

Step by Step for Import Manufacturing files for Straumann In-house Workflow

Straumann Inhouse customers are able to import fully designed objects in for nesting and milling using the CARES® M series, and D series.

It is available for tooth supported and Ti-Base supported single units and bridges.

This workflow starts with a customary Straumann In-house order creation, where the indication and material is chosen for the best milling result. Next, complete the clinical model definition and assigning the objects. Manufacturing lines need to be defined and ready for nesting and insertion axis to avoid milling undercuts. These are general guideline to prepare design objects for In-house milling import.

Warning:

With import of manufacturing files the following features of the design are not checked:

1. The minimum wall thickness of tooth borne prosthetics
2. The minimum thickness of connectors or their maximum length
3. The minimum thickness or material surrounding a Ti-base
4. The quality of the interface to implants or abutments
5. Whether the bridge will fit onto multiple implant or tooth indications, e.g. due to extreme angulation it may not be possible to mount the bridge.
6. Whether all material can be milled, e.g. due to excessive undercuts unwanted material may remain after milling

It is the responsibility of the manufacturing file designer to check that the recommended values for all features are achieved. The values should be checked using appropriate measurement tools in the software where the STL is designed.



The Straumann IFU Website contains limitations for **implant-based parameters**:
Ifu.straumann.com

For **in-house materials** the limits for thicknesses and lengths may be found at these WWW locations (or where included in the raw material packaging):

Permanent materials:

<http://www.straumann-cares-digital-solutions.com/en/my-straumann-cares-desktop-cares-9/products---service/straumann-inhouse-milling/manuals.html>

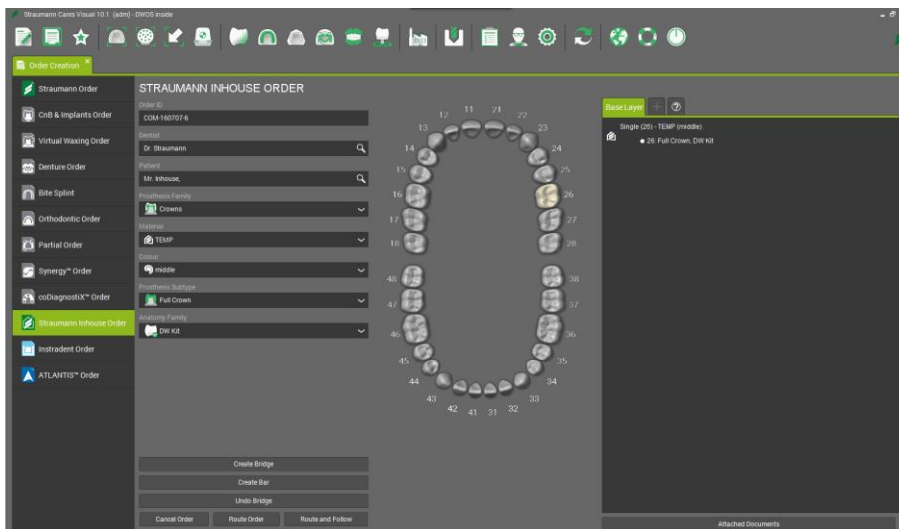
Temporary materials:

www.amangirrbach.com/instruction-manuals

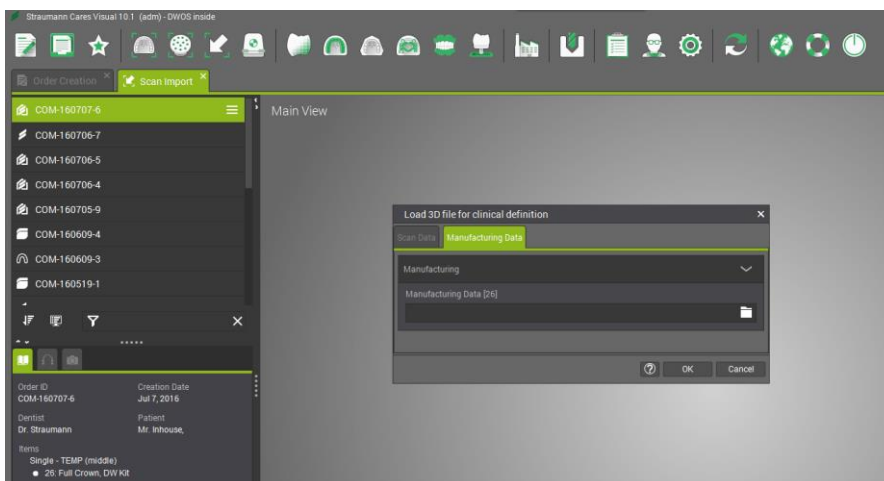
Ceramill PEEK – www.juvoradental.com

Import Manufacturing file for Crowns, Telescopic crowns and tooth borne bridges

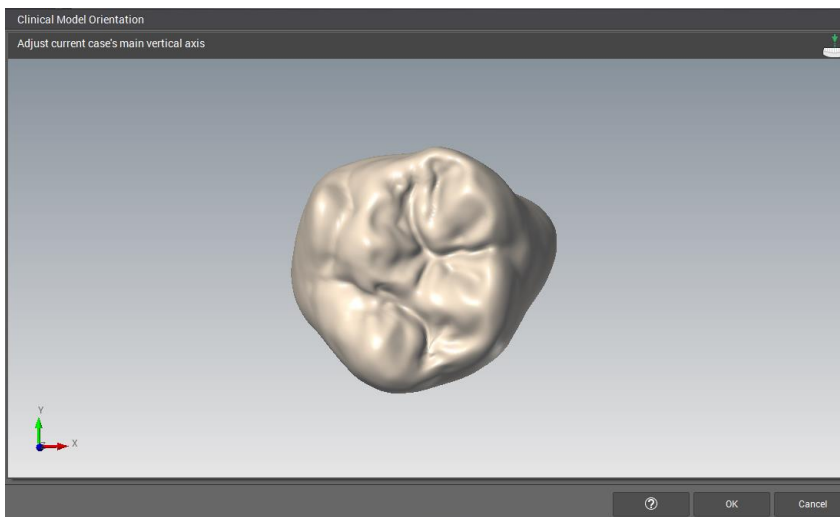
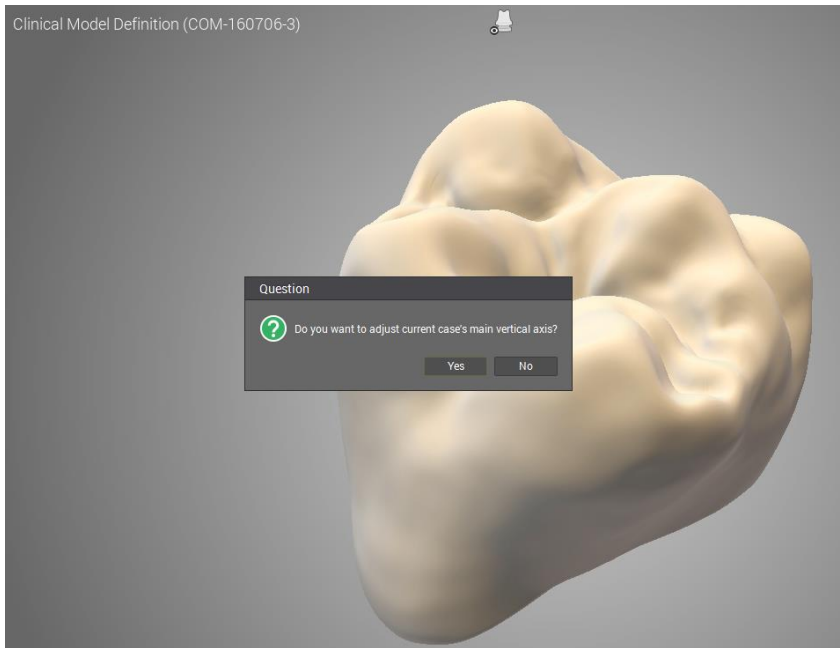
1. Order creation with “Straumann Inhouse Order”



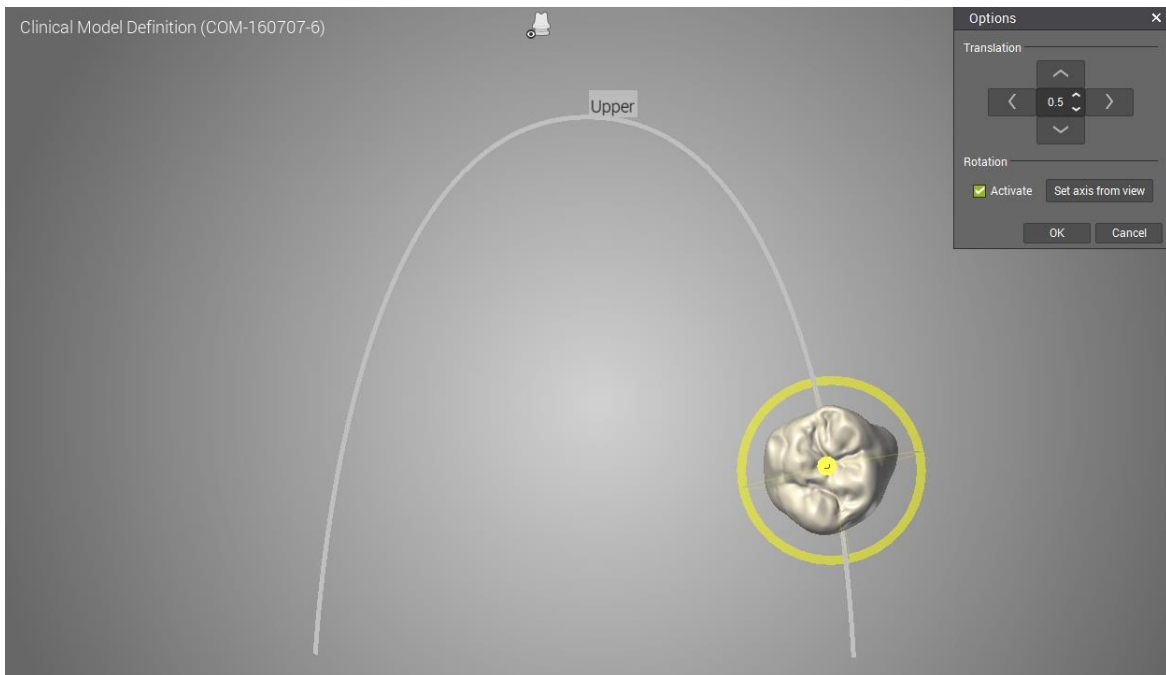
2. Click on “Route Order” and open “Scan import”
3. Drag and Drop the respective order into the “Main view” window
4. Activate “Manufacturing Data” and load the created stl file (note only STL can be imported)



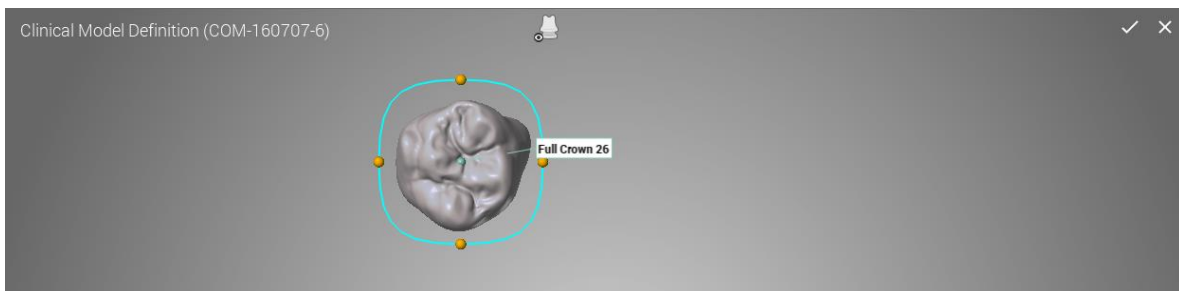
5. Adjust the main vertical axis so that the view is from the occlusal direction



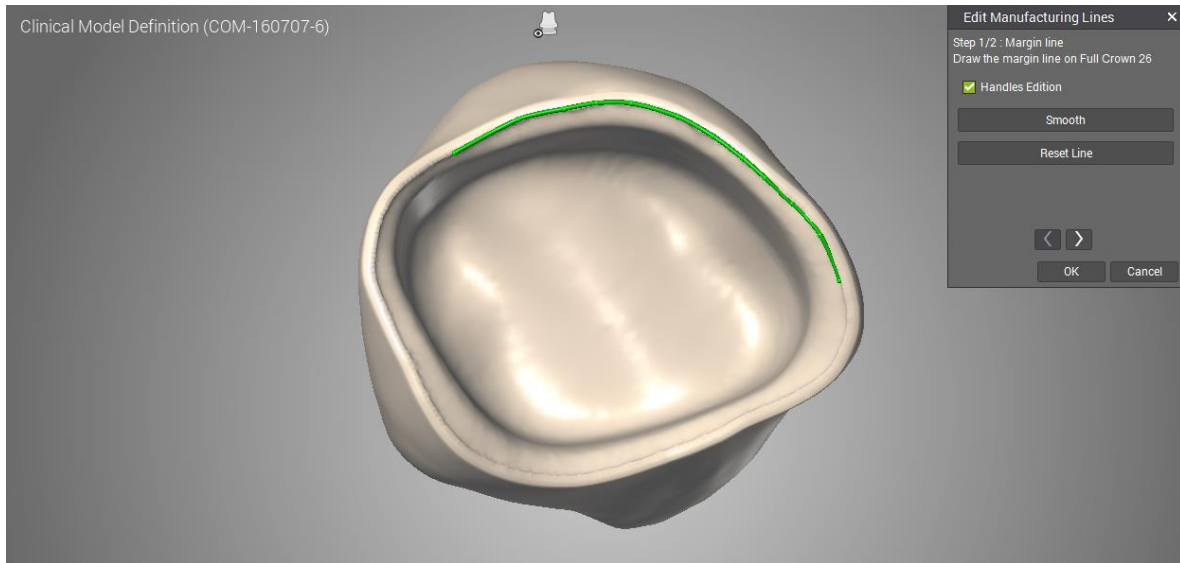
6. Place the object in the correct position on the "Arch line" by using Options "Translation and or "Rotation"



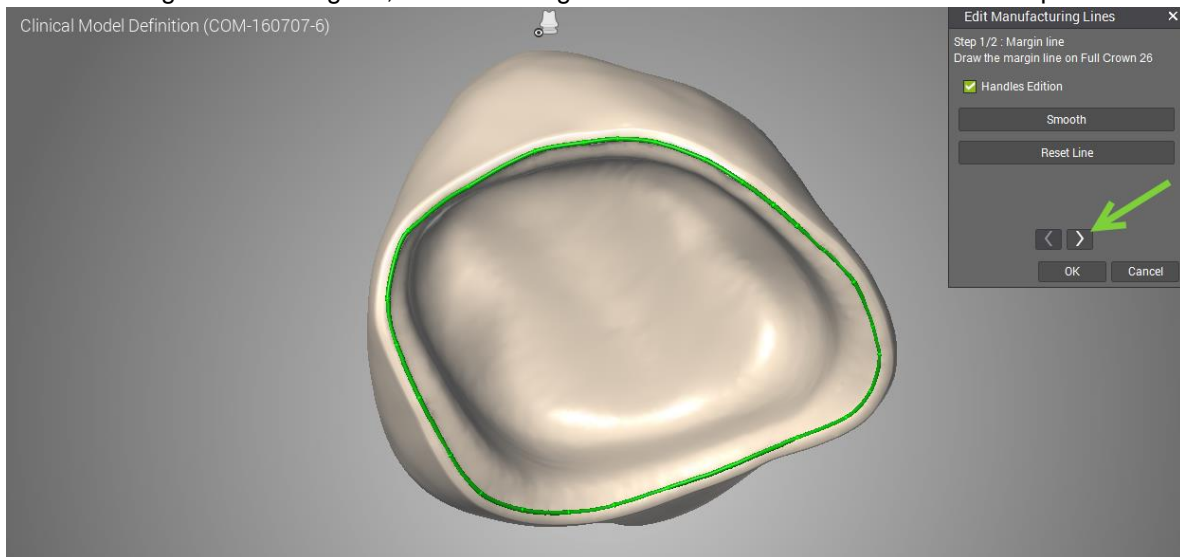
7. Assign the object



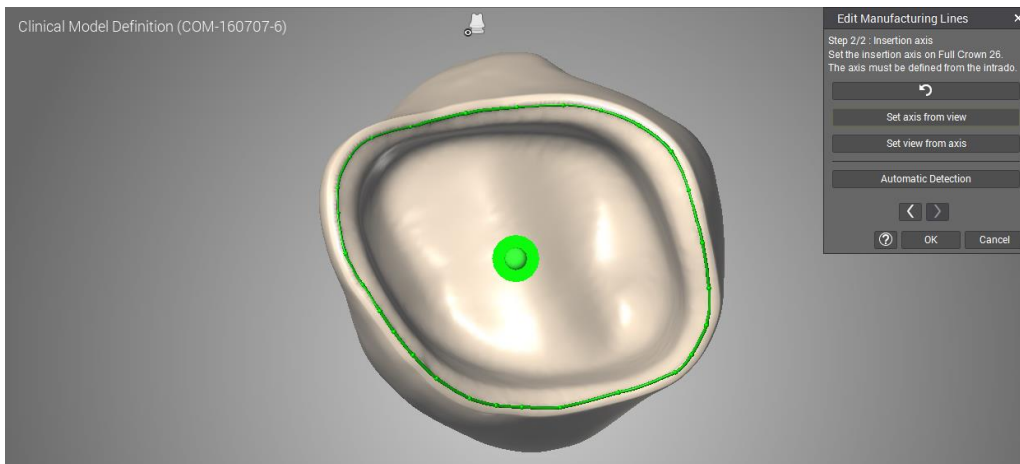
8. Edit Manufacturing lines **Step 1/2 Margin line:** Draw the margin line. It is possible to draw the line or use the handles to define the margin line (for bridges this must be carried out for each tooth). Further options are available. "Smooth" and "Reset line"



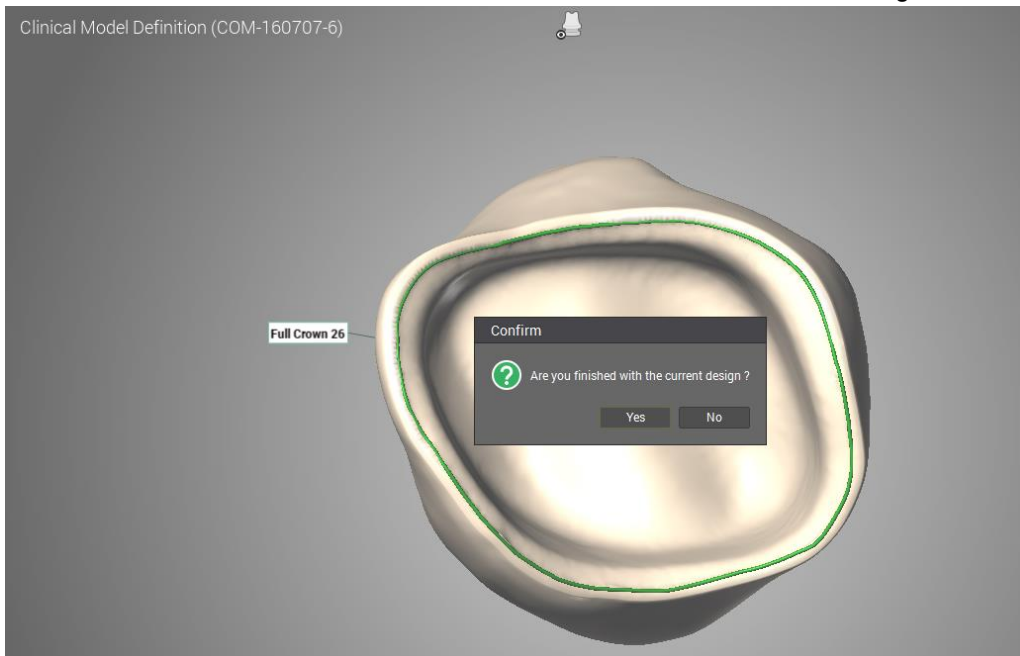
After the margin line is assigned, click on the right forward arrow to move to the next step



9. Edit Manufacturing lines **Step 2/2 Insertion axis:** Set the insertion axis. The axis must be defined from the intrado



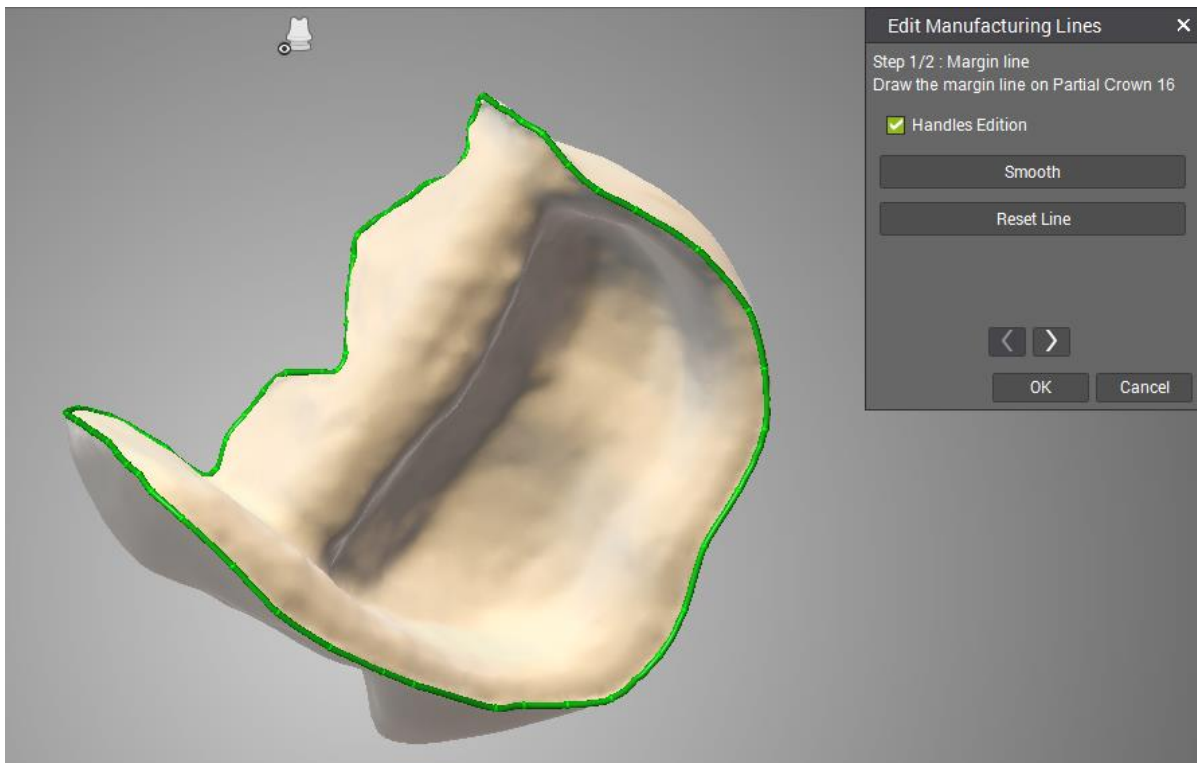
After the insertion axis is defined, click on “OK” and confirm the current design with “YES”



10. The order will be routed into the “Nesting Station” and is ready for nesting in the “Production Queue”

Import Manufacturing file for Inlay, Onlay, Veneer and Partial crown

For those indications, it is the same as for Crown, Telescopic crown and Bridges. All Steps are identical. In addition, it is only necessary to draw **one** manufacturing line for Inlay, Onlay, Veneer and Partial crown. There is no need to define two lines as required in the CARES Visual Workflow “Define margin line”. For the indications here, it is the same as steps 8 and 9 of the previous workflow

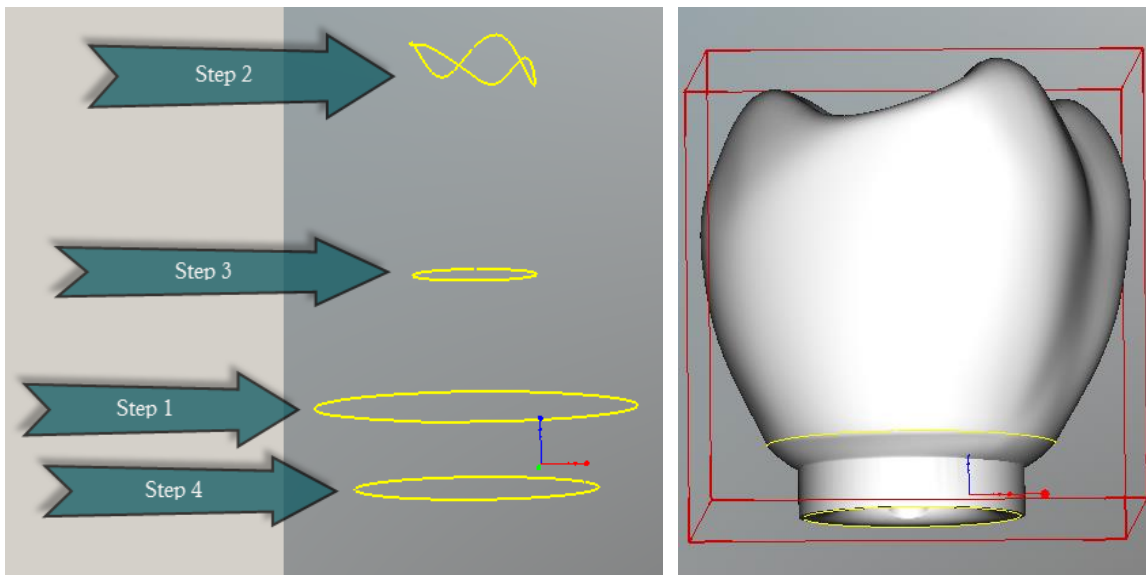


Import Manufacturing file for Variobase and Variobridge

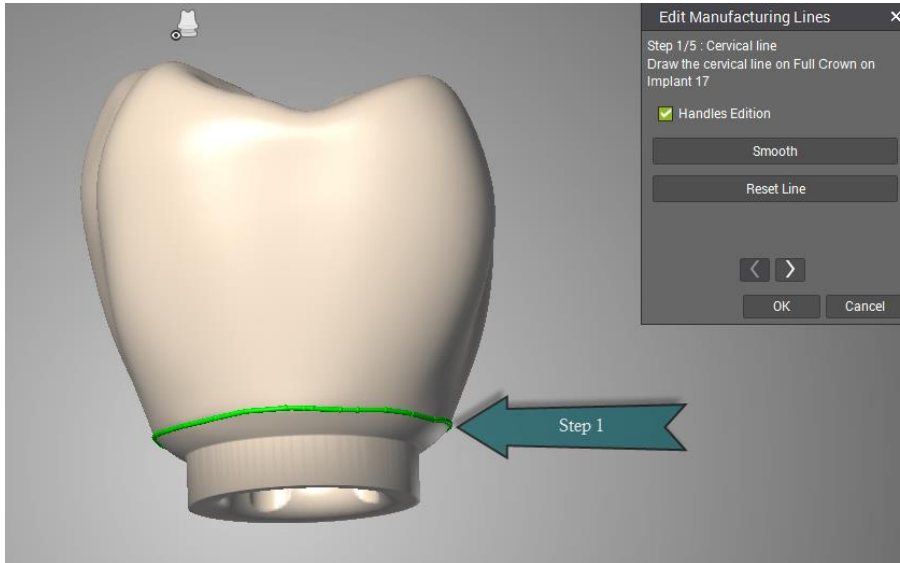
For the Variobase and VarioBridge additional manufacturing lines must be defined.

The “Edit Manufacturing files” section consists of 5 steps. Order creation for Variobase: Stock Element and Layer 1, is not necessary to define the type of Ti-Base being used.

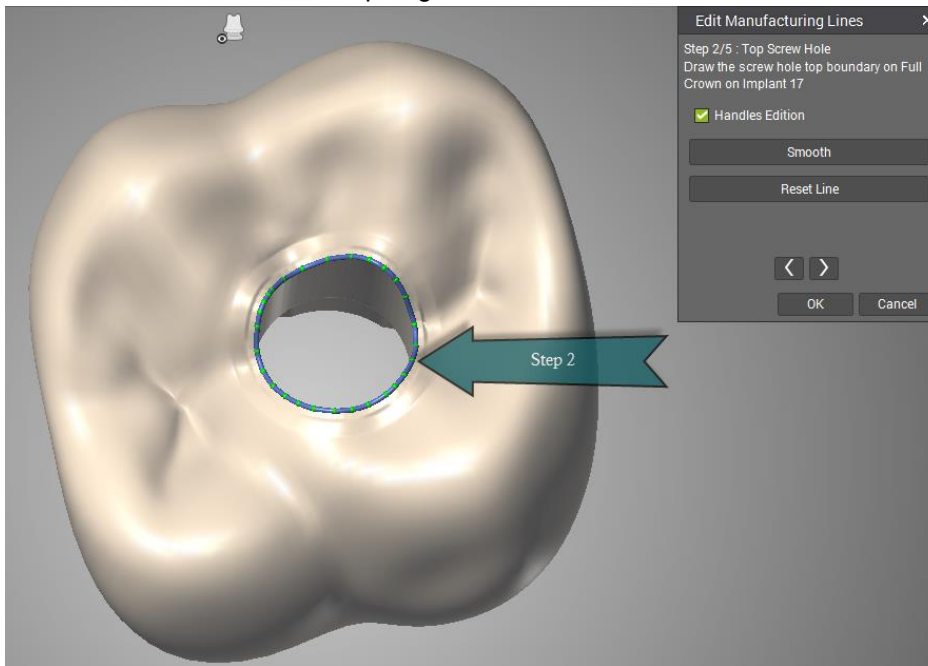
- Step1: Cervical line
- Step2: Top Screw Hole
- Step3: Bottom Screw Hole
- Step4: Interface
- (Step5: Insertion axis)



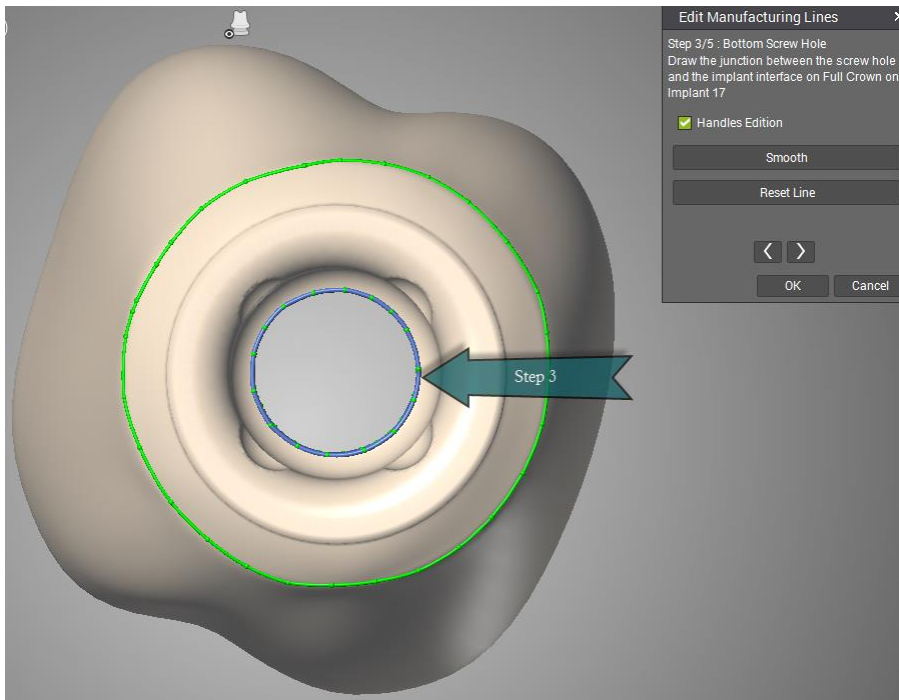
Edit Manufacturing Lines **Step 1/5 Cervical line:** Draw cervical line on full crown on Implant



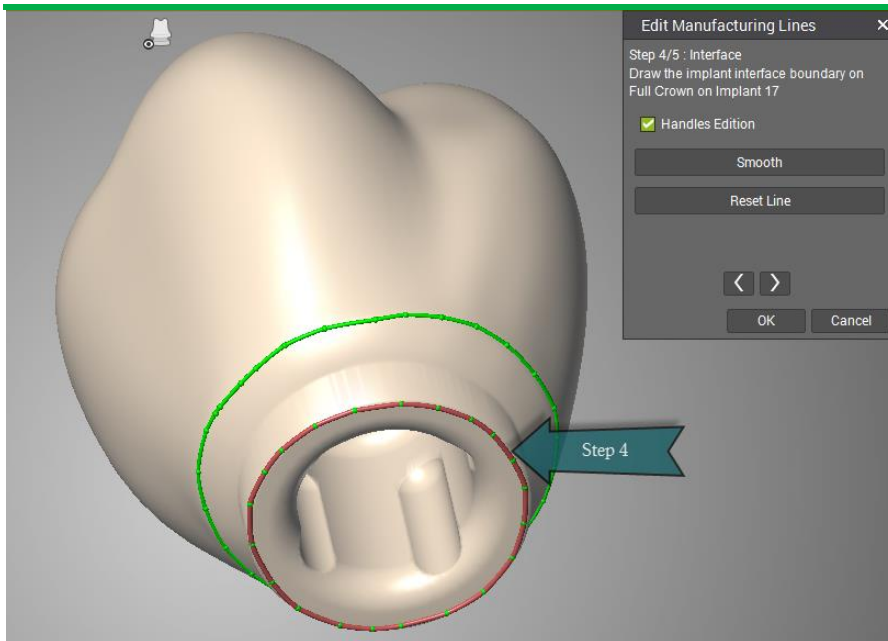
Edit Manufacturing Lines **Step 2/5 Top Screw Hole:** Draw the screw hole top boundary, ensure that the hole is correctly followed in order prevent material being left which would block the channel or cause a weakness due to sharp edges.



Edit Manufacturing Lines **Step 3/5 Bottom Screw Hole:** Draw the junction between the screw hole and the abutment interface



Edit Manufacturing Lines **Step 4/5 Interface:** Draw the implant interface boundary



Edit Manufacturing Line **Step 5/5 Insertion axis**: Set the insertion axis on Full Crown on Implant. The axis must be defined from the intrado. This must be exactly in line with the screw channel, the screw might not lined up with the base, or the crown will be at the wrong angle, causing occlusal contact problems.

