



Straumann® Novaloc® Retentive System for Hybrid Dentures
Basic Information

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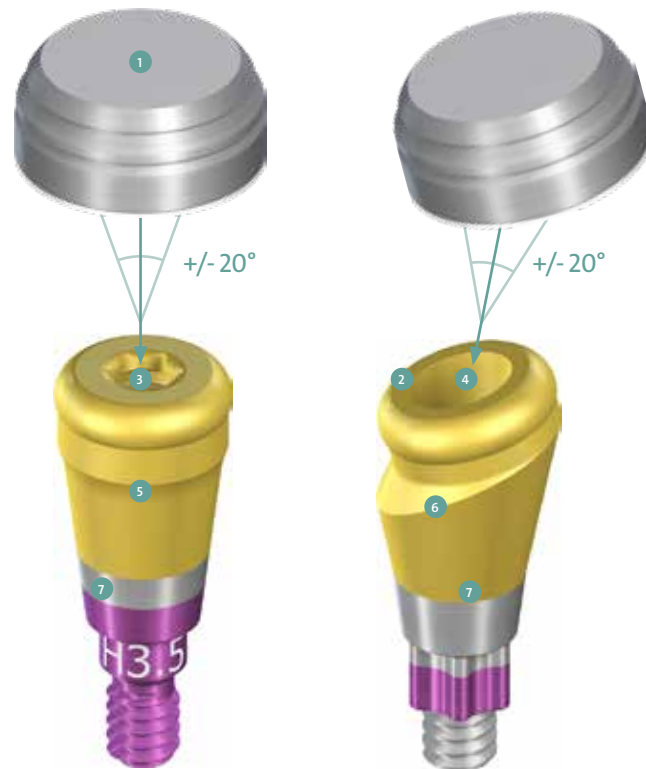
1. The Novaloc[®] Retentive System for hybrid dentures

The Straumann[®] Novaloc[®] Retentive System for hybrid dentures offers TiN coated abutments, with excellent function, overcoming over 60-deg implant divergence.

Both the straight and 15° angled abutments are available in various abutment heights, covering a broad range of clinical implant situations. Together with its durable PEEK² matrices, the Novaloc[®] Retentive System provides a unique and long-lasting attachment performance.

1.1 Straumann[®] Novaloc[®] Retentive System at a glance

- 1 – PEEK¹ matrix inserts offering excellent chemical and physical properties
 - Matrix accommodates up to 40° prosthetic divergence between two abutments
 - 6 retention strengths offer optimal adjustment of the denture retention
 - Matrix Housing available in titanium, or color-neutral PEEK¹ for a more aesthetic outcome
- 2 – TiN coated Abutments
- 3 – Compatible to the standard SCS Screw-driver
 - self-retaining system preventing aspiration
 - Small stud hole prevents food accumulation
- 4 – Compatible to the standard SCS Screwdriver
 - self-retaining system preventing aspiration
- 5 – Available in 6 abutment heights: 1.5 to 6.5 mm
- 6 – Available in 6 abutment heights: 2.5 to 7.5 mm
- 7 – Laser-marked abutment height and implant platform
 - Rely on the original implant-abutment connection
 - Perfectly matching components
 - Excellent service and support



Novaloc[®] Abutment, straight

Novaloc[®] Abutment, 15° angled[°]

¹ Polyether ether ketone

2. Creating a new overdenture with the Novaloc® Retentive System

2.1 Procedure in the dental office

2.1.1 Selecting Novaloc® Abutment height



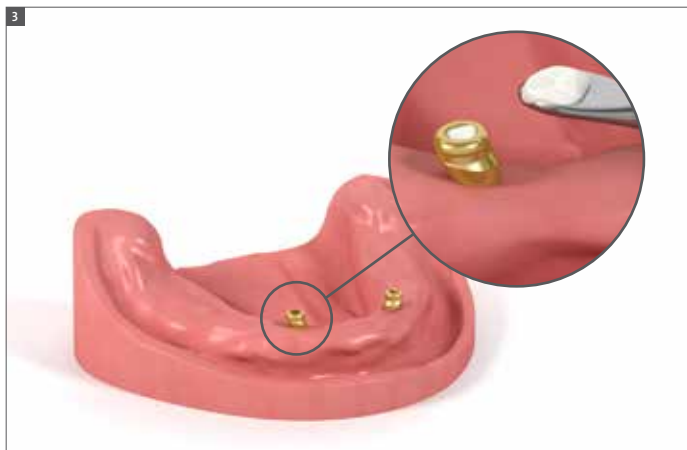
Step 1 – Selecting the abutment

- Ensure that the implant shoulder is not covered by hard or soft tissue



Step 2 – Inserting the Abutment

- Screw the Novaloc® Abutment tightly by hand into the implant using the Straumann® Screwdriver.
- Torque the abutment to 35 Ncm using the Ratchet, the Torque Control Device and the SCS Screwdriver.



Step 3 – Sealing the screw channel of the Novaloc® Angled Abutment

- Use Teflon and composite in order to seal the screw channel of the Novaloc® Angled Abutment. Ensure that the composite is planar to the abutment.

Note:

A uniform horizontal height of all Novaloc® Abutments makes it easier for the patient to insert the prosthesis.

2.1.2 Impression taking – abutment-level



Step 1 – Placing the Novaloc® Forming/Fixing Matrix

- Place the Forming/Fixing Matrix on the Novaloc® Abutment.



Step 2 – Impression taking

- Use the mucodynamic technique for impression taking (vinyl polysiloxane or polyether rubber).
- Send the impression to the dental lab.

2.2 Procedure in the dental lab

2.2.1 Master cast – abutment-level impression



Step 1 – Inserting the Novaloc® Model Analog

- Insert the Novaloc® Model Analog into the Novaloc® Forming/Fixing Matrix (see chapter 3 Using the Novaloc® Tools). For straight abutments use the straight, for angled abutments the angled analog.



Step 2 – Fabricating the master cast

- Pour a master model using standard methods and type-4 dental stone (DIN 6873).

Note:

The master model can also be created with an implant-level impression.

2.2.2 Finalizing the new Novaloc® overdenture



Step 1 – Placing the Novaloc® Mounting Collar and Matrix Housing

- Place white Mounting collars on all Novaloc® Model Analogs.
- Place the Matrix Housing incl. preassembled Mounting Insert onto the Novaloc® Abutments.

Note:

For a chair-side polymerization of the Novaloc® Matrix Housing use the Novaloc® Processing Spacer to create the space needed.



Step 2 – Processing the overdenture

- Process the overdenture according to standard procedures.
- The dental lab will return the finalized Novaloc® overdenture to the dental office including the Mounting Inserts in place.

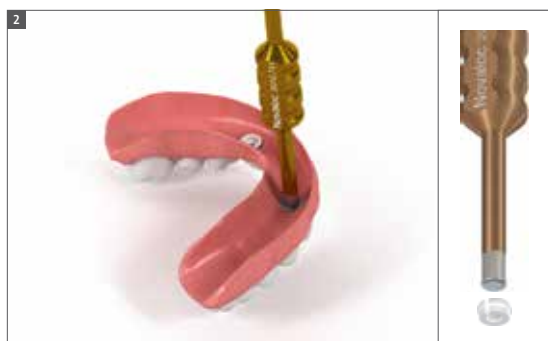
2.3 Procedure in the dental office

2.3.1 Seating the new Novaloc® overdenture



Step 1 – Removing the Novaloc® Mounting Insert

- Remove all Mounting Inserts from the Matrix Housing using the Demounting Tool for Mounting Inserts (blue) (see chapter 3 Using the Novaloc® Tools).



Step 2 – Selecting and inserting the Novaloc® Retention Inserts

- Select the appropriate Novaloc® Retention Insert (see chapter 4 Special featured Novaloc® components).
- Insert the Novaloc® Retention Inserts to the Matrix Housing using the Mounting and Demounting Tool for Retention Inserts (brown) (see chapter 3 Using the Novaloc® Tools).



Step 3 – Seating the finished overdenture

- Seat the finished overdenture and check the occlusion.

3. Using the Novaloc® Tools

3.1 Novaloc® Matrix Housing Extractor (Fig. 1)

Removing the Novaloc® Matrix Housing from an overdenture

1. Heat the Novaloc® Matrix Housing Extractor head (Fig. 2).
2. Apply the hot Novaloc® Matrix Housing Extractor to the Matrix Housing and let the heat transfer for 2–3 seconds melting the resin around the Matrix Housing.
3. Tilt the Novaloc® Matrix Housing Extractor to the opposite side of the beak-shape end in order to remove the Novaloc® Matrix Housing (Fig. 3).

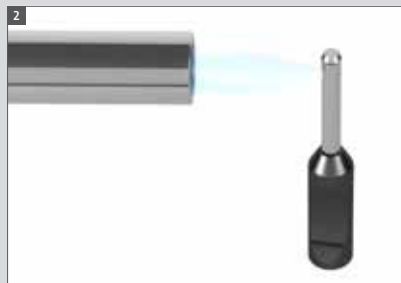
3.2 Novaloc® Demounting Tool for Mounting Inserts and Model Analog Reposition Aid (Fig. 4)

Removing the Novaloc® Mounting Insert

1. Insert the toe of the Novaloc® Demounting Tool into the Novaloc® Mounting Insert (Fig. 5).
2. Tip the Novaloc® Demounting Tool to the opposite side of the foot-shaped end and remove the Novaloc® Mounting Insert from the Novaloc® Matrix Housing (Fig. 6).

Placing the Novaloc® Model Analog

1. Pick up the Novaloc® Model Analog with the opposite side of the Novaloc® Demounting Tool (Fig. 7/8).
2. Position the Novaloc® Model Analog in the impression (Fig. 9).



3.3 Novaloc® Mounting and Demounting Tool for Retention Inserts (Fig. 11)

Mounting the Novaloc® Retention Insert

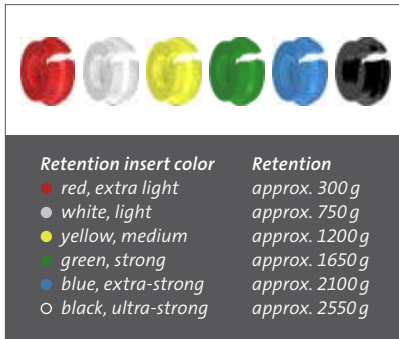
1. Pick up the Novaloc® Retention Insert with the gripper end of the Novaloc® Mounting and Demounting Tool. The Novaloc® Retention Insert will lock on to the tool (Fig. 12).
2. Place the Novaloc® Retention Insert into the Novaloc® Matrix Housing (Fig. 13). The Novaloc® Retention Insert “clicks” into position (Fig. 14).

Demounting the Novaloc® Retention Insert

1. Apply the plunger end of the Novaloc® Mounting and Demounting Tool to the Novaloc® Retention Insert and engage with light pressure (Fig. 15/16).
2. Remove the Novaloc® Retention Insert from the Novaloc® Matrix Housing using a slight rotational movement (Fig. 17).
3. Use the special indentation in the handle of the Novaloc® Matrix Housing Extractor (Fig. 1) to remove the Novaloc® Retention Insert from the Novaloc® Mounting and Demounting Tool with a tilting movement (Fig. 18/19).



4. Special featured Novaloc® Components



Novaloc® Retention Inserts

The Novaloc® matrix system allows for a prosthetic insertion of up to +/- 20° divergence, meaning 40° between two Novaloc® Abutments.

Note:

It is recommended to use the light retention force first (white). In case it feels too loose for the patient, exchange with inserts with a higher retention force.



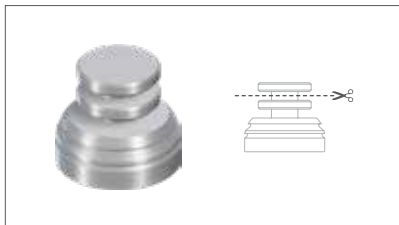
Novaloc® Mounting Collar

The Mounting Collar blocks out the area surrounding the abutment, preventing that resin or a bonding agent flows into the Matrix Housing and imbedding the abutment.



Novaloc® Matrix Housing, PEEK

The neutral-colored PEEK Matrix Housing is used for extremely labial or buccal implant positions preventing grey irritation coming from a titanium Matrix Housing.



Novaloc® Matrix Housing with attachment option

This Matrix Housing offers an extended attachment option. It is used for low-lying abutment heights or in situations requiring more retention. The attachment may be shortened according the required height.



Novaloc® Mounting Insert







The Novaloc® Mounting Insert protects the interior of the Novaloc® Matrix Housing and keeps it in place during processing. Furthermore, it also prevents any resin or bonding agents of entering into the Novaloc® Matrix Housing during fixation.



Novaloc® Processing Spacer

The Novaloc® Processing Spacer is a placeholder for the Novaloc® Matrix Housing. It is used for the model-cast, cast metal-reinforced denture or if the Novaloc® Matrix Housing shall be polymerized into the overdenture chair-side.

5. Product reference list







| Straumann® Novaloc® Abutment, straight, 0°* | | | | |
|---|----------|---|-----------------|-------------------|
| | Art. No. | Description | Abutment height | Material |
|  | 062.4521 | RB/WB Novaloc TiN Ø4.5, 0°, GH 1.5, TAV | 1,5 mm | Titanium Gr 5/TiN |
|  | 062.4522 | RB/WB Novaloc TiN Ø4.5, 0°, GH 2.5, TAV | 2,5 mm | Titanium Gr 5/TiN |
|  | 062.4523 | RB/WB Novaloc TiN Ø4.5, 0°, GH 3.5, TAV | 3,5 mm | Titanium Gr 5/TiN |
|  | 062.4524 | RB/WB Novaloc TiN Ø4.5, 0°, GH 4.5, TAV | 4,5 mm | Titanium Gr 5/TiN |
|  | 062.4525 | RB/WB Novaloc TiN Ø4.5, 0°, GH 5.5, TAV | 5,5 mm | Titanium Gr 5/TiN |
|  | 062.4526 | RB/WB Novaloc TiN Ø4.5, 0°, GH 6.5, TAV | 6,5 mm | Titanium Gr 5/TiN |

TiN: Titanium nitride

* Manufacturer
 Institut Straumann AG
 Peter Merian-Weg 12, 4002 Basel
 Switzerland

Not all products are available in all countries.

Straumann® Novaloc® Abutment, straight, 15**

| | Art. No. | Description | Abutment height | Material |
|---|----------|--|-----------------|-------------------|
|  | 062.4527 | RB/WB Novaloc TiN Ø4.5, 15°, GH 2.5, TAV | 2.5 mm | Titanium Gr 5/TiN |
|  | 062.4528 | RB/WB Novaloc TiN Ø4.5, 15°, GH 3.5, TAV | 3.5 mm | Titanium Gr 5/TiN |
|  | 062.4529 | RB/WB Novaloc TiN Ø4.5, 15°, GH 4.5, TAV | 4.5 mm | Titanium Gr 5/TiN |
|  | 062.4530 | RB/WB Novaloc TiN Ø4.5, 15°, GH 5.5, TAV | 5.5 mm | Titanium Gr 5/TiN |
|  | 062.4531 | RB/WB Novaloc TiN Ø4.5, 15°, GH 6.5, TAV | 6.5 mm | Titanium Gr 5/TiN |
|  | 062.4532 | RB/WB Novaloc TiN Ø4.5, 15°, GH 7.5, TAV | 7.5 mm | Titanium Gr 5/TiN |

TiN: Titanium nitride

* Manufacturer
 Institut Straumann AG
 Peter Merian-Weg 12, 4002 Basel
 Switzerland

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Retention Inserts*










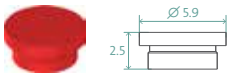



| | Art. No. | Description | Material | Retention | Quantity |
|---|--------------|---|----------|-----------------------------|----------|
|  | 2010.601-STM | Processing Package titanium | | | |
| | | Titanium Matrix Housing (including Mounting Insert) | | | 2 pcs |
| | | Retention Insert, white, light | | | 2 pcs |
| | | Retention Insert, yellow, medium | | | 2 pcs |
| | | Retention Insert, green, strong | | | 2 pcs |
| | | Mounting Collar, silicone | | | 2 pcs |
|  | 2010.611-STM | Processing Package PEEK | | | |
| | | PEEK Matrix Housing (including Mounting Insert) | | | 2 pcs |
| | | Retention Insert, white, light | | | 2 pcs |
| | | Retention Insert, yellow, medium | | | 2 pcs |
| | | Retention Insert, green, strong | | | 2 pcs |
| | | Mounting Collar, silicone | | | 2 pcs |
|  | 2010.710-STM | Novaloc® Retention Insert, red | PEEK | Extra-light, approx. 300g | 4 pcs |
|  | 2010.711-STM | Novaloc® Retention Insert, white | PEEK | Light, approx. 750g | 4 pcs |
|  | 2010.712-STM | Novaloc® Retention Insert, yellow | PEEK | Medium, approx. 1200g | 4 pcs |
|  | 2010.713-STM | Novaloc® Retention Insert, green | PEEK | Strong, approx. 1650g | 4 pcs |
|  | 2010.714-STM | Novaloc® Retention Insert, blue | PEEK | Extra-strong, approx. 2100g | 4 pcs |
|  | 2010.715-STM | Novaloc® Retention Insert, black | PEEK | Ultra-strong, approx. 2550g | 4 pcs |

CE 0473

* Manufacturer
 Valoc AG
 Bahnhofstrasse 64, 4313 Möhlin
 Switzerland

* Distributor
 Institut Straumann AG
 Peter Merian-Weg 12, 4002 Basel
 Switzerland

Auxiliaries*

| | Art. No. | Description | Material | Quantity |
|---|--------------|--|-----------------|----------|
|  | 2010.101-STM | Equipment Box, incl. 3 tools | | 1 pcs |
| | | Demounting Tool for Mounting Insert and Model Analog Reposition Aid (blue) | | |
| | | Mounting and Demounting Tool for Retention Inserts (brown) | | |
| | | Matrix Housing Extractor (gray) | | |
|  | 2010.731-STM | Demounting Tool for Mounting Inserts an Model Analog Reposition Aid (blue) | Aluminum/steel | 1 pcs |
|  | 2010.741-STM | Mounting and Demounting Tool for Retention Inserts (brown) | Aluminum/steel | 1 pcs |
|  | 2010.751-STM | Matrix Housing Extractor (gray) | Aluminum/steel | 1 pcs |
|  | 2010.701-STM | Matrix Housing, titanium (including Mounting Insert) | Titanium / PEEK | 4 pcs |
|  | 2010.702-STM | Matrix Housing, PEEK (including Mounting Insert) | PEEK | 4 pcs |
|  | 2010.703-STM | Matrix Housing with attachment option (including Mounting Insert) | Titanium / PEEK | 4 pcs |
|  | 2010.721-STM | Model Analog, blue | Aluminum | 4 pcs |
|  | 2010.720-STM | Model analogue, angled 15°, red | Aluminum | 1 pc |
|  | 2010.722-STM | Forming/Fixing Matrix, red | PEEK | 4 pcs |
|  | 2010.723-STM | Processing Spacer, white | POM | 4 pcs |
|  | 2010.724-STM | Mounting Collar | Silicone | 10 pcs |
|  | 2010.725-STM | Mounting Insert | PEEK | 4 pcs |

CE 0473

* Manufacturer
 Valoc AG
 Bahnhofstrasse 64, 4313 Möhlin
 Switzerland

* Distributor
 Institut Straumann AG
 Peter Merian-Weg 12, 4002 Basel
 Switzerland

6. Appendix

6.1 Appendix A

6.1.1 Chair-side modification of an existing lower denture into an overdenture supported by Novaloc® Abutments

For an existing **well-fitting** and **well-functioning** lower complete denture, the **Novaloc® Retentive System** can be used in a chair-side procedure.

Caution: It is a prerequisite however, that the lower complete denture does not need to be relined by a **dental technician**.



Place white Mounting Collars on each Novaloc® Abutment. The Mounting Collars are used to block out the area surrounding the abutments.

Caution: If the Novaloc® Mounting Collars do not completely fill the space between the mucosa and the Matrix Housings any remaining undercuts must be blocked out to prevent resin flowing under the Matrix Housings. This can be accomplished by stacking two or more Mounting Collars or a custom sized and pierced piece of rubber dam.

Then place a Matrix Housing with white Mounting Insert onto each Novaloc® Abutment, leaving the white Mounting Collar beneath it.



Prepare the lower complete denture to accommodate the Novaloc® Matrix Housings. Hollow out the existing denture base in the areas of the Novaloc® Matrix Housings with handpiece and resin bur.

Note: Novaloc® Processing Spacers can be used instead of Matrix Housings to create the space needed in the denture.



Use wash impression silicone to confirm adequate clearance between the Matrix Housings and the denture base.



Insert the lower complete denture into the patient's mouth and check the clearance. The Matrix Housings fixed on the abutments should not touch the denture base. Reconfirm adequate space using wash impression silicone. Adjust the denture base until seated passively in occlusion without touching the Matrix Housings.



Prepare the recess in the lower complete denture with monomer. Protect areas where you don't want the resin with a thin layer of petroleum jelly.



Fill the hollowed area with self-curing PMMA resin to polymerize the Matrix Housings in the denture.

Apply a small amount of acrylic resin to the recess of the denture base and around the Matrix Housings. Insert the lower complete denture into the oral cavity.



Once the lower complete denture is properly seated, maintain the patient in full occlusion while the acrylic sets.



Once the resin has cured, remove the lower complete denture from the mouth and discard the white Novaloc® Mounting Collars. Put the lower complete denture in hot, but not boiling, water. Place it in a pressure pot when available.



After final curing, remove any excess acrylic and finish the denture base.

Exchange the Mounting Inserts for the final Novaloc® Retention Inserts and insert the final overdenture into the patient's mouth. For details see brochure *Basic Information on the Straumann® Novaloc® Retentive System for Hybrid Dentures* (490.115).

6.2 Appendix B

6.2.1 Preparation for lab-side modification of an existing lower denture into an overdenture supported by Novaloc® Abutments

If the lower complete denture's fit is inadequate (poor adaptation to underlying tissue) after surgery and major adjustments are necessary, indirect relining of the mandibular denture is necessary. This means that relining and insertion of Novaloc® Matrix Housings incl. Mounting Inserts are performed by the dental technician immediately after border mold impression-taking. Lab-side relining has to be planned in advance with your dental technician.



Place a Novaloc® Forming/Fixing Matrix onto each Novaloc® Abutment.



Hollow out the existing denture base in the areas of the Novaloc® Forming/Fixing Matrices with handpiece and resin bur.



Use wash impression silicone to confirm adequate clearance between the Matrix Housings and the denture base.



Insert the lower complete denture into the patient's mouth and check the clearance. The Matrix Housings on the abutments should not touch the denture base. Reconfirm space using wash impression silicone. Adjust the denture base to seat passively in occlusion without touching the Matrix Housings.



Prepare the lower complete denture for **border mold impression technique**.

- Remove any undercuts from the denture base.
- Check for peripheral extensions and if necessary (optional) adjust them with thermo-plastic materials (border molding).
- Dry the inner surface of the mandibular denture with alcohol and apply the corresponding adhesive.



Take a reline impression.

Apply polyether impression material to the internal aspect of the lower complete denture, and take a reline impression with the patient in occlusion.





Once the impression material has cured, remove the lower complete denture with the Novaloc® Forming/Fixing Matrices from the mouth. If the Novaloc® Forming/Fixing Matrices did not remain inside the impression, carefully reseat them into the relined impression.

Send the mandibular denture to the dental technician to reline it, integrate the Matrix Housings and convert it into an overdenture. After having received the final overdenture from the **dental technician** exchange the Mounting Inserts for the final Novaloc® Retention Inserts and insert the final overdenture into the patient's mouth. For details see brochure *Basic Information on the Straumann® Novaloc® Retentive System for Hybrid Dentures* (USLIT.1127).

Straumann North American Headquarters

ifu.straumann.com

Straumann USA, LLC

60 Minuteman Road

Andover, MA 01810

Phone 800/448 8168 (US) • 800/363 4024 (CA)

Fax 978/747 2490

www.straumann.us • www.straumann.ca