straumann

PROSTHETIC OPTIONS FOR
NARROW NECK IMPLANTS

COMMITTED TO
SIMPLY DOING MORE
FOR DENTAL PROFESSIONALS

CONTENTS

ITI International Team for Implantology

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

INTRODUCTION

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 (with a height of 1.5 mm) and a reduced shoulder width of 3.5 mm, which provides a solid base for narrow prosthetic abutment 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.

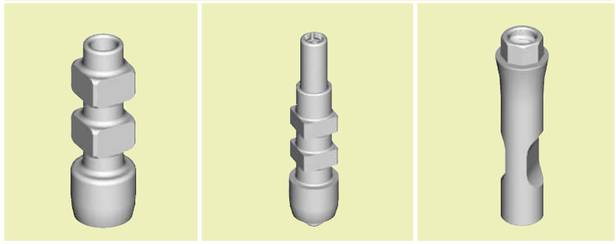
Standard Plus implant Ø 3.3 mm Narrow Neck

SYSTEM OVERVIEW

Prosthetics	
	Narrow Neck Ø 3.5 mm
Surfaces	SLA® and SLActive™
Transfer parts	048.016 · 048.122V4 · 048.130
Prosthetic restoration	screw-retained or cement-retained
Case planning	048.935V4 · 048.936V4 · 048.937V4
Temporary restorations/ protective caps	048.043 · 048.050 · 048.374*
Titanium copings	048.505 · 048.550 · 048.551
Gold copings	048.500 · 048.635
Auxiliary parts/screws	049.177

* Requires the hexagonal screwdriver (046.421)

Transfer and cast fabrication



048.122V4

NN impression cap with snap-on fit (for closed tray)

Plastic
Precise impression procedure, saves time, simple handling

SCS configuration
Secure transfer to the implant

048.016

NN impression cap with integral screw (for open tray)

Aluminum/titanium
Precise impression procedure, simple handling

SCS configuration
Secure transfer to the implant

048.130

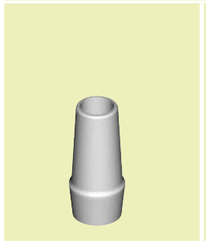
NN analog

Stainless steel
Exact dimensions of the implant

Secured against rotation
Secure anchorage in the model

NN = Narrow Neck (Ø 3.5 mm restorative platform)

Prosthetics



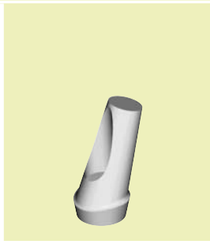
048.505

NN titanium coping*

Grade 4 titanium
Increased strength

Design
Shoulder and height can be modified.
- As a screw-retained base for cement-retained crowns
- For the direct application of acrylic veneering materials (not suitable for ceramic veneering)

Height 9.0 mm with a 3.0 mm tissue cuff



048.550/551

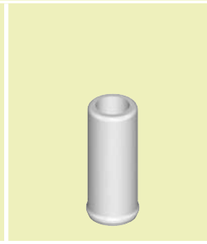
NN 15°/20° angled titanium copings*

Grade 4 titanium
Increased strength

Design
Shoulder and height can be modified.
- As a screw-retained base for cement-retained crowns
- For the direct application of acrylic veneering materials (not suitable for ceramic veneering)

Internal 16 position design
For flexible positioning

Height 8.8 mm



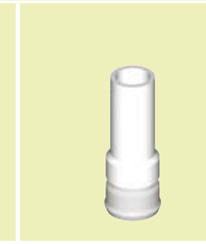
048.500

NN framework blank*

Metal ceramic alloy ESTETICOR® COSMOR H
Can be trimmed for the direct application of ceramic materials

Design
For screw-retained crowns.

Height 9.0 mm



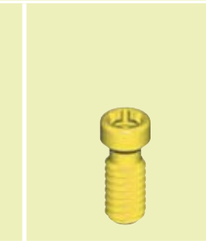
048.635

NN cast-on gold coping

Cast-on alloy CERAMICOR®/ burn-out plastic
Non-oxidizing, high-melting, for the cast-on technique with precious metal alloy.

Design
For screw-retained and cement-retained crowns.

Height 10.0 mm



049.177

NN occlusal screw

Titanium alloy Ti-6Al-7Nb anodized

Tightening torque 35 Ncm
Provides for a stable connection

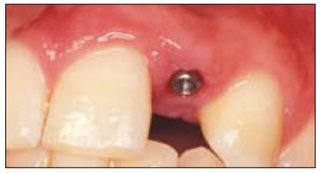
Pale yellow color
Clear distinction from the standard occlusal screw

Thread Ø 1.8 mm

***Important note:**
These components cannot be cast onto.

Fabrication of a provisional

Although the healing or protective cap can remain in place throughout the entire healing phase, some cases may require placement of a custom provisional in order to achieve an esthetic gingival architecture.



Remove healing cap with an SCS screwdriver

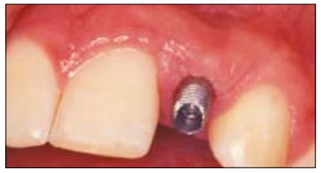
An acrylic provisional can be created and placed over the NN titanium coping.

NN titanium coping
048.505

Secure the NN titanium coping with the yellow NN occlusal screw and modify it as necessary (in the mouth using copious water spray).

NN occlusal screw
049.177

The modified coping is then secured onto an NN analog with an NN occlusal screw. A preformed acrylic tooth can be relined over the prepared coping.

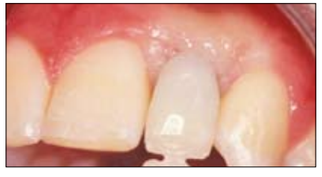


The coping is prepped in the mouth

The screw access hole must be blocked out prior to using the reline material.

For direct bonding of facing materials to the NN titanium abutment coping, it is advisable to roughen the surface and use a bonding agent.

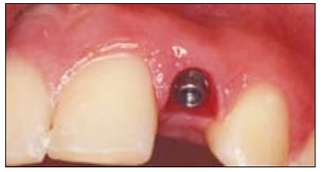
The screw aperture must be sealed before adding the facing.



Use temporary cement to secure the provisional crown on the prepped coping

Impression procedure

Once the provisional is removed, it reveals the mature scalloped gingiva.



Provisional has been removed

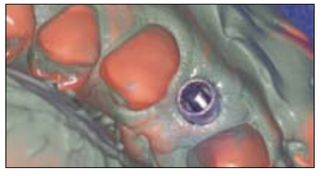
An impression cap is chosen and then seated. In this case, an open tray technique was used. The NN metal impression cap (048.016) is screwed into place using an SCS screwdriver. A plastic NN snap-on impression cap (048.122V4) for a closed tray technique is also available.

NN impression cap with integral screw
048.016

NN snap-on impression cap
048.122V4

Metal impression cap screwed into place

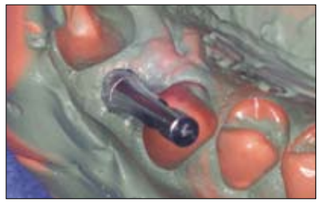
The impression is taken using an elastomeric impression material.



The impression (with the impression cap picked up) is sent to the lab

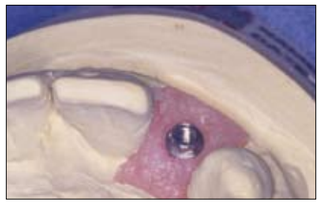
Laboratory procedure

When the dental laboratory receives the impression from the doctor, the NN 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

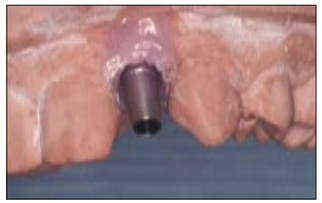
The working cast is fabricated in the usual way from resin stone, Type 4 (DIN 13911).



The model is poured in stone

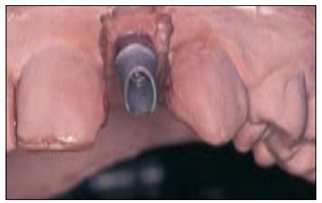
The appropriate coping is then chosen. For this, the plastic NN PLAN copings can be used as "try-ins" on the model to facilitate selection of prosthetic components. The NN PLAN copings are included in the prosthetic planning kit (048.901).

In this case, the titanium coping (048.505) for cement-retained restorations was used.



NN titanium coping in place on the model

A flatwall/groove must be made on the coping to ensure anti-rotation (walls must not be less than 0.3 mm thick). The coping is modified/customized and the restoration is fabricated using conventional laboratory procedures.



The coping is prepped

NN analog
048.130

NN PLAN coping
048.935V4

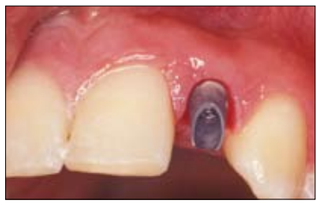
NN 15° angled PLAN coping
048.936V4

NN 20° angled PLAN coping
048.937V4

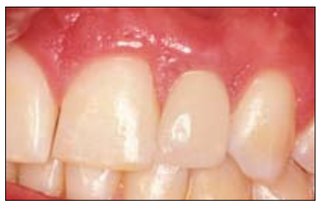
Placement of final restoration

An NN occlusal screw is used to secure the NN 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 CD-ROM "Straumann® Dental Implant System – Prosthetics" (USADV 022). Refer to the section "Cemented single tooth restoration with the angled NN titanium abutment."

NN CAST-ON GOLD COPING – LABORATORY PROCEDURE

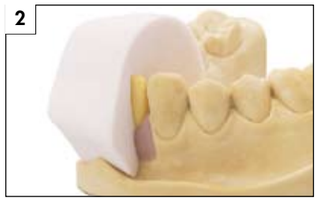
The NN cast-on gold coping consists of a non-oxidizing, high-fusion alloy (Ceramicor®: Au 60%, Pt 19%, Pd 20%, Ir 1%; melting temperature range 1400°–1490°C/2552°–2714°F). With this coping, a modeling aid made of burn-out plastic is already attached. If required, the modeling aid can be individually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

NN cast-on gold coping
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.

1 Initial situation for the fabrication of a PFM crown for tooth 32 (ADA 23). For optimal reproduction of the gingiva, it is recommended that a gingival mask be fabricated 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 in the process of molding the porcelain veneer.



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.

Tip: Do not use wetting agents if possible. The fine film of the wax wetting agent on the surface of the Ceramicor® during casting can result in metal on the 45° shoulder or in the interior. Wetting agent residues can lead to reactions with the investment material and casting errors. Use of a cotton pellet soaked in alcohol is recommended to clean the interior and edge of Ceramicor® components to remove wax particles and insulating agents to prevent overflow of cast-on alloy on to the delicate circular edge and interior.

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. The casting temperature must be below 1250°C/2282°F.

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).

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).

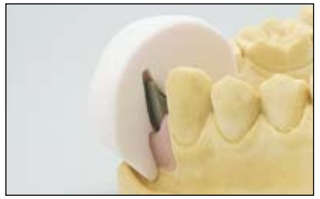
11 After final firing, the crown is ready for attachment. It is screwed tight on the implant with the NN occlusal screw, applying a **torque of 35 Ncm** using an SCS screwdriver together with the ratchet and torque control device.

6

7

8

9



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11

NOTES

IMPORTANT NOTES

Disclaimer of liability
The Straumann® dental implant is part of an overall concept and may only be used in conjunction with the associated original components and instruments according to Institut Straumann AG's instructions and recommendations. Use of products made by third parties in conjunction with the Straumann® Dental Implant System will void any warranty or other obligation, expressed or implied, of Straumann. Instruction as to application of our products takes place verbally, in writing, by electronic media, or in hands-on training corresponding to state-of-the-art at the time of introduction of the product. The user of Straumann products has the duty to determine whether or not any product is suitable for a particular patient and circumstance. Straumann disclaims any liability, expressed or implied, and shall have no responsibility for any direct, indirect, punitive or other damages, arising out of, or in connection, with any errors in professional judgment or practice in the use or installation of Straumann products.

The user is also obliged to study the latest developments of the Straumann® Dental Implant System and its applications regularly.

Please note
The descriptions given are insufficient to allow immediate use of the Straumann® Dental Implant System. Guidance in the handling of these instruments by a doctor experienced in their use is strongly recommended.

Validity
Upon publication of this brochure, all previous versions are superseded.

Availability
Not all products listed in this brochure are available in all countries.

Caution
Our products must be secured against aspiration when used intraorally (e.g., use of a throat pack is recommended).

Federal law restricts these devices to sale by, or on the order of, a dentist or physician.

Units per package
Unless stated otherwise, there is one unit in each package.

Documentation
You can obtain detailed instructions on the Straumann® Dental Implant System from your Straumann representative.

Definition
SLA® = Sand-blasted, Large grit, Acid-etched

SLActive™ = Sand-blasted, Large grit, Acid-etched, chemically active and hydrophilic.

Copyright and trademarks

Explanation of the symbols on labels and instruction leaflets

LOT	Lot/batch number
REF	Article number
STERILE R	Sterile by gamma irradiation
~~STERILE~~	Non-sterile
	Upper temperature limit
	Temperature limitation
Rx only	Caution: Federal (USA) law restricts these devices to sale by, or on the order of, a dentist or physician
	Do not use on patients
	Do not reuse
	Refer to instructions for use
	Use before expiration date
	Protect from exposure to strong light or heat
CE xxxx	Straumann products carry the CE mark and fulfill the requirements of the Medical Devices Directive 93/42 EEC

Colored warning labels

YELLOW ➡ Caution:	Indicates hazards or unsafe handling that might cause minor injury or damage to property.
ORANGE ➡ Warning:	Indicates hazards that might cause serious or fatal injury.
RED ➡ Danger:	Indicates hazards that might cause immediate serious or fatal injury.

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