

Radiographic Guide

The Radiographic Guide is used to simulate the teeth, the soft tissue surface and edentulous space during the CT scan.

The correct design of the radiographic guide is a pre-requisite for successful treatment since the final outcome of the rehabilitation is determined by the Radiographic Guide.

Fully edentulous cases: use existing optimized prosthesis or a newly produced prosthesis as the Radiographic Guide.

Single and partial cases: make an acrylic replica (see next page)

Important!

Verify that the Radiographic Guide:

- optimally fits the anatomy of the patient, including:
 - gingiva
 - palate (if applicable)
 - existing denture (if applicable)
- extends over the buccal and lingual soft tissue to the vestibular extension
- has an ideal set-up of teeth in terms of occlusion, position, height, lip support, etc
- has a minimum thickness of 2 mm
- is made of prosthesis-like material (acrylic)

Reference Points

To facilitate the double CT scanning technique and the subsequent matching of the two CT scans in Procera® Software, six reference points must be inserted into the Radiographic Guide.

Important! *Reference points must be inserted into all Radiographic Guides, i.e. existing optimized prostheses or acrylic replicas.*

- Make 6 small holes (\varnothing 1.5 mm) in the Radiographic Guide and fill them with gutta-percha. The holes should be no more than 1 mm deep.
- Place two of the reference points lingually/palatally to the canines, two disto-buccally to the premolars and two in the molar region.
- Place the reference points at different levels in relation to the occlusal plane. In single and partial cases where metal fillings are present in the existing denture, place the reference points on levels other than those of the fillings, for example, below the teeth.



Workflow (Partial and Single cases)

- Fabricate stone models of the patient's jaws based on the impressions.
- Set up the stone model in the articulator using the bite registration index.
- Make a diagnostic wax-up of the patient's tooth/teeth to be restored on the stone model.
- Cover the existing teeth down to the vestibular extension with a 2 mm thick resin material. Be sure to block all undercuts.
- Attach the resin cover to the lingual and buccal sides of the diagnostic wax-up, but do not add material on the occlusal aspect of the diagnostic wax-up. This is to ensure that the correct occlusal level of the restoration is transferred into the CAD.
- Make sure that the Radiographic Guide extends all the way back to rest on the retromolar area.
- Insert the Radiographic Guide in the articulator and, using stiff material, make an occlusal index between the Radiographic Guide and the opposing dentition. This index is known as the "Radiographic Index". Do not overextend this index, but it should cover the premolars, molars and incisors.

Note! *If the patient only has a few teeth in the opposing jaw and does not wear a partial prosthesis, make sure to fill up the area where the teeth are missing with occlusion index material to make contact with the alveolar ridge. This is to ensure that you have a horizontal, well-balanced bite registration.*

Inspection Windows

- The inspection windows made on single and partial Radiographic Guides are transferred to the Surgical Template where they allow inspection of the underlying dentition, thus confirming the proper seating of the Surgical Template during surgery.
- Make inspection windows through the Radiographic Guide through the occlusal surface over the existing dentition.
- Make 3–4 windows evenly distributed over the entire arch where one or two windows are located adjacent to the area to be restored.
- The inspection windows should preferably be placed over a cusp or a corner of a tooth so that the underlying dentition protrudes through the window.

Deliver the Radiographic Guide and the Radiographic Index to be used during CT scan.

