

BASIC INFORMATION ON  
**DENTAL LAB PROCEDURE**



Straumann® Customized Abutments



Straumann is industrial partner of the ITI (International Team for Implantology) in the areas of research, development and education.

# STRAUMANN® CUSTOMIZED ABUTMENTS

## Intended use

- Cement-retained crowns and bridges using customized abutments
- Screw-retained directly veneered crowns (ceramic abutments only)

## Characteristics

### Simple

- Anatomic emergence profile
- Fast scan process
- Cost and time savings in the dental lab

### Reliable

- High precision connection
- High performance materials



# 1. TECHNICAL REQUIREMENTS

To provide Straumann® customized abutments, the dental lab needs the following components:

Scanners	
<b>es1</b>	 <p>The laser-driven etkon es1 system scans 28'000 points per second, which allows image capturing on the most difficult preparations, whether they are angular, shoulder or deep chamfer preparations.</p>
<b>Abutment-WaxupKit</b>	 <p>The Abutment-WaxupKit consists of all analog holders needed to design restorations for the entire Straumann® Dental Implant System. Analog holders are needed to correctly scan the wax-up of the Straumann® customized abutments.</p>
<b>Wax-up sleeve</b>	 <p>To model the abutment for the scan process, a wax-up sleeve is required. A set of wax-up sleeves (one for every platform) is included in every Abutment-WaxUpKit. A wax-up sleeve is also included in each Straumann® Customized Abutment set.</p>
Software	
<p>The software to check the prosthetic part of the abutment shape is part of the etkon_visual 4 software.</p>	

## 2. STRAUMANN® CUSTOMIZED ABUTMENT – LAB PROCEDURE

1a



### Step 1 – Fabricating the master cast

- Fabricate the master cast using standard methods and Type 4 dental stone (DIN 6873). A gingival mask should always be used to ensure that the emergence profile of the crown is optimally contoured.

1b



- For optimal esthetic planning, model a full anatomical wax-up.

1c



- Prepare a silicone key over the full wax-up in order to define the optimal shape of the Straumann® customized abutment.

2a



### Step 2 – Modeling the abutment shape

- Insert a wax-up sleeve in the master cast.

2b



- Use the wax-up sleeve to model the desired shape of the abutment.

#### **Note**

Scannable wax must be used for an accurate scan (CopyCadWax from etkon).

3a



### Step 3 – Scanning the abutment

- Fix the modified wax-up sleeve on the corresponding analog holder.
- Insert the analog holder into the scan cup. Make sure that the bolt on the analog holder is in line with the white marking of the scan cup. This allows for proper positioning of the analog holder at the bottom of the scan cup. Integrated magnets help to find the correct position.
- Position the complete scan cup into the scan cylinder of the es1 scanner.

#### Note

For an accurate scan, the wax-up sleeve must be positioned correctly on the analog holder.

With a correctly positioned wax-up sleeve, there is no gap and no rotation between the wax-up sleeve and the analog holder. Wax-up sleeves are intended for single use only, to ensure optimal fit and precision.

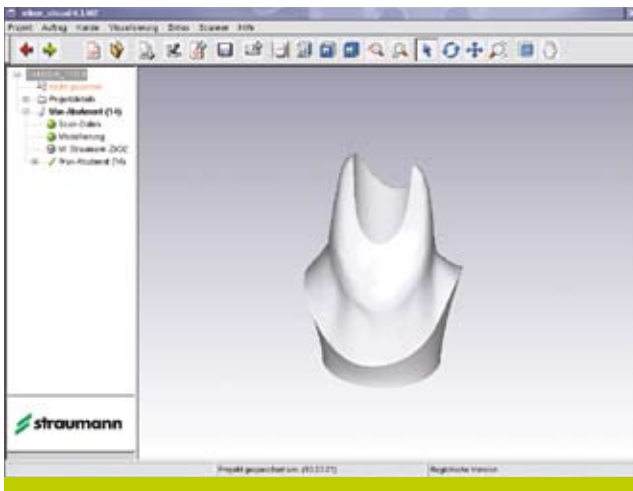
3b



### Step 3b – Scanning

- Close the cover of the scanner and follow the scan instructions of the es1 scanner.

4



#### Step 4 – Ordering the abutment

- After scanning the abutment, you can order your abutment directly via the etkon\_visual 4 software.
- After the data transmission is completed, an email confirmation is sent.
- Once the abutment design has been verified, you will receive an order confirmation.



#### Note

Before the abutment is fabricated, the data is subject to an incoming inspection. If the data record is found to contain errors or is incomplete, a message will be sent to you requesting corrections or additional information. A definitive order confirmation will be sent after completing this step.

### 3. MANUFACTURING AND DELIVERY



#### **Fabricating the abutment at Straumann**

- Based on the design data, the Straumann® customized abutment is manufactured in our production center.



#### **Delivery to the dental laboratory**

- The Straumann® customized abutment is immediately delivered after production.
- In just a few working days, the dental laboratory receives the Straumann® customized abutment(s).

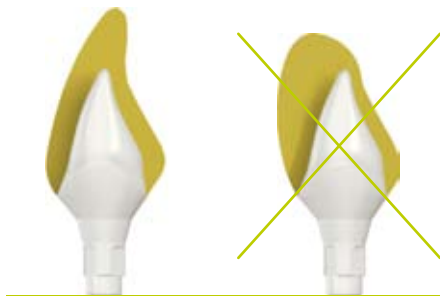
Delivery of the Straumann® customized abutment is available through the following service providers:

- **International:** DHL ([www.dhl.com](http://www.dhl.com))
- **Switzerland:** Swiss Post ([www.post.ch](http://www.post.ch))

After the order has left the production center, you will receive an order tracking number with a delivery notification. With this number you can check the status of your order on the "track & trace" website of the corresponding service provider.

## 4. PRODUCT COMPLETION AT THE DENTAL LABORATORY

### Straumann® Customized Abutment - Ceramic



#### Option A: Screw-retained directly veneered abutment

- Fabricate a screw-retained directly veneered abutment with a ceramic veneering material synchronized to the thermal expansion coefficient of zirconia.
- Straumann® customized abutments made from zirconia have a thermal expansion coefficient of  $10.5 \times 10^{-6}/K$  (25°C – 500°C, 77°F – 932°F).

#### Note

Particular attention must be given to an even-layered thickness at the porcelain veneered on the abutment.



#### Option B: Cement-retained crown

- Mount the Straumann® ceramic abutment on the implant analog.
- Use a standard procedure to fabricate the cement retained single crown.
- Veneer the crown.

### Straumann® Customized Abutment – Titanium

The procedure for the Straumann® titanium abutment is the same as the procedure for the cement-retained ceramic abutment, option B.

#### Note

Straumann® customized abutments are provided non-sterile.

Please use the following procedure for sterilization before use:

Titanium, titanium alloy	Autoclave	134°C (273°F), 18 min
Ceramic	Dry heat	160°C (320°F), 4h

## 5. STRAUMANN® CUSTOMIZED ABUTMENTS – PROSTHETIC PROCEDURE

The final restoration is delivered to the doctor's office on the master cast.

1



### Step 1 – Preparation

- Remove the healing cap or temporary restoration.
- Remove the superstructure from the master cast and unscrew the abutment from the analog.

2



### Step 2 – Final insertion

- Clean and dry the inner joint of the implant and the abutment thoroughly.
- Insert the cleaned Straumann® customized abutment.

#### Note

If the model contains more than one abutment, use transfer aids.

Tighten the screw using only the SCS Screwdriver (together with Ratchet and Torque Control Device).

Never use cement when inserting the Straumann® customized abutment into the implant.

Straumann® customized ceramic abutments made of zirconium oxide are not autoclavable and must not be cleaned with a steam jet.

Follow recommended sterilization procedures (see previous page).

## Straumann® Customized Ceramic Abutment



### Option A: Screw-retained directly veneered abutment

- Position the Straumann® customized ceramic abutment in the implant. Tighten the screw with 35 Ncm using the SCS screwdriver along with the ratchet and the torque control device.
- Close the SCS configuration of the screw with cotton and sealing compound (e.g. gutta-percha). This allows a later removal of the directly veneered Straumann® customized abutment in case a replacement of the Straumann® customized abutment should be required.



### Option B: Cement-retained crown

- Position the Straumann® customized ceramic abutment in the implant. Tighten the screw with 35 Ncm using the SCS screwdriver along with the ratchet and the torque control device.
- Close the SCS configuration of the screw with cotton and sealing compound (e.g. gutta-percha). This allows a later removal of the crown in case a crown replacement should be required.
- Cement the superstructure to the abutment.
- Remove superfluous cement.

#### Note

Use only the special basal screws provided for the Straumann® customized ceramic abutment.

## Straumann® Customized Titanium Abutment



### Cement-retained crown

- Position the Straumann® customized titanium abutment in the implant. Tighten the screw with 35 Ncm using the SCS screwdriver along with the ratchet and the torque control device.
- Close the SCS configuration of the screw with cotton and sealing compound (e.g. gutta-percha). This allows a later removal of the crown in case a crown replacement should be required.
- Cement the superstructure to the abutment.
- Remove superfluous cement.

#### Note

Direct ceramic veneering is not possible. Use only the basal screws provided for the Straumann® customized titanium abutment

## 6. AUXILIARIES

	Art. No.	Article	Length	Material	
<b>Narrow Neck (NN)</b>		<b>048.353<sup>1</sup></b>	NN Occlusal screw (for ceramic only)	5 mm	Ti-6Al-7Nb
		<b>049.177<sup>1</sup></b>	NN Occlusal screw	5 mm	Ti-6Al-7Nb
		<b>048.087</b> <b>048.087-04<sup>2</sup></b>	NN Wax-up sleeve, for single use	15 mm	polymer
		<b>048.130</b>	NN Implant analog	14 mm	stainless steel
<b>Regular Neck (RN)</b>		<b>048.354<sup>1</sup></b>	RN Occlusal screw (for ceramic only)	5 mm	Ti-6Al-7Nb
		<b>048.356<sup>1</sup></b>	synOcta® basal screw	6.7 mm	Ti-6Al-7Nb
		<b>048.088</b> <b>048.088-04<sup>2</sup></b>	RN Wax-up sleeve, for single use	19.3 mm	polymer
		<b>048.124</b>	RN synOcta® implant analog	12 mm	stainless steel
<b>Wide Neck (WN)</b>		<b>048.356<sup>1</sup></b>	synOcta® basal screw	6.7 mm	Ti-6Al-7Nb
		<b>048.089</b> <b>048.089-04<sup>2</sup></b>	WN Wax-up sleeve, for single use	16.4 mm	polymer
		<b>048.171</b>	WN synOcta® implant analog	12 mm	stainless steel
<b>Narrow CrossFit™ (NC)</b>		<b>025.2906<sup>3</sup></b>	NC Basal screw (for ceramic only)	8.85 mm	Ti-6Al-7Nb
		<b>025.2900<sup>1</sup></b>	NC Basal screw	7.85 mm	Ti-6Al-7Nb
		<b>025.2903</b> <b>025.2903-04<sup>2</sup></b>	NC Wax-up sleeve, for single use	15.2 mm	polymer
		<b>025.2101</b>	NC Implant analog	12 mm	stainless steel
<b>Regular CrossFit™ (RC)</b>		<b>025.4906<sup>1</sup></b>	RC Basal screw (for ceramic only)	8.2 mm	Ti-6Al-7Nb
		<b>025.4900<sup>1</sup></b>	RC Basal screw	7.85 mm	Ti-6Al-7Nb
		<b>025.4903</b> <b>025.4903-04<sup>2</sup></b>	RC Wax-up sleeve, for single use	18.8 mm	polymer
		<b>025.4101</b>	RC Implant analog	12 mm	stainless steel

<sup>1</sup> When ordered separately    <sup>2</sup> Pack of 4    <sup>3</sup> Available in 2008





[www.straumann.com](http://www.straumann.com)



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