



ModelPro
Powered By IPD Dental Group

Stump Die 3D User Guide





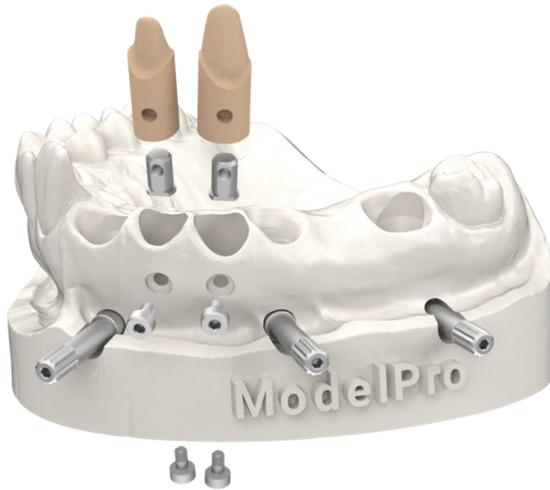
Dental Group

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Introducción



Tutorial diseño

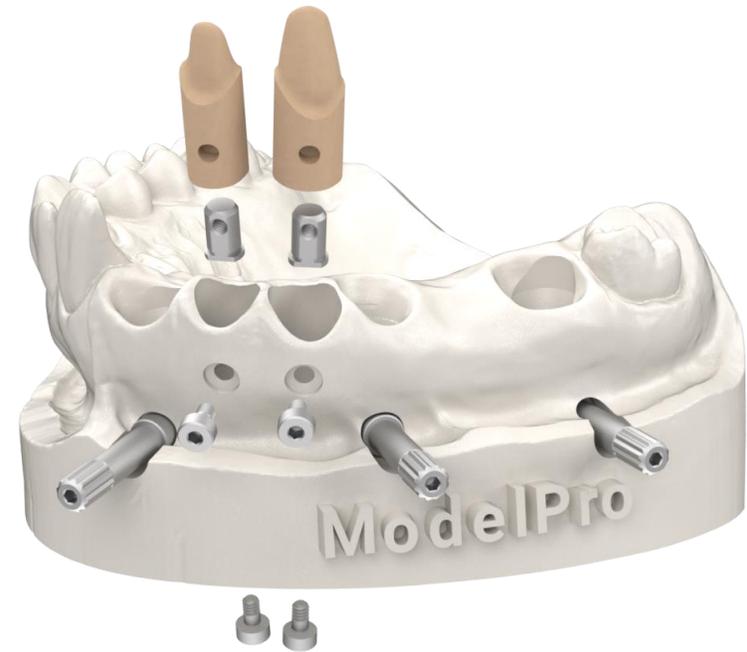
Presentación
interactiva



Stump Die 3D

Descubre el nuevo Stump Die 3D en ModelPro

- Sistema exclusivo de fijación para muñones desmontables
- Cuerpo retentivo para el muñón, para colocar en la mejor posición posible en cada caso
- Doble tornillo de fijación para asegurar la posición del muñón en el modelo (igual que el análogo 3D)
- Diferentes opciones en librería dependiendo del grosor de la pared del modelo



Stump Die 3D

Librería

Dependiendo del grosor de pared en el modelo, existen 3 librerías diferentes para diseñar la fijación lateral: “short” (corto), “regular” (estándar) y “large” (largo).

Cada librería tiene una longitud distinta para el tornillo de fijación lateral, que permite generar el espacio y soporte necesario en la pared del modelo, evitando la rotura al atornillar.

Stump Dies

Stump Dies

Stump Die Offset 0,10 mm

With Concavity

Reduction Height 1,0 mm

Reduction Angle 15 °

Reduction Offset 0,0 mm

With Die Pin

Show Cutting Cone

Show Replica

With Die Fixation

Fixation Shape

Regular (IPD/KA-ST-02) ▼

Short (IPD/KA-ST-03)

Large (IPD/KA-ST-02)

Regular (IPD/KA-ST-02)

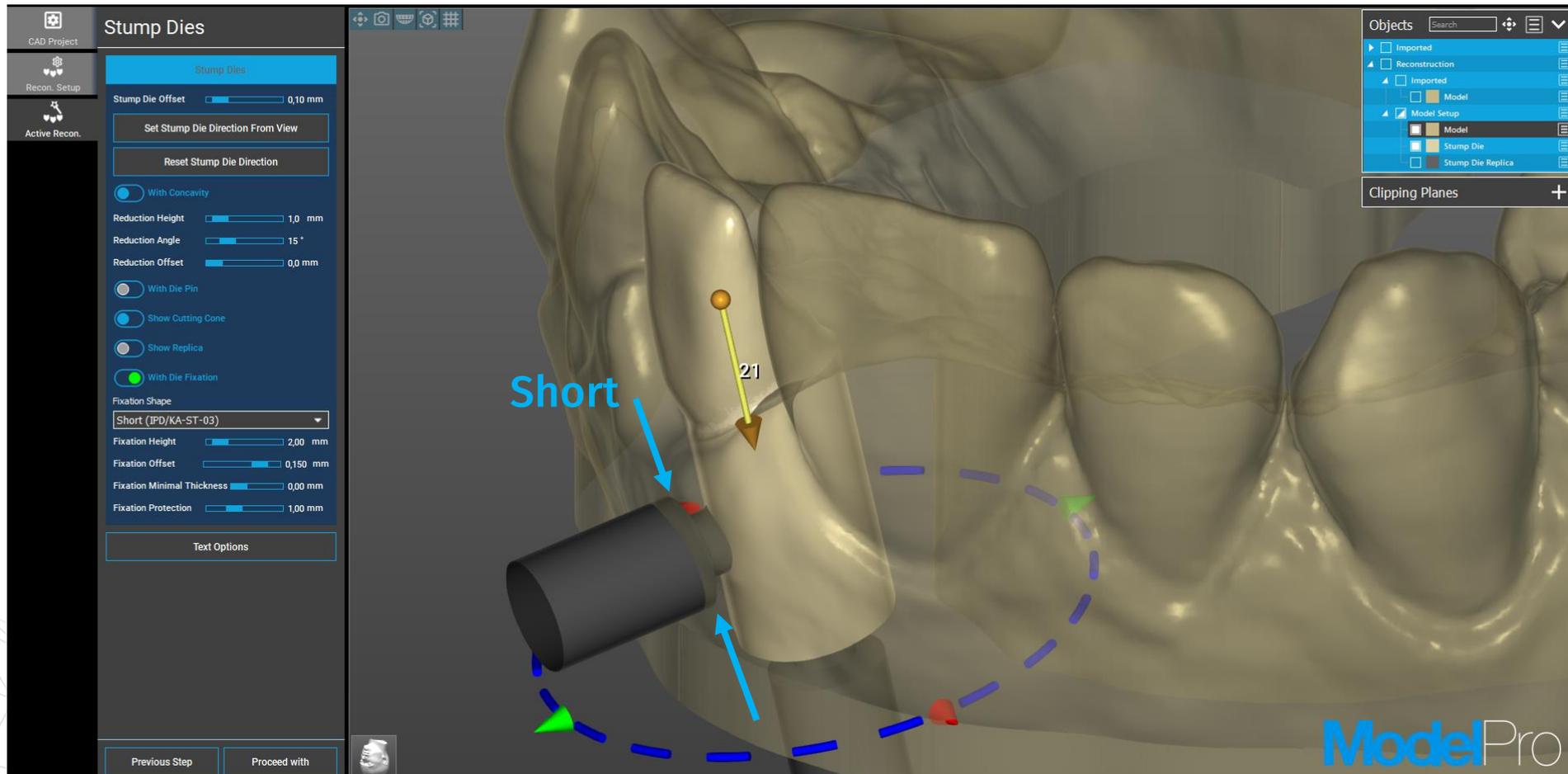
Fixation Minimal Thickness 0,00 mm

Fixation Protection 1,00 mm

Stump Die 3D

Librerías

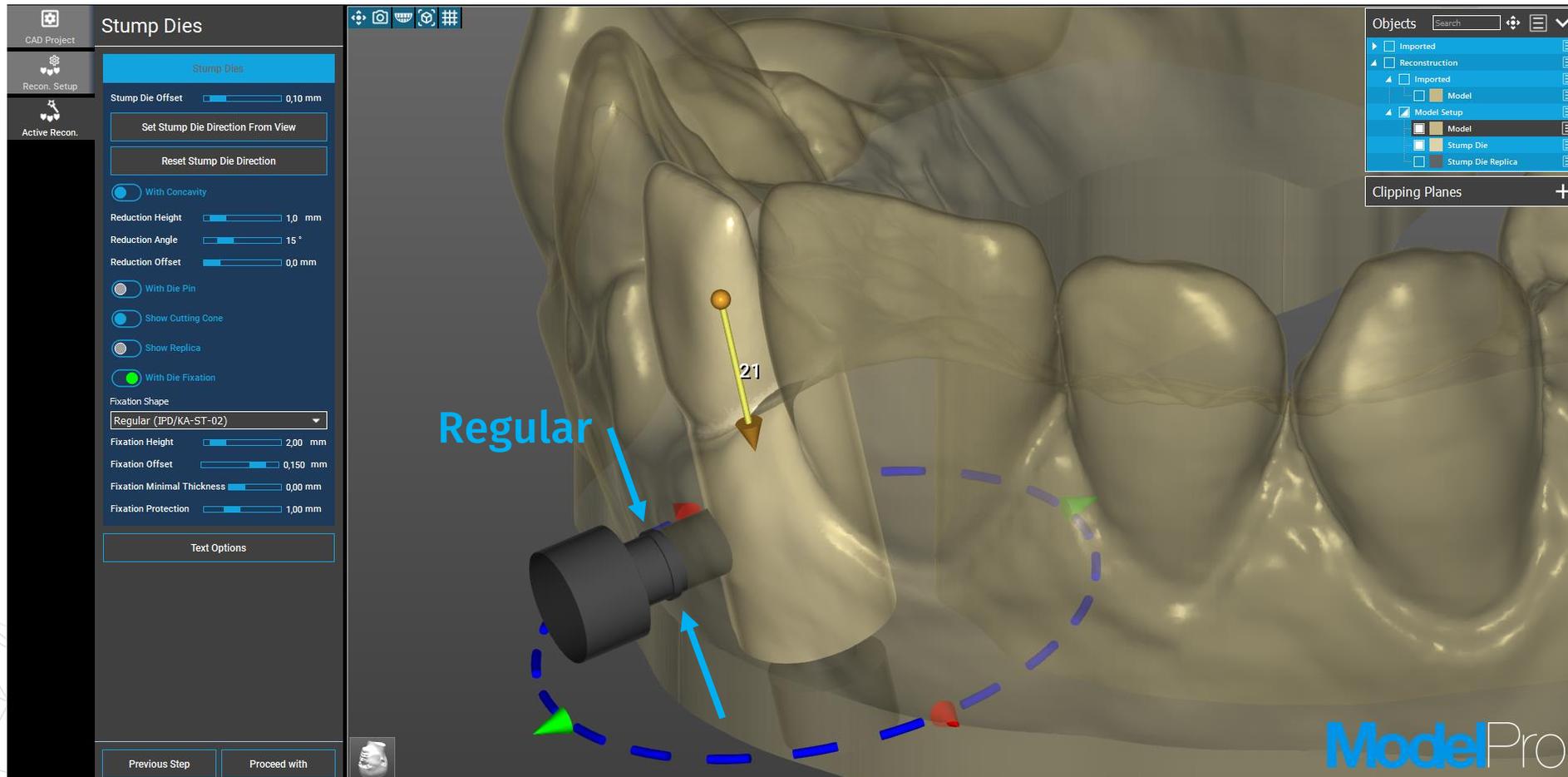
Cada librería tiene una marca en el STL, que indica el grosor mínimo de pared necesario para colocar el Stump Die 3D



Stump Die 3D

Librerías

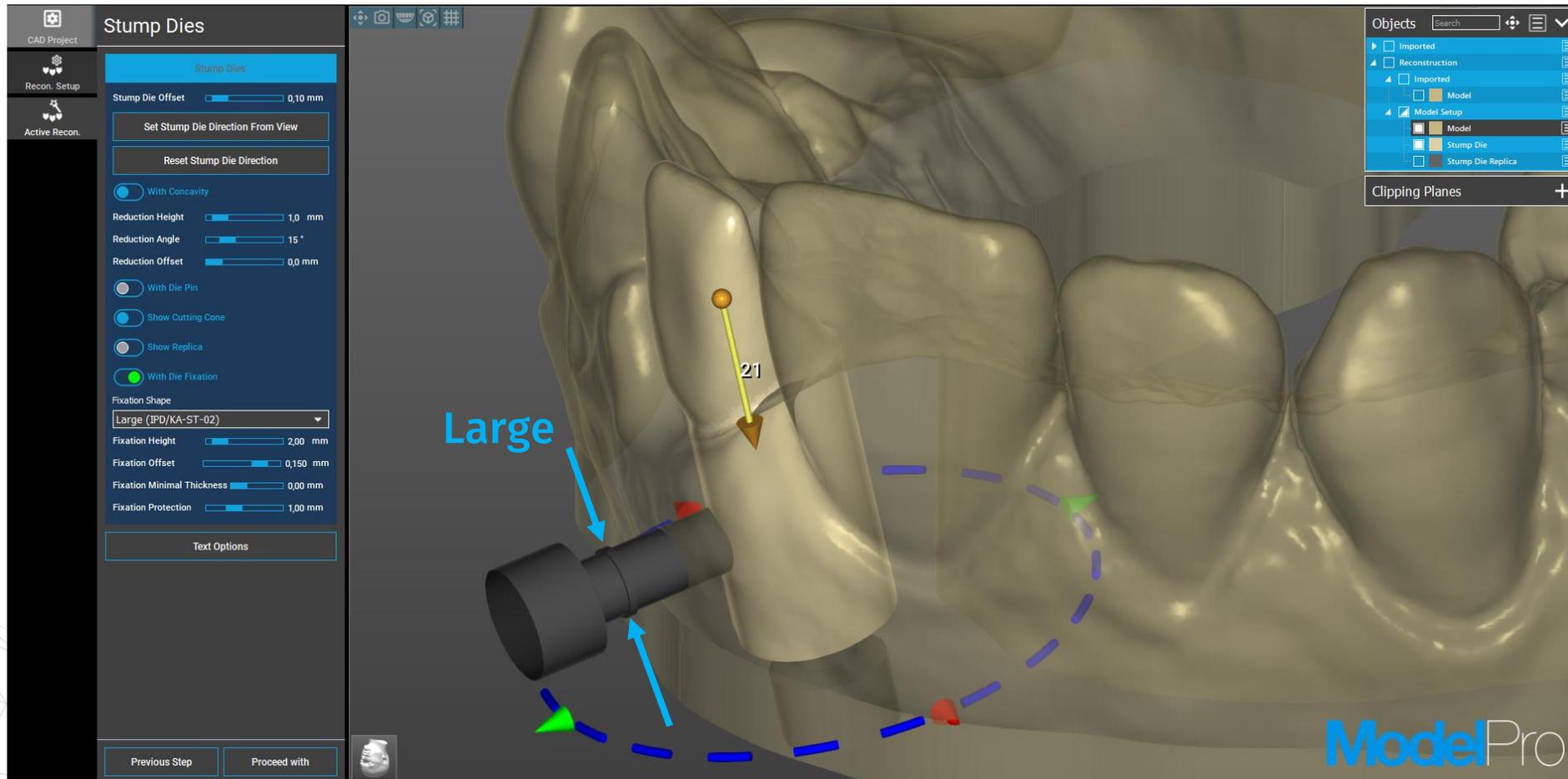
Cada librería tiene una marca en el STL, que indica el grosor mínimo de pared necesario para colocar el Stump Die 3D



Stump Die 3D

Librerías

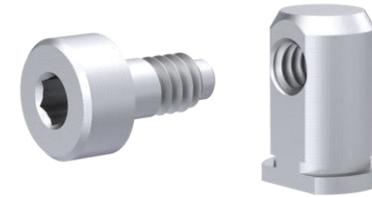
Cada librería tiene una marca en el STL, que indica el grosor mínimo de pared necesario para colocar el Stump Die 3D



Stump Die 3D

Grosor de la pared del modelo 3D

- **Short (IPD/KA-ST-03):** para modelos con paredes estrechas, se utiliza el mismo tornillo de fijación lateral e inferior.
- **Regular (IPD/KA-ST-02):** para modelos con paredes estándar, se utiliza el tornillo lateral e inferior correspondiente.
- **Large (IPD/KA-ST-02):** para modelos con paredes anchas, se utiliza el tornillo lateral e inferior correspondiente (el software genera el espacio de protección necesario en la pared del modelo).



Short



Regular / Large



Save Reset Layout Screenshot W/L Ruler **ipd** StumpDie3D Undo Redo Info Settings Support Exit

CAD Project Recon. Setup Active Recon.

Import New Files

- Scans
- Pictures

Import From RealGUIDE Project

Manage Scans

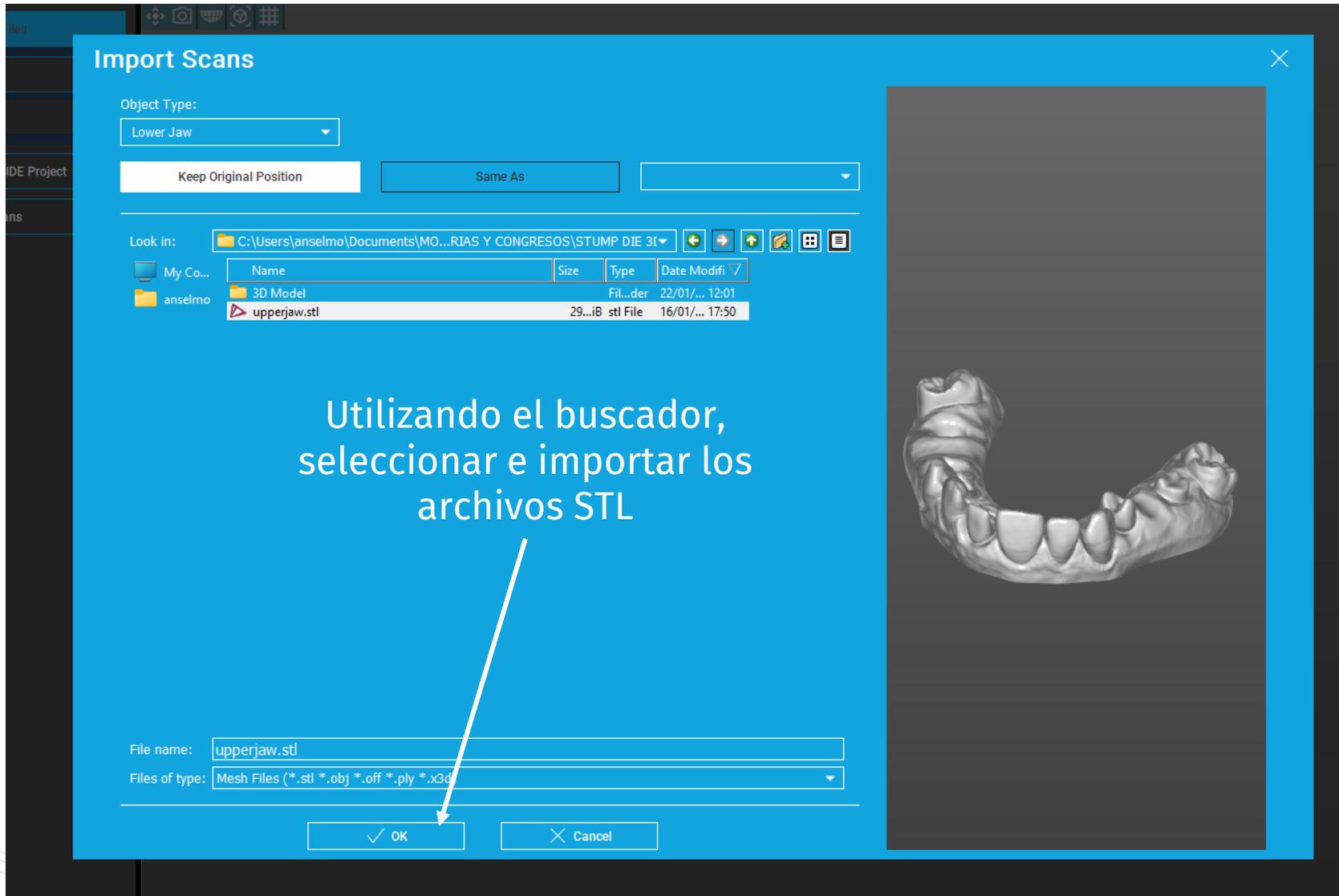
Reconstruction Setup

Clipping Planes +

ModelPro

Click aquí para importar los escaneados





Import Scans

Object Type:
Lower Jaw

Keep Original Position Same As

Look in: C:\Users\anselmo\Documents\MO...RIAS Y CONGRESOS\STUMP DIE 3f

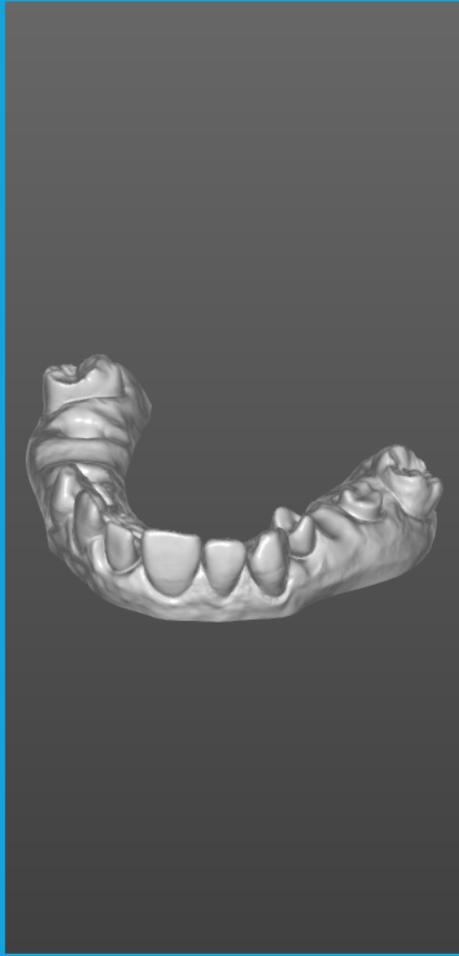
Name	Size	Type	Date Modified
3D Model		Folder	22/01/... 12:01
upperjaw.stl	29...iB	stl File	16/01/... 17:50

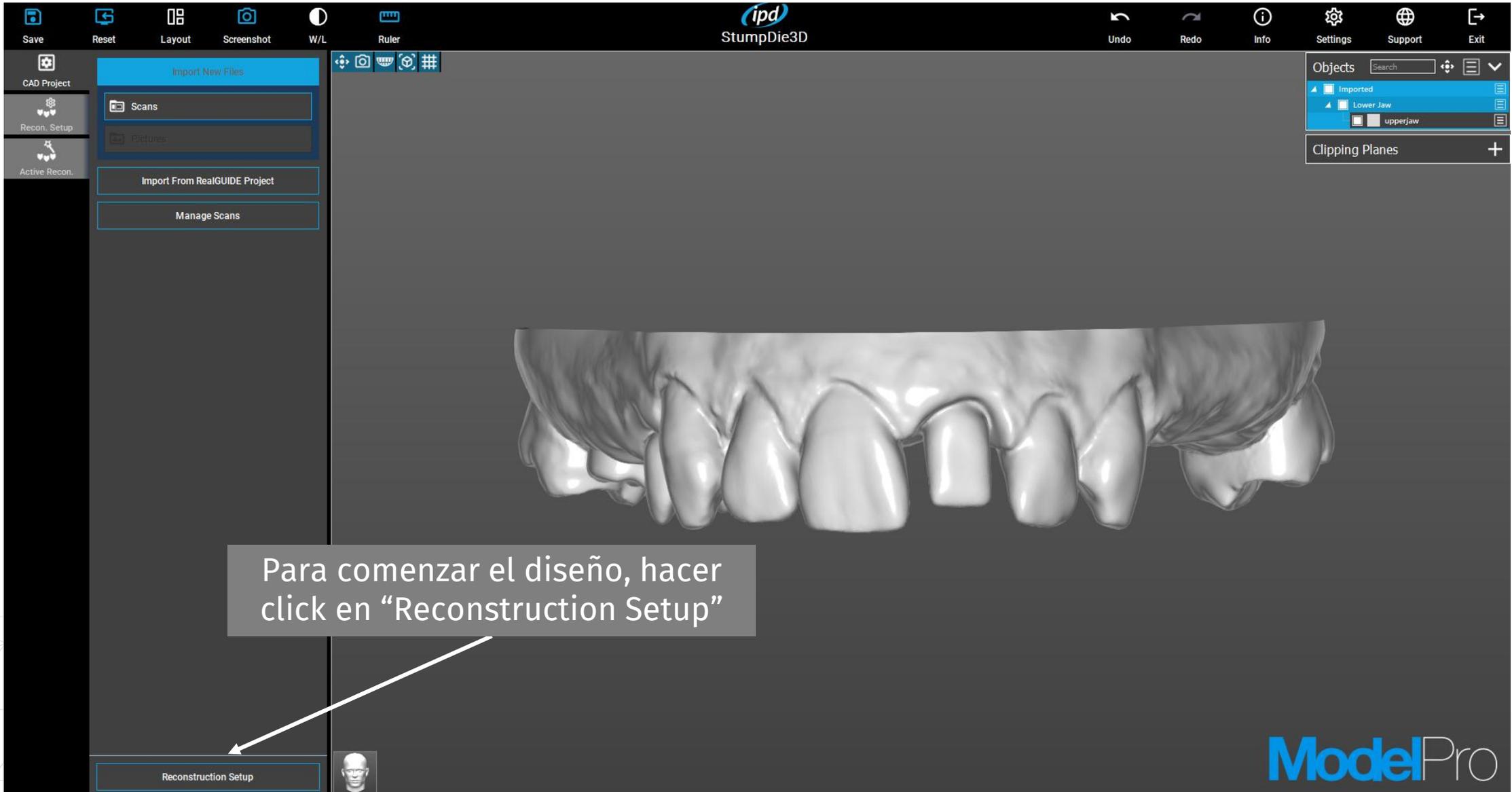
File name: upperjaw.stl

Files of type: Mesh Files (*.stl *.obj *.off *.ply *.x3d)

OK Cancel

Utilizando el buscador,
seleccionar e importar los
archivos STL





Para comenzar el diseño, hacer click en "Reconstruction Setup"

ModelPro





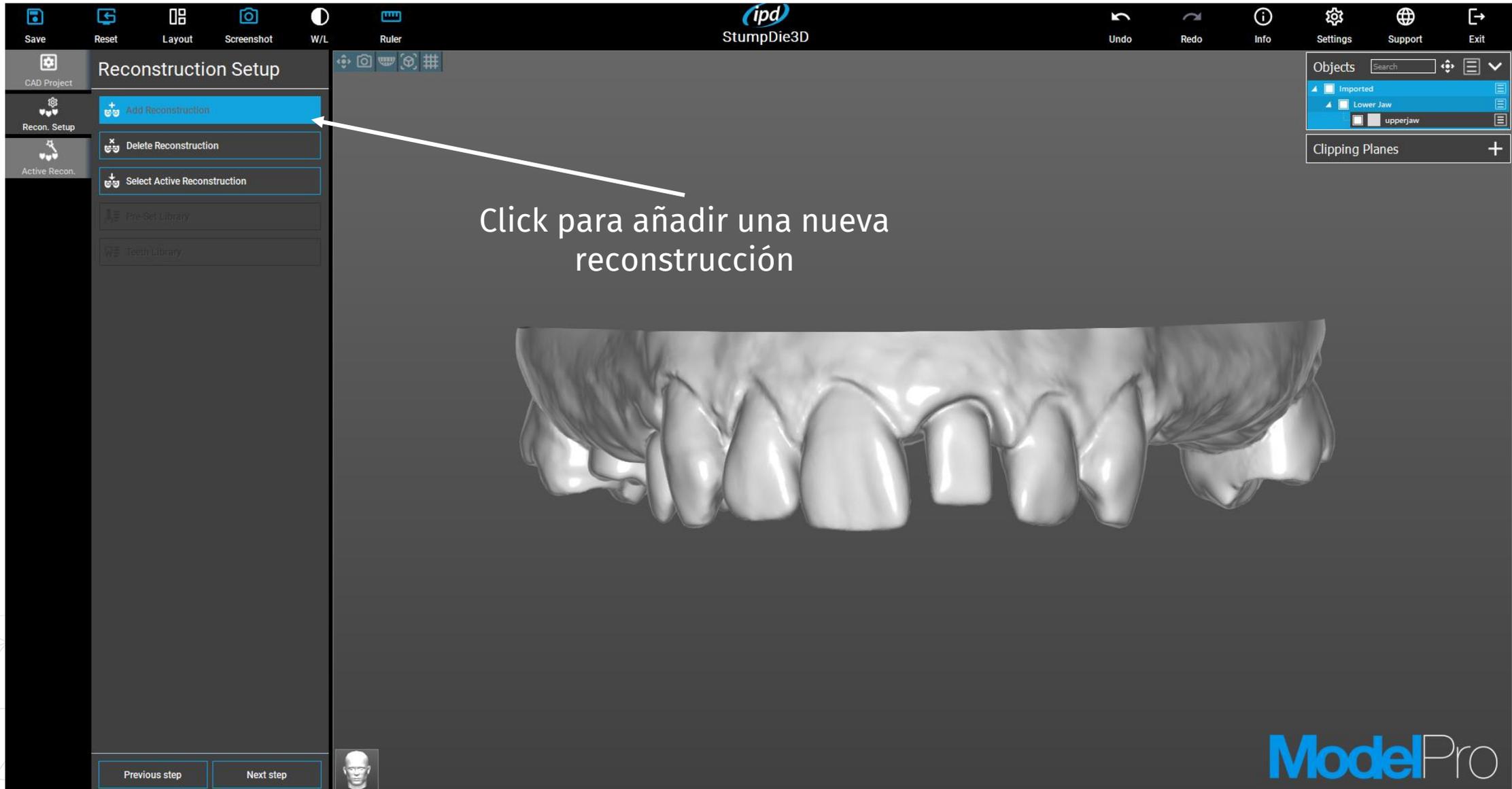
Objects Alignment [X]

Did you align the imported objects according to the annotation head?

[✓] OK [X] Cancel

Aceptar si se han importado los escaneados con la orientación correcta





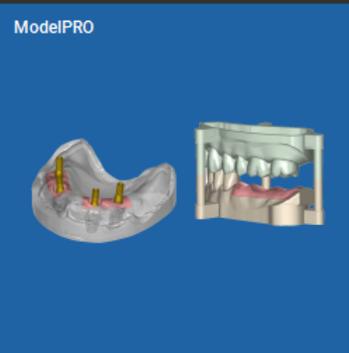
The screenshot displays the StumpDie3D software interface. At the top, there is a menu bar with icons for Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, Info, Settings, Support, and Exit. The main window is titled "StumpDie3D". On the left side, there is a "Reconstruction Setup" panel with the following options: "Add Reconstruction" (highlighted in blue), "Delete Reconstruction", "Select Active Reconstruction", "Pre-Set Library", and "Teeth Library". A white arrow points from the text "Click para añadir una nueva reconstrucción" to the "Add Reconstruction" button. On the right side, there is an "Objects" panel with a search bar and a list of objects: "Imported", "Lower Jaw", and "upperjaw". Below the "Objects" panel is a "Clipping Planes" section with a plus sign. The main workspace shows a 3D model of a lower jaw with teeth. At the bottom left, there are "Previous step" and "Next step" buttons. At the bottom right, there is a "ModelPro" logo and a small icon of a hand pointing to a button.

Click para añadir una nueva reconstrucción





ModelPRO

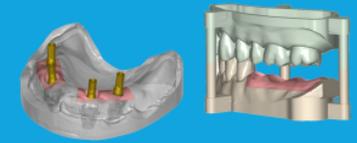


Seleccionar modelo ModelPro

✓ OK ✕ Cancel



ModelPRO



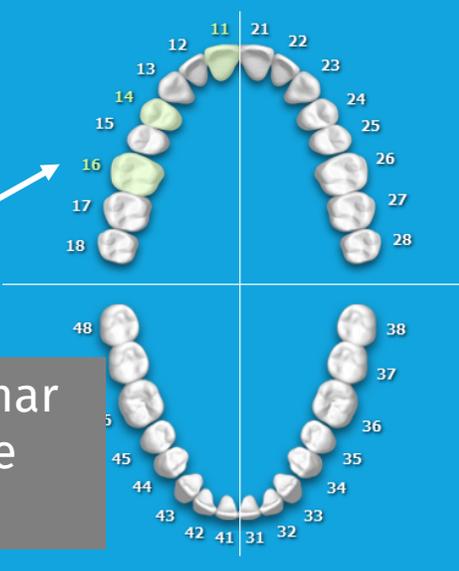
RECONSTRUCTION TYPE BASED workflow the

- Stackable stump die models
- Monolithic models with stackable gingiva replicas
- Digital analogues and stump die combination
- Reconstruction bottom stamp - out option
- Occlusor based models with or without attachments
- Reference pins based models

Reconstruction

Upper Jaw

Upper Marker



Lower Jaw

Lower Marker

Mockup options

Material Library Pre-Set Library

Color

En el odontograma, seleccionar únicamente los dientes que tienen preparación





The screenshot displays the ipd StumpDie3D software interface. At the top, there is a menu bar with icons for Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, Info, Settings, Support, and Exit. The main workspace shows a 3D model of an upper jaw with teeth, with a yellow reconstruction overlay. On the left, the 'Reconstruction Setup' panel includes buttons for 'Add Reconstruction', 'Delete Reconstruction', and 'Select Active Reconstruction', along with 'Pre-Set Library' and 'Teeth Library' sections. Below these is the 'Active Reconstruction' section, which shows details for the current reconstruction: Type: ModelPRO, Name: Reconstruction, Model: upperjaw, Teeth Library: RG Generic JP-1, and Prefabricated: No. An 'Export Construction Info' button is also present. At the bottom of the setup panel is a dental arch diagram with teeth numbered 11 through 48. Below the diagram are 'Previous step' and 'Next step' buttons. On the right side of the interface, there is an 'Objects' panel with a search bar and a tree view showing 'Imported', 'Upper Jaw', 'Reconstruction', and 'Model'. Below the objects panel is a 'Clipping Planes' section with a plus sign. The 'ModelPro' logo is visible in the bottom right corner of the software interface.

Una vez creada la orden de trabajo, click “siguiente” para continuar con el diseño



The screenshot displays the ipd StumpDie3D software interface. At the top, a menu bar includes options like Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, Info, Settings, Support, and Exit. The main workspace shows a 3D model of a dental arch with teeth numbered 11 through 28. A 'Teeth Assignment' panel on the left lists 'Crown Margin' (highlighted in green), 'Archive Model' (checked), and 'Implant Marker' (highlighted in blue). A white arrow points from the text 'Seleccionar cada diente como “línea de margen”' to the 'Crown Margin' option. The 'Objects' panel on the right shows a hierarchy: Imported > Reconstruction > Imported > Model. The 'Clipping Planes' panel is also visible. At the bottom, there are 'Previous Step' and 'Next Step' buttons, a small user icon, and the 'ModelPro' logo.

Seleccionar cada diente como “línea de margen”





The screenshot shows the ipd StumpDie3D software interface. The top toolbar includes icons for Save, Reset, Layout, Screenshot, W/L, and Ruler. The main window displays a 3D dental model with a black margin line around a preparation. A white arrow points from a text box to this margin line. On the left, a 'Margin Lines' panel shows a dental arch with teeth numbered 11-28. Below it, a 'Detect Margin Line' panel has a 'Ridges' toggle switch turned on. A white arrow points from a text box to this toggle switch. At the bottom of the panel are 'Previous Step' and 'Next Step' buttons.

Click en la línea de margen para que el software detecte automáticamente la curva

Para mejorar la detección automática del margen, desactivar la opción "Crestas"





The screenshot displays the ipd StumpDie3D software interface. On the left, a vertical sidebar contains several panels: 'Margin Lines' showing a dental arch with teeth numbered 11-28 and tooth 16 highlighted in green; 'Correct Margin Line' with buttons for 'Edit Margin Line', 'Section Edit', and 'Finalize'; and 'Insert Directions' with options for 'Set Insert Direction From View' and 'Best Direction'. At the bottom of the sidebar are 'Previous Step' and 'Next Step' buttons. The main workspace shows a 3D model of a dental crown with a black margin line. A green line is drawn over the margin line, and a white arrow points to it. A red number '16' is visible on the crown's surface. The top of the interface includes a menu bar with icons for Save, Reset, Layout, Screenshot, W/L, Ruler, and Undo/Redo.

Save Reset Layout Screenshot W/L Ruler Undo Redo

ipd StumpDie3D

CAD Project

Margin Lines

Recon. Setup

Active Recon.

11 21 22 23 24 25 26 27 28

12 13 14 15 16 17 18

Correct Margin Line

Edit Margin Line

Section Edit

Finalize

Insert Directions

Set Insert Direction From View

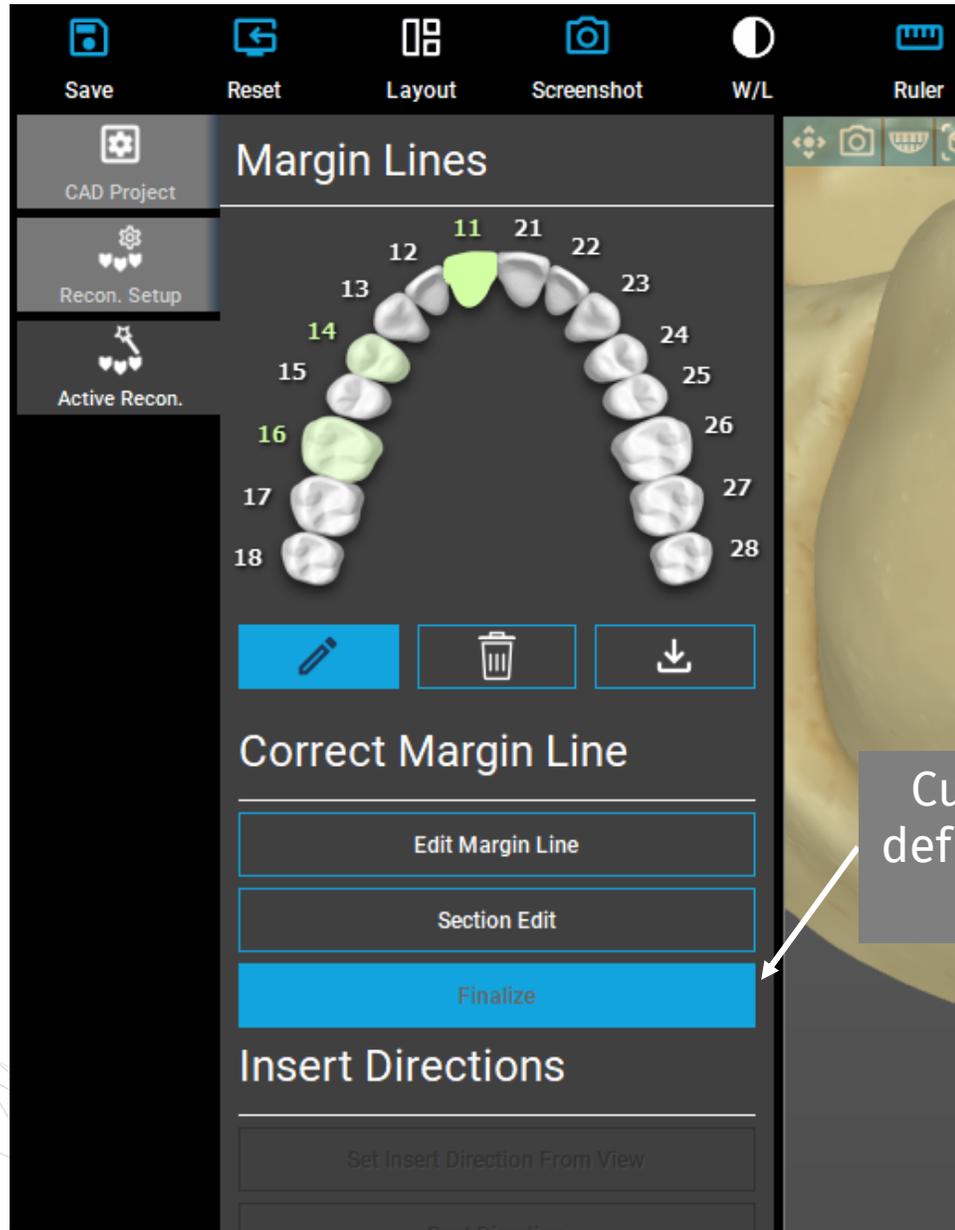
Best Direction

Previous Step Next Step

Seleccionando "Corregir línea de margen" es posible modificar la curva simplemente dibujando.

16





Cuando todas las líneas de margen estén definidas, click en "Finalizar" para aplicar la selección y continuar el diseño





Save Reset Layout Screenshot W/L Ruler ipd StumpDie3D Undo Redo Info Settings Support Exit

Model Edit

CAD Project

Recon. Setup

Active Recon.

- Mesh Repair
- Reconstruct Mesh
- Isotropic Remesh
- Simplify Mesh
- Flip Normals
- Fill Holes
- Remove Isolated Components
- Offset By Brush

Cut By

- Area
- Brush
- Lasso
- Spline

Boundary Edit

- Boundary Straightening
- Boundary Restoration
- Boundary Extension

Previous Step Next Step

Objects

- Imported
- Reconstruction
 - Imported
 - Model
- Model Setup
 - Model

Freeform Tools

Clipping Planes

ModelPro

En el paso de diseño “Edición de modelo”, es posible modificar y editar los STL utilizando las diferentes herramientas de corte, reparación, reconstrucción, etc.

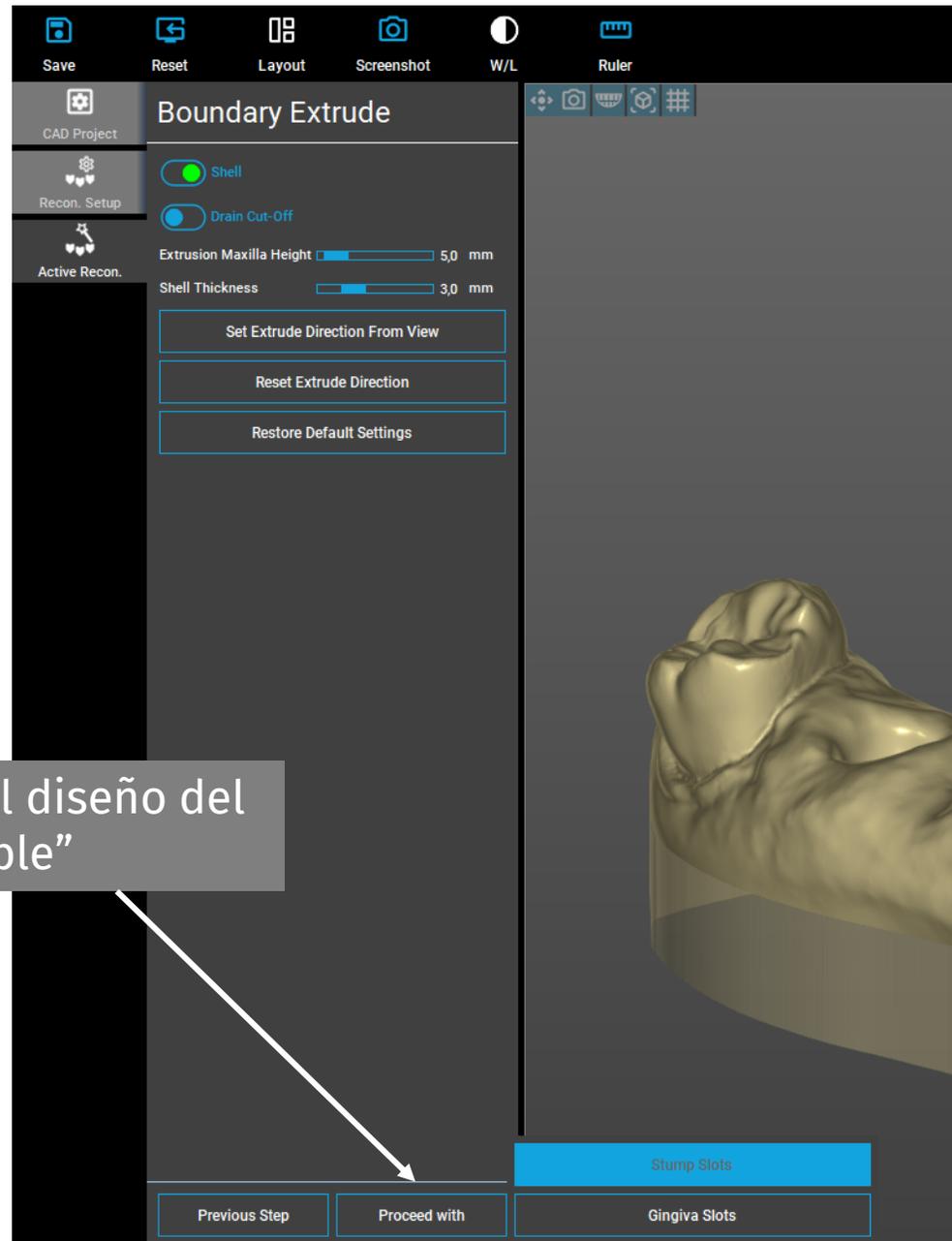




The screenshot displays the ipd StumpDie3D software interface. The top toolbar includes icons for Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, Info, Settings, Support, and Exit. The left sidebar shows the 'Boundary Extrude' settings panel with options for 'Shell' (checked), 'Drain Cut-Off' (checked), 'Extrusion Maxilla Height' (5,0 mm), and 'Shell Thickness' (3,0 mm). Below these are buttons for 'Set Extrude Direction From View', 'Reset Extrude Direction', and 'Restore Default Settings'. The main workspace shows a 3D dental model with a yellow arrow pointing to a specific area. The right sidebar contains an 'Objects' list and a 'Clipping Planes' section. The bottom of the interface features 'Previous Step' and 'Proceed with' buttons, a small portrait icon, and the 'ModelPro' logo.

En este paso de diseño es posible modificar la base, altura o pared del modelo y seleccionar entre modelo 3D hueco o sólido con la opción “carcasa”





Click aquí y continuar con el diseño del
“troquel desmontable”





Seleccionar cada diente (marcado en verde) para diseñar el muñón desmontable y añadir el Stump Die 3D



Save Reset Layout Screenshot W/L Ruler Undo Redo Info Settings Support Exit

ipd StumpDie3D

CAD Project

Stump Dies

Recon. Setup

Active Recon.

Stump Dies

Stump Die Offset 0,00 mm

Set Stump Die Direction From View

Reset Stump Die Direction

With Concavity

Reduction Height 1,0 mm

Reduction Angle 15°

Reduction Offset 0,0 mm

With Die Pin

Show Cutting Cone

Show Replica

With Die Fixation

Text Options

Objects

- Imported
- Reconstruction
 - Imported
 - Model
 - Model Setup
 - Model
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Stump Die Replica

Clipping Planes

11 14 15

Seleccionar la dirección de inserción arrastrando la flecha

Previous Step Proceed with

ModelPro



The screenshot displays the StumpDie3D software interface. At the top, there is a menu bar with icons for Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, Info, Settings, Support, and Exit. The main window shows a 3D dental model with three stumps labeled 11, 14, and 16. A settings panel on the left is titled "Stump Dies" and includes a slider for "Stump Die Offset" set to 0,30 mm, which is highlighted by a white arrow. Other settings include "Reduction Height" (1,0 mm), "Reduction Angle" (15°), and "Reduction Offset" (0,0 mm). The "Objects" panel on the right shows a hierarchy of objects including "Imported", "Reconstruction", "Model", and "Model Setup". The "Model Setup" panel is expanded, showing "Model", "Stump Die", and "Stump Die Replica". The "Clipping Planes" panel is also visible at the bottom right. The "ModelPro" logo is in the bottom right corner of the main window.

Save Reset Layout Screenshot W/L Ruler Undo Redo Info Settings Support Exit

Stump Dies

CAD Project

Recon. Setup

Active Recon.

Stump Die Offset 0,30 mm

Set Stump Die Direction From View

Reset Stump Die Direction

With Concavity

Reduction Height 1,0 mm

Reduction Angle 15°

Reduction Offset 0,0 mm

With Die Pin

Show Cutting Cone

Show Replica

With Die Fixation

Text Options

Previous Step Proceed with

Objects

Imported

Reconstruction

Imported

Model

Model Setup

Model

Stump Die

Stump Die Replica

Stump Die

Stump Die Replica

Stump Die

Stump Die Replica

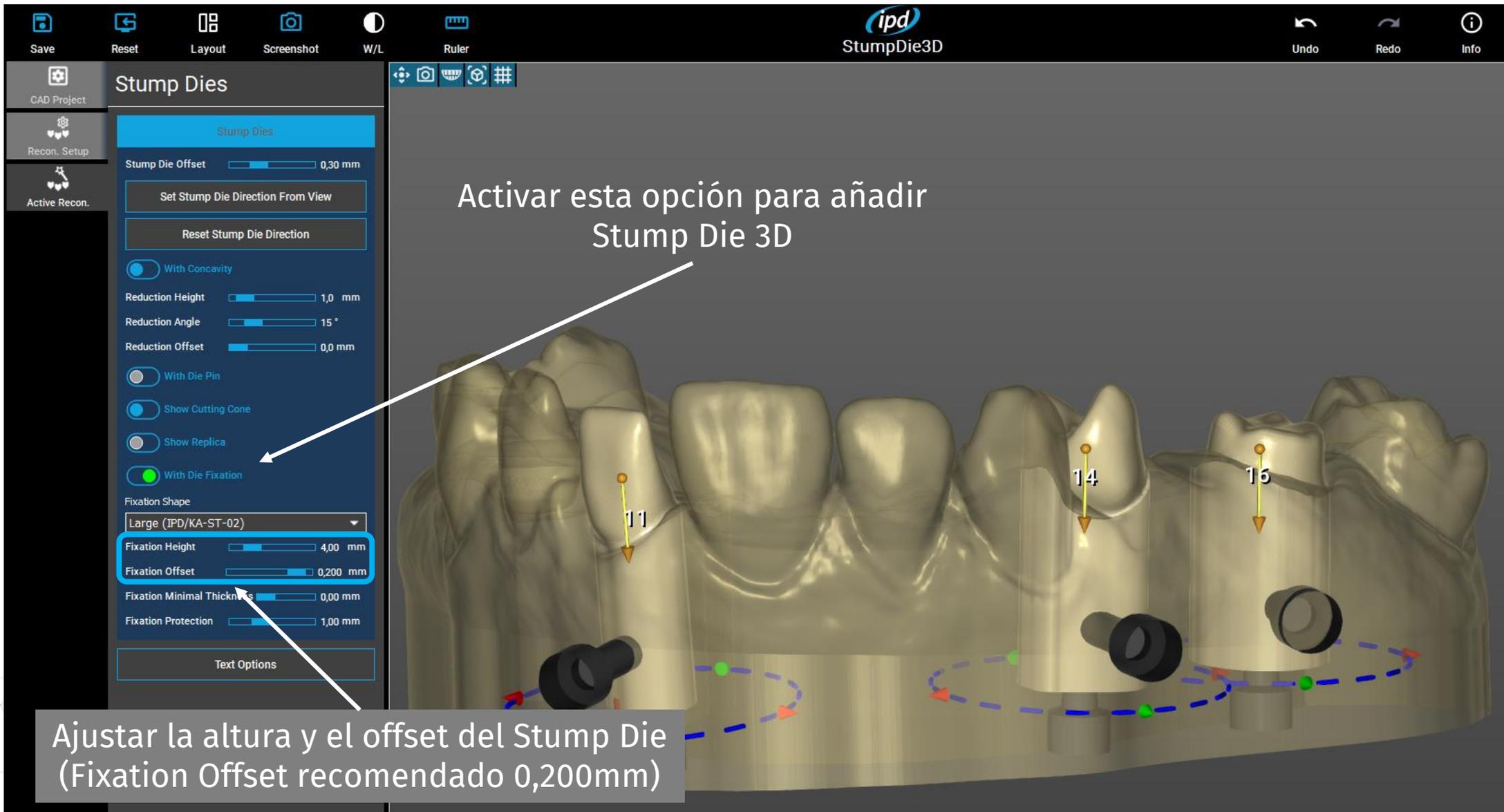
Clipping Planes

ModelPro

11 14 16

Seleccionar el offset para el muñón desmontable
(espacio entre troquel y modelo)





The screenshot displays the ipd StumpDie3D software interface. The top toolbar includes icons for Save, Reset, Layout, Screenshot, W/L, Ruler, Undo, Redo, and Info. The left sidebar contains CAD Project, Recon. Setup, and Active Recon. buttons. The main settings panel for 'Stump Dies' includes:

- Stump Die Offset: 0,30 mm
- Buttons: Set Stump Die Direction From View, Reset Stump Die Direction
- With Concavity:
- Reduction Height: 1,0 mm
- Reduction Angle: 15 °
- Reduction Offset: 0,0 mm
- With Die Pin:
- Show Cutting Cone:
- Show Replica:
- With Die Fixation:
- Fixation Shape: Large (IPD/KA-ST-02)
- Fixation Height: 4,00 mm
- Fixation Offset: 0,200 mm
- Fixation Minimal Thickness: 0,00 mm
- Fixation Protection: 1,00 mm
- Text Options button

The 3D model shows a dental arch with three dies (11, 14, 16) and their corresponding fixation rings. A white arrow points from the 'With Die Fixation' option in the settings panel to the model. Another white arrow points from the 'Fixation Offset' slider to a text box at the bottom left.

Activar esta opción para añadir
Stump Die 3D

Ajustar la altura y el offset del Stump Die
(Fixation Offset recomendado 0,200mm)



Save Reset Layout Screenshot W/L Ruler ipd StumpDie3D Undo Redo Info

Stump Dies

CAD Project

Recon. Setup

Active Recon.

Stump Die Offset 0,30 mm

Set Stump Die Direction From View

Reset Stump Die Direction

With Concavity

Reduction Height 1,0 mm

Reduction Angle 15 °

Reduction Offset 0,0 mm

With Die Pin

Show Cutting Cone

Show Replica

With Die Fixation

Fixation Shape

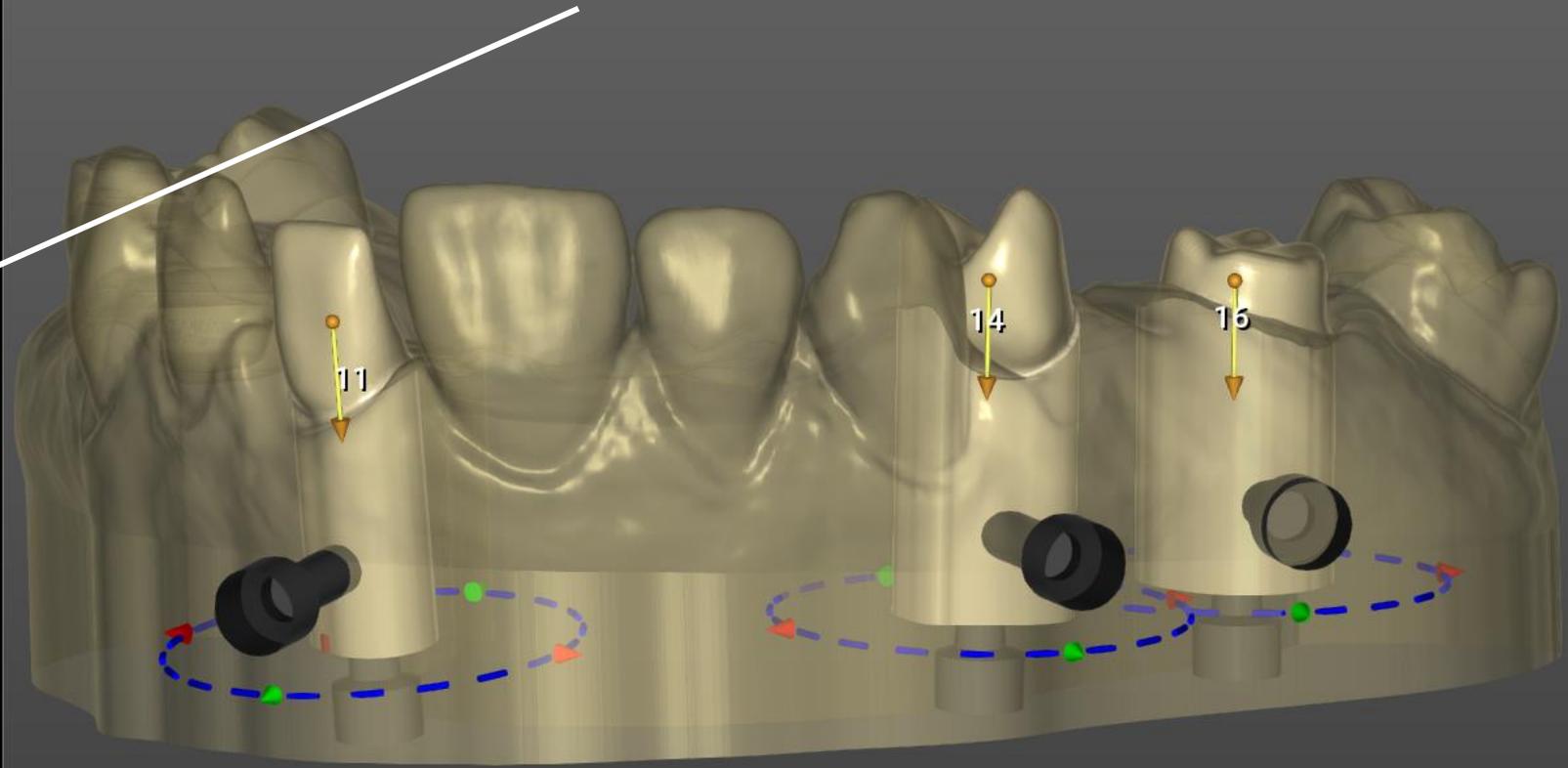
- Large (IPD/KA-ST-02)
- Short (IPD/KA-ST-03)
- Large (IPD/KA-ST-02)
- Regular (IPD/KA-ST-02)

Fixation Minimal Thickness 0,00 mm

Fixation Protection 1,00 mm

Text Options

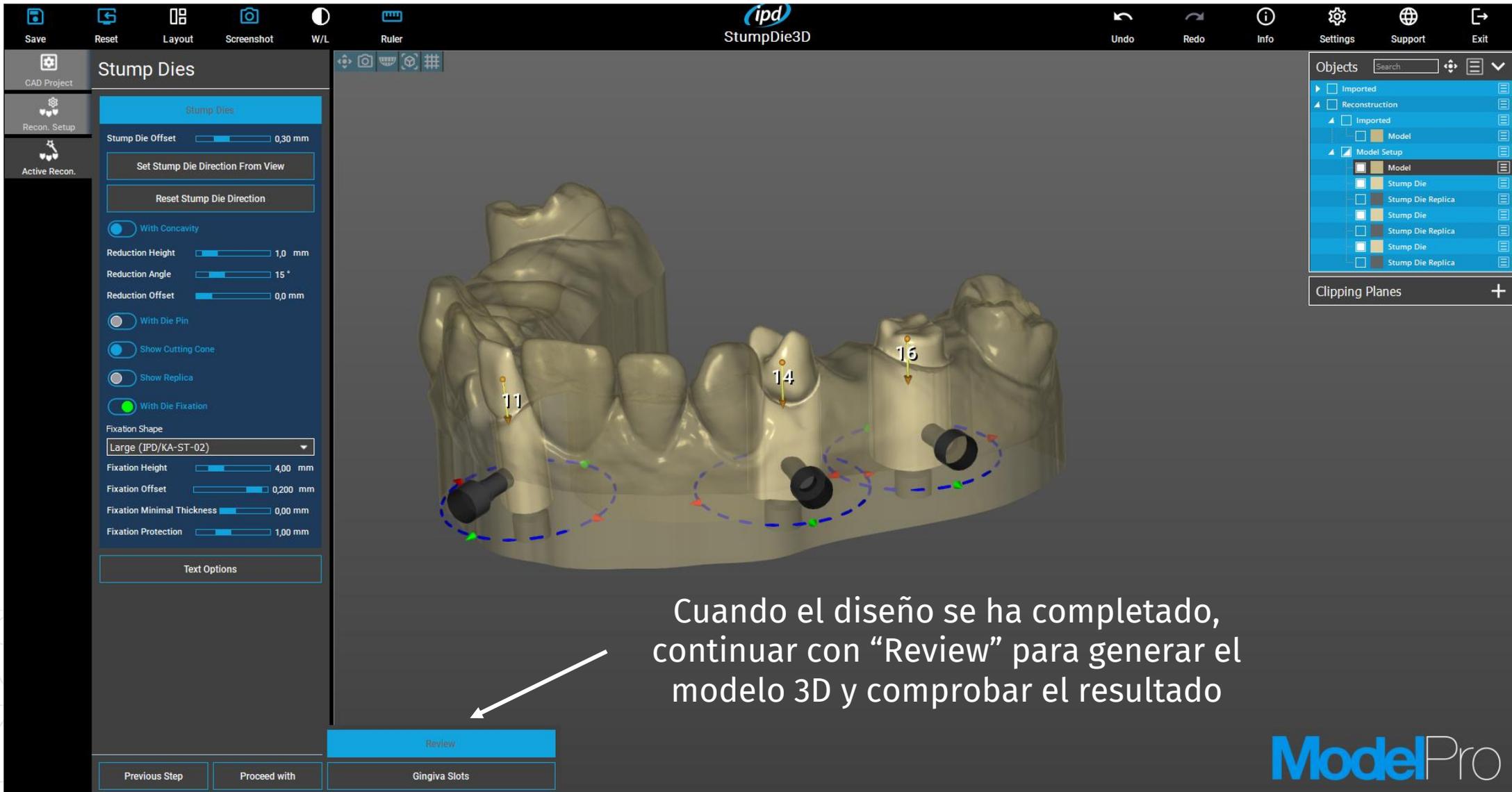
Seleccionar el tornillo lateral correspondiente dependiendo de la pared del modelo





The screenshot displays the 'ipd StumpDie3D' software interface. On the left, a sidebar contains navigation icons (Save, Reset, Layout, Screenshot, W/L, Ruler) and a 'CAD Project' section with 'Stump Dies' selected. Below this are 'Recon. Setup' and 'Active Recon.' sections. The main panel shows a 3D model of a dental stump with a die positioned on it. The die is labeled '11' and has a yellow arrow pointing to its top. A dashed blue circle surrounds the die, with red and green arrows indicating movement directions. A text box with a white arrow points to the die, containing the text: 'Ajustar la posición del Stump Die en el muñón utilizando las flechas'. The left sidebar includes various sliders and checkboxes for 'Stump Die Offset' (0,30 mm), 'Set Stump Die Direction From View', 'Reset Stump Die Direction', 'With Concavity', 'Reduction Height' (1,0 mm), 'Reduction Angle' (15°), 'Reduction Offset' (0,0 mm), 'With Die Pin', 'Show Cutting Cone', 'Show Replica', 'With Die Fixation', 'Fixation Shape' (Large (IPD/KA-ST-02)), 'Fixation Height' (4,00 mm), 'Fixation Offset' (0,200 mm), 'Fixation Minimal Thickness' (0,00 mm), and 'Fixation Protection' (1,00 mm). At the bottom of the sidebar are 'Text Options', 'Previous Step', and 'Proceed with' buttons.





Save Reset Layout Screenshot W/L Ruler Undo Redo Info Settings Support Exit

Stump Dies

CAD Project

Recon. Setup

Active Recon.

Stump Dies

Stump Die Offset 0,30 mm

Set Stump Die Direction From View

Reset Stump Die Direction

With Concavity

Reduction Height 1,0 mm

Reduction Angle 15°

Reduction Offset 0,0 mm

With Die Pin

Show Cutting Cone

Show Replica

With Die Fixation

Fixation Shape

Large (IPD/KA-ST-02)

Fixation Height 4,00 mm

Fixation Offset 0,200 mm

Fixation Minimal Thickness 0,00 mm

Fixation Protection 1,00 mm

Text Options

Review

Previous Step Proceed with Gingiva Slots

Objects

- Imported
- Reconstruction
 - Imported
 - Model
 - Model Setup
 - Model
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Stump Die Replica

Clipping Planes +

11 14 16

ModelPro

Cuando el diseño se ha completado, continuar con "Review" para generar el modelo 3D y comprobar el resultado





Save Reset Layout Screenshot W/L Ruler StumpDie3D//StumpDie3D_project1 Undo Redo Info Settings Support Exit

CAD Project Import New Files Scans Pictures Import From RealGUIDE Project Manage Scans

Recon. Setup Active Recon.

Reconstruction Setup

Una vez el modelo se ha generado correctamente, seleccionar las mallas de modelo y todos los Stump Die para exportarlos en formato STL

Objects Search

- Imported
- Reconstruction
 - Imported
 - Model Setup
 - Model
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Stump Die Replica
 - Stump Die
 - Toggle Transparency
 - Toggle Visibility
 - Toggle Glossy

Clipping Planes

- Transparency
- Brightness
- Representation
- Material
- Change Color
- Export To STL
- Export and Open MillBOX
- Save As

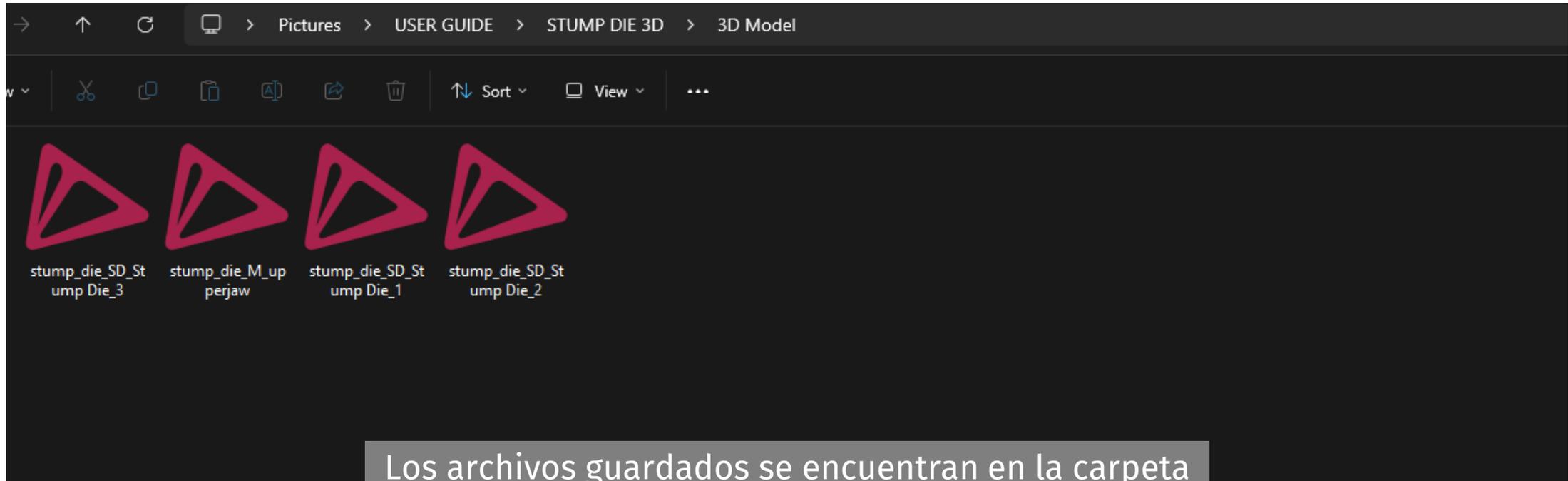
ModelPro





Nombrar los archivos y guardarlos en la ruta seleccionada





Los archivos guardados se encuentran en la carpeta seleccionada en formato STL listos para la impresión 3D





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