Straumann® Screw-retained Abutments

Basic Information

straumann®

Contents

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. This must be considered by all involved parties when planning and designing the restoration.

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.	USLIT.1194 CALIT.1194
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.	USLIT.1205 CALIT.1205
Straumann® Bone Level Prosthetics Procedures	USLIT.232 CALIT.232
Straumann® Pro Arch Basic Information	NAMLIT.1060

Consult the Instructions for use:	
Straumann® Titanium Abutments and Temporary Abutments/Copings	ifu.straumann.com

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

BLX (TorcFit™)

BL/BLT (CrossFit®)

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).

Type A

Angle between flat sides

Type B

Angle to the flat wall

		Single-unit restoration	Multi-unit restorations (incisor to premolar region)	Multi-unit restorations (molar region)
NC Ø 3.5 mm straight abutments	GH 1.5/2.5/3.5 mm	Yes	Yes	No
NC Ø 4.6 mm straight abutments				
NC Ø 4.6 mm angled abutments	GH 2.5*/3.5/4.5/5.5 mm			
RC Ø 4.6 mm straight abutments	GH 1.5/2.5/3.5 mm	No limitation		
RC Ø 4.6 mm angled abutments	GH 2.5*/3.5/4.5/5.5 mm			
RB/WB Ø 4.6 mm straight abutments	GH 1.5/2.5/3.5/4.5 mm			
RB/WB Ø 4.6 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°	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 4.5 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							

CrossFit®

TorcFit™

Ø 3.5 mm

Engaging (Crown)

Temporary TAN coping	Titanium Coping	Gold Coping
024.0021	023.2747	023.2751

Non-engaging (Bridges / Bars)

Temporary TAN Coping, Bridge	Titanium Coping, Bridge	Titanium Coping, Bar	Gold Coping, Bridge	Gold Coping, Bar
024.0022	023.2749	023.2750	023.2752	023.2753

Ø 4.6 mm

Engaging (Crown)

Temporary TAN coping	Titanium Coping	Gold Coping
024.0023	023.4747	023.4753

Non-engaging (Bridges / Bars)

Temporary TAN Coping, Bridge	Coping, Ti, Bridge	Coping, Ti, Bar	Coping, Gold, Bridge	Coping, Gold, Bar	Variobase® for Bridge/Bar Cylindrical	Burn-out Coping, for Variobase® for Bridge/Bar Cylindrical Coping
024.0024	023.4751	023.4752	023.4754	023.4755	023.0028	023.0032

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.

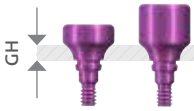
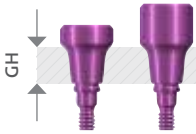
2.2 Healing abutments that suit CrossFit® Screw-retained abutments

Platform	NC											
Type	Screw-retained Abutment											
												
Material	TAN			TAN			TAN			TAN		
Angle	0°			0°			17°			30°		
∅ (mm)	3.5			4.6			4.6			4.6		
GH (mm)	1.5	2.5	3.5	1.5	2.5	3.5	2.5	3.5	4.5	5.5	3.5	4.5	5.5
GH (mm)	2.0	3.5	5.0	2.0	3.5	5.0	3.5					
∅ (mm)	3.6			4.8			4.8					
Type												
	Conical Healing Abutment											

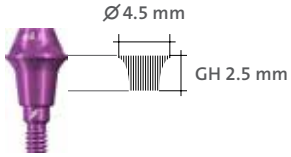
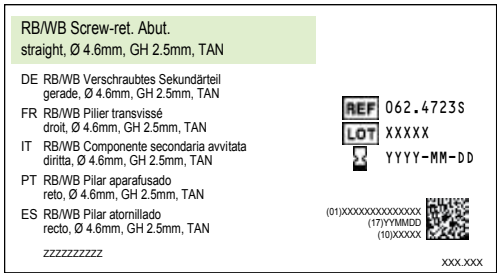
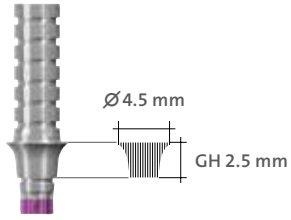
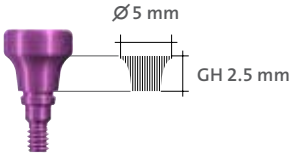
Platform	RC											
Type	Screw-retained Abutment											
												
Material	TAN			TAN			TAN					
Angle	0°			17°			30°					
∅ (mm)	4.6			4.6			4.6					
GH (mm)	1.5	2.5	3.5	2.5	3.5	4.5	5.5	3.5	4.5	5.5		
GH (mm)	2.0	4.0	6.0	4.0								
∅ (mm)	5.0			5.0								
Type												
	Conical Healing 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	 062.4722S
	Gingiva Height GH 2.5 mm	 064.4214S / 064.4215S	 064.4373	 062.4723S
	Gingiva Height GH 3.5 mm	 064.4216S / 064.4217S	 064.4374	 062.4724S

How to match fitting TorcFit™ components

Dimensions on components	Label	Label text
		**RB/WB Screw-ret. Abut. straight**, Ø 4.6 mm, GH 2.5 mm, **TAN**
		**RB/WB Temporary Abutment**, for crown, Ø 4.5 mm, GH 2.5 mm, TAN
		**RB/WB Healing Abutment***, Crown, Ø 5 mm, GH 2.5 mm, AH 2 mm, Ti

** 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.

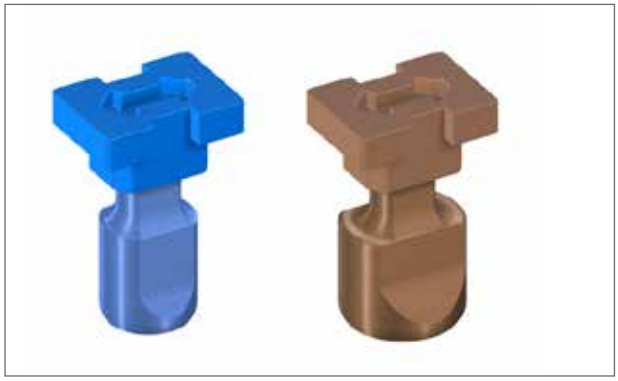
For single-unit restoration use the impression components with the engaging feature, for multi-unit restorations use the impression components with the non-engaging feature.

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.

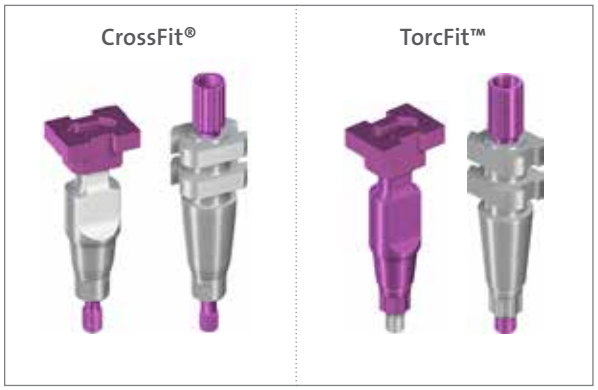
For single-unit restoration use the impression components with the engaging feature, for multi-unit restorations use the impression components with the non-engaging feature.

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* (USLIT.232 / CALIT.232).



3.2 Plan abutments for RB/WB Screw-retained Abutments for intra- and extra-oral planning

Characteristics

Simple

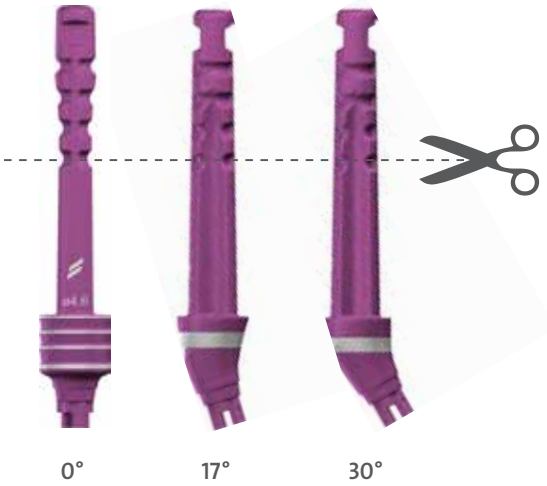
- Color-coded and easily readable
- Easy handling with the integrated holding pin
- All gingiva heights marked on each abutment

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



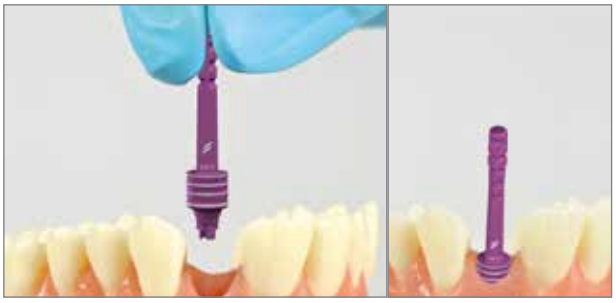
Notes:

- 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.

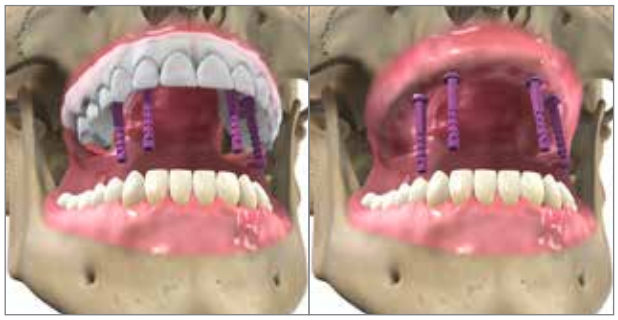


3.2.2 For multiple-unit restorations

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

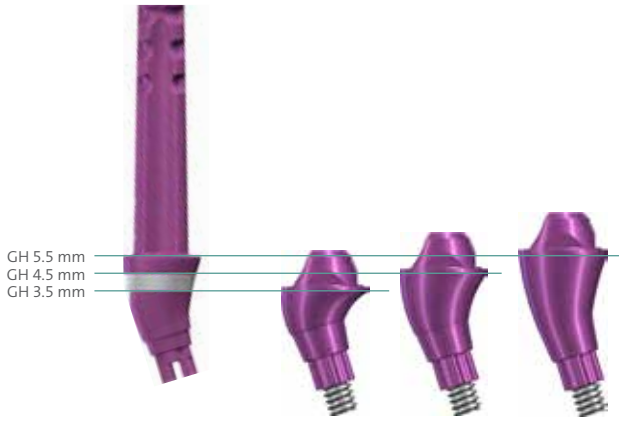
This will aid in checking dimensions (laser marks on Plan abutments indicate gingiva height), axial alignment and occlusal screw axis of the potential restoration.

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

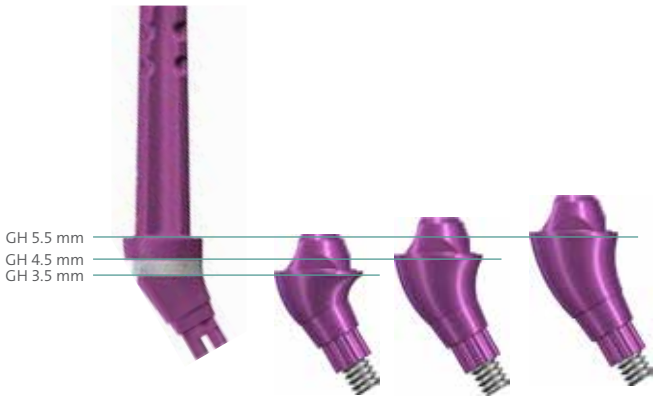


3.2.3 Identification of the gingiva heights marked on the plan abutments and corresponding RB/WB Screw-retained Abutments

Straight 062.4722S 062.4723S 062.4724S 062.4725S



17° 062.4733S 062.4734S 062.4735S



30° 062.4743S 062.4744S 062.4745S

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.

Temporary TAN Coping

Titanium Coping

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* (USLIT.232).

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.

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 tension-free.

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 preheating 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.

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 Sheffield 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.

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.

Final restoration

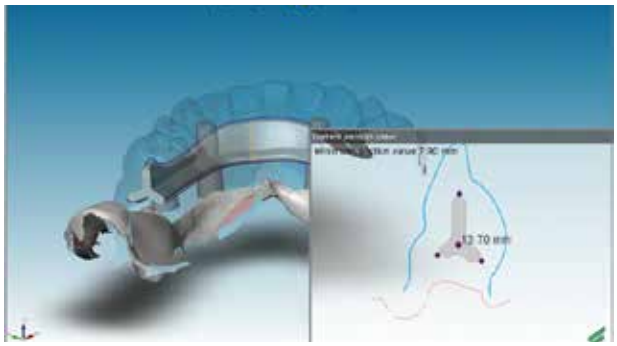
Final restoration using CADCAM system

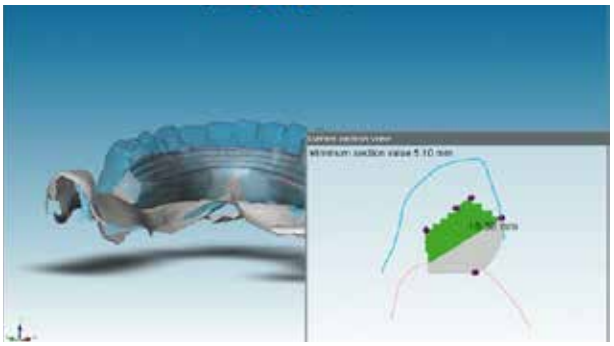
Fabricate the master cast using standard procedure (for instructions see chapter 6. *Impression taking* from *BL Prosthetics Procedures* (USLIT.232 / CALIT.232).

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.

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* (USLIT.232 / CALIT.232).

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.

CrossFit®

TorcFit™

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 tension-free.

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 preheating 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.

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.

Temporary TAN Coping Titanium Coping

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.

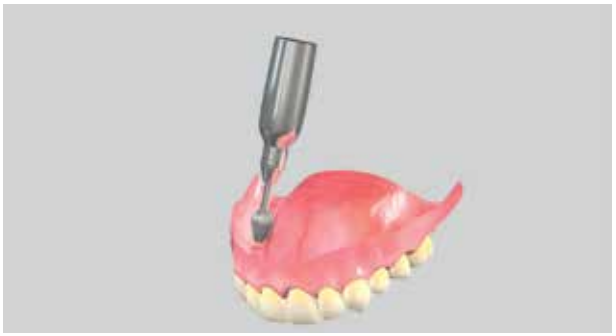
Temporary TAN or titanium copings will represent the implant position and angulation in the acrylic guide.

Note: For more detailed information on the surgical procedure, please see the *Straumann® Pro Arch, Basic Information* (NAMIT.1060).

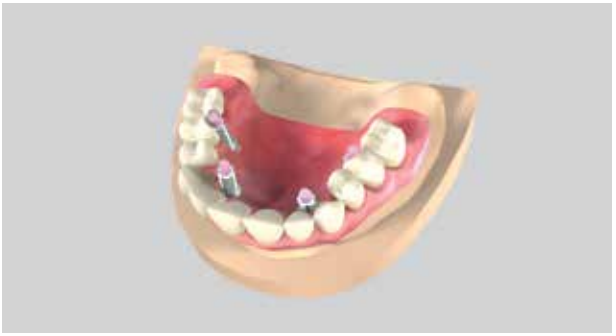
CrossFit®

TorcFit™

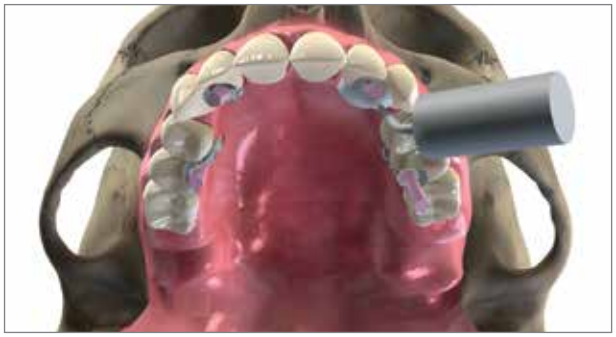
In the dental lab, prepare holes in the temporary denture according to the number of copings. Consider sufficient space for resin material.



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.



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* (USLIT.232 / CALIT.232).

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.

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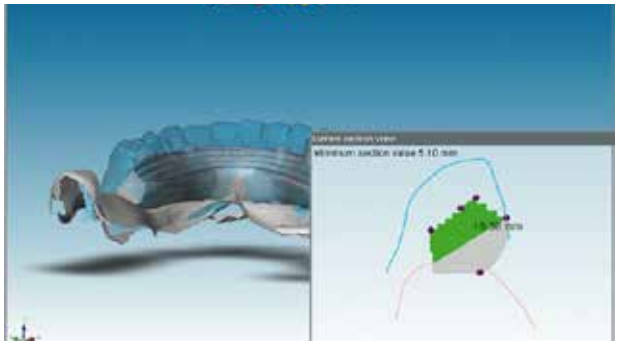
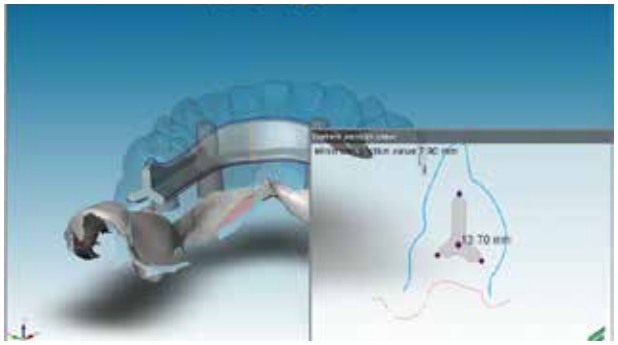
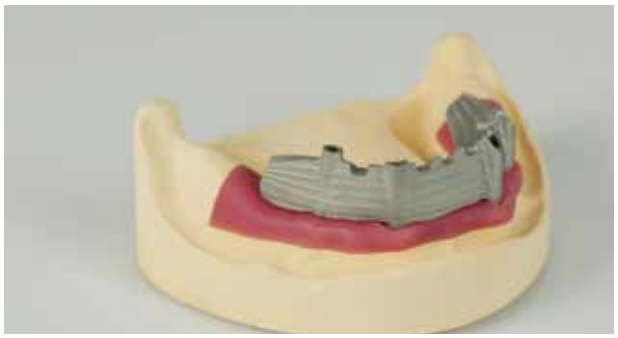
Place the dental model in the scanner and follow the scanning instructions.





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

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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* (USLIT.232 / CALIT.232).

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.

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Tighten the occlusal screw to 15 Ncm using the SCS screwdriver with the 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 Screw-Retained Bars and Bridges* (NAMLIT.1188).

4. Aids and instruments

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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 = **S**crew **C**arrying **S**ystem
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

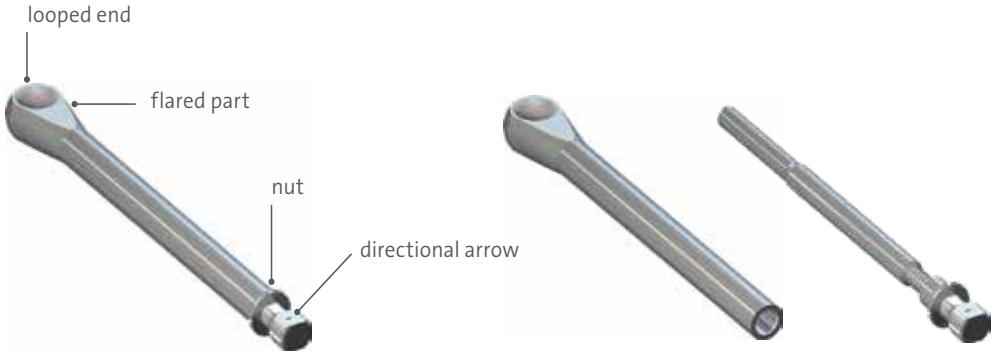
Note: In the case of BLX, use an implant analog.

4.3 Ratchet 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.



ratchet disassembled

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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).

4.4 Assembling the Ratchet and the Torque Control Device

Step 1 – Loosening

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

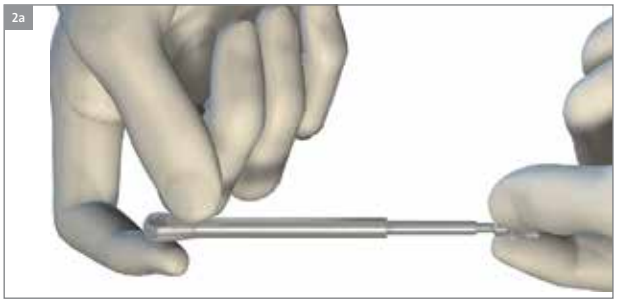
1a

1b

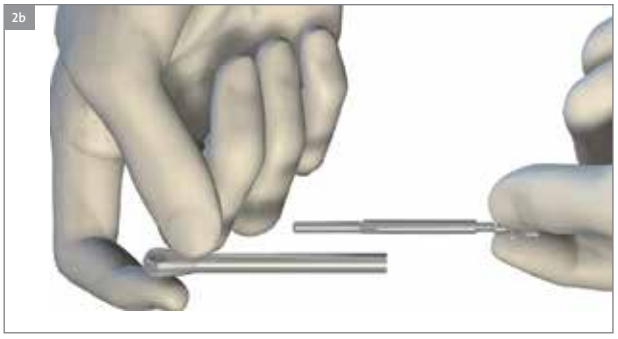
Step 2 – Removing

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

2a



2b



3a

3b

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.

4b

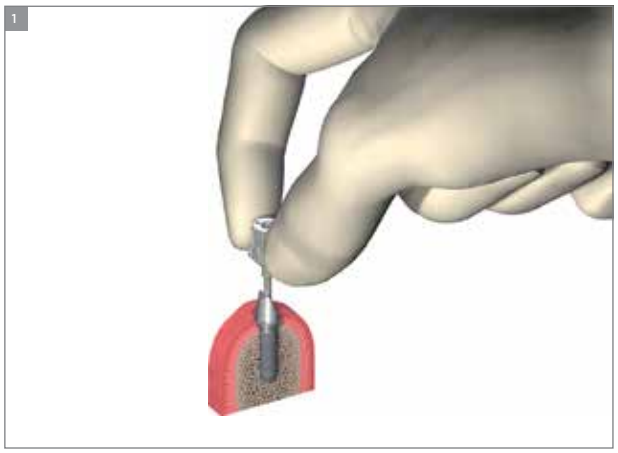
- The ratchet and torque control device are now assembled and ready for use.

4b

4.5 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.

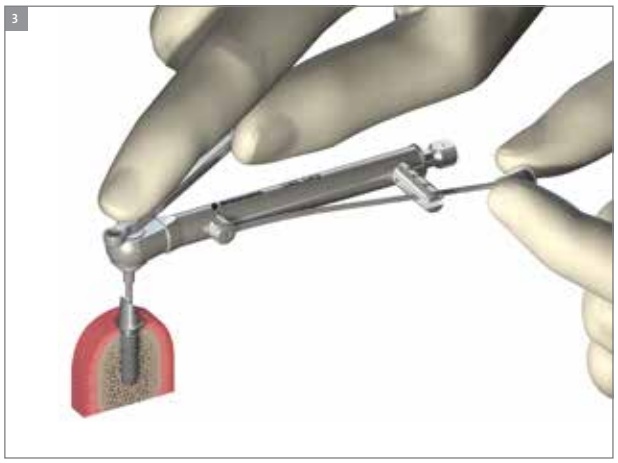


Step 2 – Placing the ratchet

- 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.

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 device and the driver.

Note: Proper care and maintenance are important to ensure correct function of the 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	
			NC	RC
Implant level impression posts and analogs	Open Tray, length 12.3 mm	Engaging	 025.2202	 025.4202
		Non-engaging	 025.0057	 025.0060
	Open Tray, length 30 mm	Engaging	 025.2205	 025.4205
		Non-engaging	 025.0058	 025.0061
	Closed Tray, length 12.3 mm		 025.2201	 025.4201
	Analogs		 025.2101	 025.4101
Digital impression	CARES® Mono Scanbody		025.2915	 025.4915
	Straumann® Scanbody		 025.2905	 025.4905
	Repositionable implant analogs		 025.2102	 025.4102
Bite Registration Aid	Short, height 8 mm, 4 pieces		 025.2208-04	 025.4208-04
	Long, height 12 mm, 4 pieces		 025.2212-04	 025.4212-04

			BLX implant	
			RB	WB
Impression posts and analogs	Open Tray, length 12.3 mm		 065.0031	 065.0032
	Open Tray, length 24 mm		 065.0033	 065.0034
	Closed Tray, length 12.3 mm		 065.4310	 065.4810
	Analogs		 065.0021	 065.0022
Digital impression	CARES® Mono Scanbody		 065.0035	
	Repositionable implant analogs		 065.0023	 065.0024

		NC		RC	BLX RB/WB
		Ø 3.5 mm	Ø 4.6 mm	Ø 4.6 mm	
Screw-retained abutments, straight	GH 1.5 mm	 022.0124S	 022.0128S	 022.0132S	 062.4722S
	GH 2.5 mm	 022.0125S	 022.0129S	 022.0133S	 062.4723S
	GH 3.5 mm	 022.0126S	 022.0130S	 022.0134S	 062.4724S
	GH 4.5 mm				 062.4725S
Screw-retained abutments, 17°, Type A	GH 2.5 mm	–	 022.0136S	 022.0150S	
	GH 3.5 mm		 022.0138S	 022.0152S	 062.4733S
	GH 4.5 mm		 022.0140S	 022.0154S	 062.4734S
	GH 5.5 mm		 022.0142S	 022.0156S	 062.4735S
Screw-retained abutments, 17°, Type B	GH 2.5 mm	–	 022.0137S	 022.0151S	
	GH 3.5 mm		 022.0139S	 022.0153S	
	GH 4.5 mm		 022.0141S	 022.0155S	
	GH 5.5 mm		 022.0143S	 022.0157S	
Screw-retained abutments, 30°, Type A	GH 3.5 mm	–	 022.0144S	 022.0145S	 062.4743S
	GH 4.5 mm		 022.0146S	 022.0147S	 062.4744S
	GH 5.5 mm		 022.0148S	 022.0149S	 062.4745S
Screw-retained abutments, 30°, Type B	GH 3.5 mm	–	 022.0158S	 022.0159S	
	GH 4.5 mm		 022.0160S	 022.0161S	
	GH 5.5 mm		 022.0162S	 022.0163S	
Replacement screw	For 17° and 30° abutments		025.0002		

6.1.2 Abutment Level
Crowns and bridges

			RB/WB	
			NC	RC
			Ø 3.5 mm	Ø 4.6 mm
Implant level impression posts and analogs	Open Tray	Engaging	025.2243	025.2244
		Non-engaging	025.0011	025.0012
	Closed Tray	Engaging	025.2245	025.2246
		Non-engaging	025.0013	025.0014
	Analogs, straight		023.2754	023.4756
	Analogs, edentulous, straight		025.0049	025.0050
	Analogs, angled		–	023.4757
Digital impression	CARES® Mono Scanbody		025.0000	025.0001
	Repositionable implant analogs		025.0007	025.0008
Lab auxiliaries	Polishing aid (also in 4 pieces version)		025.0004 or 025.0004V4	025.0005 or 025.0005V4
	Lab processing screw	Length 10 mm	025.0052	
		Lenght 20 mm	025.0006	
Protective caps (4 pieces)	Height 5 mm		024.0019-04	024.0020-04
	Height 5 mm		024.2323-04	
	Height 6.5 mm		024.2324-04	
	Height 8 mm		024.2325-04	

		RB/WB	
		NC	RC
		Ø 3.5 mm	Ø 4.6 mm
Auxiliary part	Straumann planning template, for Pro Arch cases	026.0016	
	Transfer and alignment pin	025.0009	
Temporary TAN copings	For crowns	024.0021	024.0023
	For bridges and full arch restorations	024.0022	024.0024
Titanium copings	For crowns	023.2747	023.4747
	For bridges and full arch restorations	023.2749	023.4751
Variobase®	Copings for bars and bridges	023.0027	023.0028
	Burn-out copings for bars and brdiges	023.0031 or 023.0031V4	023.0032 or 023.0032V4
Gold copings	For crowns	023.2751	023.4753
	For bridges and full arch restorations	023.2752	023.4754
Replacement occlusal screw		023.4763	

Hybrid, bar construction

			NC	RC	BLX RB/WB
			Ø 3.5 mm	Ø 4.6 mm	
Bar construction on Screw retained abutments, Gold	Bar Gold Coping		023.2753	023.4755	
	Replacement screw		023.4763		
	Dolder® Bar, Gold	Mini	048.411		
		Regular	048.412		
	Dolder® Bar Matrix, Gold	Mini	048.413		
		Regular	048.414		
Bar construction on Screw retained abutments, Titanium	Bar Titanium Coping		023.2750	023.4752	
	Replacement screw		023.4763		
	Dolder® Bar, Titanium	Mini	048.466		
		Regular	048.465		
		Mini	048.471		
		Regular	048.470		

			NC	RC	BLX RB/WB
			Ø 3.5 mm	Ø 4.6 mm	
	Replacement screw		023.4763		
	Dolder® Bar, Plastic	Mini	048.461		
		Regular	048.460		
	Dolder® Bar Matrix, Titanium	Mini	048.471		
		Regular	048.470		
Tools, Auxiliary parts for Bar	Activator set for all bar matrices		046.150		
	Deactivator for Dolder Bar Matrix	Mini	046.151		
		Regular	046.152		

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
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		
BLX Abutment removal tools				
065.0007		RB/WB Abutment-Removal Screw		TAN
065.0009		Removal Tool BLX Basal Screw, Left-ha	Length 21 mm	stainless steel
065.0008		Removal Tool BLX Basal Screw, Left-ha	Length 27 mm	
Plan abutments for BLX 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
For detailed instructions on the Straumann Products contact your Straumann representative.

Notes

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