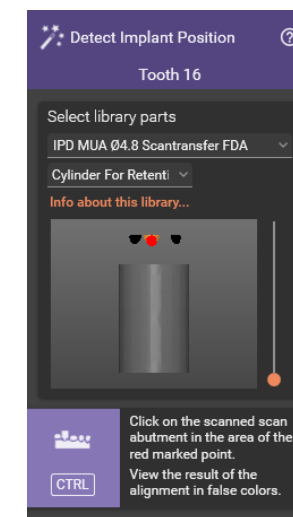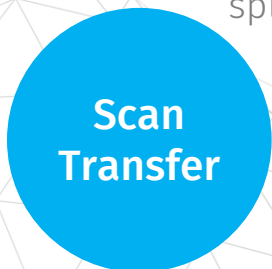
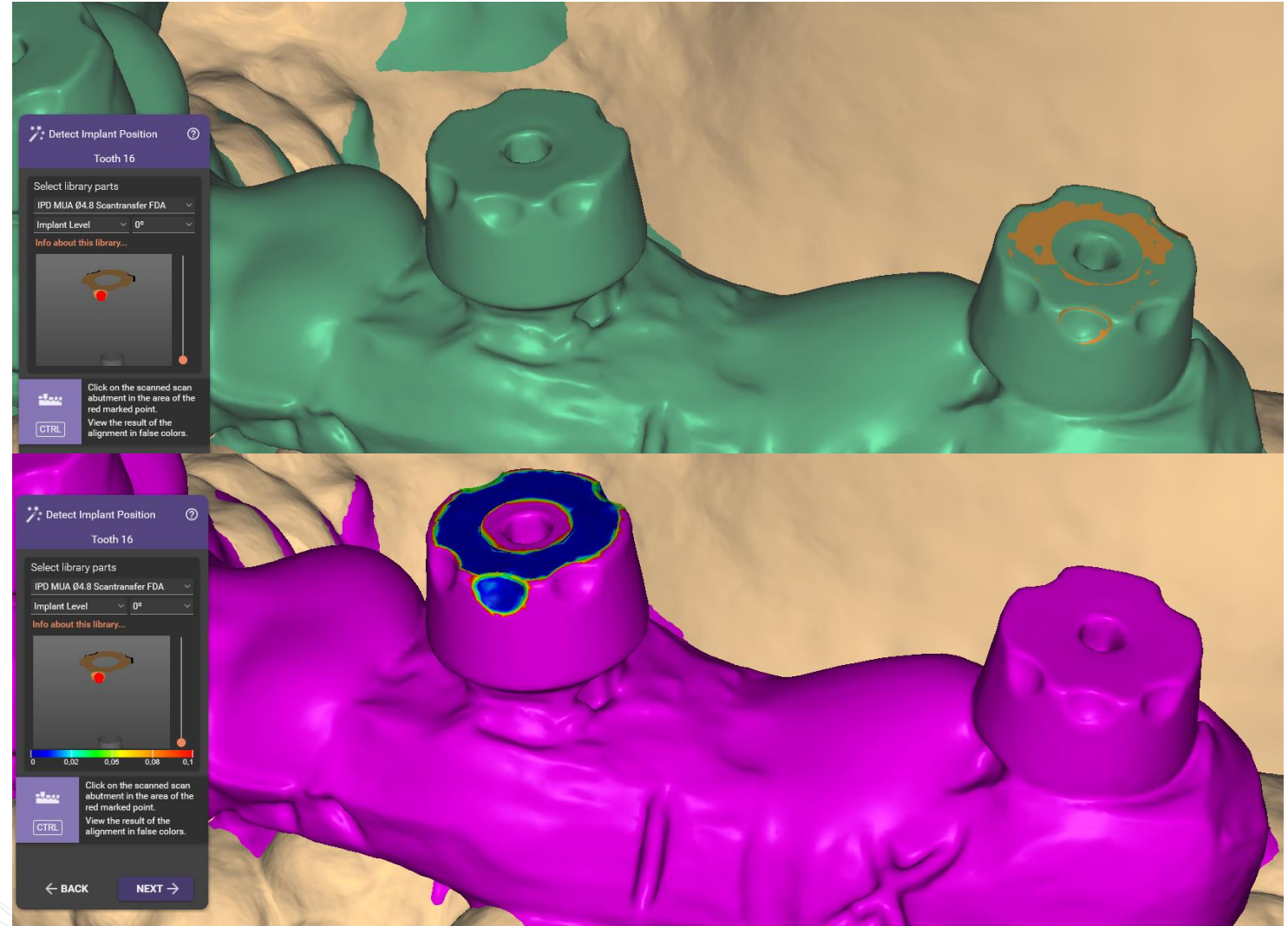Scan Transfer

a / b

c
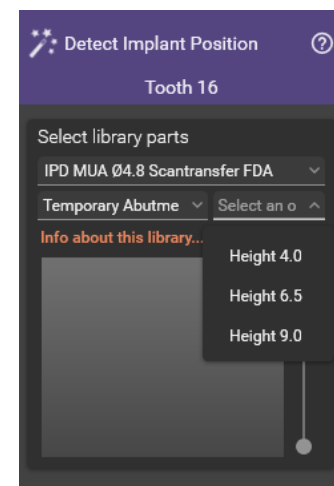
d

e

Library alignment

Thanks to the IPD Only Top technology, the alignment of Scan Transfer is offering a simple and highly accurate alignmnent protocol.

Use the middle front asymmetrical cut out to for the alignment.

Scan Transfer

ipd

Dental Group