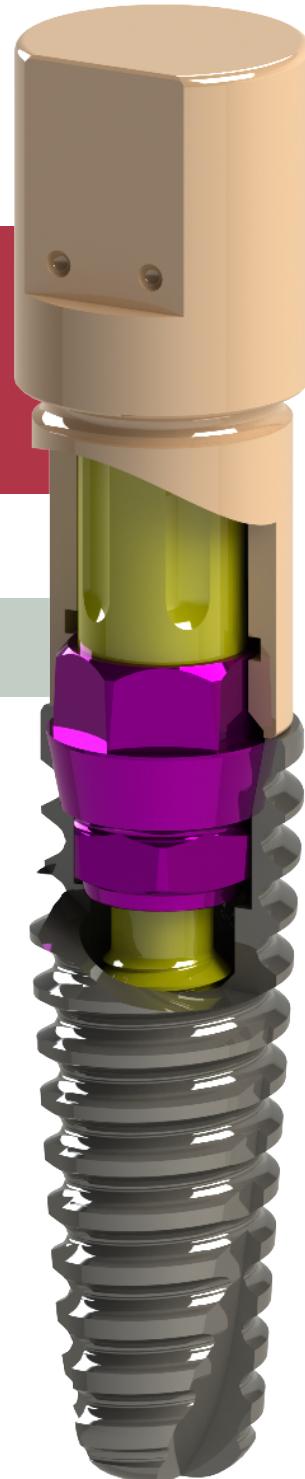


DYNAMIC
ABUTMENT®
SOLUTIONS



Full Library

exocad

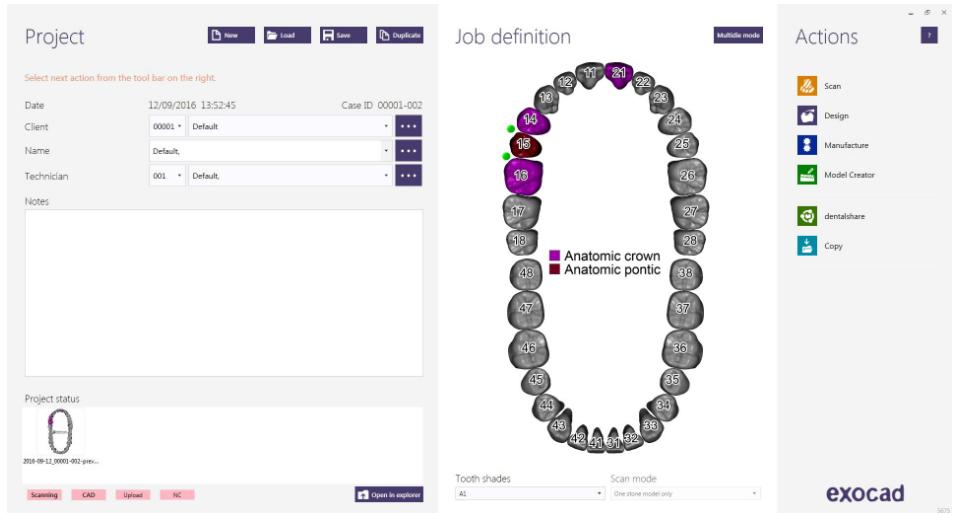
INSTRUCTIONS FOR USE

DYNAMIC ABUTMENT® SOLUTIONS LIBRARY


Mscan
Own Technology
DYNAMIC ABUTMENT® SOLUTIONS

INTRODUCTION

When starting the Exocad Dental DB program, it will appear the following screen that defines the work to do.

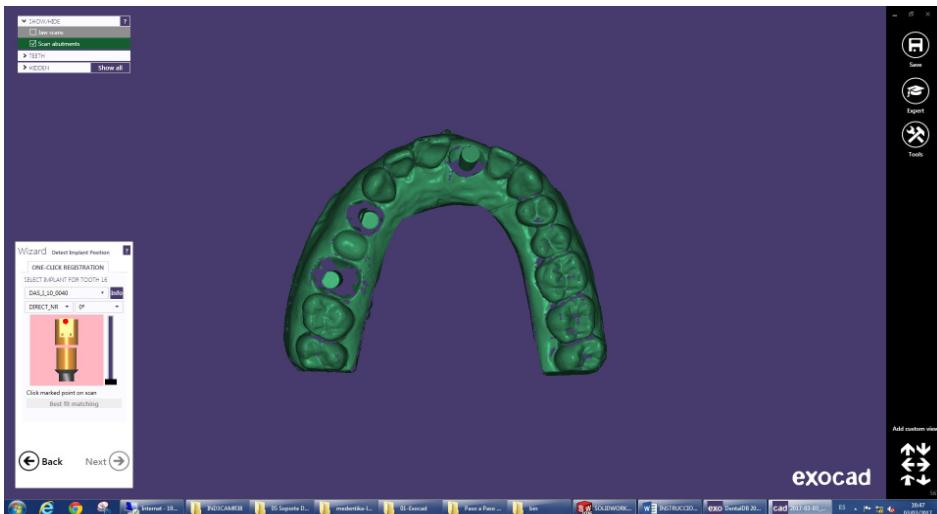


On this screen, client, patient, technician, type of work, materials, etc. is defined. The work is completely defined without specifying the brand and implant model.

It will only be necessary to specify that work will be done on implants, as the reconstruction will be based on one or more implants depending if the work is for a single or a multiple restoration.

SELECT DYNAMIC ABUTMENT® SOLUTIONS LIBRARY (DAS_I)

When selecting the DAS library to work with the Full system, you can choose between the different scanbody heights, which are 8mm, 10mm, 12mm or and along with the height, you can choose the implant compatibility (Nobel Biocare, Straumann, Astra, etc.).



The DAS library has different heights and compatibilities, which are represented by the following nomenclature:

DAS = Dynamic Abutment Solutions

I = Dynamic Scanbody

8/10/12 = Scanbody heights

0001/0002/0003/... = Compatibility

Library options:

STANDARD = Tibase+Dynamic Premilled+Digital Analog

STANDARD_PLUS=Tibase+Dynamic Premilled+Digital Analog+Direct to Implant

(Fake connection-Changes to real connection in CAM)

PREMIUM = Tibase+ Dynamic Premilled+Digital Analog+

Direct to Implant (Real values)

NOTE: the angulation of the TiBase® it goes always on the opposite side of the scanbody lateral cut. Also it is possible to move horizontally 45° the angled channel to each side from the central axis.

The company has a list (PDF) which identifies the compatibility of the implant with a number, for example: the compatibility DAS_I_10_0001 stands for Biomet 3I Certain Narrow Platform, using a 10mm scanbody.

The same number can have more than one compatibility, for example: DAS_I_10_0024 is compatible with Nobel Biocare Branemark Regular platform, but it will also be compatible with other external hexagons that are compatible with the external hexagon dimensions of Branemark Regular Platform.

Once the compatibility we want to work with is selected, you have to decide the type of work to be performed. One of the most important advantages of the system is that it has different work options.

Ti-Base_NR (CH*/GH*)= Engaging TiBase

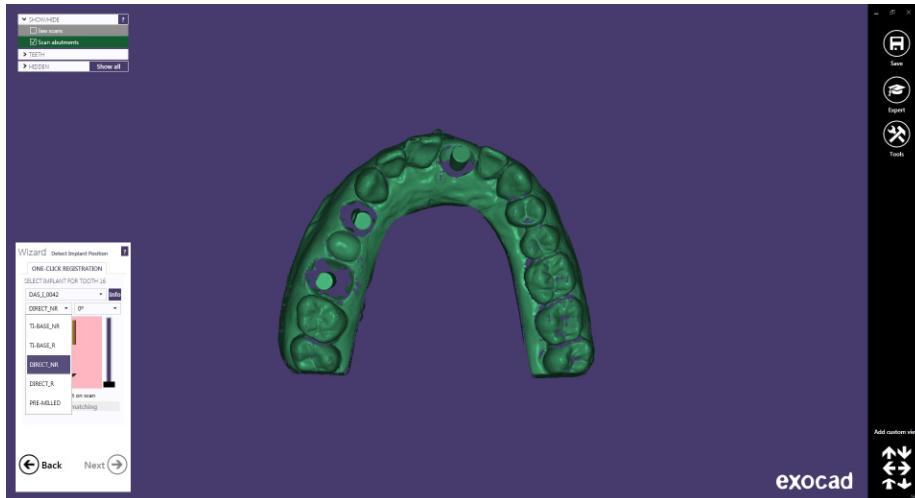
Ti-Base_R (CH*/GH*) = Non-engaging TiBase

* (CH= Cement Height / GH= Gingival Height)

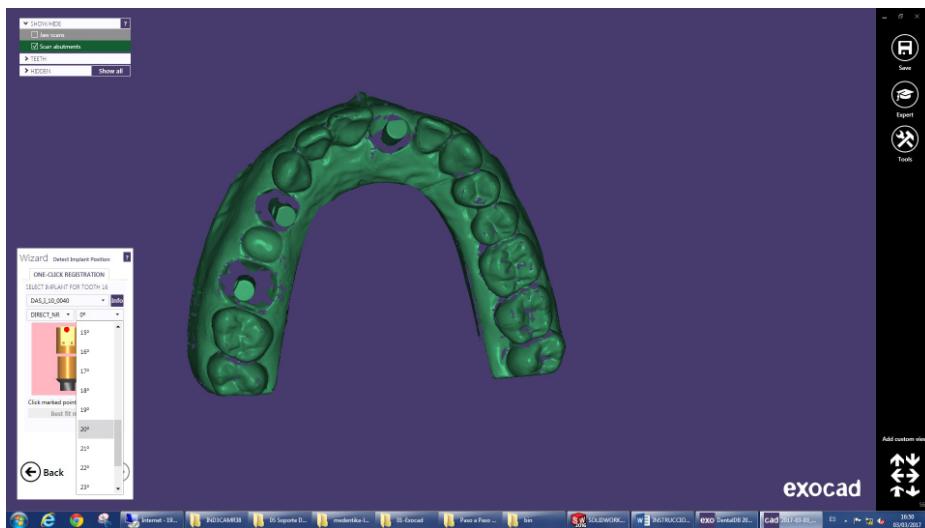
Direct_NR = Engaging direct to implant

Direct_R = Non-engaging direct to implant

Dynamic Pre-Milled = Dynamic Pre-milled for unitary restorations



After selecting the type of work to be performed, proceed to select if you want to work with straight screw channel (0°) or angled channel (up to 45°).



To explain the work to be done we will use the scanbody for number 21, 14 and 16 and we will perform a unitary work and a bridge.

In this example we will use the Direct_NR (21) and Direct_R (14 and 16) option.

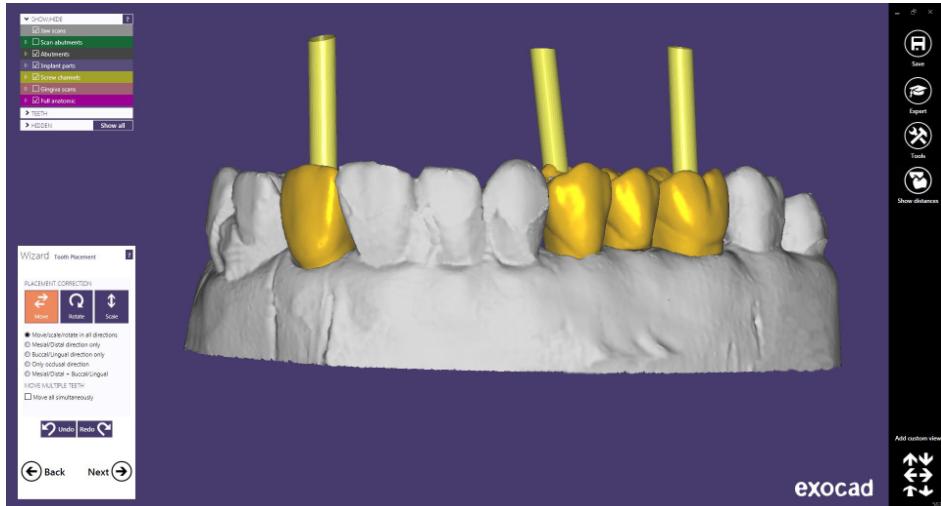
After selecting the compatibility and the type of work, proceed to choose the angulation for each structure. The example is 20° for 21, 10° for 14 and 15° for 16.

The angulation in this step is approximate, when designing the structure, you can change the angulation. It is recommended to choose the angulation as approximate to the one we want as possible, so that in the next steps the angulation change is minimal. This recommendation is due to the fact that in the Exocad angulation module any change in the angulation and direction of the channel might deform the design of the screw hole, making it larger than the one that originated at the beginning.

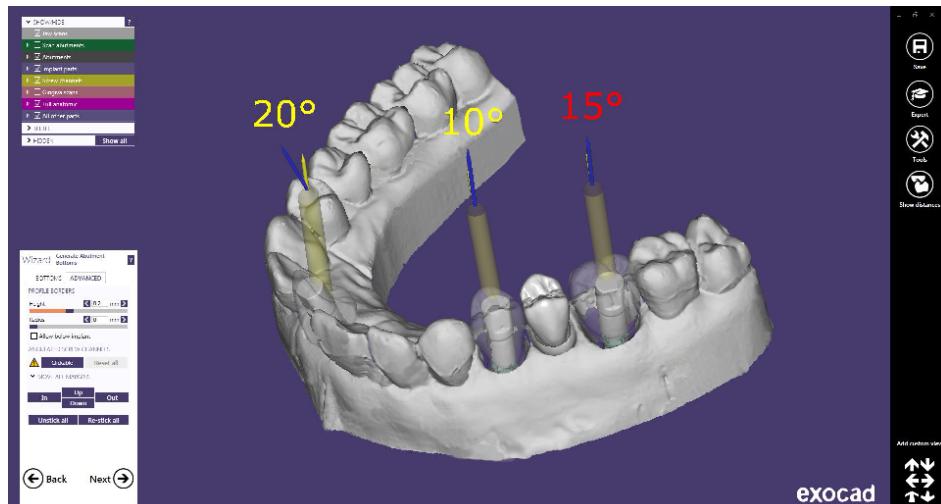
Once the scanbodies have been correctly positioned, click on “Next”.

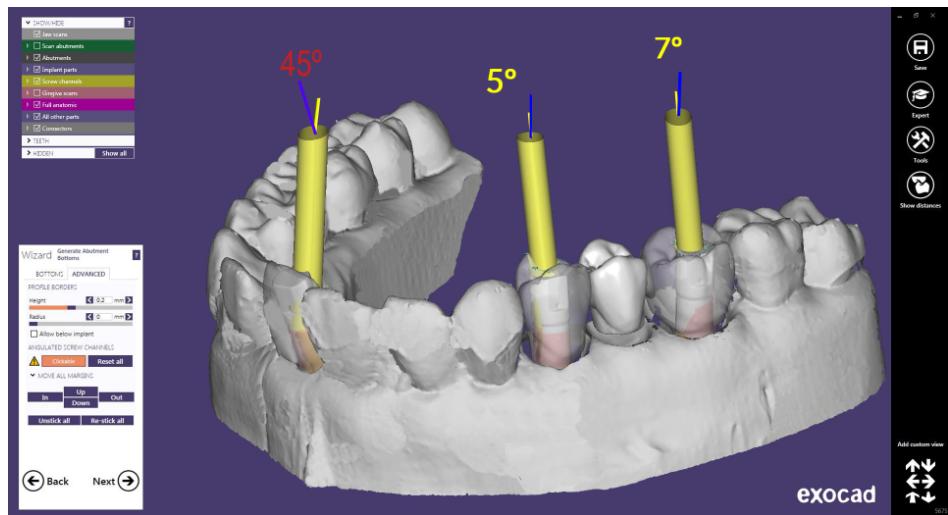
STRUCTURE DESIGN

This step defines the position, rotation and scale of the structure.

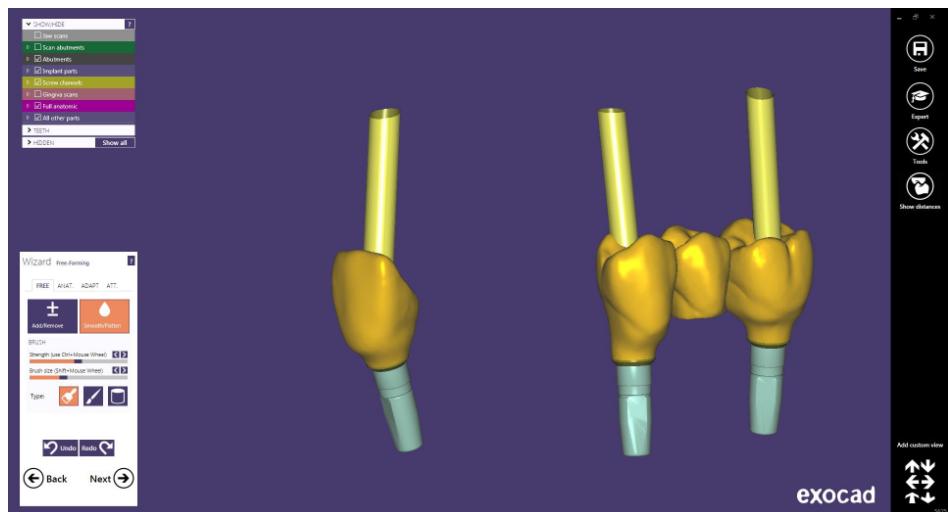


Then in “Generate Abutment Bottoms”, “Advanced”, there is an option called “Angulated Screw Channel”, where you can change the angle and direction of the screw channel. It is recommended that the change in both angulation and direction is not excessive, as the Exocad angulation module deforms the screw entry by making it larger than the original. For example, changing from 20° to 25° is a good solution, but changing from 5° to 25° would cause the channel deformation and therefore it wouldn't be aesthetic. Please mind when changing direction of the channel, because an excessive change would deform the screw channel.



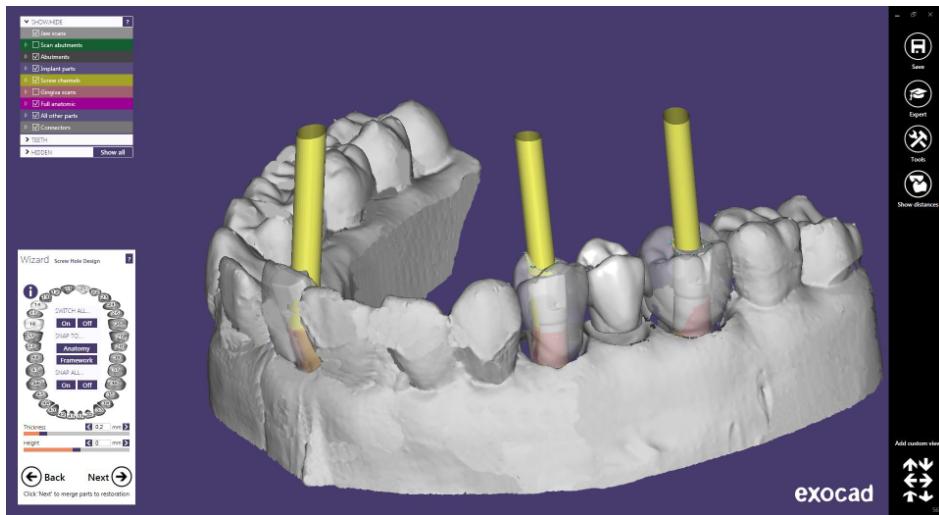


The anatomical design of the structure is defined below.



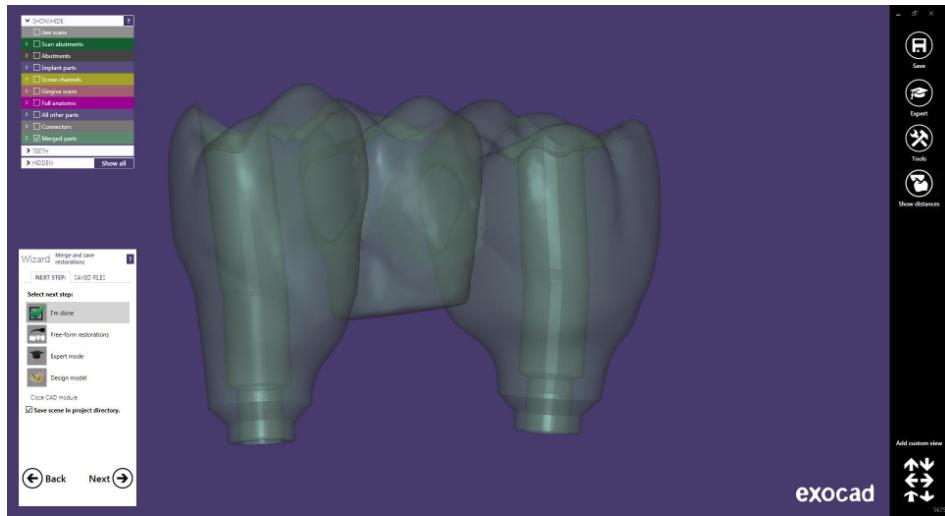
Screw hole design

In the section of screw hole design, it is possible to modify the height and the thickness of the screw hole (It is the same for any library).



Once the design of the screw hole is finished, click on “Next”, and you obtain the following design:



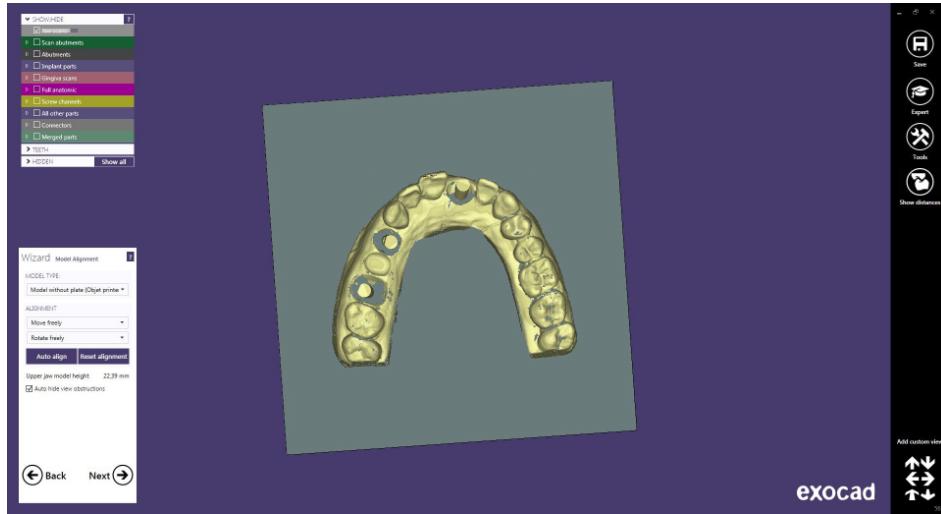


Once the work is completed, the model can be designed for subsequent 3D printing.

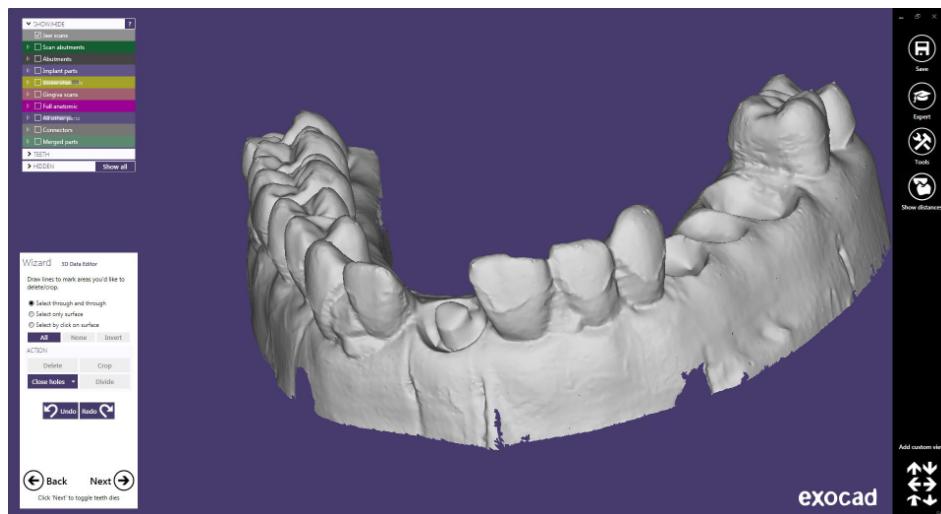
In the last image, you can see that there are different options, one of them is "Design Model" where you can proceed to the realization of the model in 3D. Click on "Design Model" to start with the design.

DIGITAL ANALOG

On the first screen, you can choose the type of model “Demo with plate”, “Model without plate (Objet printer)”, etc, and perform the alignment of the model.



On the next screen you can modify the model, like cutting parts that are not used, “Close Holes”, divide the model, etc.

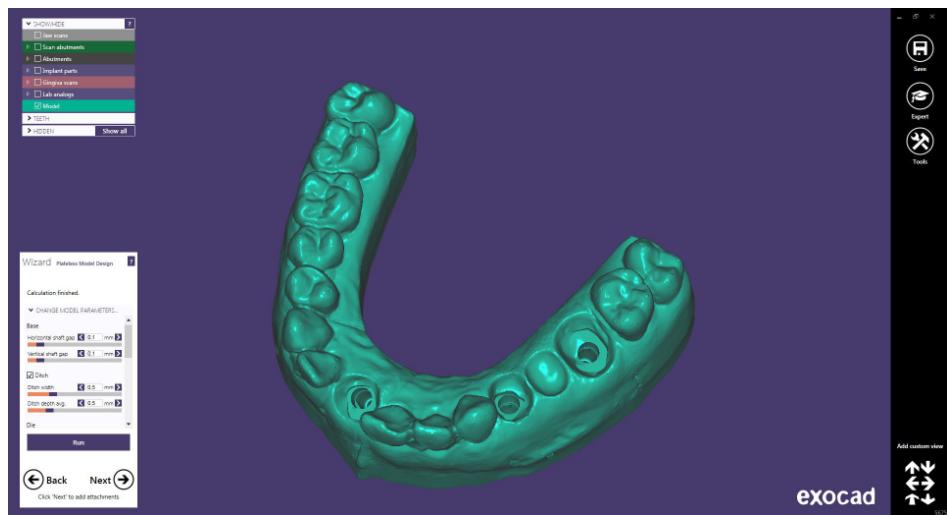


In this case proceed to close the holes and click on Next.

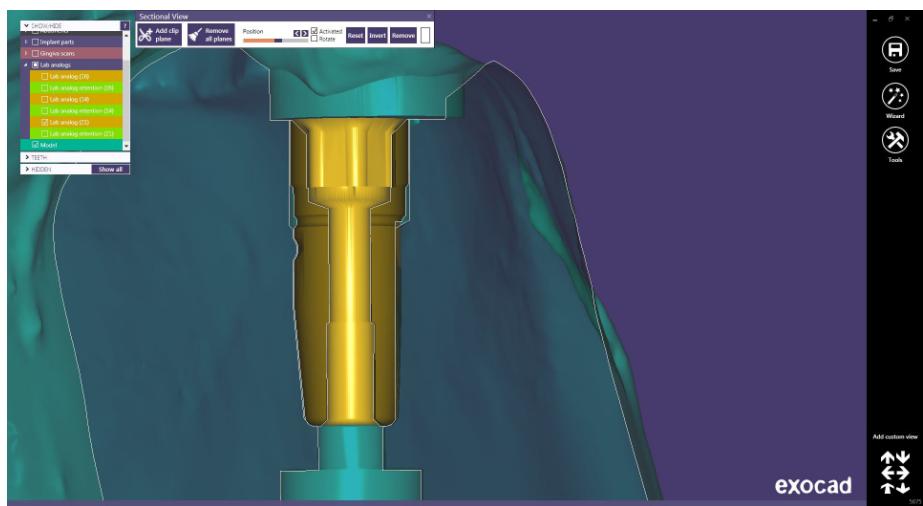
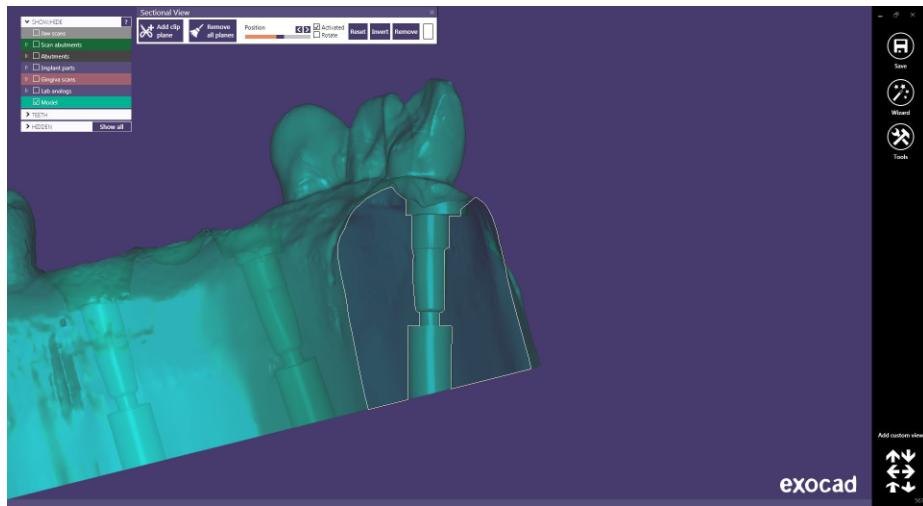
The following Exocad screen will start with the design of the 3D model with the digital analogs and leave the space for later use of the analog.

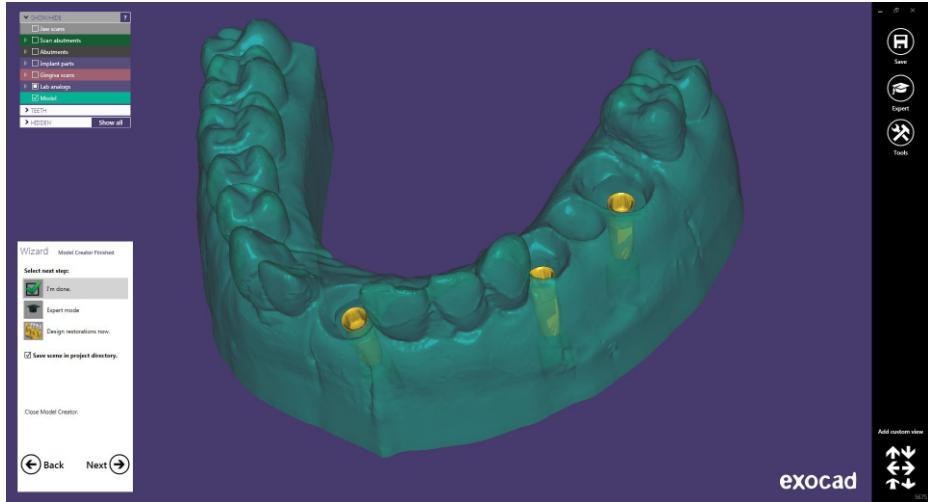


The following image shows the model with the holes. In this step you can make different modifications of the 3D, such as "Wall thickness", "Cavity fill diameter", etc.



Finally, we can see the model from different views, the hole for the digital analog and the hole with the virtual analog placed.





ANNEX: CAPTIVE LIBRARY INSTRUCTIONS FOR USE

Introduction

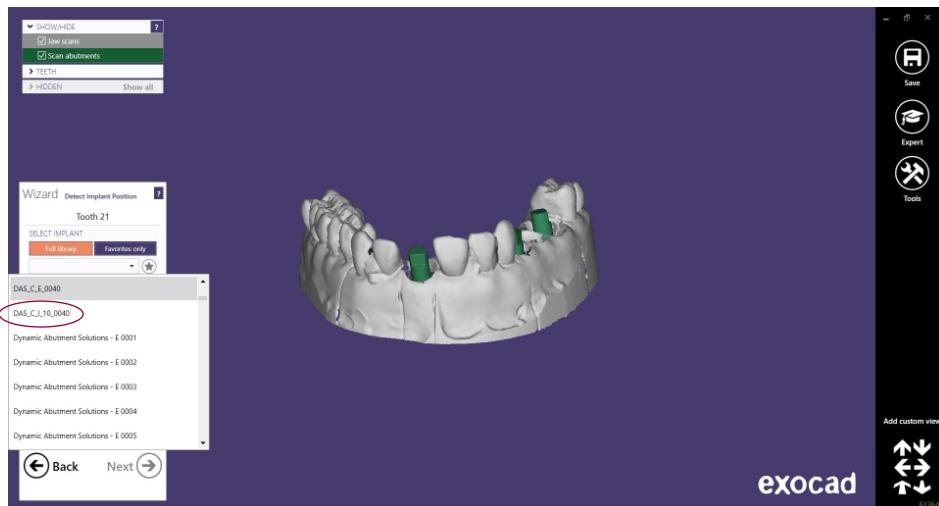
Working with captive screw, the Dynamic Abutment Solutions library is designated:

DAS_C_I_XXXX working with Dynamic scanbody.

Where C means captive, I Dynamic scanbody and XXXX the compatibility code.

Note: when working with captive screw, it is necessary to place first the screw on the Tibase and after cement the structure, obtaining approximately a screw channel of 2mm which allows to remain the captive screw.

Working with this library, the process to start the software is the same. Choose the option to work with the captive screw, selecting the library according previous indications. See the library name on following picture.

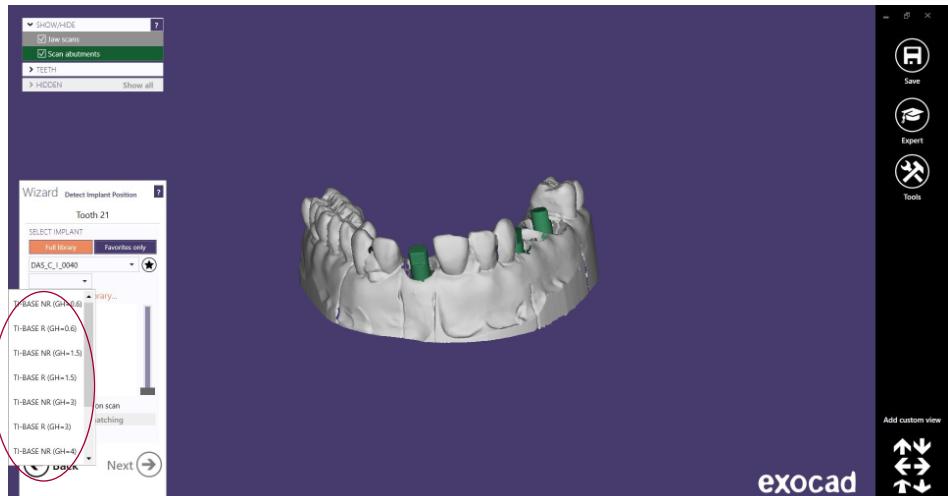


After selecting the connection to work, select the type of work. One of main advantages of this system is there are different Ti-bases with different gingival heights, either engaging or non-engaging.

Ti-Base_NR (GH*) = Engaging TiBase

Ti-Base_R (GH*) = Non-engaging TiBase

***(GH= Gingival Height)**



After selecting the type of work, select if the work is with straight (0°) channel or angulated channel up to 25° or 30° .

