

Stage 3 | Prosthetic procedures

Step 1 Impression-taking

Prosthetic procedures

Step 1 | Impression-taking

Overview

Assessment and treatment planning



Step 1 | Patient's expectations,
history and examination



Step 2 | Treatment planning



Step 3 | Consultation and consent



Step 4 | Fabrication of the surgical drill template

Surgical procedures



Step 1 | Implant surgery



Step 2 | Post-operative review and suture removal

7–10 days

6–8 weeks

Prosthetic procedures



Step 1 | Impression-taking



Step 2 | Fabrication of the final prosthesis



Step 3 | Insertion of the final prosthesis

2 weeks

Aftercare and maintenance



Step 1 | Review visit



Step 2 | Maintenance visit

3–6 months
(or as necessary)



In clinic with patient



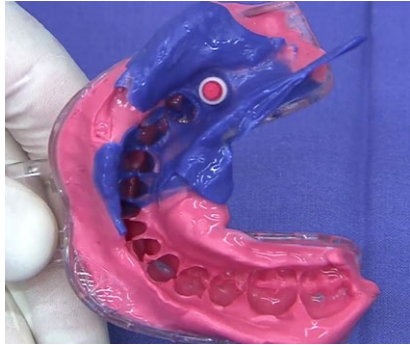
Office / Lab work

Contents

Introduction	4
Learning objectives	4
1. Assessment	5
2. Clinical examination	6
3. Treatment	7
3.1 Impression-taking with the SP (RN) Implant – open tray	10
3.2 Impression-taking with the SP (RN) Implant – closed tray	18
3.3 Impression-taking with the BLT (RC) Implant – open tray	26
3.4 Impression-taking with the BLT (RC) Implant – closed tray	33



Introduction



Following the recommended healing phase (in [🔗 Post-operative review and suture removal](#)) after implant placement, you must now see the patient to take the impression for the final restoration. Depending on the position of the restoration and the preference of the clinician, the impression may be taken with a closed-

or open- tray method, using the respective impression components for the implant type. The bite registration and color assessment should also be done during this step, to provide the required information for the dental lab technician to fabricate the final restoration.

Impression-taking follows after a period of osseointegration of the implant.

Plan to take impressions about 6-8 weeks after suture removal.

Fabrication of the final prosthesis requires:

- Impression with open- or closed-tray method
- Bite registration
- Color assessment
- Clear lab prescription

Learning objectives

- 🎯 Be able to decide whether a closed- or open- tray impression should be done.
- 🎯 Understand how a tray is prepared for an open- tray impression.
- 🎯 Understand how to position the selected impression components for the specific implant type (SP/BLT), and perform the open- or closed- tray impression.
- 🎯 Be able to carry out a proper bite registration and color assessment.
- 🎯 Understand how the impression is transferred to the lab to create the master models.



Prosthetic procedures

Step 1 | Impression-taking

1. Assessment



1. Assessment



- Review the healing period after surgery with the patient (ask about comfort and oral function).
- The patient should not be experiencing any pain prior to taking the impression.

Carry out impression-taking if your patient is symptom-free.



2. Clinical examination

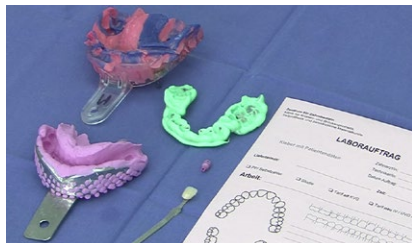
**Check for:**

- Implant stability – clinically by visual inspection and tactile sensation when removing the healing component or placing the screw-retained impression component.
- Healthy peri-implant soft tissues

Take impression(s) if the implant is stable and the site fully healed.



3. Treatment



- Carry out impression-taking with either the open- or closed-tray for the implant type [SP](#) or [BLT](#).
- Perform a bite registration and color assessment for the required final restoration.

Treatment at this visit:

- Impression-taking
- Bite registration
- Color assessment



The preferred impression materials are polyvinyl siloxane and polyether rubber because of their stiffness and dimensional stability, which ensures that the impression component is retained accurately in the material.

Use a stiff and dimensionally stable impression material. Do not use hydrocolloids/alginate.

Selection of impression technique



Open-tray impression

Indicated when the implant shoulder is positioned very deeply (more than **3.0 mm sub-gingival**); and if the soft tissue condition does not allow accurate seating of the closed-tray impression components. In this case,

the open-tray impression procedure is advantageous, because the Impression Post is screwed tightly and precisely into the implant, and displacement by the gingiva is avoided. You may do this with stock trays or custom-made trays.

Use open-tray impressions:

- if the implant shoulder is 3 mm or more sub-gingival.
- if the soft tissue condition requires a screwed-in component for stability.



Closed-tray impression

There is no need to drill a hole in the impression tray. The impression material picks up the Impression Cap, which is easily “snapped” into place and can be used in most cases. You may do this with stock trays or custom-made trays.

Use closed-tray impressions:

- when convenient snap-on components are preferred.
- when you prefer not to drill a hole in the tray.



Prosthetic procedures







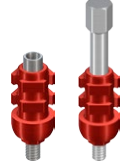



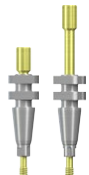











Step 1 | Impression-taking

3. Treatment



This table shows the overview of the Straumann® products for the open- and closed-tray impression techniques for both **SP** (RN/WN) and **BLT** (NC/RC) Implants:

Product overview of open- and closed-tray impression components for SP (RN/WN) and BLT (NC/RC) Implants

		Tissue Level				Bone Level			
		 SP Implant				 BLT Implant			
Impression components	Open-tray		Closed-tray		Open-tray		Closed-tray		
									
Implant shoulder									
	Regular Neck (RN)	Wide Neck (WN)	Regular Neck (RN)	Wide Neck (WN)	Narrow CrossFit® (NC)	Regular CrossFit® (RC)	Narrow CrossFit® (NC)	Regular CrossFit® (RC)	
Article No.	048.010 (short) 048.090 (long)	048.091	048.070V4 048.017V4	048.095 048.013	025.2202 (short) 025.2205 (long)	025.4202 (short) 025.4205 (long)	025.2201	025.4201	
		Tissue Level				Bone Level			
		 SP Implant				 BLT Implant			
Bite Registration Aids	Regular Neck (RN) or Wide Neck (WN)				Narrow CrossFit® (NC)		Regular CrossFit® (RC)		
									
Article No.	048.940V4 (short)		048.941V4 (long)		025.2208-04 (short)	025.2212-04 (long)	025.4208-04 (short)	025.4212-04 (long)	



Prosthetic procedures

Step 1 | Impression-taking

3. Treatment



- ⚠ Caution:** Impression Posts and [Bite Registration Aids](#) are:
- Intended for single use only to ensure optimal fit and precise impression-taking or bite registration for each patient.
 - Provided non-sterile and require disinfection before use.
- ⚠ Caution:** Protect all components and the [SCS Screwdriver](#) against aspiration (e.g., use a throat pack or a thread).

- Disinfect impression components and bite registration aids before use.
- Protect them against aspiration.
- Use the parts only once.



SP Implants Section

If you are working
with SP Implants,
please click here



BLT Implants Section

If you are working
with BLT Implants,
please click here



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants

3.1 Impression-taking with the SP (RN) Implant – open tray

Instrument set-up for **open-tray** impressions with SP (RN) Implants:



Instrument set-up for
open-tray impressions
with **SP** (RN) Implants

1. X-ray holder and film
2. Light-bodied impression material dispenser
3. Prophylaxis paste and cup
4. Disposable saliva ejector and control pads
5. Timer
6. **SCS Screwdrivers** (long and short)
7. Slow-speed handpiece
8. Cotton dispenser
9. Aspirator and suction tips
10. Shimstock (occlusal registration paper) and holder
11. Dental probes and scalers
12. Periodontal probe
13. Dental mirrors
14. Dental tweezers
15. Cotton rolls, gauze and petroleum jelly
16. Scissors
17. Fluoride gel
18. Dental floss
19. Syringe with saline and blunt needle for irrigation
20. Disposable lip and cheek retractor
21. Stock impression trays
22. **RN synOcta® Impression Post** and RN/WN **Bite Registration Aid**
23. Soft wax
24. Straight handpiece and acrylic bur
25. Indelible pen
26. Heavy-bodied impression material dispenser



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants

Step-by-step instructions for open-tray impressions
with [SP \(RN\) Implants](#)

Please click [here](#) for a quick reference checklist for this procedure.



[Video: Open-tray impression-taking with the Standard Plus \(RN\) Implant](#)

Follow the step-by-step
procedure for open-tray
impressions with SP (RN)
Implants.



1. Unscrew the [Healing Cap](#) in a counterclockwise direction using the [SCS Screwdriver](#).

Unscrew the Healing Cap.

2



2. Examine and rinse the internal connection of the implant thoroughly to remove any blood, tissue or other debris.

Clean the internal connection of the implant.

⚠ Caution: Ensure that there is sufficient access to the implant site in order to avoid pinching the gingival tissue during the impression procedure. Be aware that the sulcus may collapse rapidly once the healing component has been removed.

Good access to the implant is required to tighten the synOcta® Impression Post for RN Implants without pinching the soft tissue.
Beware of soft tissue collapse.

3



3. Place the [RN synOcta® Impression Post](#) onto the implant shoulder and hand-tighten the integral guide screw. In this image, the Impression Post 048.090 with the long integral guide screw is used.

Hand-tighten the RN synOcta® Impression Post by turning the guide screw.

3a





Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants

⚠ Caution: It is important to accurately position the impression component within the internal synOcta® connection of the implant before tightening the screw.



If necessary, use retraction cords and check with a periodontal probe that the fit of the impression component is very firm when it is fully engaged in the internal connection. When the screw continues to turn without a firm stop, the component may not be firmly engaged in the connection.

- If the inter-occlusal space is not adequate, you can take the impression with the short RN synOcta® Impression Post (048.010). Hand-tighten the integral guide screw using the [SCS Screw-driver](#), which is available in different lengths.

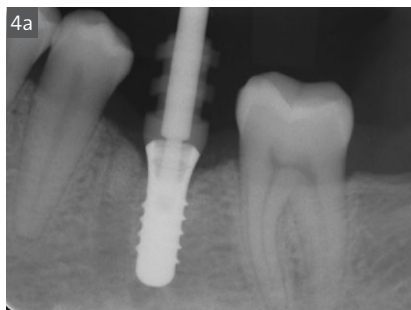
Check for accurate positioning of the impression post before hand-tightening.

Retraction cords help to gain access to position the Impression Post when the implant is deeply placed.

A short Impression Post is available for limited interocclusal spaces.



4. If in doubt, you may take a periapical radiograph to check that the [RN synOcta® Impression Post](#) is in the proper position.



Optional:

A periapical radiograph can help to check if the RN synOcta® Impression Post is tightened in the correct position.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray impressions with SP (RN) Implants



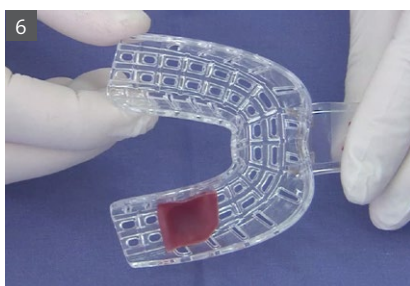
5. Customize the prefabricated tray provided by the dental lab, or a standard plastic tray at the chair-side by cutting out a window over the area of the implant to allow clearance for the impression component. A minimum window size of 1.5 cm by 1.5 cm is recommended.

Cut a 1.5 cm x 1.5 cm window in the tray.



Try the impression tray in the patient's mouth to check that the impression component and its integral guide screw can protrude through the tray.

Try-in the modified tray before taking the impression.



6. Cover the tray opening with dental wax applied from the inner side. When taking the impression this wax will occlude the head of the screw in order to allow retrievability of the screw by the [SCS Screwdriver](#).

Cover the window with dental wax before taking the impression to block the head of the screw for retrievability.



7. Apply a light-bodied elastomeric impression material (e.g., light-bodied polyvinyl siloxane or polyether rubber) around the [RN synOcta® Impression Post](#).

Apply a light-bodied impression material around the Impression Post.



Meanwhile, load the impression tray with heavy-bodied impression material and seat it directly in the mouth over the area with the light-bodied impression material.

Load the tray with heavy-bodied impression material and seat over the area.

⚠ Caution: Due to its low tensile strength, hydrocolloid is not suitable for this impression.

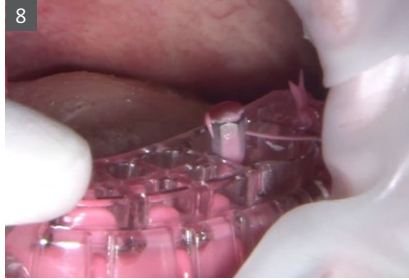
Do not use hydrocolloids/ alginates.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants



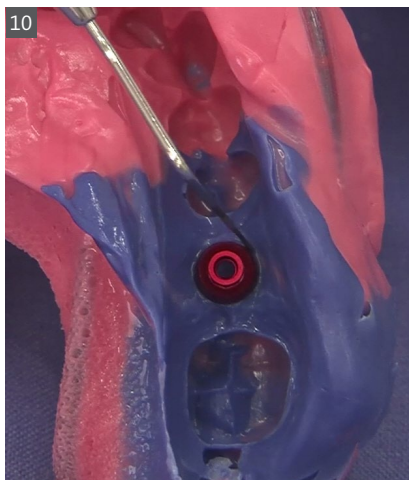
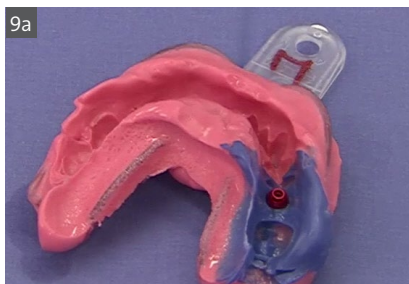
8. Wipe any excessive impression material off the integral guide screw of the [RN synOcta® Impression Post](#) before it sets. The screw opening is filled with wax or cotton to prevent impression material from being trapped.

Wipe off any wax or impression material from the head of the screw.



9. Once the impression material is cured, loosen the integral guide screw with the [SCS Screw-driver](#) and remove the tray together with the RN synOcta® Impression Post, which remains inside the impression material.

When the impression has set, unscrew the integral guide screw to remove the impression.



10. Inspect the impression to check that the impression material has completely adapted around the RN synOcta® Impression Post.

Check for good adaptation of the impression material around the RN synOcta® Impression Post.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants



11. Rinse the internal connection of the implant thoroughly to remove any impression material, or other debris.

Rinse the internal connection of the implant.



12. If necessary, take a bite registration. Insert the [Bite Registration Aid](#) into the implant. You should feel it “snap” into the internal configuration of the implant.

Snap in the Bite Registration Aid.

⚠ Caution: Protect the components against aspiration (e.g., use a throat pack or a thread).



13. Shorten the Bite Registration Aid (if needed) and apply the bite registration material. To ensure the repositioning from the mouth to the master cast, the occlusal area and the lateral flat side of the Bite Registration Aid must be adequately surrounded with the registration material.

Shorten the Bite Registration Aid if needed.

Apply the bite registration material and remove it when set.



⚠ Caution: The Bite Registration Aid must be shaped outside of the mouth. If it needs to be shortened occlusally due to lack of space, ensure that the lateral flat side is not ground off.

Do not grind off the flat lateral side of the Bite Registration Aid.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants



14. Perform a color assessment for the future crown.

Choose an appropriate tooth shade for the patient.



15. Rinse the internal connection of the implant thoroughly to remove any impression material, bite registration paste or other debris.

Rinse the internal connection of the implant.



16. Put the [Healing Cap](#) back onto the [SP](#) (RN) Implant to prevent soft tissue collapse.



Subsequent loosening is made easier by applying chlorhexidine gel or sterile petroleum jelly to the Healing Cap before screwing it into the implant.

Apply some chlorhexidine gel or petroleum jelly before screwing in the Healing Cap.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
SP (RN) Implants



17. Take an impression of the opposing arch, if this was not already done at a previous visit.

Take an impression of the opposing arch if necessary.

18. Send the impression(s), bite registration, color assessment and lab prescription to the [dental technician](#).

Send these materials to your dental technician:

- Impression with the synOcta® Impression Post
- Impression of the opposing jaw
- Bite registration
- Color assessment
- Lab prescription

When the impression tray is sent to the lab, the dental technician seats the Implant Analog into the impression component inside the impression to find the correct position of the implant. The master model is then created with dental stone. The use of a soft tissue mask by your dental technician is also recommended.

Your dental technician creates working models with the Implant Analog from the impressions. A soft tissue mask is recommended.

Arrange for your patient to return in about 1-2 weeks for the [insertion of the final prosthesis](#), depending on the production time in the lab. Please read the next module on [fabrication of the final prosthesis](#), which gives you more information on what to communicate to the dental technician in order to obtain the desired final prosthesis.

Check the processing time with your dental lab.

Schedule the next appointment with your patient to fit the final prosthesis.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants

3.2 Impression-taking with the SP (RN) Implant – closed tray

Instrument set-up for **closed-tray** impressions with [SP](#) (RN) Implants:



Instrument set-up for
closed-tray impressions
with **SP** (RN) Implants

1. X-ray holder and film
2. Light-bodied impression material dispenser
3. Prophylaxis paste and cup
4. Disposable saliva ejector and control pads
5. Timer
6. [SCS Screwdrivers](#) (long and short)
7. Slow-speed handpiece
8. Cotton dispenser
9. Aspirator and suction tips
10. Shimstock (occlusal registration paper) and holder
11. Dental probes and scalers
12. Periodontal probe
13. Dental mirrors
14. Dental tweezers
15. Cotton rolls, gauze and petroleum jelly
16. Scissors
17. Fluoride gel
18. Dental floss
19. Syringe with saline and blunt needle for irrigation
20. Disposable lip and cheek retractor
21. Stock impression trays
22. [RN Impression Cap](#), [RN synOcta® Positioning Cylinder](#) and [RN/WN](#) [Bite Registration Aid](#)
23. Soft wax
24. Straight handpiece and acrylic bur
25. Indelible pen
26. Heavy-bodied impression material dispenser



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants

Step-by-step instructions for closed-tray impressions with

[SP \(RN\) Implants](#)

Please click [here](#) for a quick reference checklist for this procedure.

[Video: Closed-tray impression-taking with the Standard Plus \(RN\) Implant](#)

Follow the step-by-step procedure for closed-tray impressions with SP (RN) Implants.



1. Unscrew the [Healing Cap](#) in counterclockwise direction using the [SCS Screwdriver](#).

Unscrew the Healing Cap.



2. Examine and rinse the internal connection of the implant thoroughly to remove any blood, tissue or other debris.

Clean the internal connection of the implant.

⚠ Caution: Ensure that there is sufficient access to the implant site in order to avoid pinching the gingival tissue during the impression procedure. Be aware that the sulcus may collapse rapidly once the healing component has been removed.

Good access to the implant is required to secure the synOcta® impression components for closed tray without pinching the soft tissue.

Beware of soft tissue collapse.



Prosthetic procedures

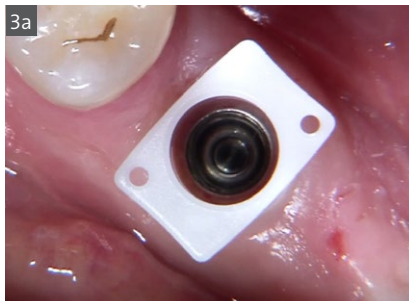
Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants

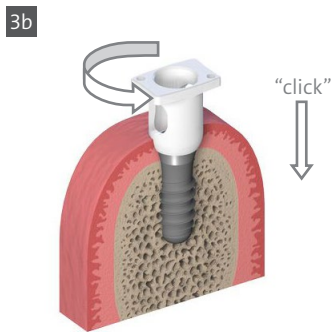


3. Push the [synOcta® Impression Cap for RN Implants](#) (048.017) onto the implant shoulder until it clicks into place. Gently turn the synOcta® Impression Cap for RN Implants to ensure it is in the correct position.

Click in the synOcta® Impression Cap for RN Implants and rotate it while checking it does not come off.



When the cap is in the correct position, you should be able to rotate it on the implant without it coming loose.



⚠ Caution: The shoulder and margin of the synOcta® Impression Cap must not be damaged to ensure accuracy of the impression procedure.

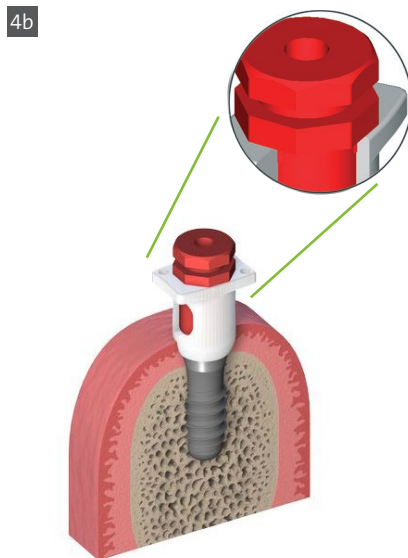
Any damage of the shoulder and margin of the synOcta® Impression Cap must be avoided.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants



4. While inserting the [RN synOcta® Positioning Cylinder](#) (048.070) ensure that the octagon is properly aligned with the octagon inside the implant, and pushed into the white [synOcta® Impression Cap for RN Implants](#) as far as it will go.

Insert the synOcta® Positioning Cylinder for RN Implants through the synOcta® Impression Cap and into the implant using one of the octagon positions.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants



5. A standard impression tray can be used or a prefabricated tray provided by the dental lab.



You should try the impression tray in the patient's mouth to check for the appropriate size and position before taking the impression.

Try-in the tray before taking the impression.



6. Apply a light-bodied elastomeric impression material (e.g., light-bodied polyvinyl siloxane or polyether rubber) around the [synOcta® Impression Cap for RN Implants](#) and [RN synOcta® Positioning Cylinder](#).

Apply a light-bodied impression material around the synOcta® Impression Cap and Positioning Cylinder.



Meanwhile, load the impression tray with heavy-bodied impression material and seat it directly in the mouth over the light-bodied impression material.

Load the tray with heavy-bodied impression material and seat over the area.

⚠ Caution: Due to its low tensile strength, hydrocolloid is not suitable for this impression.

Do not use hydrocolloids/ alginates.



7. Once the impression material is cured, carefully remove the tray. The RN synOcta® Impression Cap and RN synOcta® Positioning Cylinder remain in the impression, as they are removed from the implant when the impression is removed from the patient's mouth.

When the impression has set, remove the tray carefully. The impression components will remain in the impression.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants

8



8. Inspect the impression to check that the impression material has completely adapted around the [synOcta® Impression Cap for RN Implants](#).

Check for good adaptation of the impression material around the synOcta® Impression Cap.

9



9. Rinse the internal connection of the implant thoroughly to remove any impression material, or other debris.

Rinse the internal connection of the implant.

10



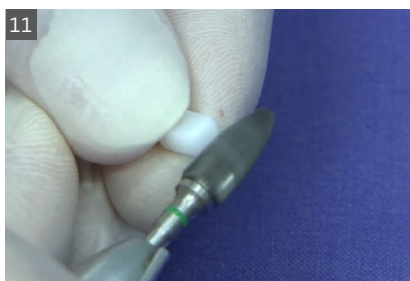
10. If necessary, take a bite registration. Insert the Bite Registration Aid into the implant. You should feel this “snap” into the internal configuration of the implant.

Snap in the Bite Registration Aid.



Caution: Protect the components against aspiration (e.g., use a throat pack or a thread).

11



11. Shorten the [Bite Registration Aid](#) (if needed).

Shorten the Bite Registration Aid if needed.

11a



Apply the bite registration material. To ensure the repositioning from the mouth to the master cast, the occlusal area and the lateral flat side of the Bite Registration Aid must be adequately surrounded with the registration material.

Apply the bite registration material and remove it when set.



Caution: The Bite Registration Aid must be shaped outside of the mouth. If it needs to be shortened occlusally due to lack of space, ensure that the lateral flat side is not ground off.

Do not grind off the flat lateral side of the Bite Registration Aid.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants



12. Perform a color assessment for the future crown.



Choose an appropriate tooth shade for the patient.



13. Rinse the internal connection of the implant thoroughly to remove any impression material, bite registration paste or other debris.

Rinse the internal connection of the implant.



14. Put the  **Healing Cap** back onto the  **SP (RN) Implant** to prevent soft tissue collapse.



Subsequent loosening is made easier by applying chlorhexidine gel or sterile petroleum jelly to the Healing Cap before screwing it into the implant.

Apply some chlorhexidine gel or petroleum jelly before screwing in the Healing Cap.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
SP (RN) Implants

15



15. Take an impression of the opposing arch, if this was not already done at a previous visit.

Take an impression of the opposing arch if necessary.

16. Send the impression(s), bite registration, color assessment and lab prescription to the dental technician.

Send these materials to your dental technician:

- Impression with the closed-tray impression components
- Impression of the opposing jaw
- Bite registration
- Color assessment
- Lab prescription

When the impression tray is sent to the lab, the [dental technician](#) seats the Implant Analog into the impression component inside the impression to find the correct position of the implant. The master model is then created with dental stone. The use of a soft tissue mask by your dental technician is also recommended.

Your dental technician creates working models with the implant analog from the impressions. A soft tissue mask is recommended.

Arrange for your patient to return in about 1-2 weeks for the [insertion of the final prosthesis](#), depending on the production time in the lab. Please read the next module on [fabrication of the final prosthesis](#), which gives you more information on what to communicate to the dental technician in order to obtain the desired final prosthesis.

Check the processing time with your dental lab.

Schedule the next appointment with your patient to fit the final prosthesis.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
BLT (RC) Implants

3.3 Impression-taking with the BLT (RC) Implant – open tray

Instrument set-up for **open-tray** impressions with **BLT** (RC) Implants:



Instrument set-up for
open-tray impressions
with **BLT** (RC) Implants

1. X-ray holder and film
2. Light-bodied impression material dispenser
3. Prophylaxis paste and cup
4. Disposable saliva ejector and control pads
5. Timer
6. **SCS Screwdrivers** (long and short)
7. Slow-speed handpiece
8. Cotton dispenser
9. Aspirator and suction tips
10. Shimstock (occlusal registration paper) and holder
11. Dental probes and scalers
12. Periodontal probe
13. Dental mirrors
14. Dental tweezers
15. Cotton rolls, gauze and petroleum jelly
16. Scissors
17. Fluoride gel
18. Dental floss
19. Syringe with saline and blunt needle for irrigation
20. Disposable lip and cheek retractor
21. Stock impression trays
22. **RC Impression Post for open tray** and RC **Bite Registration Aid**
23. Soft wax
24. Straight handpiece and acrylic bur
25. Indelible pen
26. Heavy-bodied impression material dispenser



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
BLT (RC) Implants

Step-by-step instructions for open-tray impressions with [BLT \(RC\) Implants](#)

Please click [here](#) for a quick reference checklist for this procedure.



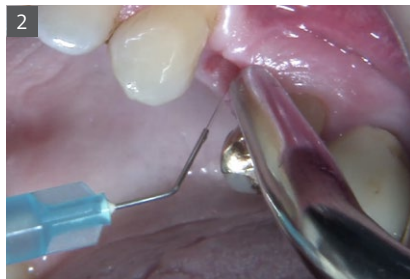
[Video: Open-tray impression-taking with the Bone Level Tapered \(RC\) Implant](#)

Follow the step-by-step procedure for open-tray impressions with BLT (RC) Implants.



1. Unscrew the Healing Abutment in a counterclockwise direction using the [SCS Screwdriver](#).

Unscrew the Healing Abutment.



2. Examine and rinse the internal connection of the implant thoroughly to remove any blood, tissue or other debris.

Clean the internal connection of the implant.



⚠ Caution: Ensure that there is sufficient access to the implant site in order to avoid pinching the gingival tissue during the impression procedure. Be aware that the sulcus may collapse rapidly once the healing component has been removed.

Good access to the implant is required to tighten the RC Impression Post for open tray without pinching the soft tissue.

Beware of soft tissue collapse.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray impressions with BLT (RC) Implants



3. Place the [RC Impression Post for open tray](#) (025.4204 short or 025.4205 long) accurately into the implant and hand-tighten the guide screw.

Hand-tighten the RC Impression Post for open tray by turning the guide screw.

⚠ Caution: It is important to accurately position the impression component within the internal CrossFit® connection of the implant before tightening the screw. If in doubt, you may also take a periapical radiograph to check if the RC Impression Post for open tray is in the proper position.

Check for accurate positioning of the RC Impression Post for open tray before hand-tightening.

Optional:

A periapical radiograph can help to check if the RC Impression Post for open tray is tightened in the correct position.



In case of occlusal space limitation, use the shorter RC Impression Post for open tray (025.4202), otherwise choose the RC Impression post for closed tray (025.4201), and use the [closed-tray impression technique](#).

If interocclusal space is limited, use the short RC Impression Post for open tray or choose the closed-tray method.



4. You can customize the prefabricated tray provided by the dental lab, or a standard plastic tray at the chairside by cutting out a window over the area of the implant to allow good clearance for the impression component. A minimum window size of 1.5 cm by 1.5 cm is recommended.

Cut a 1.5 cm x 1.5 cm window in the tray.





Prosthetic procedures

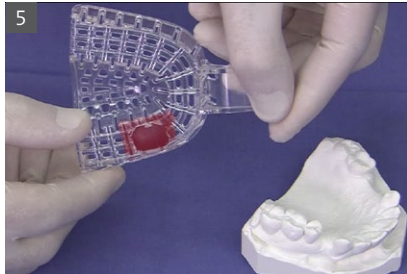
Step 1 | Impression-taking

Open-tray impressions with BLT (RC) Implants



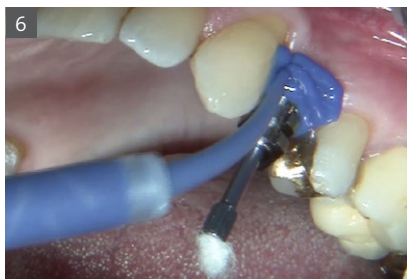
Try the impression tray in the patient's mouth to check that the impression component and its guide screw can protrude through the tray.

Try-in the modified tray before taking the impression.



5. The tray opening is covered by dental wax applied from the inner side. When taking the impression, this wax will occlude the head of the screw in order to allow retrievability of the screw by the [SCS Screwdriver](#).

Cover the window with dental wax before taking the impression to block the head of the screw for retrievability.



6. Apply a light-bodied elastomeric impression material (e.g., light-bodied polyvinyl siloxane or polyether rubber) around the [RC Impression Post for open tray](#).

Apply a light-bodied elastomeric impression material around the RC Impression Post for open tray.



Meanwhile, load the impression tray with heavy-bodied impression material and seat it directly in the mouth over the area with the light-bodied impression material.

Load the tray with heavy-bodied impression material and seat over the area.

⚠ Caution: Due to its low tensile strength, hydrocolloid is not suitable for this impression.

Do not use hydrocolloids/ alginates.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray impressions with BLT (RC) Implants



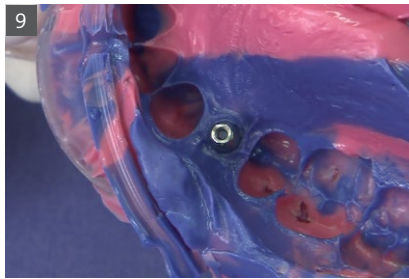
7. Wipe off any excessive impression material from the guide screw of the RC Impression Post for open tray before it sets. The screw opening is filled with wax or cotton to prevent impression material from being trapped.

Wipe off any wax or impression material from the head of the screw.



8. Once the impression material is cured, loosen the guide screw with the [SCS Screwdriver](#) and remove the tray together with the RC Impression Post for open tray, which remains inside the impression material.

When the impression has set, unscrew the guide screw to remove the impression.



9. Inspect the impression to check that the impression material has completely adapted around the [RC Impression Post for open tray](#).

Check for good adaptation of the impression material around the RC Impression Post for open tray.



10. Rinse the internal connection of the implant thoroughly to remove any impression material or other debris.

Rinse the internal connection of the implant.



11. If necessary, take a bite registration. Insert the [Bite Registration Aid](#) into the implant. You should feel this “snap” into the internal configuration of the implant.

Snap in the Bite Registration Aid.

⚠ Caution: Protect the components against aspiration (e.g., use a throat pack or a thread).



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
BLT (RC) Implants

12



12. Shorten the [Bite Registration Aid](#) (if needed) and apply the bite registration material. To ensure the repositioning from the mouth to the master cast, the occlusal area and the lateral flat side of the Bite Registration Aid must be adequately surrounded with the registration material.

Shorten the Bite Registration Aid if needed.

Apply the bite registration material and remove it when set.

⚠ Caution: The Bite Registration Aid must be shaped outside of the mouth. If it needs to be shortened occlusally due to lack of space, ensure that the lateral flat side is not ground off.

Do not grind off the flat lateral side of the Bite Registration Aid.

13



13. Perform a color assessment for the future crown.

Choose an appropriate tooth shade for the patient.

13a



14



14. Rinse the internal configuration of the implant thoroughly from any remaining impression material, bite registration paste or other debris.

Rinse the internal connection of the implant.



Prosthetic procedures

Step 1 | Impression-taking

Open-tray
impressions with
BLT (RC) Implants

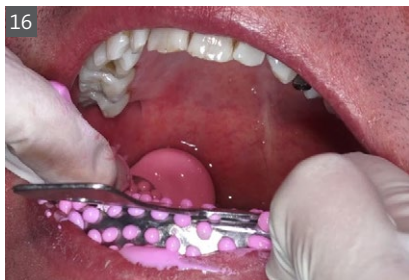


15. Insert the [Healing Abutment](#) back onto the [BLT](#) (RC) Implant to prevent soft tissue collapse.



Subsequent loosening is made easier by applying chlorhexidine gel or sterile petroleum jelly to the Healing Abutment before screwing it into the implant.

Apply some chlorhexidine gel or petroleum jelly before screwing in the Healing Abutment.



16. Take an impression of the opposing arch, if this was not already done at a previous visit.

Take an impression of the opposing arch if necessary.

17. Send the impression(s), bite registration, color assessment and lab prescription to the [dental technician](#).

Send these materials to your dental technician:

- Impression with the RC Impression Post for open tray
- Impression of the opposing jaw
- Bite registration
- Color assessment
- Lab prescription

When the impression tray is sent to the lab, the dental technician seats the Implant Analog into the impression component inside the impression, to find the correct position of the implant. The master model is then created with dental stone. The use of a soft tissue mask by your dental technician is also recommended.

Your dental technician creates working models with the implant analog from the impressions. A soft tissue mask is recommended.

Arrange for your patient to return in about 1-2 weeks for the [insertion of the final prosthesis](#), depending on the production time in the lab. Please read the next module on [fabrication of the final prosthesis](#), which gives you more information on what to communicate to the dental technician in order to obtain the desired final prosthesis.

Check the processing time with your dental lab.

Schedule the next appointment with your patient to fit the final prosthesis.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray impressions with BLT (RC) Implants

3.4 Impression-taking with the BLT (RC) Implant – closed tray

Instrument set-up for **closed-tray** impressions with [BLT \(RC\) Implants](#):



Instrument set-up for **closed-tray** impressions with **BLT (RC) Implants**

1. X-ray holder and film
2. Light-bodied impression material dispenser
3. Prophylaxis paste and cup
4. Disposable saliva ejector and control pads
5. Timer
6. [SCS Screwdrivers](#) (long and short)
7. Slow-speed handpiece
8. Cotton dispenser
9. Aspirator and suction tips
10. Shimstock (occlusal registration paper) and holder
11. Dental probes and scalers
12. Periodontal probe
13. Dental mirrors
14. Dental tweezers
15. Cotton rolls, gauze and petroleum jelly
16. Scissors
17. Fluoride gel
18. Dental floss
19. Syringe with saline and blunt needle for irrigation
20. Disposable lip and cheek retractor
21. Stock impression trays
22. [RC Impression Post for closed tray](#) and RC [Bite Registration Aid](#)
23. Soft wax
24. Straight handpiece and acrylic bur
25. Indelible pen
26. Heavy-bodied impression material dispenser



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
BLT (RC) Implants

Step-by-step instructions for closed-tray impressions with [BLT \(RC\) Implants](#)

Please click [here](#) for a quick reference checklist for this procedure.



[Video: Closed-tray impression-taking with the Bone Level Tapered \(RC\) Implant](#)

Follow the step-by-step procedure for closed-tray impressions with BLT (RC) Implants.



1. Unscrew the Healing Abutment in a counterclockwise direction using the [SCS Screwdriver](#).

Unscrew the Healing Abutment.



2. Examine and rinse the internal connection of the implant thoroughly to remove any blood, tissue or other debris.

Clean the internal connection of the implant.



⚠ Caution: Ensure that there is sufficient access to the implant site in order to avoid pinching the gingival tissue during the impression procedure. Be aware that the sulcus may collapse rapidly once the healing component has been removed.

Good access to the implant is required to secure the RC impression components for closed tray without pinching the soft tissue.

Beware of soft tissue collapse.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray impressions with BLT (RC) Implants



- Place the [RC Impression Post for closed tray](#) (025.4201) accurately into the implant and hand-tighten the guide screw. Ensure that the lateral planar areas of the impression post are facing mesially and distally.

Check for accurate positioning of the RC Impression Post for closed tray before hand-tightening by turning the guide screw.

The lateral planar areas of the impression post should face mesial and distal.

⚠ Caution: It is important to accurately position the impression component within the internal CrossFit® connection of the implant before tightening the screw. If in doubt, you may also take a periapical radiograph to check if the RC Impression Post for closed tray is in the proper position.

Optional:

A periapical radiograph can help to check if the RC Impression Post for closed tray is tightened in the correct position.



- Place the purple polymer Impression Cap on top of the fixed RC Impression Post for closed tray. Ensure that the arrows on the Impression Cap are pointing in the oral-vestibular direction.



Push the Impression Cap in the apical direction until it clicks to firmly seat it.

The arrows on the cap should point in bucco-palatal / bucco-lingual direction.

Click on the Impression Cap to the top of the RC Impression Post for closed tray.



Prosthetic procedures

Step 1 | Impression-taking

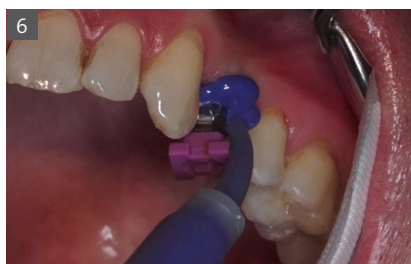
Closed-tray impressions with BLT (RC) Implants

5. A standard impression tray can be used or a prefabricated tray provided by the dental lab.



You should try the impression tray in the patient's mouth to check for the appropriate size and position before taking the impression.

Try in the tray before taking the impression.



6. Apply a light-bodied elastomeric impression material (e.g., light-bodied polyvinyl siloxane or polyether rubber) around the [RC Impression Post for closed tray](#), with Impression Cap.

First, apply a light-bodied impression material around the impression post.



Meanwhile, load the impression tray with heavy-bodied impression material and seat it directly in the mouth over the light-bodied impression material.

Then load the tray with heavy-bodied impression material and seat over the area.

⚠ Caution: Due to its low tensile strength, hydrocolloid is not suitable for this impression.

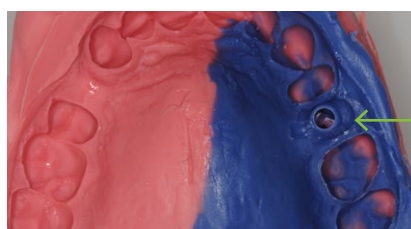
Do not use hydrocolloids/ alginates.

7. Once the impression material is cured, carefully remove the tray. The Impression Cap remains in the impression, as it is automatically pulled off from the RC Impression Post for closed tray during the removal of the impression from the patient's mouth.

When the impression has set, remove the tray carefully. The Impression Cap remains in the impression.

⚠ Caution: Inspect the impression to check that the impression material has completely adapted around the Impression Cap, but is still accessible for the technician to locate it inside the impression.

Check for good adaptation of the impression material around the Impression Cap.





Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
BLT (RC) Implants



8. Unscrew and remove the [RC Impression Post for closed tray](#) and set it aside to be sent with the impression tray to the dental technician.

Unscrew the RC Impression Post for closed tray.



9. Rinse the internal connection of the implant thoroughly to remove any impression material or other debris.

Rinse the internal connection of the implant.



10. If necessary, take a bite registration. Insert the [Bite Registration Aid](#) into the implant. You should feel this “snap” into the internal configuration of the implant.

Snap in the Bite Registration Aid.

⚠ Caution: Protect the components against aspiration (e.g., use a throat pack or a thread).



11. Shorten the Bite Registration Aid (if needed) and apply the bite registration material. To ensure the repositioning from the mouth to the master cast, the occlusal area and the lateral flat side of the Bite Registration Aid must be adequately surrounded with the registration material.

Shorten the Bite Registration Aid if needed.

Apply the bite registration material and remove it when set.

⚠ Caution: The Bite Registration Aid must be shaped outside of the mouth. If it needs to be shortened occlusally due to lack of space, ensure that the lateral flat side is not ground off.

Do not grind the flat lateral side off.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
BLT (RC) Implants



12. Perform a color assessment for the future crown.

Choose an appropriate tooth shade for the patient.



13. Rinse the internal configuration of the implant thoroughly from any remaining impression material, bite registration paste or other debris.

Rinse the internal connection of the implant.



14. Insert the [Healing Abutment](#) back onto the [BLT](#) (RC) Implant to prevent soft tissue collapse.



Subsequent loosening is made easier by applying chlorhexidine gel or sterile petroleum jelly to the Healing Abutment before screwing it into the implant.

Apply some chlorhexidine gel or petroleum jelly before screwing in the Healing Abutment.



Prosthetic procedures

Step 1 | Impression-taking

Closed-tray
impressions with
BLT (RC) Implants



15. Take an impression of the opposing arch, if this was not already done at a previous visit.

Take an impression of the opposing arch if necessary.

16. Send the impression(s), the [RC Impression Post for closed tray](#), bite registration, color assessment and lab prescription to the [dental technician](#).

Send these materials to your dental technician:

- Impression and RC Impression Post for closed tray
- Impression of the opposing jaw
- Bite registration
- Color assessment
- Lab prescription

When the impression tray is sent to the lab, the dental technician seats the Implant Analog into the impression component inside the impression, to find the correct position of the implant. The master model is then created with dental stone. The use of a soft tissue mask by your dental technician is also recommended.

Your dental technician creates working models with the Implant Analog from the impressions. A soft tissue mask is recommended.

Arrange for your patient to return in about 1-2 weeks for the [insertion of the final prosthesis](#), depending on the production time in the lab. Please read the next module on [fabrication of the final prosthesis](#), which gives you more information on what to communicate to the dental technician in order to obtain the desired final prosthesis.

Check the processing time with your dental lab.

Schedule the next appointment with your patient to fit the final prosthesis.



Prosthetic procedures

Step 1 | Impression-taking

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