

# **PROSTHETIC OPTIONS**

## FOR NARROW NECK IMPLANTS



Straumann® Narrow Neck



The ITI (International Team for Implantology) is academic partner of Institut Straumann AG in the areas of research and education.

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## INTRODUCTION

Patients' expectations regarding the function and appearance of dental implants have risen steadily in recent years. The objective in the development of the Standard Plus implant Ø 3.3 mm Narrow Neck was to create ideal conditions for the treatment of small single-tooth gaps in the anterior upper and lower jaws.

The one-part Narrow Neck implant has a built-in octa abutment and a reduced shoulder width of 3.5 mm, which provides a solid base for narrow prosthetic copings. As part of the Standard Plus system, the Narrow Neck implant has a smooth collar height of 1.8 mm to meet high esthetic expectations.








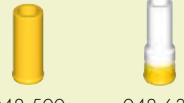
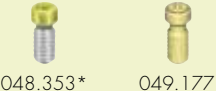


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**Standard Plus Implant Ø 3.3 mm  
Narrow Neck**



# SYSTEM OVERVIEW

Prosthetics	
	<b>Narrow Neck</b> Ø 3.5 mm 
<b>Transfer parts</b>	 048.016   048.167   048.067   048.084V4   048.087   048.087-04   048.122V4   048.132   048.130
<b>Prosthetic restoration</b>	screw-retained or cement-retained
<b>Case planning (V4 only)</b>	 048.935V4   048.936V4   048.937V4
<b>Titanium/gold abutments</b>	2)  CADCAM <sup>1)</sup>
<b>Temporary restorations/ Protective caps</b>	 048.669   048.050
<b>Titanium copings</b>	 048.505   048.550   048.551
<b>Ceramic abutments/copings</b>	 CADCAM <sup>1)</sup>
<b>Gold copings</b>	 048.500   048.635
<b>Auxiliary parts/Screws</b>	 048.353*   049.177

V4 = 4 components per pack      -04 = 4 components per pack

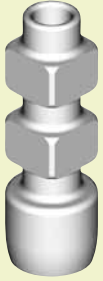
\*for NN CADCAM ceramic copings only

1) Straumann® CARES® abutments can be ordered via the Straumann® CARES® Visual software or at <http://cares.straumann.com>

2) Manufactured at the Straumann® CADCAM production center.

## PRODUCT OVERVIEW

### Transfer and cast fabrication



048.122V4



048.016



048.130

#### **NN impression cap with snap-on fit, plastic**

Precise impression procedure, saves time, simple handling.

#### **SCS configuration**

Secure transfer to the implant.

#### **NN impression cap with integral screw, aluminum/ titanium**

Secure transfer to the implant (for open tray).

#### **NN implant analog Stainless steel**

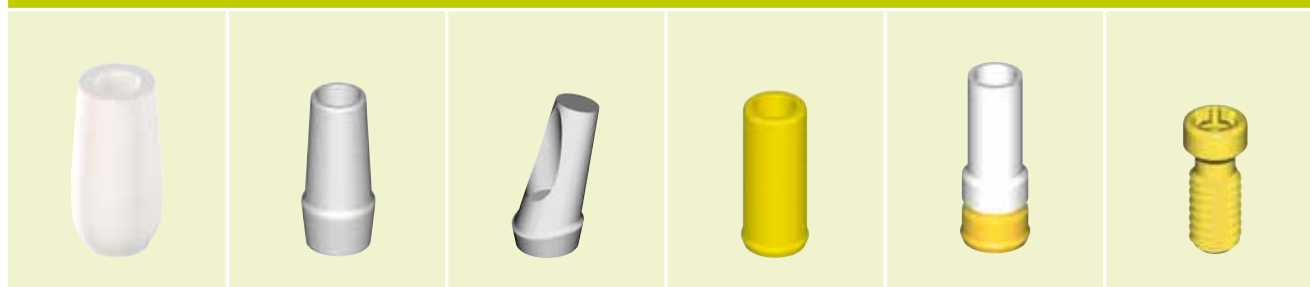
Dimensionally stable, exact dimensions.

#### **Secured against rotation**

Secure anchorage in the model.



## Prosthetics



048.669

048.505

048.550/551

048.500

048.635

049.177

**\*NN temporary coping**

**Grade 4 titanium/ white PEEK**

**Design**

Can be modified.

- For screw- or cement-retained temporary single-tooth and cement-retained temporary bridge restorations

For detailed instructions see "Crown and Bridge Restorations with the Straumann® synOcta Prosthetic System", Art. No. 152.255.

**Height 10 mm**

**\*NN coping**

**Grade 4 titanium**

**Design**

Can be modified.

- For cement-retained crowns
- For the direct application of acrylic veneering materials (not suitable for ceramic veneering)

**Height 9 mm,**  
with a 3 mm tissue cuff

**\*NN coping, 15°/20° angled**

**Grade 4 titanium**

**Design**

Can be modified.

- For cement-retained crowns
- For the direct application of acrylic veneering materials (not suitable for ceramic veneering)
- Internal 16 position design for optimal positioning

**Height 8.8 mm**

**\*NN framework blank**

**Metal ceramic alloy: ESTETICOR® COSMOR® H**

Not suitable for cast-on technique.

**Design**

Can be trimmed.

- For screw-retained crowns
- For the direct application of ceramic materials

**Height 9 mm**

**NN gold coping, cast on**

**Alloy CERAMICOR®/ burn-out plastic**

Non-oxidizing, high-melting, for cast-on technique with precious metal alloy.

**Design**

- For screw-retained crowns and cement-retained bridges

For detailed instructions see "Crown and Bridge Restorations with the Straumann® synOcta Prosthetic System", Art. No. 152.255.

**Height 10 mm**

**NN occlusal screw**

**Titanium alloy: Ti-6Al-7Nb anodized**

**Design**

- For a stable connection
- Pale yellow color for clear distinction from the standard occlusal screw

**Tightening torque**

35 Ncm for final restoration, 15–35 Ncm for temporary restoration with NN temporary coping

**Thread Ø 1.8 mm**

NN= Narrow Neck

\*Components can not be cast onto.

**New Indications**

The Standard Plus Implant Ø 3.3 mm Narrow Neck can now be used in a broader range of indications:

- Single tooth replacement
- Fixed partial denture (cement-retained only)

**Note**

- Estheticor® and Ceramicor® are registered trademarks of Cendres & Métaux SA (Biel-Bienne, Switzerland)

# RESTORATIVE PROCEDURES FOR THE NARROW NECK IMPLANT

## Fabrication of a temporary

Although the healing or protective cap can remain in place throughout the entire healing phase, most cases require placement of a custom temporary in order to achieve an esthetic gingival architecture. The temporary single-tooth or bridge restoration can be fabricated chair-side using the NN temporary coping.



NN temporary coping including occlusal screw  
(048.669)

The temporary is fabricated using standard techniques such as direct veneering (e.g. vacuum formed sheet technique as shown here) or temporary cementation of prefabricated crowns.



1. NN temporary coping after customization

The temporary coping is customized individually on an NN analog and then placed on the implant. To make it easy to loosen the occlusal screw afterwards, the screw channel is sealed with cotton wool or wax prior to veneering.

**Tip:** New cross-toothed millers or heatless wheels are suitable for processing the temporary coping. To avoid smearing of the polymer, adjust the bur speed properly (low rpm number, only little pressure). For optimal adhesion of temporary veneering material, we recommend inserting retentions in the resin or sandblasting the resin (covering the octagon).





A vacuum formed sheet is used for veneering.



**2. Direct veneering with vacuum formed sheet**



**3. Finished temporary restoration in place**

The excess acrylic is removed, the screw channel reopened and the temporary restoration finished. Then the cleaned restoration is placed on the implant, the screw head is covered with cotton wool and the screw channel is sealed with composite.



**Note:** We recommend a tightening torque of between 15 and 35 Ncm. The NN temporary coping must not remain in situ for more than 6 months and the restoration must always be under-occluded in order to reduce lateral forces. Use temporary cement for cement-retained temporary restorations.

# NN TITANIUM COPING

## Laboratory Procedure

When the dental laboratory receives the impression from the doctor, the NN implant analog is secured onto the impression cap by screwing it into place with an SCS screwdriver (or it snaps into place if the plastic Snap on impression cap is used).



*NN analog in place in the impression*

The working cast is fabricated in the usual way from resin stone, Type 4.



*The model is poured in stone*

The appropriate coping is then chosen. For this, the plastic NN PLAN copings can be used as "try-ins" on the model or intraorally to facilitate selection of prosthetic components. The NN PLAN copings are included in the Prosthetic planning set, Art. No. 048.901/048.904.

In this case the titanium coping for cement-retained restorations was used.



*NN titanium coping in place on the model*

A flatwall must be made in the coping to ensure anti-rotation. The coping is modified and the restoration is fabricated using conventional laboratory procedures.



**NN implant analog**  
(048.130)



**NN PLAN coping**  
(048.935V4)



**NN angled PLAN coping, 15°**  
(048.936V4)



**NN angled PLAN coping, 20°**  
(048.937V4)



*The coping is prepped*

## Placement of Final Restoration

An NN occlusal screw is used to secure the titanium coping onto the implant. It is then torqued to 35 Ncm with an SCS screwdriver (in combination with the ratchet 046.119 and torque control device 046.049).

The screw access hole is blocked out and the crown is cemented into place with permanent cement.



*The modified coping secured in the mouth*



*Final crown in place*

Clinical photos courtesy of Robert Vogel, DDS/USA



**NN occlusal screw**  
(049.177)



Also see the "Straumann® Dental Implant System – Prosthetics" DVD, Art. No. 150.538, "Cemented single tooth restoration with the angled NN Titanium abutment".

## NN GOLD COPING, CAST-ON – LABORATORY PROCEDURE

The NN gold coping consists of a non-oxidizing, high-fusion alloy (Ceramicor: Au 60%, Pt 19%, Pd 20%, Ir 1%; fusion temperature range 1400°–1490 °C/2552°–2714 °F). With this coping, a modeling aid made of burn-out plastic is already attached. If required, the modeling aid can be individually shortened occlusally.

**1.** Initial situation for the fabrication of a PFM crown for tooth 32 (ADA 23). For optimal reproduction of the gingiva, we recommend fabricating a gingival mask on the plaster cast.

**2.** The cast is used to produce a wax-up and silicone index, with which the spacing is later checked when modeling the crown, and which can assist the process of molding the porcelain veneer.



**NN Gold coping, cast-on**  
048.635



**Tip:** Never cast without a modeling aid, as otherwise the PFM alloy will flow out too thinly, or not at all, at the upper edge of the coping (screw seat on the coping) and there is a danger of crack formation in the ceramic material as a result of different heat expansion coefficients. The modeling aid also has the function of ensuring a cleanly finished screw channel with sharp edges.

**3.** The gold coping is screwed onto the analog with the occlusal screw.



**4.** The framework is modeled to the tooth shape with reduced dimensions, according to the rules of the veneering technique. As the prefabricated gold coping is made of a non-oxidizing alloy, it is important to ensure that the parts to which the porcelain veneer will later be applied are covered with a layer of wax at least 0.7 mm thick during modeling.



**5.** The silicone index fabricated with the help of the wax-up is used to check that the framework has been formed correctly.



**6.** Pins and base are applied to the finished framework. The use of investment materials designed for the rapid heating procedure (speed investment materials) is not recommended. Casting is performed with precious metal alloys.



**7.** Suitable means of devesting include ultrasound, a water jet, pickling or a glass-fiber brush. Never use sandblasting for devestment! Sandblasting will damage the interior configuration (octagon) and coping edge, which causes a loss of precision in the form of inadequate accuracy of fit.



**8.** The framework is finished, taking care not to grind through the cast-on alloy, as the gold coping is made of a non-oxidizing alloy to which a porcelain veneer cannot be applied (the thickness of the cast-on alloy must be at least 0.5 mm).



**Note:**

Please also refer to the Straumann brochure, "Crowns and Bridges with the synOcta® Prosthetic System", Art. No. 152.255 for detailed information about casting and instructions for use for the fabrication of a PFM crown with the aid of a cast-on gold coping.

**9.** Before veneering, the framework is checked on the cast, with the help of the silicone index, to ensure that the dimensions are optimal.

**10.** To prevent the veneering porcelain from cracking or chipping in the area of the cervical margin, the framework should be left unveneered around the circumference in this area (approximately 0.3 to 0.4 mm).

**11.** After final firing, the crown is ready for attachment. It is screwed tight on the implant with the NIN occlusal screw, applying a **torque of 35 Ncm** with a screwdriver.









# IMPORTANT GUIDELINES

## Please note

Practitioners must have appropriate knowledge and instruction in the handling of the Straumann® dental implants, Straumann CAD/CAM products, Straumann regenerative products or other Straumann products ("Straumann Products") for using the Straumann Products safely and properly in accordance with the instructions for use.

The Straumann Product must be used in accordance with the instructions for use provided by the manufacturer. It is the practitioner's responsibility to use the device in accordance with these instructions for use and to determine, if the device fits to the individual patient situation.

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## Availability

Some of the Straumann Products listed in this document may not be available in all countries.

## Caution

In addition to the caution notes in this document, our products must be secured against aspiration when used intraorally.

## Validity

Upon publication of this document, all previous versions are superseded.

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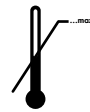
Catalogue number



Sterilized using irradiation



Lower limit of temperature



Upper limit of temperature



Temperature limitation

Rx only

Caution: Federal law restricts this device to sale by or on the order of a dental professional.



Do not re-use



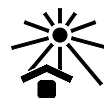
Non-sterile



Caution, consult accompanying documents



Use by



Keep away from sunlight



Straumann Products with the CE mark fulfill the requirements of the Medical Devices Directive 93/42 EEC



Consult instructions for use



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