

# Basic Information on the Straumann® Novaloc® Retentive System for Hybrid Dentures



# Contents

1.	The Novaloc® Retentive System for hybrid dentures	1
	1.1 Straumann® Novaloc® Retentive System at a glance	1
2.	Creating a new overdenture with the Novaloc® Retentive System	2
	2.1 Procedure in the dental office	2
	2.2 Procedure in the dental lab	3
	2.3 Procedure in the dental office	5
3.	Using the Novaloc® Tools	6
	3.1 Novaloc® Matrix Housing Extractor	6
	3.2 Novaloc® Demounting Tool for Mounting Inserts and Model Analog Reposition Aid	6
	3.3 Novaloc® Mounting and Demounting Tool for Retention Inserts	7
4.	Special featured Novaloc® Components	8
5.	Product reference list	9

# 1. The Novaloc® Retentive System for hybrid dentures

The Straumann® Novaloc® Retentive System for hybrid dentures offers an innovative carbon-based abutment coating (ADLC¹) with an excellent wear resistance, overcoming up to 60° 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

- PEEK<sup>2</sup> 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 PEEK<sup>2</sup> for a more aesthetic outcome
- Carbon-based abutment coating (ADLC¹) offering a smooth surface and ultimate hardness
  - → for excellent wear resistance
- **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 to 6 mm
- 6 Available in 5 abutment heights: 2 to 6 mm
- 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°

<sup>&</sup>lt;sup>1</sup> Amorphous Diamond-Like Carbon

<sup>&</sup>lt;sup>2</sup> 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
- Determine the appropriate abutment height by counting the marks on the Novaloc® Plan Abutments.



#### 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 Analogs into the Novaloc® Forming/Fixing Matrix (see chapter 3 Using the Novaloc® Tools).



#### 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<sup>®</sup> 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).

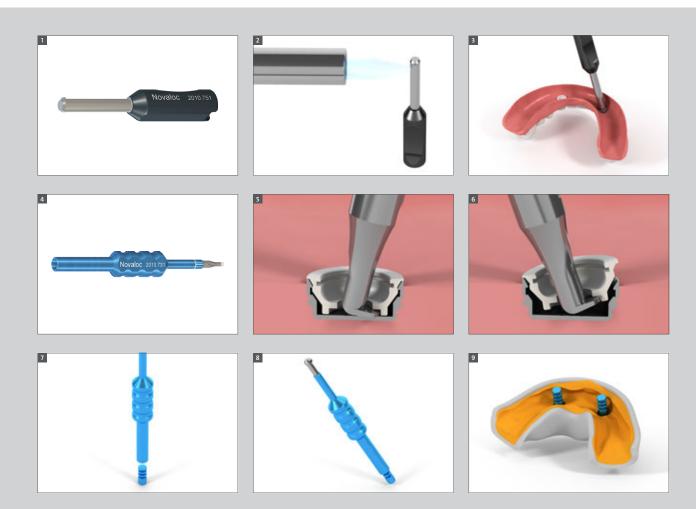
#### 3.2 Novaloc® Demounting Tool for Mounting Inserts and Model Analog Reposition Aid (Fig. 4)

#### Removing the Novaloc® Mounting Insert

- 4. Insert the toe of the Novaloc® Demounting Tool into the Novaloc® Mounting Insert (Fig. 5).
- 5. 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).



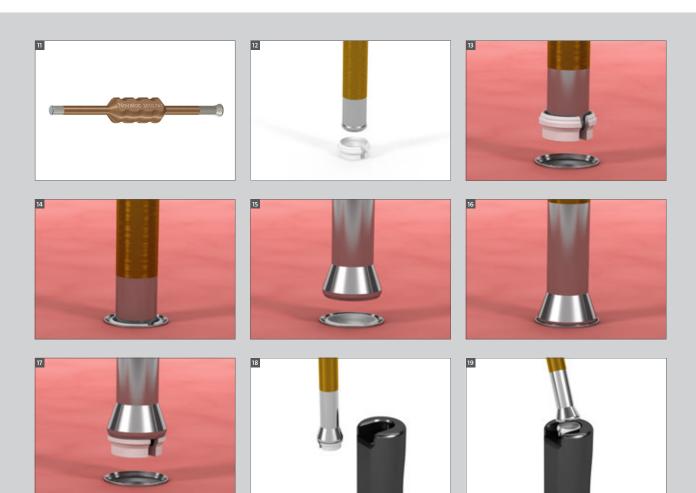
# 3.3 Novaloc® Mounting and Demounting Tool for Retention Inserts (Fig. 11)

#### 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

	Art. No.	Description	Abutment height	Material
	048.812	RN Novaloc® Abutment, 0°	1mm	Titanium Gr 5/ADLC
	048.813	RN Novaloc® Abutment, 0°	2 mm	Titanium Gr 5/ADLC
	048.814	RN Novaloc® Abutment, 0°	3 mm	Titanium Gr 5/ADLC
	048.815	RN Novaloc® Abutment, 0°	4mm	Titanium Gr 5/ADLC
	048.816	RN Novaloc® Abutment, 0°	5 mm	Titanium Gr 5/ADLC
	048.817	RN Novaloc® Abutment, 0°	6 mm	Titanium Gr 5/ADLC
	048.818	WN Novaloc® Abutment, 0°	1mm	Titanium Gr 5/ADLC
	048.819	WN Novaloc® Abutment, 0°	2 mm	Titanium Gr 5/ADLC
	048.820	WN Novaloc® Abutment, 0°	3 mm	Titanium Gr 5/ADLC
	048.821	WN Novaloc® Abutment, 0°	4mm	Titanium Gr 5/ADLC
	048.822	WN Novaloc® Abutment, 0°	5 mm	Titanium Gr 5/ADLC
	048.823	WN Novaloc® Abutment, 0°	6 mm	Titanium Gr 5/ADLC
	048.806	NNC Novaloc® Abutment, 0°	1mm	Titanium Gr 5/ADLC
	048.807	NNC Novaloc® Abutment, 0°	2 mm	Titanium Gr 5/ADLC
	048.808	NNC Novaloc® Abutment, 0°	3 mm	Titanium Gr 5/ADLC
9	048.809	NNC Novaloc® Abutment, 0°	4 mm	Titanium Gr 5/ADLC
	048.810	NNC Novaloc® Abutment, 0°	5 mm	Titanium Gr 5/ADLC
F	048.811	NNC Novaloc® Abutment, 0°	6 mm	Titanium Gr 5/ADLC
	022.0046	NC Novaloc® Abutment, 0°	1mm	Titanium Gr 5/ADLC
	022.0047	NC Novaloc® Abutment, 0°	2 mm	Titanium Gr 5/ADLC
	022.0048	NC Novaloc® Abutment, 0°	3 mm	Titanium Gr 5/ADLC
	022.0049	NC Novaloc® Abutment, 0°	4mm	Titanium Gr 5/ADLC
	022.0050	NC Novaloc® Abutment, 0°	5 mm	Titanium Gr 5/ADLC
1.	022.0051	NC Novaloc® Abutment, 0°	6 mm	Titanium Gr 5/ADLC
	022.0052	RC Novaloc® Abutment, 0°	1mm	Titanium Gr 5/ADLC
	022.0053	RC Novaloc® Abutment, 0°	2 mm	Titanium Gr 5/ADLC
7	022.0054	RC Novaloc® Abutment, 0°	3 mm	Titanium Gr 5/ADLC
	022.0055	RC Novaloc® Abutment, 0°	4 mm	Titanium Gr 5/ADLC
	022.0056	RC Novaloc® Abutment, 0°	5 mm	Titanium Gr 5/ADLC

ADLC = Amorphous Diamond-Like Carbon

<sup>\*</sup> Manufacturer Institut Straumann AG Peter Merian-Weg 12, 4002 Basel Switzerland

Straumann® Novaloc® Abutment, angled, 15°*					
	Art. No.	Description	Abutment height	Material	
	048.832	RN Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC	
	048.833	RN Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC	
1000	048.834	RN Novaloc® Abutment, 15°	4mm	Titanium Gr 5/ADLC	
	048.835	RN Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC	
	048.836	RN Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC	
	048.837	WN Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC	
	048.838	WN Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC	
	048.839	WN Novaloc® Abutment, 15°	4mm	Titanium Gr 5/ADLC	
	048.840	WN Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC	
# H	048.841	WN Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC	

Straumann® Novaloc® Abut	traumann® Novaloc® Abutment, angled, 15°   Type A*					
	Art. No.	Description	Abutment height	Material		
	048.842	NNC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC		
	048.843	NNC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC		
	048.844	NNC Novaloc® Abutment, 15°	4 mm	Titanium Gr 5/ADLC		
A	048.845	NNC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC		
(1)	048.846	NNC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC		
	022.0062	NC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC		
	022.0063	NC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC		
	022.0064	NC Novaloc® Abutment, 15°	4 mm	Titanium Gr 5/ADLC		
A	022.0065	NC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC		
	022.0066	NC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC		
	022.0067	RC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC		
	022.0068	RC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC		
	022.0069	RC Novaloc® Abutment, 15°	4 mm	Titanium Gr 5/ADLC		
A	022.0070	RC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC		
The state of the s	022.0071	RC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC		

ADLC = Amorphous Diamond-Like Carbon

<sup>\*</sup> Manufacturer Institut Straumann AG Peter Merian-Weg 12, 4002 Basel Switzerland

Straumann® Novaloc® Abutn	nent, angled, 1	5°   Type B*		
	Art. No.	Description	Abutment height	Material
	048.847	NNC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC
	048.848	NNC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC
	048.849	NNC Novaloc® Abutment, 15°	4mm	Titanium Gr 5/ADLC
1787	048.850	NNC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC
()	048.851	NNC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC
	022.0072	NC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC
	022.0073	NC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC
	022.0074	NC Novaloc® Abutment, 15°	4mm	Titanium Gr 5/ADLC
100	022.0075	NC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC
(1)	022.0076	NC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC
	022.0077	RC Novaloc® Abutment, 15°	2 mm	Titanium Gr 5/ADLC
	022.0078	RC Novaloc® Abutment, 15°	3 mm	Titanium Gr 5/ADLC
	022.0079	RC Novaloc® Abutment, 15°	4mm	Titanium Gr 5/ADLC
	022.0080	RC Novaloc® Abutment, 15°	5 mm	Titanium Gr 5/ADLC
The state of the s	022.0081	RC Novaloc® Abutment, 15°	6 mm	Titanium Gr 5/ADLC

Straumann® Novaloc® Bar Abutment						
	Art. No.	Description	Abutment height	Material		
	048.857V2	Novaloc® Bar Abutment	N/A	Titanium Gr 5/ADLC		

ADLC = Amorphous Diamond-Like Carbon

<sup>\*</sup> Manufacturer Institut Straumann AG Peter Merian-Weg 12, 4002 Basel Switzerland

#### Straumann® Novaloc® Plan Abutments, straight, 0° Compatility to Novaloc® Abtuments Art. No. Description 048.280V4\* RN Novaloc® Plan Abutment, H 1-6 mm, POM 048.812, 048.813, 048.814, 048.815, 048.816, 048.817 048.852V4\* WN Novaloc® Plan Abutment, H 1-6 mm, POM 048.818, 048.819, 048.820, 048.821, 048.822, 048.823 048.951V4\* NNC Novaloc® Plan Abutment, H 1-6 mm, POM 048.806, 048.807, 048.808, 048.809, 048.810, 048.811NC Novaloc® Plan Abutment, H 1-6 mm, POM 022.0046, 022.0047, 022.0048, 022.0049, 022.0050 025.2646-04\* RC Novaloc® Plan Abutment, H 1-6 mm, POM 022.0052, 022.0053, 022.0054, 022.0055, 022.0056, 022.0057025.4646-04\*

#### Straumann® Novaloc® Plan Abutments, angled, 15°

Art. No.	Description	Compatility to Novaloc® Abtuments
048.853V4	RN Novaloc® Plan Abutment, angled 15°, H 2-6mm, POM	048.832, 048.833, 048.834, 048.835, 048.836
048.854V4	WN Novaloc® Plan Abutment, angled 15°, H 2-6mm, POM	048.837, 048.838, 048.839, 048.840, 048.841

#### Straumann® Novaloc® Plan Abutments, angled, 15°, Type A

	Art. No.	Description	Compatility to Novaloc® Abtuments
@)))))}	048.855V4	NNC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type A, POM	048.842, 048.843, 048.844, 048.845, 048.846
	025.0046V4	NC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type A, POM	022.0062, 022.0063, 022.0064, 022.0065, 022.0066
	025.0045V4	RC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type A, POM	022.0067, 022.0068, 022.0069, 022.0070, 022.0071

#### Straumann® Novaloc® Plan Abutments, angled, 15°, Type B

	Art. No.	Description	Compatility to Novaloc® Abtuments
@))))))	048.856V4	NNC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type B, POM	048.847, 048.848, 048.849, 048.850, 048.851
	025.0048V4	NC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type B, POM	022.0072, 022.0073, 022.0074, 022.0075, 022.0076
	025.0047V4	RC Novaloc® Plan Abutment, angled 15°, H 2-6mm, type B, POM	022.0077, 022.0078, 022.0079, 022.0080, 022.0081

\*compatible to LOCATOR®

ADLC = Amorphous Diamond-Like Carbon

	Art. No.	Description	Material	Retention	Quantity
	2010.601-STM	Processing Package titanium			
8		Titanium Matrix Housing (including Mounting Insert)			2 pcs
		Retention Insert, white, light			2 pcs
		Retention Insert, yellow, medium			2 pcs
<b>57</b>		Retention Insert, green, strong			2 pcs
		Mounting Collar, silicone			2 pcs
	2010.611-STM	Processing Package PEEK			
8		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
3	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
6	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
<b>3</b>	2010.715-STM	Novaloc® Retention Insert, black	PEEK	Ultra-strong, approx. 2550g	4 pcs

CE 0473 \* Manufacturer Valoc AG Bahnhofsstrasse 64, 4313 Möhlin Switzerland

<sup>\*</sup> 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		
11		Demounting Tool for Mounting Insert and Model Analog Reposition Aid (blue)				
		Mounting and Demounting Tool for Retention Inserts (brown)				
		Matrix Housing Extractor (gray)				
Novalos 2010 731	2010.731-STM	Demounting Tool for Mounting Inserts an Model Analog Reposition Aid (blue)	Aluminum/steel	1 pcs		
Novelor 2013/4	2010.741-STM	Mounting and Demounting Tool for Retention Inserts (brown)	Aluminum/steel	1 pcs		
Novaloc zaraza	2010.751-STM	Matrix Housing Extractor (gray)	Aluminum/steel	1 pcs		
2.3 Ø 5.5	2010.701-STM	Matrix Housing, titanium (including Mounting Insert)	Titanium / PEEK	4 pcs		
2.3 Ø 5.5	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 ∅ 4, blue	Aluminum	4 pcs		
Ø5.9	2010.722-STM	Forming/Fixing Matrix, red	PEEK	4 pcs		
	2010.723-STM	Processing Spacer, white	POM	4 pcs		
0	2010.724-STM	Mounting Collar	Silicone	10 pcs		
8	2010.725-STM	Mounting Insert	PEEK	4 pcs		

CE 0473 \* Manufacturer Valoc AG Bahnhofsstrasse 64, 4313 Möhlin Switzerland

<sup>\*</sup> Distributor Institut Straumann AG Peter Merian-Weg 12, 4002 Basel Switzerland

#### **International Headquarters**

Institut Straumann AG
Peter Merian-Weg 12
CH-4002 Basel, Switzerland
Phone +41 (0)61 965 11 11
Fax +41 (0)61 965 11 01
www.straumann.com

Novaloc® is a registered trademark of Valoc AG, Switzerland.