SIMPLANT®

mySIMPLANT® Planning Service
Scan Guidelines – Partially edentulous case

1. Preparing 3D scan (share with your dental laboratory)

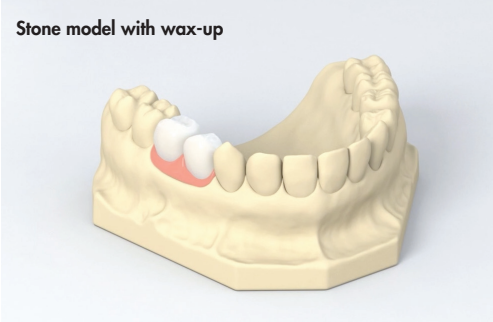
1.1 Prepare stone model & wax-up (wax-up is optional)

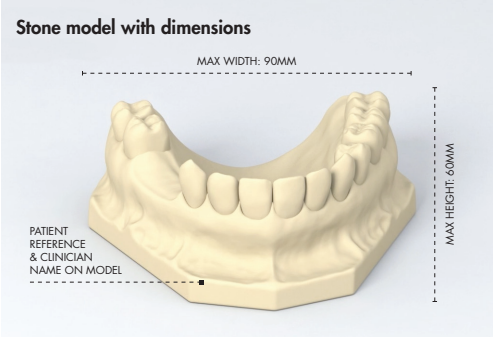
The **stone model** provides information about the remaining teeth and soft tissue, and is used to design an accurate SIMPLANT Guide.

The **wax-up** provides information about the crowns to be restored. If you have a wax-up available for the case, sending it to SIMPLANT will facilitate an esthetic planning of implants and abutments. The wax-up is an optional step.

How to prepare the stone model & wax-up:

- Use accurate impression material (poly-ether, silicone).
- Use an up-to-date and intact stone model.
- A maxillary model should contain the complete palatum and tuberositas.
- Mark the patient's reference and the name of the dentist or ordering person on the models.
- Ensure the stone model has a base to reduce the risk the model will break during shipping.
- Do not include impressions, articulators, occludators.
- Remove articulator sockets.
- Make sure the model is well packed and protected in a solid box.





Note: digitized models.

- You can also use digital stone model information by using information from intraoral scanners or by laser scanning the stone models or wax-up.
- The format of these digital models has to be STL.

Note: in case when extraction is planned.

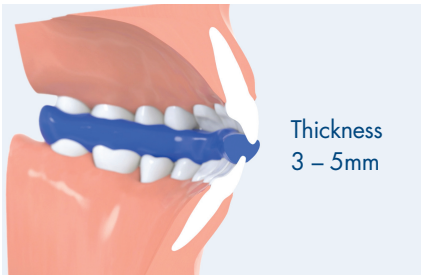
- Provide one model with original dentition and one model with teeth ground away.
- Grind away teeth that will be extracted during implant surgery from the plaster model.

1.2 Prepare bite index

A bite index stabilizes and separates the jaws when scanning the patient. Scans showing jaw movement cannot be used for designing a guide.

How to create a bite index:

- Apply the radiolucent material (e.g. Aquasil Bite) onto the patient's occlusal surface.
- Have the patient close his or her mouth, but not completely. Thickness of bite index: 3-5 mm.
- Trim excess material with a sharp instrument.



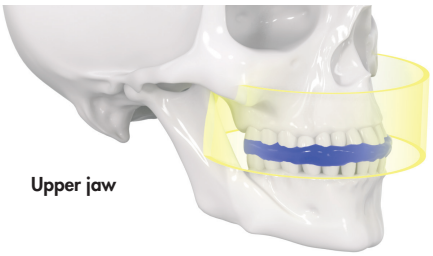
DENTSPLY IMPLANTS

2. Taking a 3D scan (share with your radiologist)

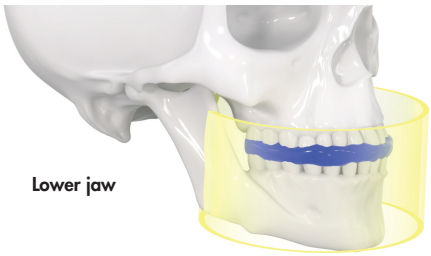
The CT or 3D cone beam scan provides information about the bone, teeth and other anatomical structures.
For partially edentulous cases only one scan needs to be taken i.e. a scan of the patient with the bite index in the mouth.

2.1 How to take a Single Scan:

- Scan the patient wearing the bite index.
- The complete upper or lower jaw including the bite index and part of the opposing jaw should be in the field of view. This will help you to evaluate the esthetics druing the reveiw of the planning.
  Expanding the field of view until the osteomeatal complex will help you evaluate potential sinus pathologies.



Upper jaw



Lower jaw

3. Scan settings (share with your radiologist)

3.1 Cone beam scanner:

- Scan images must be provided in DICOM format.
- To obtain optimal image quality check your specific DICOM export protocol:
  http://www.dentsplyimplants.com/Digital-solutions/SIMPLANT-Academy/SIMPLANT-Guidelines
- If there is no export protocol available for your cone-beam scanner, SIMPLANT recommends to save the DICOM images with a slice thickness of 0.3 mm or 0.4 mm.

3.2 CT scanner:

- Matrix 512 x 512.
- Slice thickness between 0.4 and 0.8 mm.
- Variable slice thickness is not allowed.
- Slice increment between 0.3 and 0.5 mm.
- Gantry tilt 0°.
- Only the axial images are required.
- The images must be saved as DICOM images.