

BASIC INFORMATION

Straumann® Screw-retained Abutments



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1. GENERAL INFORMATION



1.1 PURPOSE OF THIS GUIDE

This guide was created for dental technicians and dentists working with the Straumann® Bone level Screw-retained abutments for designing screw-retained customized prosthetic reconstructions, such as crowns, bridges or over-dentures. It provides complementary step-by-step information on working with the Straumann® Screw-retained abutments.

Failure to follow the procedures outlined in these instructions may harm the patient and/or lead to any or all of the following complications:

- Aspiration or swallowing of a component
- Breakage
- Infection

Note:

Implant-borne superstructures require optimal oral hygiene from the patient side. This must be considered by all involved parties when planning and designing the restoration.

Not all products shown are available in all markets.

All products shown in this guide are for single use only if not indicated otherwise on the respective product label.

Consult the brochure:

Straumann® Dental Implant System, Basic Information, for information on indications and contraindications of Straumann® implants such as the required minimum number of implants, implant type, diameter and loading protocols.	152.754/en
Straumann BLX™ Implant System, Basic Information, for information on indications and contraindications of Straumann® implants such as the required minimum number of implants, implant type, diameter and loading protocols.	702115/en
Straumann® Bone Level Prosthetics Procedures	152.810/en
Straumann Pro Arch™ Basic Information	490.015/en

Consult the Instructions for use:

Straumann® Titanium Abutments and Temporary Abutments/Copings	150.923/en
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1.2 INTRODUCTION TO STRAUMANN® SCREW-RETAINED ABUTMENTS

Intended use

- Screw-retained multi-unit as well as single-unit restorations on abutment-level
- Full-arch restorations on abutment-level, screw-retained as well as removable

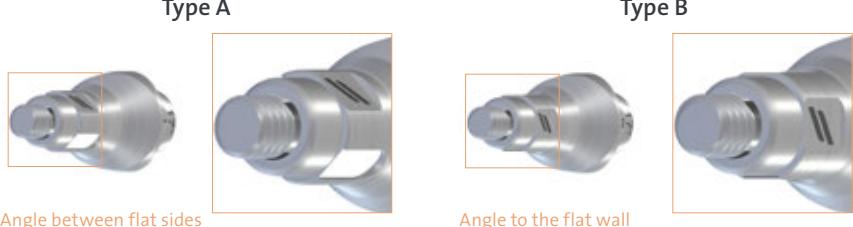
Sleek design and clear portfolio

- Same abutment-restoration connection design for all diameters, angulations and implant connections allow a streamlined portfolio of tertiary components
- Abutment angulations of 0°, 17° and 30°
- Abutment design allows multi-unit as well as single-unit restorations
- Sterile packed for immediate use
- Large variety of gingiva heights available



CrossFit®:

Two types of Screw-retained abutments are available, type A and type B. This enables the axis to be corrected in 8 different alignments (in 45° graduations).



	Single-unit restoration	Multi-unit restorations (incisor to premolar region)	Multi-unit restorations (molar region)
NC Ø3.5 mm straight abutments	GH 1.5/2.5/3.5 mm	Yes	Yes
NC Ø4.6 mm straight abutments	GH 2.5*/3.5/4.5/5.5 mm		No
RC Ø4.6 mm straight abutments	GH 1.5/2.5/3.5 mm		
RC Ø4.6 mm angled abutments	GH 2.5*/3.5/4.5/5.5 mm		
RB/WB Ø4.6 mm straight abutments	GH 1.5/2.5/3.5/4.5 mm		No limitation
RB/WB Ø4.6 mm angled abutments	GH 3.5/4.5/5.5 mm		

*GH 2.5 not available for 30° angled abutments



1.3 STRAUMANN® SCREW-RETAINED ABUTMENT - OVERVIEW

Narrow CrossFit®			Regular CrossFit®			TorcFit™ RB & WB									
Diameter	3.5	4.6	4.6			4.6									
Angulation	0°	0°	17° 30°			0°	17° 30°								
Coding	Blue	Yellow			Grey			Magenta							
Abutment height	1.8 mm	1.8 mm			1.8 mm			1.8 mm							
Angle of Abutment-restoration connection	22°	22°			22°			22°							
Gingiva heights	1.5 mm 2.5 mm 3.5 mm	1.5 mm 2.5 mm 3.5 mm	2.5 mm (17° only) 3.5 mm 4.5 mm 5.5 mm	1.5 mm 2.5 mm 3.5 mm	2.5 mm (17° only) 3.5 mm 4.5 mm 5.5 mm	1.5 mm 2.5 mm 3.5 mm	3.5 mm 4.5 mm 5.5 mm								
Impression components*															
	*impression components are available as non-engaging (for bridges) and engaging components (for crowns)														
	Non engaging Engaging														
Abutment screws	Straight abutments		Angled abutments				Straight abutments	Angled abutments							
	Integrated in one-piece abutment						Integrated in one-piece abutment								
Tightening force abutment screw	35 Ncm														
Occlusal screws															
Tightening force occlusal screw	15 Ncm														
Lab processing screws															
Lab polishing aid															
Analogs and repositionable analogs															



$\varnothing 3.5 \text{ mm}$								
 Engaging (Crown)								
	Burn-out Coping 023.2748		Temporary TAN coping 024.0021		Titanium Coping 023.2747			
 Non-engaging (Bridges/Bars)								
	Burn-out Coping, Bridge 023.2755	Temporary TAN Cop- ing, Bridge 024.0022	Titanium Coping, Bridge 023.2749	Titanium Coping, Bar 023.2750	Gold Coping, Bridge 023.2752	Gold Coping, Bar 023.2753		
$\varnothing 4.6 \text{ mm}$								
 Engaging (Crown)								
	Burn-out Coping 023.4748		Temporary TAN coping 024.0023		Titanium Coping 023.4747			
 Non-engaging (Bridges/Bars)								
	Temporary TAN Coping, Bridge 024.0024	Coping, Ti, Bridge 023.4751	Coping, Ti, Bar 023.4752	Coping, Gold, Bridge 023.4754	Coping, Gold, Bar 023.4755	Variobase® for Bridge/Bar Cylindrical 023.0028	Burn-out Coping, for Variobase® for Bridge/ Bar Cylindrical Coping 023.0032	Burn-out Coping 023.4758
 Occlusal Screw 023.4763								

2. SOFT TISSUE MANAGEMENT



The Straumann® Bone Level Implant lines put a strong emphasis on esthetic considerations. They offer tailor-made solutions that allow for natural soft tissue shaping and maintenance in all indications. A versatile portfolio of healing and temporary abutments is available, including customizable products made of polymer for easy and fast processing.

2.1 SOFT TISSUE MANAGEMENT SOLUTIONS

	Healing Abutment		Temporary Abutment	
	Prefabricated healing abutment (titanium)	Customizable healing abutment (polymer)	PMMA with titanium alloy inlay	Titanium alloy (TAN)
BL/BLT (CrossFit®)				
BLX (TorcFit™)		-	-	

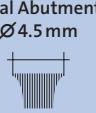
Note: Do not use for longer than 6 months.

2.2 HEALING ABUTMENTS THAT SUIT CROSSFIT® SCREW-RETAINED ABUTMENTS

Platform	NC												
Type	Screw-retained Abutment												
Material													
Angle													
\varnothing (mm)													
GH (mm)	1.5	2.5	3.5	1.5	2.5	3.5	2.5	3.5					
GH (mm)	2.0	3.5	5.0	2.0	3.5	5.0	3.5						
\varnothing (mm)	3.6			4.8			4.8						
Type	Conical Healing Abutment												
Platform	RC												
Type	Screw-retained Abutment												
Material													
Angle													
\varnothing (mm)													
GH (mm)	1.5	2.5	3.5	2.5	3.5	4.5	5.5	3.5	4.5	5.5			
GH (mm)	2.0	4.0	6.0	4.0									
\varnothing (mm)	5.0			5.0									
Type	Conical Healing Abutment												

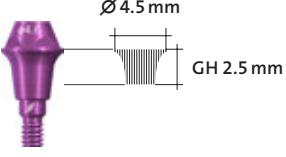
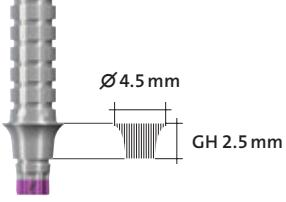
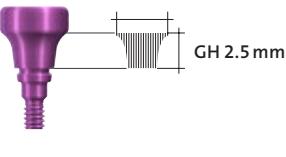
2.3 OVERVIEW OF CONSISTENT EMERGENCE PROFILES™ FOR TORCFIT™ SCREW-RETAINED ABUTMENTS

Which healing abutments suit which final abutment?

Crowns	Healing Abutments for Crown	Temporary Abutments for Crown	Final Abutments
 Final Abutment Ø4.5 mm	 Gingiva Height GH 1.5 mm	 064.4212S / 064.4213S	 064.4372
	 Gingiva Height GH 2.5 mm	 064.4214S / 064.4215S	 064.4373
	 Gingiva Height GH 3.5 mm	 064.4216S / 064.4217S	 064.4374
			 062.4722S
			 062.4723S
			 062.4724S



How to match fitting TorcFit™ components

Dimensions on components	Label	Label text
 <p>Ø 4.5 mm GH 2.5 mm</p>	<p>RB/WB Screw-ret. Abut. straight, Ø 4.6mm, GH 2.5mm, TAN</p> <p>DE RB/WB Verschraubtes Sekundärteil gerade, Ø 4.6mm, GH 2.5mm, TAN FR RB/WB Pilier transverse droit, Ø 4.6mm, GH 2.5mm, TAN IT RB/WB Componente secondaria avvitata diritta, Ø 4.6mm, GH 2.5mm, TAN PT RB/WB Pilier aparañadido recto, Ø 4.6mm, GH 2.5mm, TAN ES RB/WB Pilier atornillado recto, Ø 4.6mm, GH 2.5mm, TAN</p> <p>ZZZZZZZZZZ</p> <p>REF 062.4723S LOT XXXXX YY YYYY-MM-DD (10)XXXXX xxxxxx</p>	<p>RB/WB Screw-ret. Abut. straight, Ø 4.6 mm, GH 2.5 mm, TAN</p>
 <p>Ø 4.5 mm GH 2.5 mm</p>	<p>EN RB/WB Temporary Abutment for crown, Ø 4.5mm, GH 2.5mm, TAN DE RB/WB Provisoriumssekundärteil für Krone, Ø 4.5mm, GH 2.5mm, TAN FR RB/WB Pilier provisoire pour couronne, Ø 4.5mm, GH 2.5mm, TAN IT RB/WB Componente secondaria provvisoria per corona, Ø 4.5mm, GH 2.5mm, TAN PT RB/WB Pilier provisório para coroa, Ø 4.5mm, GH 2.5mm, TAN ES RB/WB Pilier provisional para corona, Ø 4.5mm, GH 2.5mm, TAN</p> <p>ZZZZZZZZZZ</p> <p>REF 064.4373 LOT XXXXX</p> <p>straumann original</p> <p>Institut Straumann AG • Peter Merian-Weg 12 • CH-4002 Basel • Switzerland</p>	<p>RB/WB Temporary Abutment, for crown, Ø 4.5 mm, GH 2.5 mm, TAN</p>
 <p>Ø 5 mm GH 2.5 mm</p>	<p>straumann REF 064.4214S LOT XXXXX</p> <p>straumann REF 064.4214S LOT XXXXX</p> <p>straumann REF 064.4214S LOT XXXXX</p> <p>RB/WB Healing Abutment Crown, Ø 5mm, GH 2.5mm, AH 2mm, Ti DE RB/WB Gingivalemer Krone, Ø 5mm, GH 2.5mm, AH 2mm, Ti FR RB/WB Pilier de cicatrisation couronne, Ø 5mm, GH 2.5mm, AH 2mm, Ti IT RB/WB Componente secondaria di guancione corona, Ø 5mm, GH 2.5mm, AH 2mm, Ti PT RB/WB Pilier de cicatrização coroa, Ø 5mm, GH 2.5mm, AH 2mm, Ti ES RB/WB Pilier de cicatrización corona, Ø 5mm, GH 2.5mm, AH 2mm, Ti</p>	<p>RB/WB Healing Abutment*, Crown, Ø 5 mm, GH 2.5 mm, AH 2 mm, Ti</p>

*Healing abutments anticipate the final crown, therefore, they have a larger nominal diameter than the final abutments.

3. PROSTHETICS AND LAB PROCEDURES



3.1 IMPRESSION TAKING

Preparation

General: It is recommended to take the impression on the level that the final restoration is planned on to ensure proper fit of the temporary and final restoration:

- Abutment-level impression for restoration on abutment level
- Implant-level impression for restoration on implant level

3.1.1 Impression-taking on abutment level

Open-tray impression

Make sure the abutments are torqued down with 35 Ncm.

Place the open-tray impression posts onto the abutments and fix them with the screw.

Ensure correct positioning of the impression posts on the abutments.

For single-unit restoration use the impression components with the engaging feature, for multi-unit restorations use the impression components with the non-engaging feature.



Take the impression using an elastomeric impression material.

Forward the impression and all corresponding impression components to the dental lab.

Caution: unscrew the open-tray impression posts from Implants/abutments before releasing the impression material from the patient/model.

Note: Open-tray impression procedure requires a custom-made tray with perforations. Impression posts are intended for single use only to ensure optimal fit and precise impression taking for each patient.



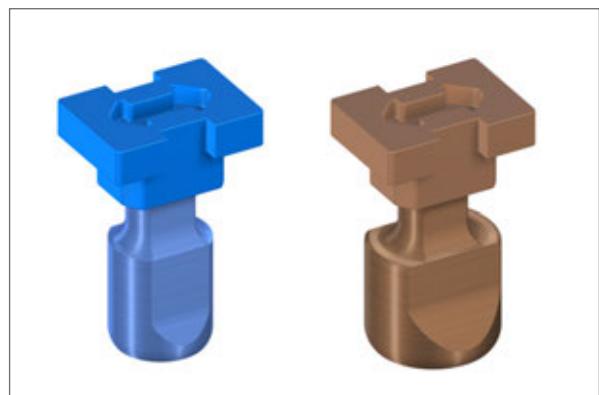
Closed-tray impression

Make sure the abutments are torqued down with 35 Ncm.

Place the closed-tray impression posts onto the abutments and fix them with the screw.

Ensure correct positioning of the impression posts on the abutments.

Position the positioning cap onto the impression post.



■ Prosthetic procedure



For single-unit restoration use the impression components with the engaging feature, for multi-unit restorations use the impression components with the non-engaging feature.

Take the impression using an elastomeric impression material.

Forward the impression and all corresponding impression components to the dental lab.



3.1.2 Impression-taking on implant level

In case all implants are placed straight, there is the option of taking an implant-level impression (for instructions see chapter 6. *Impression taking* from *BL Prosthetics Procedures* (152.810/en)).



3.2 PLAN ABUTMENTS FOR RB/WB SCREW-RETAINED ABUTMENTS FOR INTRA- AND EXTRA-ORAL PLANNING

Characteristics

Simple

- Color-coded and easily readable
- Easy handling with the integrated holding pin
- All gingiva heights marked on each abutment

Reliable

- Plan abutments fabricated of sterilizable polymer material

Designed to facilitate Pro Arch restoration planning

- 0°, 17° and 30° abutments to cover implant divergences
- Indication of occlusal screw channel direction
- Possibility to cut the pin for easier placement in posterior region of the mouth

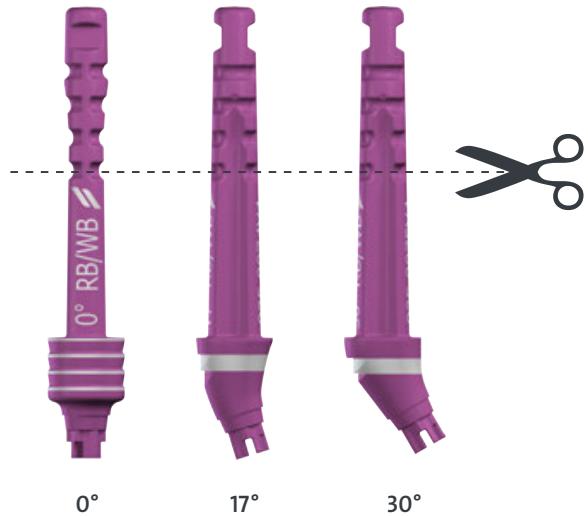
Notes:

- After intraoral use clean and sterilize the Plan abutments as described in the IFU (702897 - Instructions for use: Straumann® prosthetic planning and placement tools)
- Replace non-functional Plan abutments.
- If you decide to cut the pin, it is recommended to polish the end. Do not cut the pin shorter than the last groove.
- For extra-oral use: while these plan abutments were optimized for intra oral use, slight vertical movements are possible when used extra-orally (in implant analog). Make sure the plan abutments are correctly seated.

3.2.1 For single-unit restorations

Place the Plan abutment on the implant (intra-oral use) or implant analog (extra-oral use).

This will aid in checking dimensions (laser marks on Plan abutments indicate gingiva height), axial alignment and occlusal screw axis of the potential restoration.

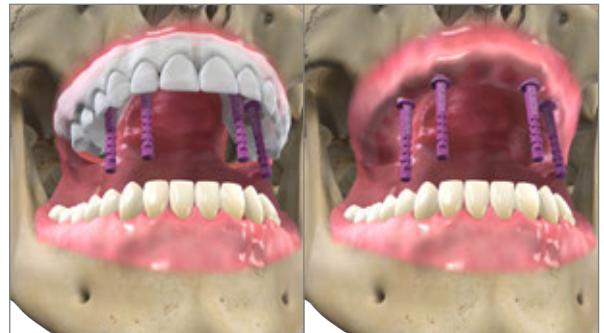


3.2.2 For multiple-unit restorations

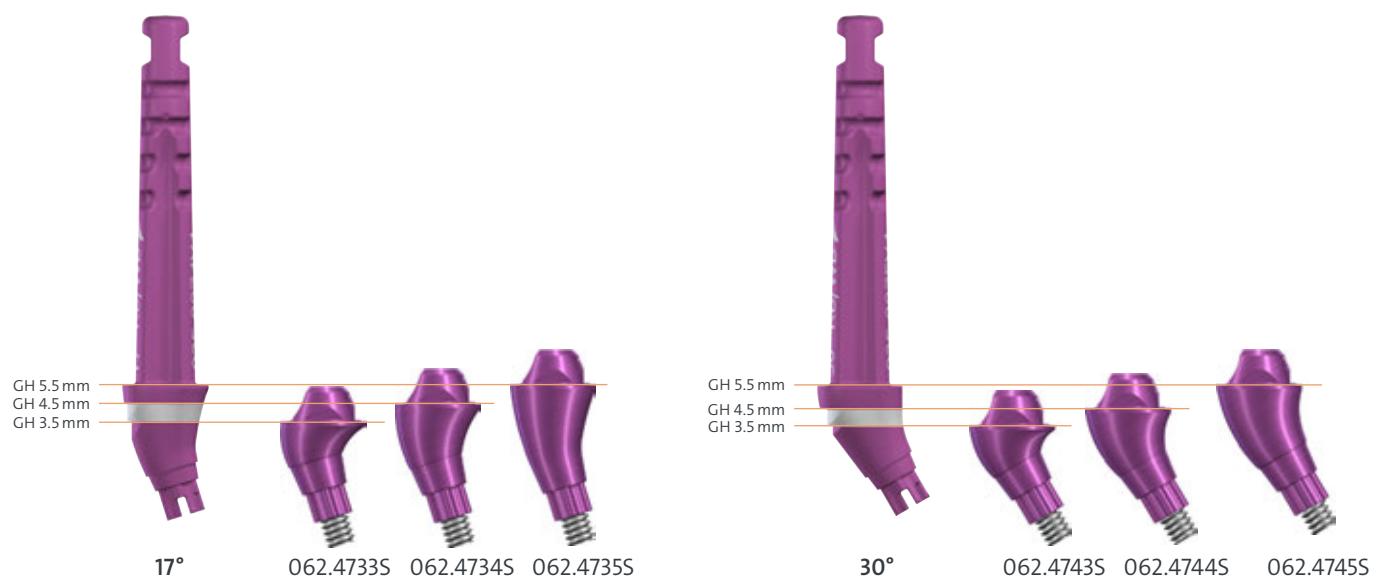
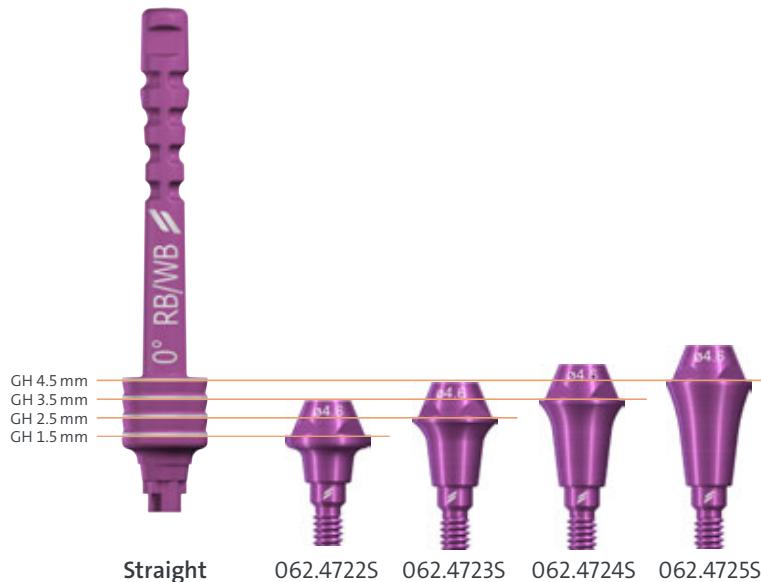
Place the Plan abutments on the implants (intra-oral use) or implant analog (extra-oral use).

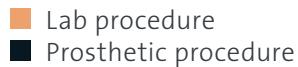
This will aid in checking dimensions (laser marks on Plan abutments indicate gingiva height), axial alignment and occlusal screw axis of the potential restoration.

A clear duplicate of the provisional may be used to check the alignment of the different occlusal screw axis.



3.2.3 Identification of the gingiva heights marked on the plan abutments and corresponding RB/WB Screw-retained Abutments





3.3 SINGLE-UNIT RESTORATION

Using protective caps

Mount the protective cap onto the abutment and hand-tighten the screws with the SCS screwdriver.

Note: Do not keep protective caps in the patient's mouth for longer than 180 days.



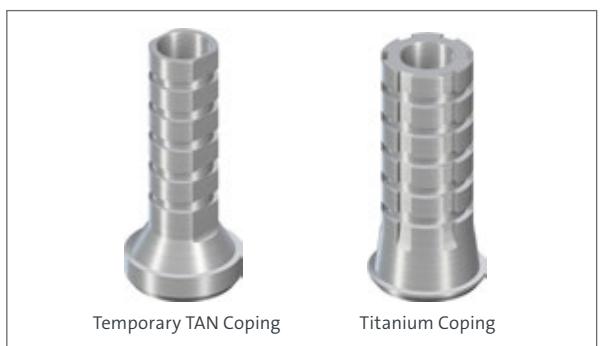
Protective caps are available in different shapes and heights, to be chosen according the patient anatomical situation and desired outcome.



Temporary restoration

Using temporary TAN copings or titanium copings

Based on the dental impression prepare the master cast using the appropriate analog.



Place the coping with engaging features onto the analog.



Modify the coping according to the required length.

Optional: Sandblast the coping and coat it with opaquer to avoid Titanium/TAN shining through.

Cover the screw channel with absorbent cotton or gutta-percha and seal the screw channel.

Warning: do not sandblast the inner configuration and connection portions of the copings.



Use a standard procedure to create the temporary crown.



Remove excess material, re-open the screw channel of the coping and finalize the temporary crown.



Finalized crown



Remove protective cap from the abutment in the patient's mouth.

Insert the provisional into the patient's mouth with a torque of 15 Ncm.

Cover the screw channel with absorbent cotton or gutta-percha and seal the screw channel.

Note: Keep the temporary restoration out of occlusion.



Final restoration

Example using gold copings

- For this procedure use the gold coping with the engaging feature.

Fix the corresponding analog into the impression material from the patient's situation.

Note: Ensure that the color code of the analog corresponds to the color code of the impression components.



Fabricate the master cast using standard procedure (for instructions see chapter 6. *Impression taking from BL Prosthetics Procedures (152.810/en)*).

Model a full anatomic wax-up for optimal esthetic planning. Use the corresponding gold copings or burn-out copings as a base for the wax-up.



Lab procedure



Define the optimal shape of the restoration by making a silicone key over the full wax-up.

Place the gold coping on the analog and hand-tighten the occlusal screw using the SCS screwdriver.



Shorten the modeling aids to the height of the occlusal plane according to the individual situation. Working with the modeling aid ensures a clean and sharp-edged finish of the screw channel.



Fabricate the superstructure on the abutments using standard modeling procedure.

Make sure that the wax layer on the abutment is sufficiently thick (at least 0.7 mm). Do not cover the delicate margin of the coping with wax.



Check the spatial conditions before casting the crown framework with the silicone key of the wax-up.

Before investing the wax framework, make sure the framework is tensionfree.



■ Lab procedure



Note: In order to avoid overflow of the cast-on alloy, clean the copings thoroughly prior to investment (removal of wax particles and insulating agents with a cotton pellet or brush moistened with alcohol).

Ensure that there is no wax on the delicate margin.

The use of investment materials for rapid heating methods (speed investment materials) is not recommended.

When processing the investment material, follow the manufacturer's instructions. Strictly observe the recommended mixing ratio and pre-heating time.

Make sure the screw channel and the internal configuration of the copings are filled with investment material from the bottom to the top in order to avoid air bubbles (see pictures).

Long-term success of the prosthetic work depends on the accurate fit of the restoration. The entire procedure will have to be repeated if casting errors occur.



- Lab procedure
- Prosthetic procedure



Invest the framework according to standard methods without using wetting agents.

Cast and devest the framework using standard methods.

Check for tension-free fitting on the master cast by applying the Shefield test.

Do an additional try-on of the tensionfree fit of the crown in the patient's mouth.



Veneer the superstructure.



Note: Alternatively, burn-out copings may be used.



3.4 MULTI-UNIT RESTORATION

Using the protective caps

Mount the protective caps onto abutments and hand-tighten the screws with the SCS screwdriver.



Note: Do not keep protective caps in the patient's mouth for longer than 180 days.

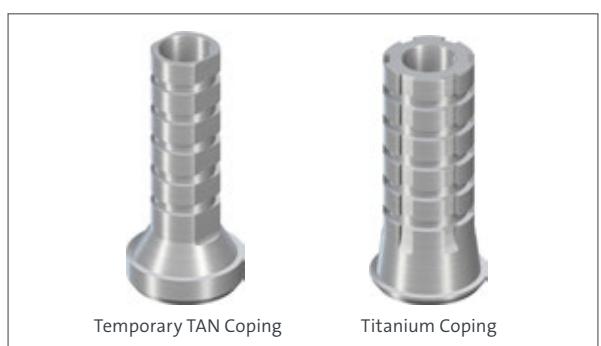
Protective caps are available in different shapes and heights, to be chosen according the patient anatomical situation and desired outcome.



Temporary restoration

Using temporary TAN copings or Titanium copings

Based on the dental impression prepare the master cast using the appropriate analogs.



Place the copings with non-engaging features onto the analogs.



Modify the copings according to the required length.

Optional: Sandblast the copings and coat them with opaquer to avoid titanium/TAN shining through.

Cover the screw channel with absorbent cotton or gutta-percha and seal the screw channel.



- Lab procedure
- Prosthetic procedure



Warning: do not sandblast the inner configuration and connection portions of the copings.



Use a standard lab procedure to create the temporary bridge.



Remove any excess material, re-open the screw channels and finalize the temporary bridge.



Insert the temporary bridge into the patient's mouth applying a 15 Ncm torque.

Cover the screw channels with absorbent cotton or gutta-percha and seal the screw channel.

Note: Keep the temporary restoration out of occlusion.



■ Lab procedure



Final restoration

Final restoration using CAD/CAM system

Fabricate the master cast using standard procedure (for instructions see chapter 6. *Impression taking from BL Prosthetics Procedures (152.810/en)*).

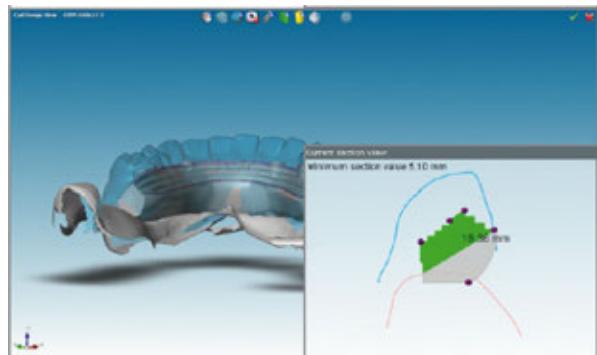
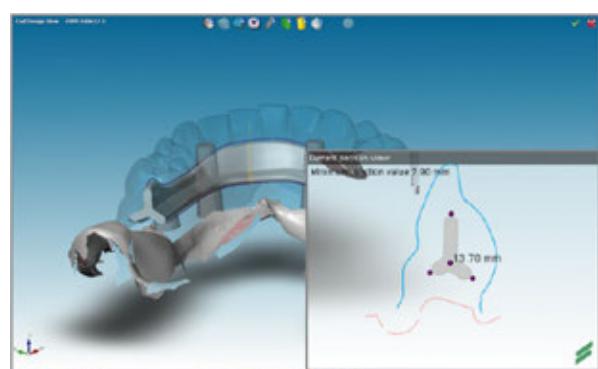
In order to transfer the impression data into the CARES® software use abutment-level scanbodies for the screw-retained abutments.



Hand-tighten the scanbodies onto the analogs in the dental model.



Place the dental model in the scanner and follow the scanning instructions.



Design the framework in the software as needed.

Transfer the final design to the milling facilities.

■ Lab procedure



Veneer the custom-milled superstructure.

In case you do not have access either to Straumann® CARES® or Createch, the final restoration can be prepared using standard procedure.



Example using gold copings

- For this procedure non-engaging gold copings are used.

Fix the corresponding analogs into the impression.



Note: Ensure that the color code of the analogs corresponds with the color code of the impression components.

Fabricate the master cast using standard procedure (for instructions see chapter 6. *Impression taking from BL Prosthetics Procedures (152.810/en)*).

Model a full anatomic wax-up for optimal esthetic planning. Use the corresponding gold copings or burn-out copings as a base for the wax-up.



Define the optimal shape of the restoration by making a silicone key over the full wax-up.



■ Lab procedure



Place the gold copings on the analogs and hand-tighten the occlusal screw using the SCS screwdriver.



Shorten the modeling aids to the height of the occlusal plane according to the individual situation. Working with the modeling aid ensures a clean and sharp-edged finish of the screw channel.



Fabricate the superstructure on the abutments using standard modeling procedures.

Make sure that the wax layer on the abutment is sufficiently thick (at least 0.7 mm). Do not cover the delicate margin of the coping with wax.



Check the spatial conditions before casting the crown framework with the silicone key of the wax-up.

Before investing the wax framework make sure the framework is tensionfree.



■ Lab procedure



Note: In order to avoid overflow of the cast-on alloy, clean the copings thoroughly prior to investment (removal of wax particles and insulating agents with a cotton pellet or brush moistened with alcohol).

Ensure that there is no wax on the delicate margin.

The use of investment materials for rapid heating methods (speed investment materials) is not recommended.

When processing the investment material, follow the manufacturer's instructions. Strictly observe the recommended mixing ratio and pre-heating time.

Make sure the screw channel and the internal configuration of the copings are filled with investment material from the bottom to the top in order to avoid air bubbles (see picture).

Long-term success of the prosthetic work depends on the accurate fit of the restoration. The entire procedure will have to be repeated if casting errors occur.



Invest the framework using standard procedure without using wetting agents.

Cast and devest the framework using standard procedure.

Check for tension-free fitting on the master cast by applying the Sheffield test. If the bridge is not tension-free and wiggles, cut the bridge and resplint tension-free.

- Lab procedure
- Prosthetic procedure



Do an additional try-on of the tensionfree fit of the bridge in the patient's mouth.



Veneer the superstructure.



Note: Alternatively, burn-out copings can be used.

3.5 EDENTULOUS RESTORATION: FIXED OPTION WITH IMMEDIATE TEMPORARY RESTORATION

Using protective caps

Mount the protective caps on the abutments and hand-tighten the screws with the SCS screwdriver.

Note: Do not keep protective caps in the patient's mouth for longer than 180 days.

Protective caps are available in different shapes and heights, to be chosen according the patient anatomical situation and desired outcome.

Temporary restoration

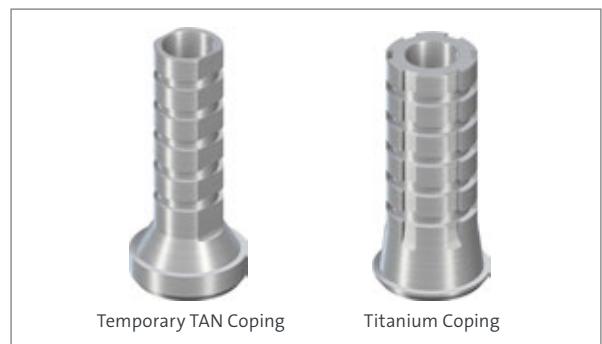
Using temporary TAN copings or titanium copings

- In this case the preparation of an immediate provisional in the dental lab is shown.

Based on dental impression, prepare the master cast using standard procedure.

Based on the impression and bite registration, prepare the provisional denture.

For the surgical procedure, prepare a duplicate of the provisional in clear acrylic material.



Temporary TAN or titanium copings will represent the implant position and angulation in the acrylic guide.

Note: For more detailed information on the surgical procedure, please see the *Straumann Pro Arch™, Basic Information* (490.015/en).



- Lab procedure
- Prosthetic procedure



In the dental lab, prepare holes in the temporary denture according to the number of copings. Consider sufficient space for resin material.



Check if there is sufficient space for the copings.



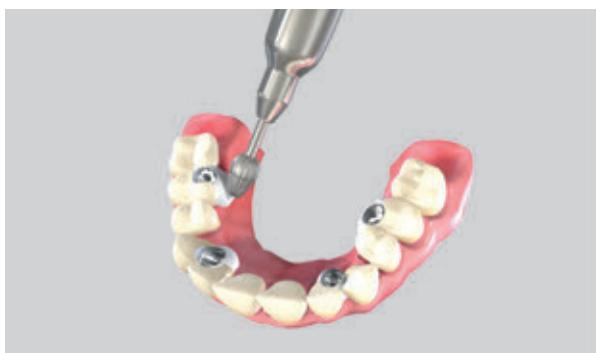
In the patient's mouth, connect the copings with the temporary prosthesis using resin material and transfer to the dental lab for finalizing.



■ Lab procedure



In the dental lab, finalize and polish the temporary restoration.



Note: In order to protect the abutment configuration from resin flowing in, use the polishing aids.



Final restoration: Screw-retained – CADCAM option

Fabricate the master cast using standard procedure (for instructions see chapter 6, *Impression taking from BL Prosthetics Procedures (152.810/en)*).

In order to transfer the impression data into the CARES® software, use abutment-level scanbodies for the screw-retained abutments.



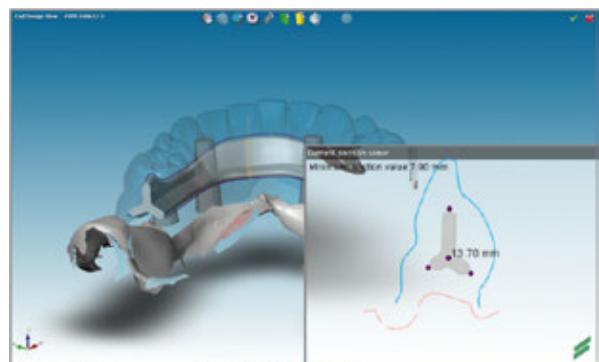
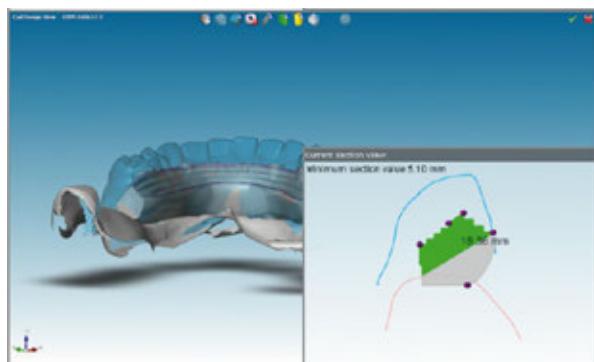
Hand-tighten the scanbodies onto the analogs in the dental model.



■ Lab procedure



Place the dental model in the scanner and follow the scanning instructions.



Design the framework for screw-retained restorations in the software as needed. Transfer the final design to the milling facility.

Example of a Straumann® CARES® Advanced Fixed Bar on 4 implants



Example of a Straumann® CARES® Basic Fixed Bar on 4 implants



■ Lab procedure



Veneer and finalize the custom-milled superstructure.

CARES® Advanced Fixed Bar



CARES® Basic Fixed Bar





3.6 EDENTULOUS RESTORATION: REMOVABLE RESTORATION

Using traditional Dolder® bars

Fix the corresponding analogs into the impression.

Note: Ensure that the color code of the analogs corresponds with the color code of the impression components.

Fabricate the master cast using standard procedure (for instructions see chapter 6. *Impression taking from BL Prosthetics Procedures (152.810/en)*).

Before placing the copings onto the master cast, we recommend mounting the occlusal screw onto the SCS screwdriver. Place the bar copings onto the master cast and hand-tighten with the occlusal screws.



Fabricate a soldered or laser-welded titanium bar using standard procedure.



Note: Use stabilization pins for the soldering of a gold bar.

Remove the temporary restoration before inserting the final restoration.

Clean the abutments thoroughly in the patient's mouth.

Check tension-free fit of the bar before tightening.

■ Prosthetic procedure



Tighten the occlusal screw to 15 Ncm using the SCS screwdriver with the Ratchet with Torque Control (Art. No. 046.821) or Ratchet and the torque control device.



Note: For more detailed information on Straumann® CARES® Basic and Advanced Fixed Bars, please refer to *Basic Information on CARES® Basic and Advanced Fixed Bars – Prosthetic Finalization* (490.042/en).

4. AIDS AND INSTRUMENTS



4.1 SCS SCREWDRIVER

The SCS* screwdriver is used for the fixation of the prosthetic parts and healing components. The star shape of the screwdriver tip connects to the top of the healing components and abutment screw heads for safe pick-up and handling.

*SCS = Screw Carrying System

SCS screwdriver for manual use

Article: extra short, short, long

Lengths: 15 mm, 21 mm, 27 mm

Art. Nos.: 046.400, 046.401, 046.402

Material: Stainless steel



4.2 POLISHING AID

The polishing aid is used during polishing and other lab procedures to protect the abutment's prosthetic connection and to establish a convenient fixation extension.

Art. Nos.: 025.2920, 025.4920

Material: Stainless steel

Note: In the case of BLX, use an implant analog.





4.3 RATCHET WITH TORQUE CONTROL (ART. NO. 046.821)

The Ratchet with torque control is required for the following operations:

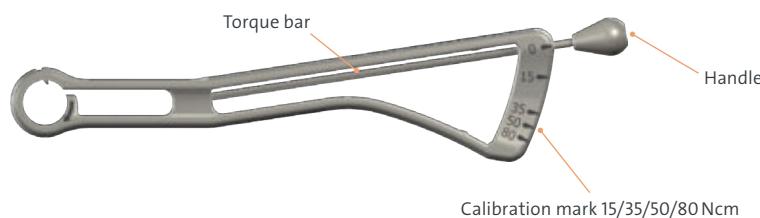
- Manual thread tapping
- Manual placement of implants into their final position in the implant bed
- Manual screwing of healing caps and closure screws and determination of the torque applied
- Screwing of abutments and occlusal screws and determination of the torque applied

The proximal end features a standardized interface allowing to be connected to torque instruments with ratchet head design. To change the working direction, the ratchet needs to be flipped.

A specific torque (Ncm) can be set by operating the ratchet via the torque bar. For this a laser marked scale on the distal end was applied.

Recommended torque values are defined for the specific screw connections of the Straumann® System.

Torque Recommendations for the Straumann® Dental Implant System		Torque Recommendations for Bone graft system	
Connection	Recommended torque	Connection	Recommended torque
Abutment (incl. angled abutments)	35Ncm	Basal screw	35Ncm
Closure screws	15Ncm	Mucosa cylinder	35Ncm
Healing caps	15Ncm	Bone graft abutment	15Ncm
Occlusal screws	15Ncm		



If the torque bar is aligned with the zero mark at rest, the precision of the displayed tightening torque is within ± 2.5 Ncm and does not need calibration.

The ratchet with torque control is a monobloc instrument which does not need to be disassembled for cleaning and sterilization.

4.4 RATCHET AND TORQUE CONTROL DEVICE

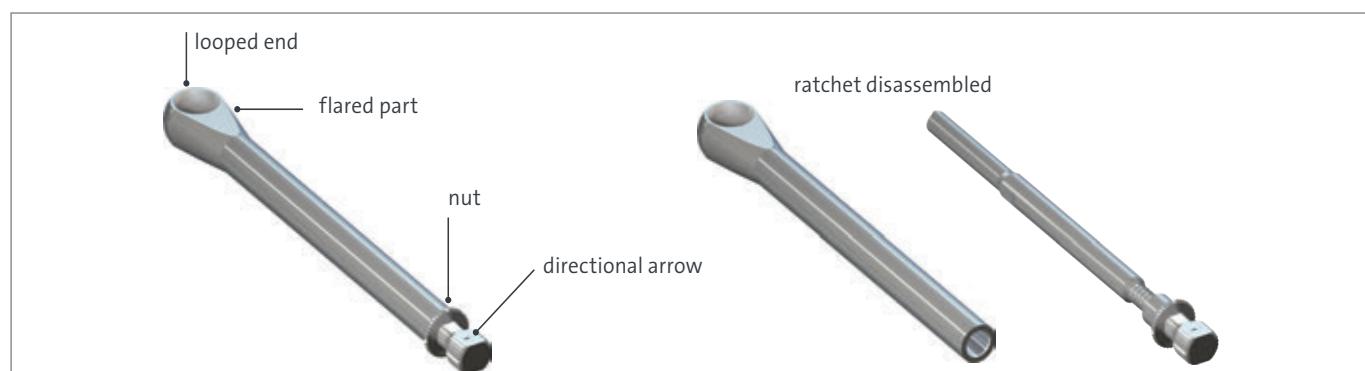
The ratchet (Art. No. 046.119) is a two-part lever arm instrument with a rotary knob for changing the direction of force. It is supplied with a service instrument (Art. No. 046.108), which is used to loosen the headed screw. After loosening, the ratchet bolt can be removed from the body of the ratchet. The ratchet must be disassembled for cleaning and sterilization.

To apply a certain torque when tightening a screw, use the ratchet together with the torque control device (Art. No. 046.049) and the holding key (Art. No. 046.064).

Ratchet

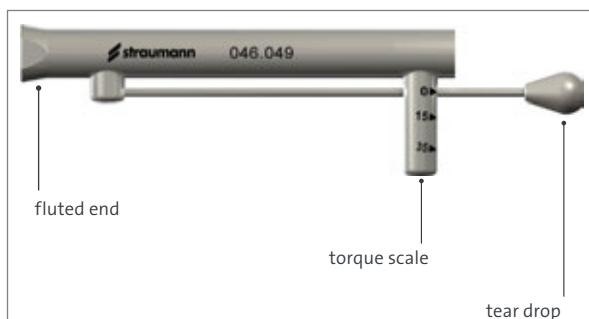
The ratchet is used in combination with the torque control device to torque in all Straumann abutments and screws (it is the same ratchet used for placing Straumann implants manually).

Note: The ratchet and service instrument are packaged together.



Torque control device

Connected to the ratchet, the torque control device is used to measure the value of Ncm (Newton centimeter) applied when inserting Straumann abutments and screws.



Service Instrument

The Service Instrument is used to assemble and disassemble the ratchet.



Holding key

The forked end of the holding key can be used to assemble and disassemble the ratchet. The pin can be used to stabilize drivers when abutments and screws are placed (also used for implant placement).





4.5 ASSEMBLING THE RATCHET AND THE TORQUE CONTROL DEVICE

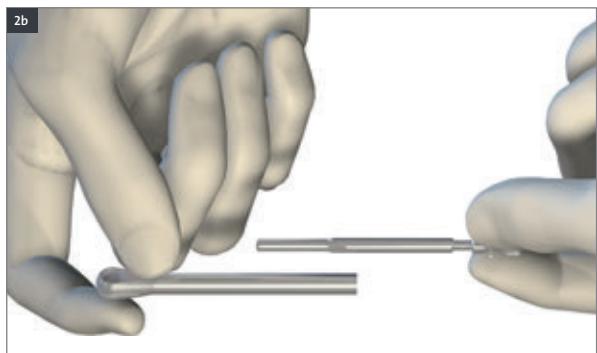
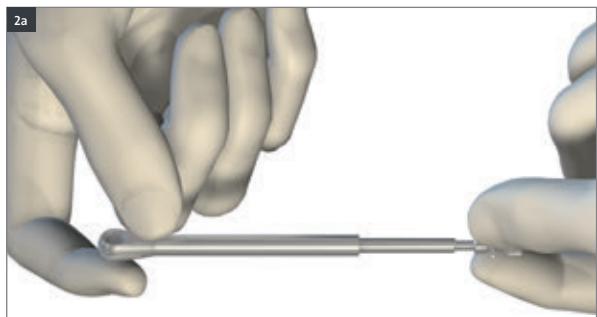
Step 1 – Loosening

- Loosen the ratchet nut with the service instrument or the holding key.



Step 2 – Removing

- Unscrew and remove the internal bolt from the ratchet body.





Step 3a – Insertion

- Insert the ratchet body into the torque control device (flared part of the ratchet must be flush with fluted end of torque control device).

Step 3b – Insertion

- Insert the internal bolt into the opposite end of the torque control device. Tighten it firmly by hand.

Step 4 – Tightening

- Tighten the nut of the ratchet with the service instrument or the holding key. Do not overtighten.



- The ratchet and torque control device are now assembled and ready for use.

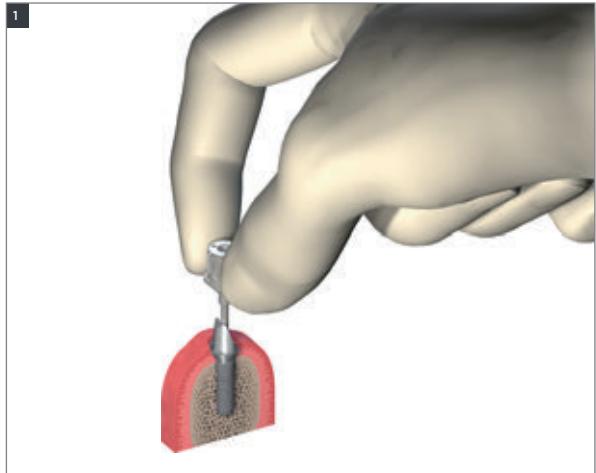




4.6 TIGHTENING AN ABUTMENT TO 35 NCM

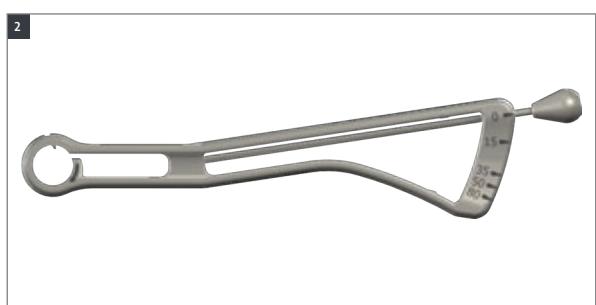
Step 1 – Insertion and tightening

- Insert the abutment into the implant.
- Tighten the abutment screw by hand using the SCS screwdriver.



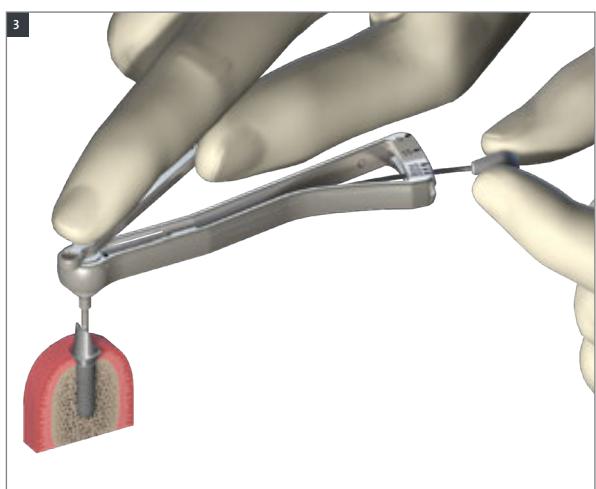
Step 2 – Placing the ratchet

- Placing the ratchet without torque control: Place the looped end of the assembled ratchet with the torque control device over the driver handle. The directional arrow must be pointing in the clockwise direction (towards the torque bar with tear drop). If not, pull the arrow out, flip it over, and let it snap in.
- Placing the ratchet with torque control: Place the looped end of the ratchet over the driver handle. The directional arrow must be pointing in the clockwise direction. If not, pull the ratchet out and flip it over.



Step 3 – Stabilizing the ratchet

- For stabilization, put the pin end of the holding key into the coronal hole on the driver handle.





Step 4 – Positioning of appropriate Ncm mark

- Use one hand to hold the holding key and use the other hand to hold the torque bar. Grasp only the tear drop and move the torque bar to the 35 Ncm mark.



Step 5 – Removing the ratchet

- After reaching the 35 Ncm mark, return the torque bar to its starting position.
- Lift and remove the holding key, the Ratchet with Torque Control (Art. No. 046.821) or Ratchet with torque control device and the driver.

Note: Proper care and maintenance are important to ensure correct function of the Ratchet with Torque Control (Art. No. 046.821) or Ratchet and torque control device. Always clean and sterilize disassembled.

For detailed instructions on how to care for these instruments, please refer to their package inserts.

Recommended tightening torques

Hand-tight	15 Ncm	15–35 Ncm	35 Ncm
Closure screws Healing abutments	Temporary copings Copings	Temporary abutments	Final abutments

5. ABOUT CLEANING AND STERILIZATION



The Straumann Screw-retained abutments shown in this document are delivered sterile (refer to product reference list in section 6). Other components are not sterile. Use the procedure for cleaning and sterilization prior to use as defined in the respective IFU.

Note: Use devices directly after sterilization. Do not store sterilized devices.

6. PRODUCT REFERENCE LIST

6.1 SYSTEM OVERVIEW

6.1.1 Implant Level

BL and BLT implants		BLX implant	
NC	RC	RB	WBsx
			
025.2202	025.4202	065.0031	065.0032
			
025.0057	025.0060	065.0033	065.0034
			
025.2205	025.4205	065.4310	065.4810
			
025.0058	025.0061	065.0021	065.0022
			
025.2201	025.4201	065.0035	
			
025.2101	025.4101		
Digital impression			
Repositionable implant analogs	Straumann® Scanbody	CARES® Mono Scanbody	
			
025.2915	025.4915		
			
025.2905	025.4905		
			
025.2102	025.4102		
Digital impression			
Repositionable implant analogs	CARES® Mono Scanbody		
			
025.2208-04	025.4208-04	065.0023	065.0024
			
025.2212-04	025.4212-04		

6.1.2 Abutment Level

Crowns and bridges

		RB/WB																					
		NC	RC																				
		Ø 3.5 mm	Ø 4.6 mm																				
Protective caps (4 pieces)	Height 8mm	Height 6.5mm	Height 5mm	024.0019-04	024.0020-04	024.2323-04	024.2324-04	024.2325-04															
Lab auxiliaries	Lab processing screw	Polishing aid (also in 4 pieces version)	Length 10mm	025.0004 or 025.0004V4	025.0005 or 025.0005V4	025.0052	025.0006	025.0001	025.0007	025.0008	025.0000	CARES® Mono Scanbody	Digital impression	Implant level impression posts and analogs									
				025.0049	025.0050	023.4756	023.4757	025.0013	025.2245	025.0011	025.2243					Ø 3.5 mm	Ø 4.6 mm	025.2244	025.0012	025.0014	025.2246	025.0012	025.2244

Hybrid, bar construction

Bar construction on Screw retained abutments, Titanium			Bar construction on Screw retained abutments, Gold		
Dolder® Bar, Titanium			Dolder® Bar Matrix, Gold		
Regular	Mini	Regular	Bar Titanium Coping	Regular	Dolder® Bar, Gold
			Replac- ement screw	Bar Ti- tium Cop- ing	Bar Gold Cop- ing
			023.2750	023.4752	023.2753
			023.4763	023.4763	023.4763
			048.466	048.466	048.411
			048.465	048.465	048.412
			048.471	048.471	048.413
			048.470	048.470	048.414

Tools, Auxiliary parts for Bar			Bar construction on Screw retained abutments, Plastic		
Deactivator for Dolder Bar Matrix			Dolder® Bar Matrix, Titanium		
Regular	Mini	Activator set for all bar matrices	Regular	Mini	Dolder® Bar, Plastic
			Replac- ement screw	Bar Burn- out Cop- ing	Bar Gold Cop- ing
			046.150	046.150	023.2755
			046.151	046.151	023.4758
			046.152	046.152	023.4763

6.2 AUXILIARIES AND INSTRUMENTS

Art. No.	Image	Article	Dimensions	Material
SCS Screwdrivers				
046.400		SCS Screwdriver for ratchet extra-short	Length 15 mm	stainless steel
046.401		SCS Screwdriver for ratchet short	Length 21 mm	
046.402		SCS Screwdriver for ratchet long	Length 27 mm	
Ratchet				
046.119		Ratchet, including service instrument	Length 84 mm	stainless steel
046.821		Ratchet with Torque Control		
Polishing Aids and Analog Holder				
025.2920 025.2920-04		NC Polishing Aid	Length 16 mm	stainless steel
025.4920 025.4920-04		RC Polishing Aid		
TorcFit™ Abutment removal tools				
065.0007		TorcFit™ Abutment-Removal Screw	Length 21 mm	TAN
065.0009		TorcFit™ Removal Tool Basal Screw, Left-handed		stainless steel
065.0008		TorcFit™ Removal Tool Basal Screw, Left-handed		
Plan abutments for RB/WB Screw-retained Abutments				
025.0073V4		RB/WB Plan Abutment	for RB/WB Screw-retained Abutments 0°, pack of 4 pieces	POM
025.0074V4			for RB/WB Screw-retained Abutments 17°, pack of 4 pieces	
025.0075V4			for RB/WB Screw-retained Abutments 30°, pack of 4 pieces	

7. IMPORTANT GUIDELINES



Please note

Practitioners must have appropriate knowledge and instruction in the handling of the Straumann Dental Implant System 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.

The Straumann Products are part of an overall concept and must be used only in conjunction with the corresponding original components and instruments distributed by Institut Straumann AG, its ultimate parent company and all affiliates or subsidiaries of such parent company ("Straumann"), except if stated otherwise in this document or in the instructions for use for the respective Straumann Product. If use of products made by third parties is not recommended by Straumann in this document or in the respective instructions for use, any such use will void any warranty or other obligation, express or implied, of Straumann.

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.

Documentation

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