

Enter

Stage 1 | Assessment and treatment planning

Step 4

Fabrication of the surgical drill template

Assessment and treatment planning

Step 4 | Fabrication of the surgical drill template

Overview



Assessment and treatment planning



Step 1 | Patient's expectations,
history and examination



Step 2 | Treatment planning



Step 3 | Consultation and consent



Step 4 | Fabrication of the surgical drill template

Surgical procedures



Step 1 | Implant surgery



Step 2 | Post-operative review and suture removal

7–10 days

6–8 weeks

Prosthetic procedures



Step 1 | Abutment insertion, modification and
relining of a lower complete denture



Step 2 | Lab-side relining of a lower complete
denture



Step 3 | Insertion of the final overdenture and
patient instructions

1 week

3–6 months
(or as necessary)

Aftercare and maintenance



Step 1 | Review visit



Step 2 | Maintenance visit



In clinic with patient



Office / Lab work

Contents

Introduction	4
Learning objectives	4
1. Requirements for a surgical drill template	5
2. Fabrication of a surgical drill template	6







Introduction



A custom-made surgical drill template, which should be a duplicate of the patient's perfectly fitting existing denture, helps you to accurately position the implants during surgery.

A custom-made surgical drill template (also known as a surgical stent or acrylic guide) supports surgical and prosthetic planning. It should be a duplicate of the patient's existing complete denture and perfectly fit the underlying bone and soft tissue. As such it facilitates preparation of the implant beds and enables precise use of the cutting instruments. This will help you to achieve the desired precise positioning and angulation of the implants during surgery.

Learning objectives

-  Understand the importance of using the patient's existing well-fitting denture to prepare the radiographic template which then helps in the fabrication of a surgical drill template.
-  Be able to communicate with the  [dental lab](#) on the specific requirements of fabricating the surgical drill template for the implant placement visit.
-  Know how to assess a surgical drill template intraorally.



Assessment and treatment planning

Step 4 | Fabrication of the surgical drill template

1. Requirements for a surgical drill template



1. Requirements for a surgical drill template

The surgical drill template should:

- be a duplicate of the patient's existing complete denture:
- perfectly fit the underlying bone and soft tissue
- be stable and rigid when positioned in the mouth
- be transparent
- be produced with a solid or robust material which does not distort during use
- not interfere with tissue reflection or the external cooling process during surgery
- be able to be disinfected without any alteration of the drill template.

Be aware that the template used in SmartArch cases is only gingiva supported. This means that when raising the flap (e.g. in the canine region), the biggest part of the template is supported by the soft tissue in the premolar and molar region.

Requirements for a surgical drill template.



Check that the patient's existing lower denture fits perfectly on the underlying soft tissue as the complete lower denture has to perfectly mirror the actual situation in the patient's mouth before it can be duplicated. If this is not the case, take a silicone wash impression before duplication. A stable template is important for guidance during surgery.



Assessment and treatment planning

Step 4 | Fabrication of the surgical drill template

2. Fabrication of a surgical drill template



2. Fabrication of a surgical drill template

Surgical drill templates are made from acrylic resin.

For SmartArch cases the surgical drill template is a duplicate of either the existing denture or a modification of the radiographic template.



Inform your [dental technician](#) where exactly they should create the access holes or notches in the template.



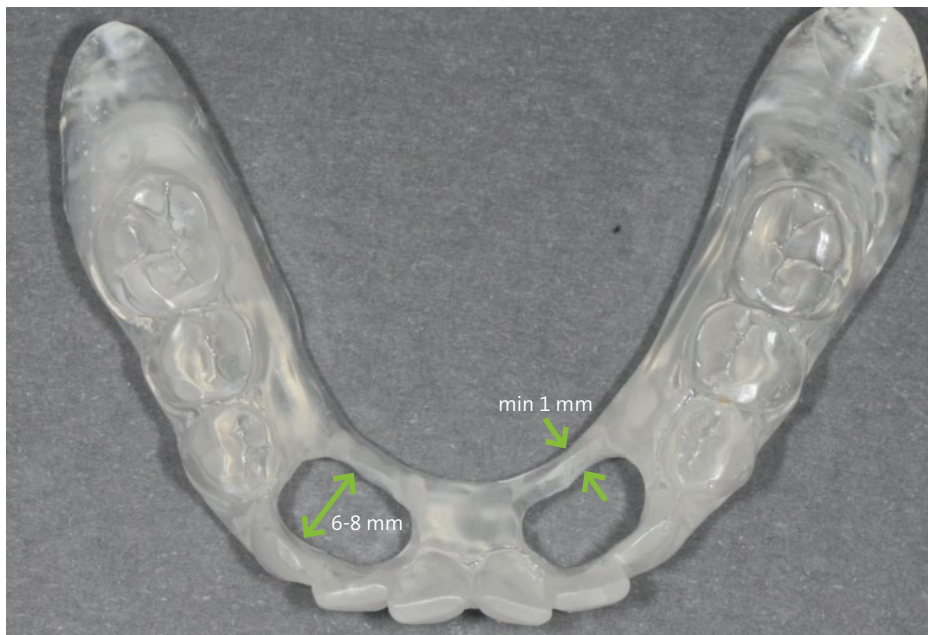
[Video: Surgical drill template fabrication and fit assessment](#)



Example of a surgical drill template made of transparent acrylic resin:



The access holes for the implants can be separate (left image) or connected (right image). Be aware of the stability of the template.



The diameter of the access holes should be approx. 6 to 8 mm.

A minimum of 1 mm thickness is required at the lingual side of the access holes to ensure stability.

Be aware of dimensions required around the access holes of the template.

Assessment and treatment planning

Step 4 | Fabrication of the surgical drill template

DISCLAIMER

Straumann® Smart is a blended training and education program focused on the education of general dentists who want to become surgically active in the field of dental implantology. The program is limited to information pertaining to straightforward implant cases and focuses on a reduced portfolio of products that are suitable for the treatment of such cases.

All clinical Straumann® Smart content – such as texts, medical record forms, pictures and videos – was created in collaboration with Prof. Dr. Christoph Hämmerle, Prof. Dr. Ronald Jung, Dr. Francine Brandenburg-Lustenberger and Dr. Alain Fontoliet from the University of Zürich, Clinic for Fixed and Removable Prosthodontics and Dental Material Science, Switzerland.

Straumann does not give any guarantee that Straumann® Smart provides sufficient knowledge or instruction for the dental professional to become surgically active in the field of implantology. It is the dental professional's sole responsibility to ensure that he/she has the appropriate knowledge and instruction before placing dental implants.

Straumann® Smart does not replace a careful and thorough analysis of each individual patient by a dental professional. Further, it does not imply any guarantee or warranty with regard to completeness of the information provided to the patient. It does not replace the dental professional's duty to inform the patient about the treatment, the products and the risks involved and to receive the patient's informed consent. The dental professional is solely responsible for determining whether or not a treatment or product is suitable for a particular patient and circumstances. Knowledge of dental implantology and instruction in the handling of the relevant products is always necessary and the sole responsibility of the dental professional. The dental professional must always comply with the individual product's Instructions For Use as well as all laws and regulations.

STRAUMANN DISCLAIMS, TO THE EXTENT POSSIBLE BY LAW, ANY LIABILITY, EXPRESS OR IMPLIED, AND BEARS NO RESPONSIBILITY FOR ANY DIRECT, INDIRECT, PUNITIVE, CONSEQUENTIAL OR OTHER DAMAGES, ARISING OUT OF OR IN CONNECTION WITH ANY INFORMATION PROVIDED TO PATIENTS, ERRORS IN PROFESSIONAL JUDGMENT, IN PRODUCT CHOICES OR PRACTICE IN THE USE OR INSTALLATION OF STRAUMANN PRODUCTS.

All clinical content as well as clinical and radiographic images are provided by courtesy of Prof. Dr. Christoph Hämmerle, Prof. Dr. Ronald Jung, Dr. Francine Brandenburg-Lustenberger and Dr. Alain Fontoliet from the University of Zürich, Clinic for Fixed and Removable Prosthodontics and Dental Material Science, Switzerland.

International Headquarters

Institut Straumann AG

Peter Merian-Weg 12

CH-4002 Basel, Switzerland

Phone +41 (0)61 965 11 11

Fax +41 (0)61 965 11 01

www.straumann.com

© Institut Straumann AG, 2016. All rights reserved.

Straumann® and/or other trademarks and logos from Straumann® mentioned herein are the trademarks or registered trademarks of Straumann Holding AG and/or its affiliates.