



## Straumann® BLX Implant System Basic Information



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## About this guide

This surgical and prosthetic procedure describes the steps required for implantation and restoration of the Straumann® BLX Implant System. The Straumann® BLX Implant System is recommended for use only by clinicians with advanced surgical skills. It is assumed that the user is familiar with placing dental implants. Not all detailed information will be found in this guide. Reference to existing Straumann® procedure manuals will be made throughout this document.









Not all products shown are available in all markets.

# 1. The Straumann® BLX Implant System

The Straumann® BLX Implant System offers bone level implants (BLX) that are designed for high primary stability and immediate treatment procedures.

The Straumann® BLX Implants are made from the material Roxolid® with the SLActive® surface and are available in the endosteal diameters Ø 3.75 mm, Ø 4.5 mm, Ø 5.5 mm and Ø 6.5 mm, with length options from 6 mm to 18 mm for the diameter Ø 4.5 mm, and 6 mm to 12 mm for diameters Ø 5.5 mm and Ø 6.5 mm. A unified color code simplifies identification of instruments and implants for the available endosteal diameters.

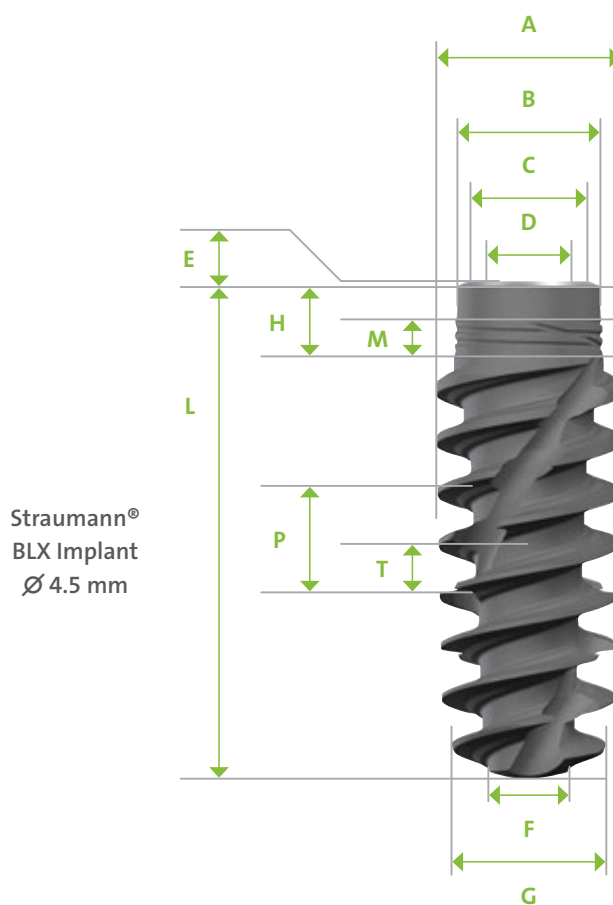
The Straumann® BLX prosthetic components are identified with RB (Regular Base) and WB (Wide Base), corresponding to the implant neck diameters of Ø 3.5 mm and Ø 4.5 mm respectively.

		Straumann® BLX Implant Ø 3.75 mm	Straumann® BLX Implant Ø 4.5 mm	Straumann® BLX Implant Ø 5.5 mm	Straumann® BLX Implant Ø 6.5 mm
Color code		 (red)	 (green)	 (brown)	 (black)
Prosthetic Base		RB (Regular Base)		WB (Wide Base)	
Connection		TorcFit™			
Picture					
Available lengths	6 mm	061.4306	061.6306	061.8306	061.9306
	8 mm	061.4308	061.6308	061.8308	061.9308
	10 mm	061.4310	061.6310	061.8310	061.9310
	12 mm	061.4312	061.6312	061.8312	061.9312
	14 mm	061.4314	061.6314	–	–
	16 mm	061.4316	061.6316	–	–
	18 mm	061.4318	061.6318	–	–

To obtain more information about the indications and contraindications related to each implant, please refer to the corresponding instructions for use. Instructions for use can be found at [www.ifu.straumann.com](http://www.ifu.straumann.com)

## 2. Implant

### 2.1 Design and specification



	Straumann® BLX Implant Ø 3.75 mm	Straumann® BLX Implant Ø 4.5 mm	Straumann® BLX Implant Ø 5.5 mm	Straumann® BLX Implant Ø 6.5 mm
[A] Maximum outer diameter	Ø 3.75 mm	Ø 4.5 mm	Ø 5.5 mm	Ø 6.5 mm
[B] Neck diameter	Ø 3.5 mm		Ø 4.5 mm	
[C] Platform diameter	Ø 2.9 mm			
[D] Connection diameter	Ø 2.7 mm			
[E] 22.5° bevel height	0.12 mm		0.33 mm	
[F] Apical diameter, body	Ø 1.9 mm		Ø 2.6 mm	Ø 3.0 mm
[G] Apical diameter, threads	Ø 2.9 mm	Ø 3.6 mm	Ø 4.0 mm	Ø 5.2 mm
Number of apical cutting edges	2		4	
[L] Implant lengths: 6 mm, 8 mm				
[H] Neck height	1.0 mm			
[M] Micro threads height	0.5 mm			
[P] Thread pitch*	1.7 mm	2.0 mm	2.1 mm	2.5 mm
[T] Thread spacing	0.85 mm	1.0 mm		
[L] Implant lengths: 10 mm, 12 mm, 14 mm				
[H] Neck height	1.7 mm			
[M] Micro threads height	0.85 mm			
[P] Thread pitch*	2.2 mm	2.5 mm		2.8 mm
[T] Thread spacing	1.1 mm	1.25 mm		
[L] Implant lengths: 16 mm, 18 mm				
[H] Neck height	2.0 mm		NA	
[M] Micro threads height	1.0 mm			
[P] Thread pitch*	2.6 mm	2.8 mm		
[T] Thread spacing	1.3 mm	1.4 mm		

\* Implant advances by this amount with every rotation.

# 3. Connection

## 3.1 TorcFit™ connection

The Straumann® BLX Implant features the intuitive TorcFit™ connection. This connection supports self-guiding insertion, for clear-cut tactile feedback. Six positions enable a simple yet flexible alignment and outstanding protection against rotation.

All BLX Implants have the same inner geometry regardless of the diameter of the implant. This allows the use of one set of prosthetic components (“RB/WB abutments”) and simplifies the prosthetic steps. In addition, a wide emergence profile can be created on top of WB implants (“WB abutments”).

### Improved Torx with six positions:

- Allows transmission of high torques
- Simple yet flexible implant and abutment alignment
- Clear-cut and guided component insertion via cylindrical guidance



### 7° conical prosthetic connection:

- High mechanical stability and stress distribution
- Exact implant-abutment fit
- Narrow emergence profile creates space for soft tissues
- Clear feedback of final position by friction fit



### 22.5° shoulder prosthetic connection:

- High mechanical stability
- Exact implant-abutment fit
- Extra wide emergence profiles (implants with diameter >5.0 mm)
- Divergence compensation for bridges



### Flat Top portion:

- High accuracy for impression components
- Flat sealing for healing and temporary components to protect inner conus

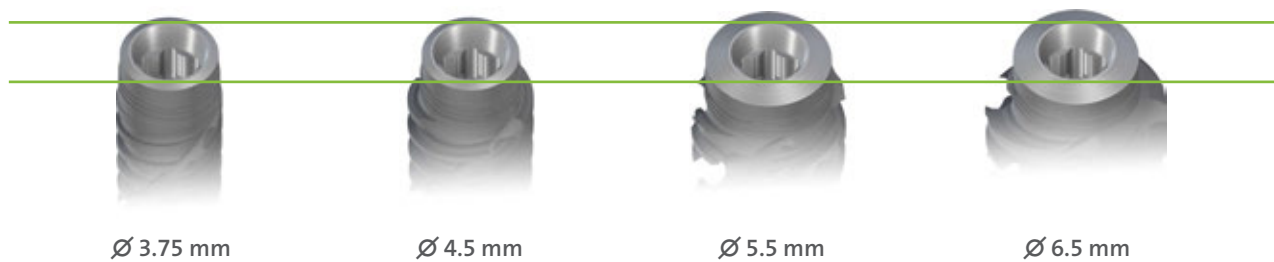


**Same inner geometry regardless of the diameter of the implant**

- A single prosthetic range to manage all implant diameters („RB/WB“)
- Simplified prosthetic steps
- Same implant driver for all implants

**Precise machined shoulder for optional wide emergence profile (Diameter >5.0)**

- Free choice of implant regardless of prosthetic volume to restore

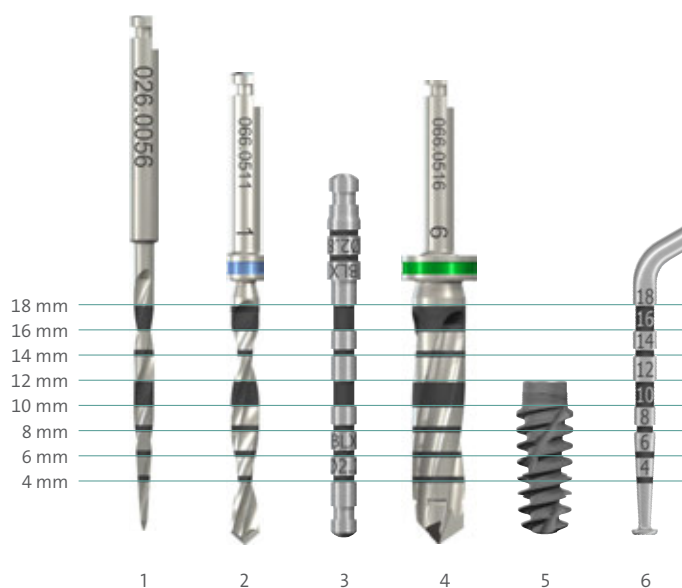




## 4. Instruments

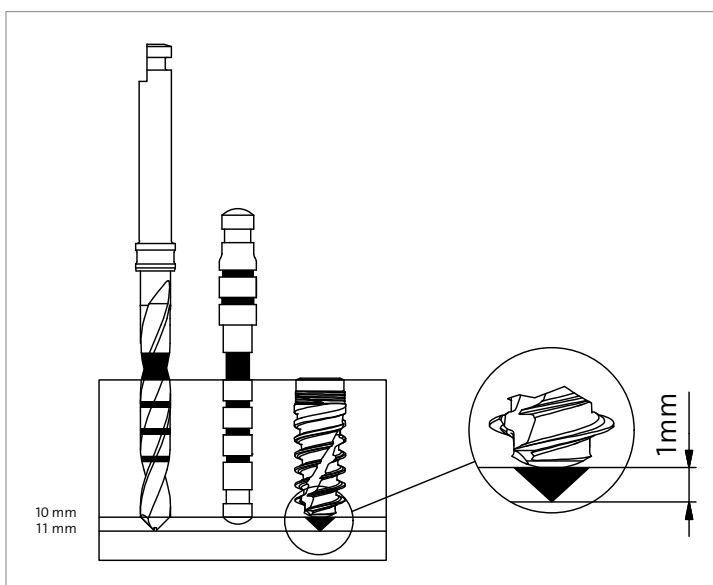
The Straumann® BLX Implant System is supplied with a specific set of instruments.

The instruments have depth marks at 2 mm intervals that correspond to the available implant lengths. The first bold mark on the drills represents 10 mm and 12 mm, where the lower edge of the mark corresponds to 10 mm and the upper edge to 12 mm. The second bold mark on the long drills represents 16 mm and 18 mm, where the lower edge of the mark corresponds to 16 mm and the upper edge to 18 mm.











1. Needle drill: 026.0056
2. Pilot drill, long: 066.0511
3. Alignment pin, long: 066.1002
4. Drill 6, long: 066.0516
5. BLX Implant Ø 4.5 / 12 mm: 061.6312
6. Implant depth gauge: 066.1000

Warning: Due to the function and design of the drills, the drill tip is up to 1.0 mm longer than the insertion depth of the implant. For example, if you drill until the 10 mm marking the actual osteotomy has a depth of 11 mm.



## 4.1 Drills

All BLX drills in the Straumann® Implant System are delivered color-coded, the color corresponding to the specific implant diameter.

	Needle drill	Drill No.1 (pilot)	Drill No.2	Drill No.3	Drill No.4	Drill No.5	Drill No.6	Drill No.7	Drill No.8	Drill No.9
Color	—									
Picture (long)										
Diameter	Ø 1.6 mm	Ø 2.2 mm	Ø 2.8 mm	Ø 3.2 mm	Ø 3.5 mm	Ø 3.7 mm	Ø 4.2 mm	Ø 4.7 mm	Ø 5.2 mm	Ø 6.2 mm
Step diameter	NA	NA	Ø 2.5 mm	Ø 3.0 mm	Ø 3.3 mm	Ø 3.6 mm	Ø 3.9 mm	Ø 4.4 mm	Ø 4.9 mm	Ø 5.7 mm
Article Number	026.0056	066.0511	066.0512	066.0513	066.0514	066.0515	066.0516	066.0517	066.051	066.0519
Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel

## 4.2 Drill extender

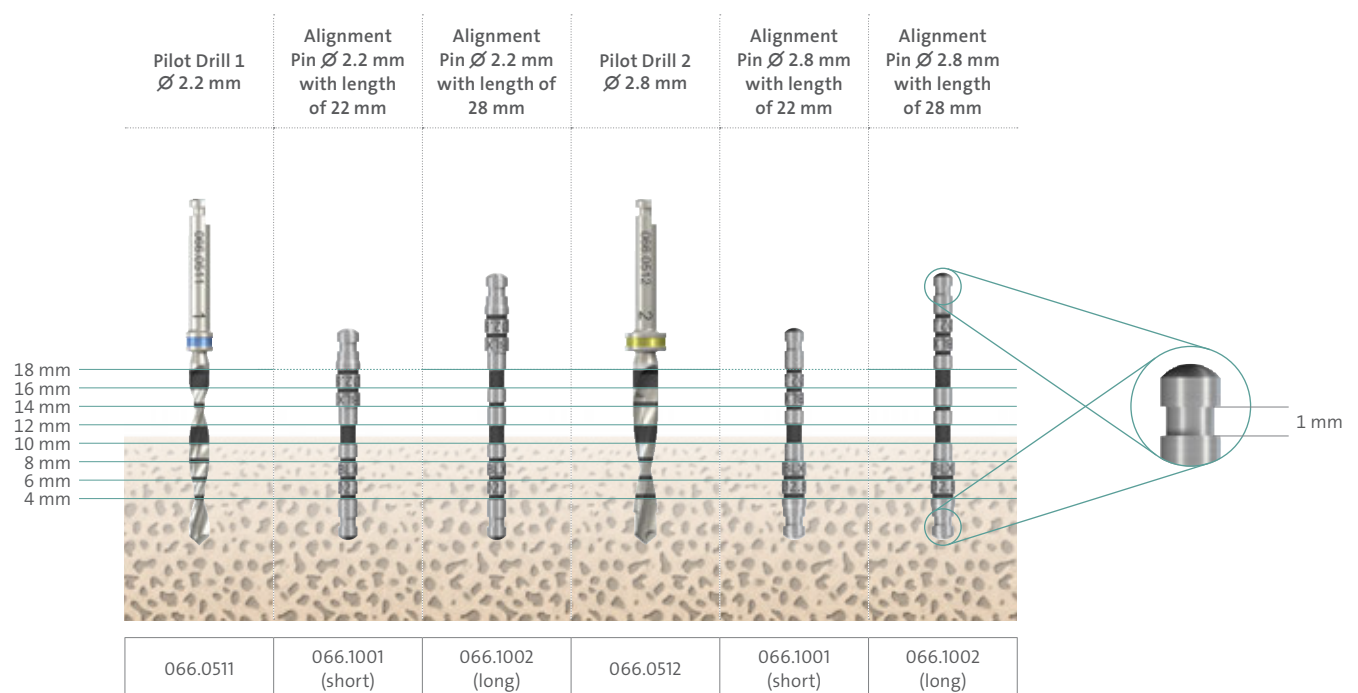


The stop ring reduced the effectiveness of the irrigation when a drill extender is used. In this case use additional external irrigation (e.g with a syringe) to ensure proper cooling of the osteotomy during drilling.

### 4.3 Alignment pins

Two lengths of alignment pins are available for accurate depth measurements and alignment of orientation and position of the osteotomy, with lengths of 22 mm (short) and 28 mm (long). Their diameters correspond to the Pilot Drill ( $\varnothing$  2.2 mm) at one end and to Drill No. 2 ( $\varnothing$  2.8 mm) at the other.

The grooves at the tip are 1.0 mm wide and also allow for distortion measurements on an interoperative radiograph. Made of titanium. Compatible with the BLX Implant System only.



### 4.4 Implant depth gauge

Implant depth gauge for accurate depth measurement and tactile examination of the osteotomy.

>  $\varnothing$  2.1 mm end: use to examine osteotomy made by drill No. 1 ( $\varnothing$  2.2 mm) and by No. 2 ( $\varnothing$  2.8 mm)





>  $\varnothing$  2.9 mm end: use to examine osteotomy made with drill No. 3 ( $\varnothing$  3.2 mm) and wider.

Made of titanium-alloy (TAN). Compatible with the BLX Implant System only.

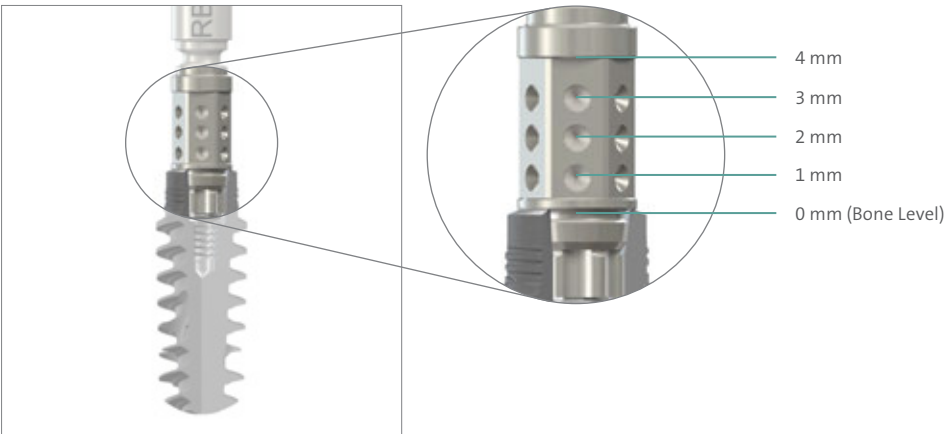


4.5 Implant driver

Specific Implant Driver to use for pick-up and insertion of the Straumann® BLX Implants.

Implant Driver type			
Implant Driver for handpiece		Implant Driver for ratchet	
			
short	long	short	long
Length 21 mm	Length 31 mm	Length 21 mm	Length 31 mm
Stainless steel	Stainless steel	Stainless steel	Stainless steel
066.4101	066.4102	066.4201	066.4202

**Note:** The Implant Driver for handpiece, long (066.4102) is compatible with a manual surgical implant drivers. If manual surgical implant drivers are used to insert the implant, special attention is required to avoid overtightening.



The round markings on the Implant Drivers indicate the distance to the implant shoulder in 1 mm steps.

4.6 Ratchet and torque control devices

The ratchet is a two-part lever arm instrument with a rotary knob for changing the direction of force. It is supplied with a service instrument, which is used to tighten and loosen the head screw. The Holding Key (046.064) can be used to stabilize the ratchet.

Two different Torque Control Devices are available for defined torque transmission or for torque measurements, with markings of 15Ncm / 35Ncm and 35-50Ncm / 80Ncm respectively. Choose the appropriate device depending on the intended use.

Ratchet and Torque Control Devices				
	Holding Key	Ratchet	Torque Control Device for Ratchet	BLX Torque Control Device for Ratchet, Surgical
	A long, thin, L-shaped stainless steel tool with a hook at one end and a circular hole at the other.	A long, thin, L-shaped stainless steel tool with a circular hole at one end and a ratchet mechanism at the other.	A black torque control device with a ratchet mechanism and a circular scale showing markings for 0, 15, and 35 Ncm.	A black torque control device with a ratchet mechanism and a circular scale showing markings for 0, 35, 50, and 80 Ncm.
Intended use	Auxilliary	Torque transmission	Prosthetic	Surgical
Torque markings	NA	NA	0/15/35Ncm	0/35/50/80Ncm
Article Number	046.064	046.119	046.049	066.1100
Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel, DLC coated

**Note:** To ensure prolonged perfect function, the ratchet must always be taken apart and the individual parts disinfected, cleaned and sterilized after use. Its function must be checked in good time before each use.

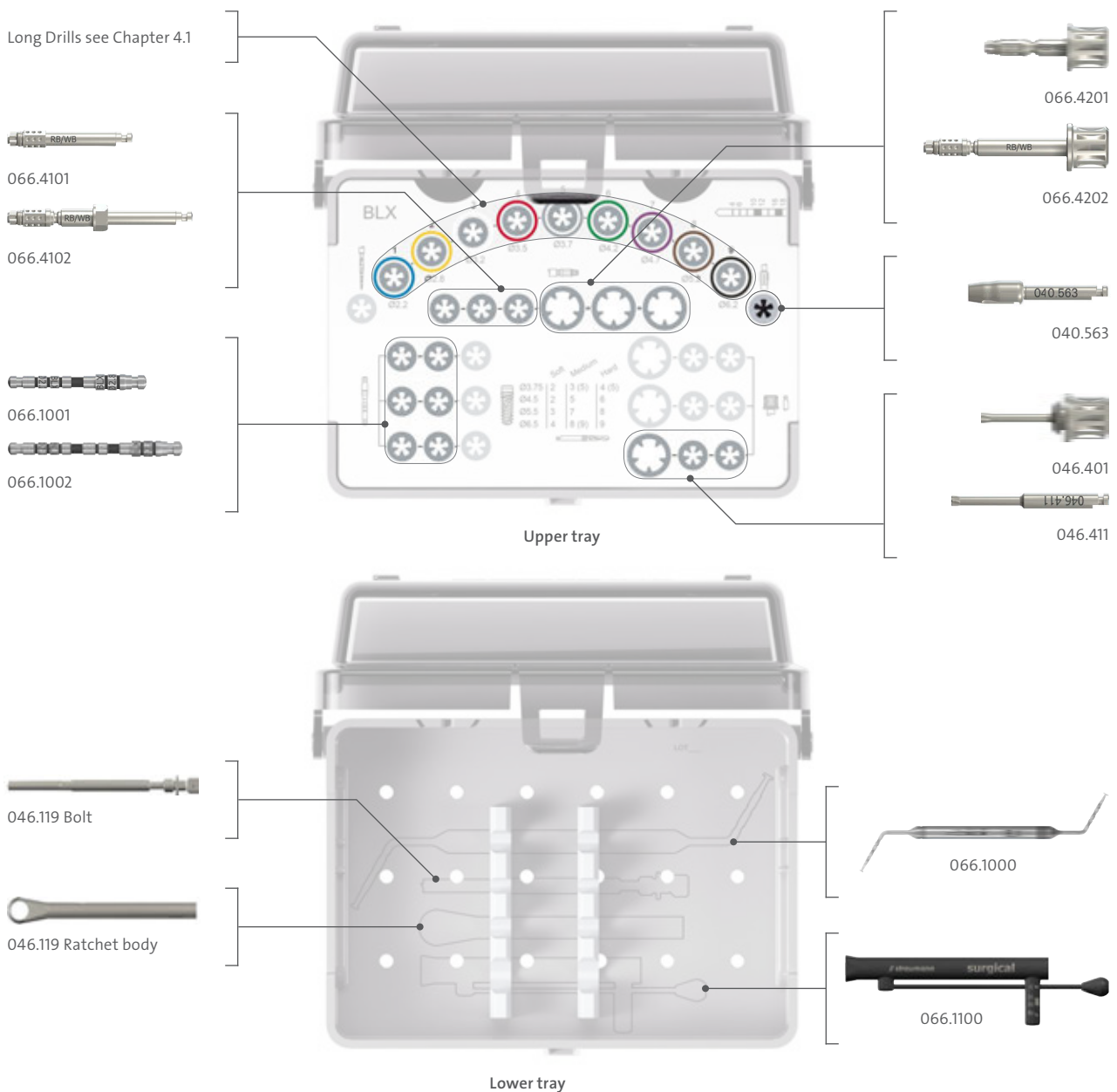
Torque reading on Torque Control Device:



## 4.7 Surgical cassette

The Straumann® BLX Surgical Cassette (069.0001) is used for the secure storage, cleaning and sterilization of the surgical instruments and auxiliary instruments. For guidelines on how to clean and sterilize the cassette with or without inserted instruments, please see Chapter 12.

Dimensions of closed box: 143 x 100 x 61 mm



# 5. Surgical procedure

The workflow for the surgical procedure for the Straumann® BLX Implant System involves 3 steps:

- Preoperative planning
- Implant bed preparation
- Implant insertion

## 5.1 Preoperative planning

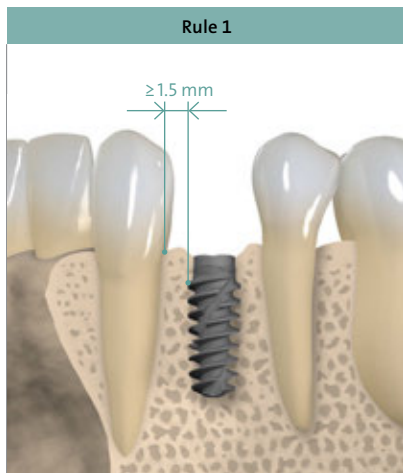
Prosthetic-driven planning is recommended, and close communication between the patient, dentist, surgeon and dental technician is imperative for achieving the desired esthetic result.

To determine the topographical situation, axial orientation and the appropriate implants, making a wax-up / set up using the previously prepared study cast is recommended. Subsequently, the type of superstructure can be defined. The wax-up / set-up can later be used as the basis for a custom-made x-ray or drill template and for a temporary restoration.

**Note: Abutments should always be loaded axially. Ideally, the long axis of the implant is aligned with the cusps of the opposing tooth. Extreme cusp formation should be avoided as this can lead to unphysiological loading.**

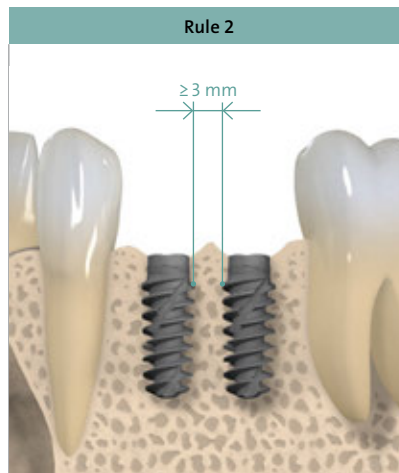
The mesiodistal bone availability is an important factor when choosing the implant type and diameter as well as the inter-implant distances if multiple implants are placed. The point of reference on the implant for measuring mesiodistal distances is always the largest diameter of the implant.

The following three rules should be regarded as minimum guidelines:



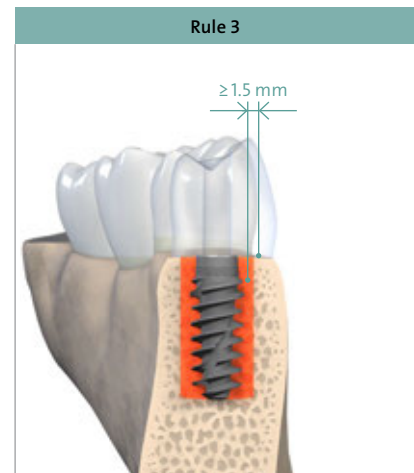
**Rule 1:** Distance to adjacent tooth at bone level

A minimum distance of **1.5 mm from the implant adjacent tooth** (mesial and distal) is recommended.



**Rule 2:** Distance to adjacent implants at bone level

A minimum distance of **3 mm between two adjacent implant shoulders** (mesiodistal) is recommended.



**Rule 3:** The facial and palatal bone layer must be at least 1.5 mm thick in order to ensure stable hard and soft tissue conditions. Within this limitation, a restoration-driven orofacial implant position and axis should be chosen such that screw-retained restorations are possible.

**Caution:** An augmentation procedure is indicated if the orofacial bone wall is less than 1.5 mm or a layer of bone is missing on one or more sides. This technique should be employed only by dentists with adequate experience in the use of augmentation procedures.

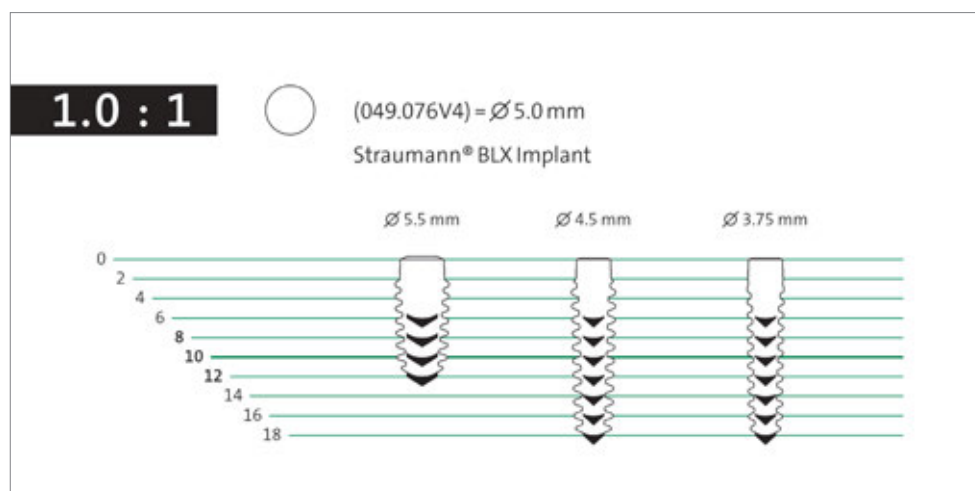


### 5.1.1 X-ray reference foil

The vertical bone availability determines the maximum allowable length of the implant that can be placed. For easier determination of the vertical bone availability, we recommend the use of an x-ray reference foil with X-ray Reference Sphere (049.076V4).

The BLX x-ray reference foil (065.0000) is used for measurement and comparison. It assists the user in selecting the suitable implant type, diameter and length. Similar to the distortions that occur in x-rays, the implant dimensions are shown on the individual reference foils with the corresponding distortion factors (1:1 to 1.7:1). Determining each magnification factor or scale is facilitated by showing the X-ray Reference Sphere on the reference foil. First, compare the size of the X-ray Reference Sphere on the patient's x-ray with the size of the Reference Sphere on the reference foil. Superimpose the two pictures to find the correct scale. Next, determine the spatial relations around the implant position, and establish the implant length and insertion depth.

For more information regarding the preparation of a x-ray jig with the Reference Spheres, refer to *Straumann® Dental Implant System, Basic Information* (152.754/en).



**Note:** For Straumann® BLX Implants use only the x-ray reference foil specific to the BLX Implant (065.0000).

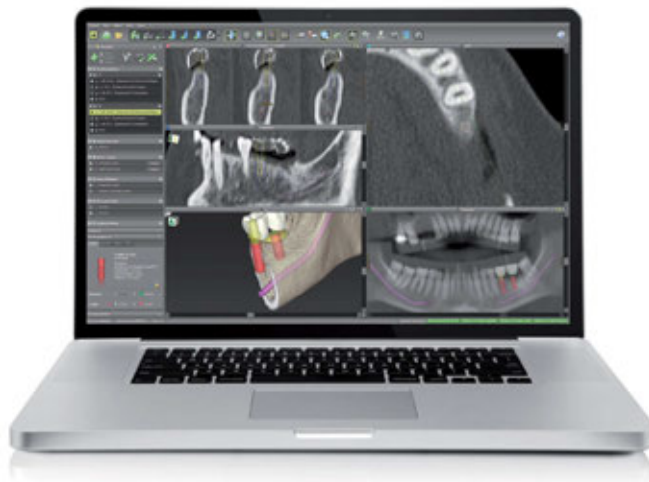
To calculate the effective bone availability, use the following formula:

$$\frac{\text{X-ray Reference sphere 5 mm} \times \text{bone availability (X-ray*)}}{\text{Reference sphere diameter on the X-ray}} = \text{effective bone availability}$$

\* Taking into consideration all implant-related anatomic structures (e.g. mandibular canal, sinus maxillaris, etc.)

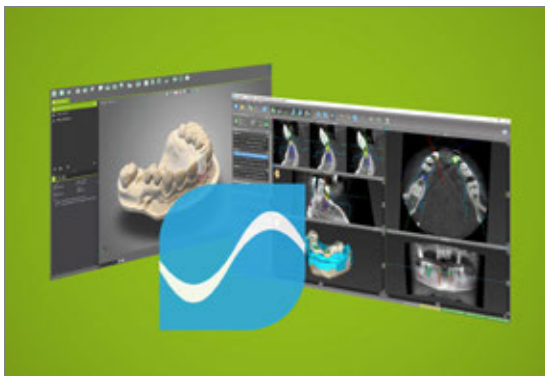
### 5.1.2 Planning software

Another possibility is digital planning with e.g. coDiagnostiX®. This 3D diagnostics and implant planning software is designed for the image-guided surgical planning of dental implants, including BLX Implants, which are included in the system's digital library. Working with the software is based on a patient's medical image data, such as a CT (Computed Tomography) or DVT (Digital Volume Tomography) scan processed by coDiagnostiX®.



Planning includes the calculation of several views (such as virtual OPG or a 3-dimensional reconstruction of the image dataset), analysis of the image data and the placement of implants, abutments and drilling sleeves.

coDiagnostiX® software is designed for use by professionals with appropriate knowledge in implantology and surgical dentistry. For further information, please refer to the coDiagnostiX® Manual.



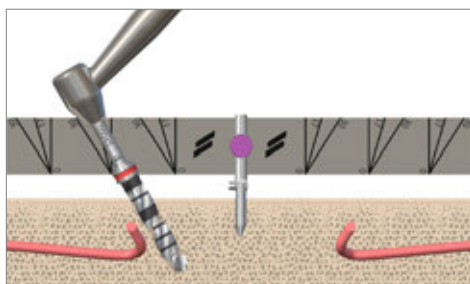
#### **CARES® Synergy workflow**

CARES® Synergy provides real-time communication between the implant planning software (coDiagnostiX®) and the lab software (i.e. Straumann® CARES® Visual) and improves implant planning by visualizing the relationship between the proposed implant position and the proposed restoration.

### 5.1.3 Straumann® Pro Arch Guide


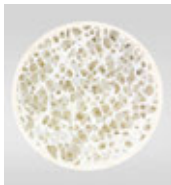
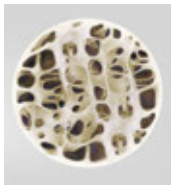
For intraoperative visual and three-dimensional orientation of the implant angulation (mesial/distal) and oral parallelization, use the Straumann® Pro Arch Guide.

The Pro Arch Guide is used in edentulous jaws for surgical implant placement. The Pro Arch Guide can be easily bent to adapt to the dental arch. It is secured by drilling into the symphysis with a Ø 2.2 mm Pilot Drill and a pin in the jaw. The drilling depth for the bone cavity of the pin is 10 mm. The drilling depth can be checked optically using the depth markings on the drills. For adjustment and disassembly use the TS Hexagonal Screwdriver (046.420).



For further information about treatment of edentulous patients and angulated placement of BLX Implants, please refer to the *Straumann® Pro Arch, Basic Information* (490.015/en).

### 5.1.4 Bone density definition

Cross sectional view of different types of bone quality*		
Type I	Type II/III	Type IV
Hard	Medium	Soft
Thick cortical bone with marrow cavity	Thin cortical bone with dense trabecular bone of good strength	Very thin cortical bone with low density trabecular bone of poor strength
		


\* Lekholm U, Zarb G. Patient selection and preparation in Tissue Integrated Prostheses. Branemark P I, Zarb G A, Albrektsson T (eds). pp199–210. Quintessence, 1985..

## 5.2 Implant bed preparation


The Straumann® BLX Surgical Cassette with specific instruments is used to prepare the implant bed. Different drill protocols should be employed depending on the bone density. This offers the flexibility to adapt the implant bed preparation to the individual bone quality and anatomical situation.

A quick guide to the surgical drill protocol is printed on the BLX surgical cassette and indicates the final drill recommended for each implant diameter and bone density.

Numbers in brackets ( ): to a depth of 4 mm (for implant lengths 6 mm and 8 mm) and 6 mm (for implant lengths 10 mm and longer) only in order to widen the coronal part of the implant bed.



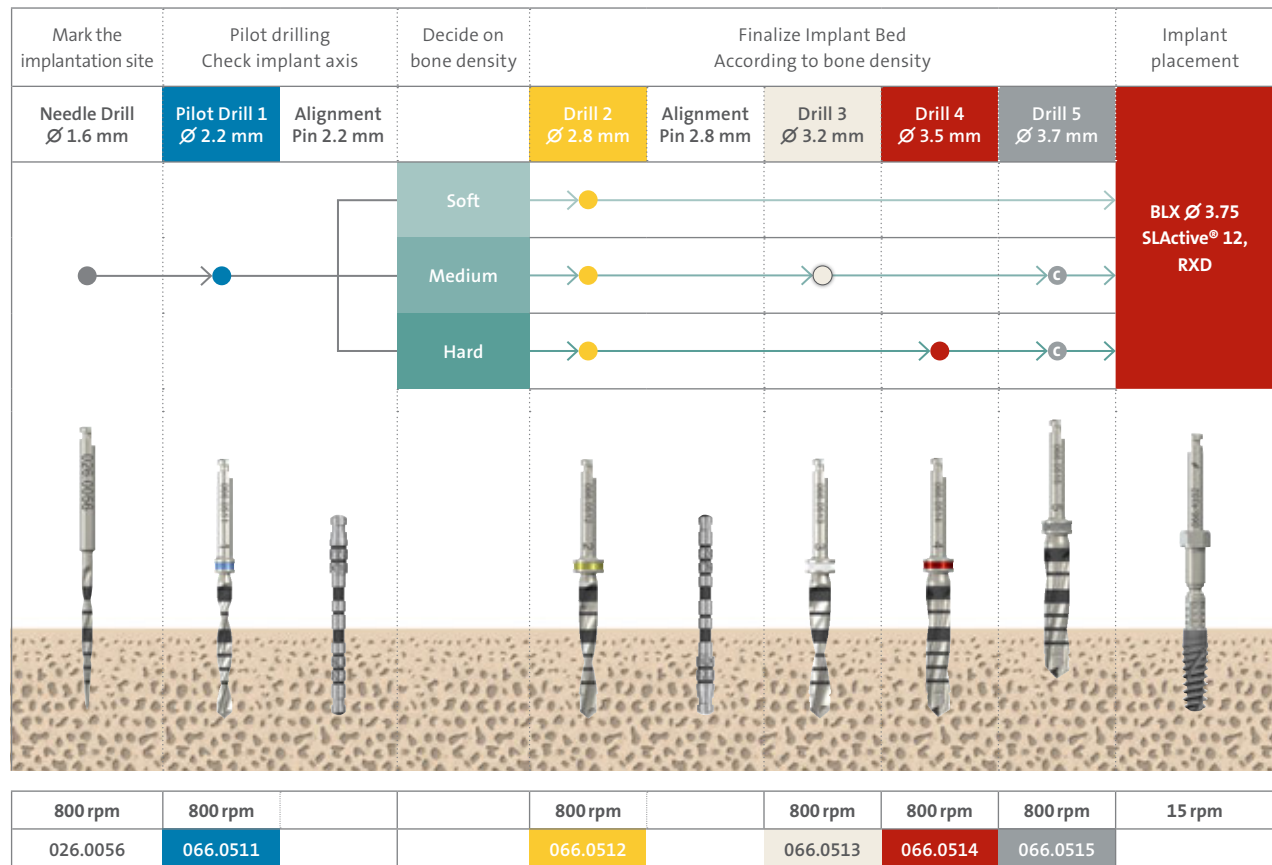
	Soft	Medium	Hard
Ø 3.75 mm	2	3 (5)	4 (5)
Ø 4.5 mm	2	5	6
Ø 5.5 mm	3	7	8
Ø 6.5 mm	4	8 (9)	9



**Note:** Every implant bed has to be initiated with the pilot drill (Ø 2.2 mm). On the quick guide only the final drill is displayed. The clinician can decide whether or not a sequence of drills with increasing diameters is used. Use the drills in a clockwise drill rotation direction, use intermittent drilling technique and provide ample cooling with pre-cooled (5°C, 41°F) sterile saline solution. Do not exceed the recommend drill speeds.

### 5.2.1 Workflow for BLX Ø 3.75 mm

Implant bed preparation, illustrated with a BLX Implant Ø 3.75 mm /12 mm RB

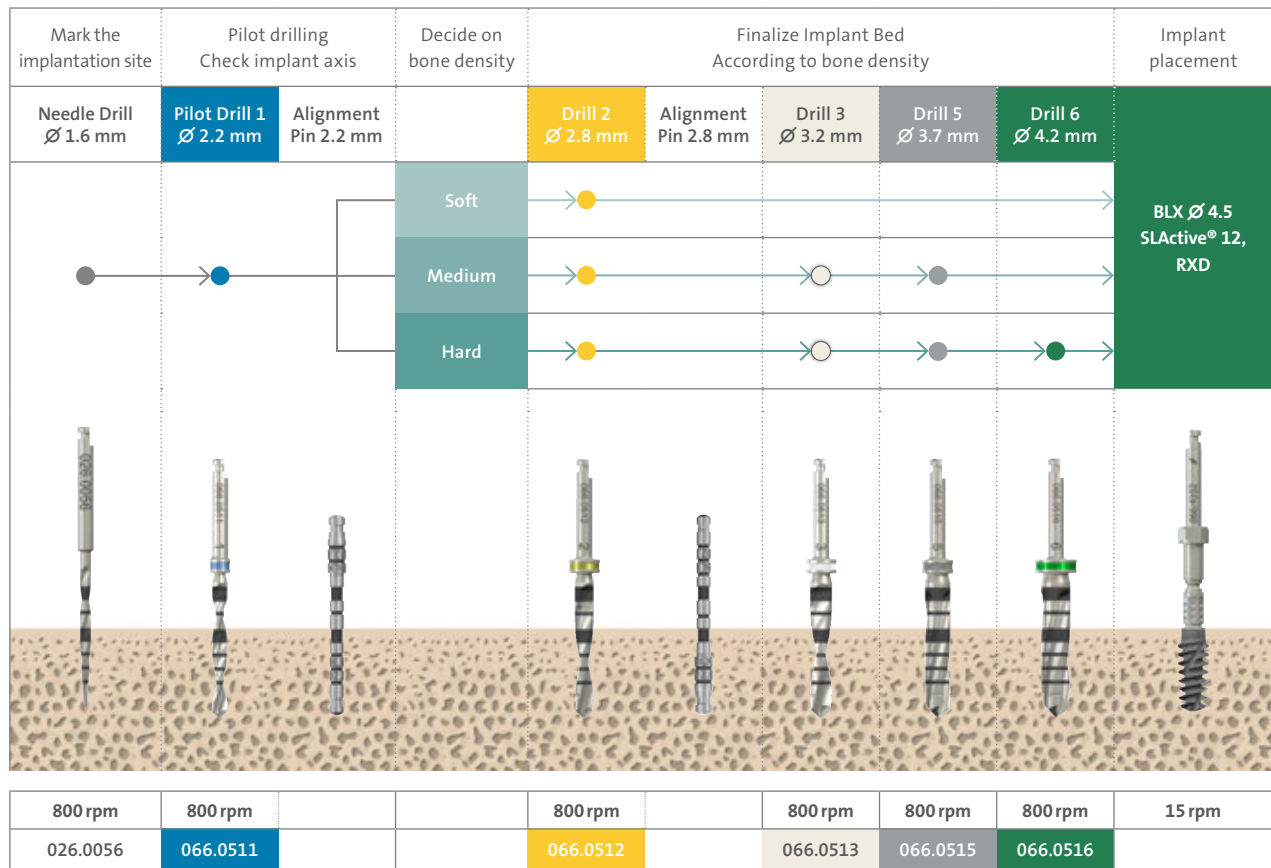


- Recommended – full depth
- C Recommended – cortical only
  - do a depth of 4 mm for implants with a length of 6 mm and 8 mm
  - do a depth of 6 mm for implants with a length of 10 mm to 18 mm

**Warning:** Due to the function and design of the drills, the drill tip is up to 1.0 mm longer than the insertion depth of the implant. For example, if you drill until the 10 mm marking, the actual implant bed has a depth of 11 mm.

### 5.2.2 Workflow for BLX Ø 4.5 mm

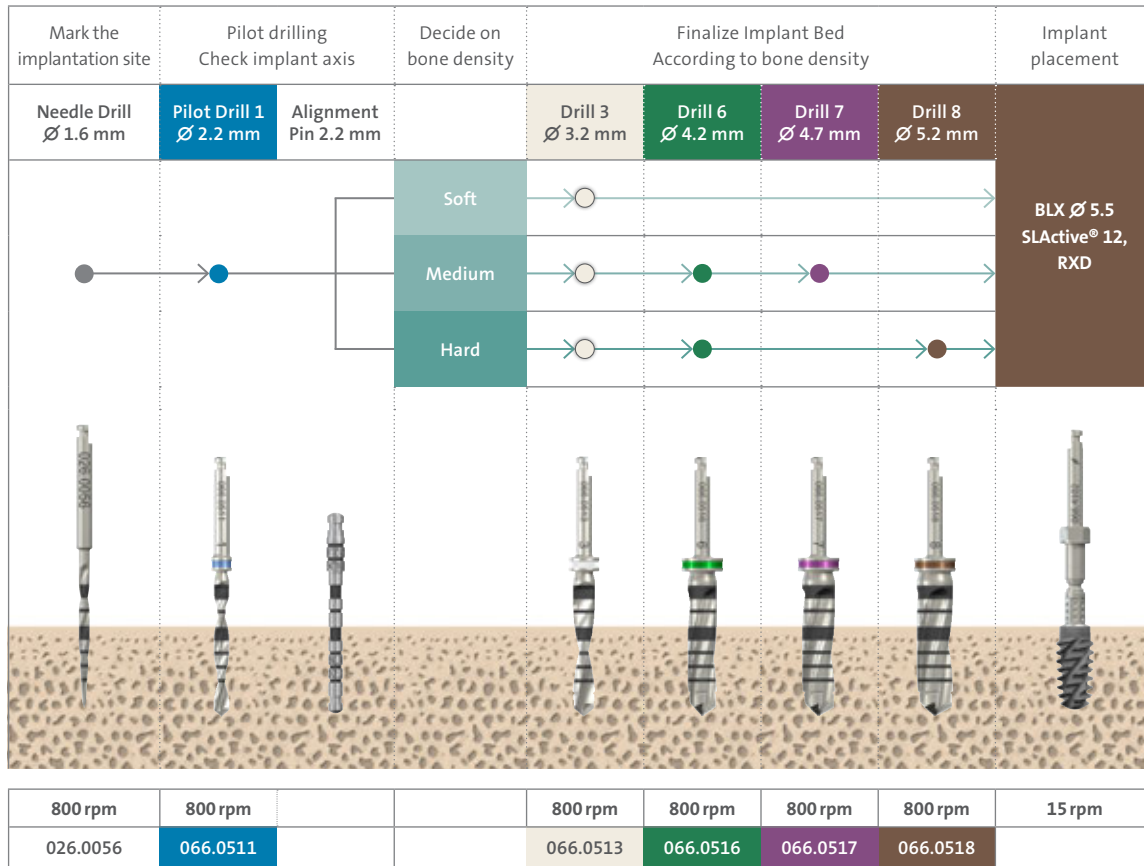
Implant bed preparation, illustrated with a BLX Implant Ø 4.5 mm / 12 mm RB



● Recommended – full depth

### 5.2.3 Workflow for BLX Ø 5.5 mm














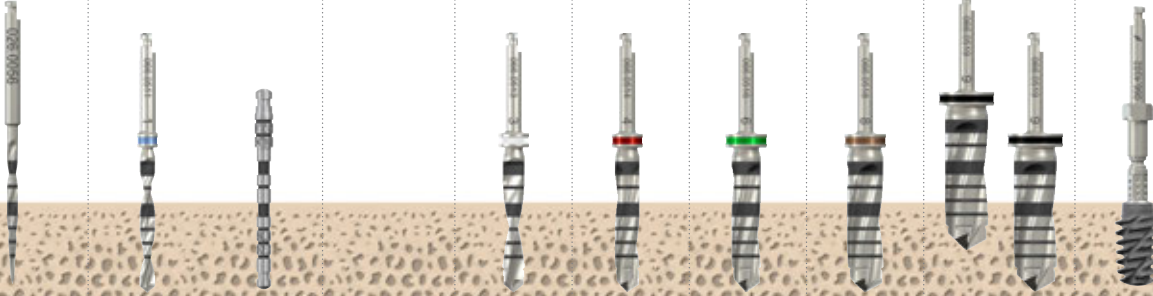
Implant bed preparation, illustrated with a BLX Implant Ø 5.5 mm / 12 mm WB



● Recommended – full depth

### 5.2.4 Workflow for BLX Ø 6.5 mm

Implant bed preparation, illustrated with a BLX Implant Ø 6.5 mm /12 mm WB

Mark the implantation site	Pilot drilling Check implant axis		Decide on bone density	Finalize Implant Bed According to bone density					Implant placement
Needle Drill Ø 1.6 mm	Pilot Drill 1 Ø 2.2 mm	Alignment Pin 2.2 mm		Drill 3 Ø 3.2 mm	Drill 4 Ø 3.5 mm	Drill 6 Ø 4.2 mm	Drill 8 Ø 5.2 mm	Drill 9 Ø 6.2 mm	BLX Ø 6.5 SLActive® 12, RXD
			Soft						
			Medium						
			Hard						
									
800 rpm	800 rpm			800 rpm	800 rpm	800 rpm	800 rpm	800 rpm	15 rpm
026.0056	066.0511			066.0513	066.0514	066.0516	066.0518	066.0519	

● Recommended – full depth

●<sup>c</sup> Recommended – cortical only

- do a depth of 4 mm for implants with a length of 6 mm and 8 mm
- do a depth of 6 mm for implants with a length of 10 mm to 18 mm



### 5.3 Implant pick up

The BLX Implants are provided with a new implant carrying system that supports direct pick-up with an appropriate Implant Driver.



**Step 1 – Open box and remove seal of blister to get access to the implant vial.**

**Note:** Patient label can be found on the blister seal. The blister ensures the sterility of the implant. Do not open the blister until immediately prior to implant placement.

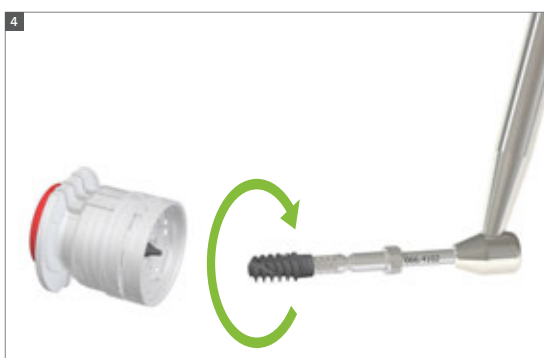


**Step 2 – Open the vial with a counter-clockwise turn and remove the lid together with the implant.**



**Step 3 – Hold the vial lid and connect the Implant Driver to the implant using the handpiece. You hear a click when the Driver is attached correctly.**

**Caution:** Make sure that the implant driver is properly seated and pull slightly on the driver to verify that it is correctly attached. This check must be performed before every use even when the driver has been successfully used before. Replace the driver with a new one if insufficient attachment occurs.



**Step 4 – A slight clockwise turn is needed to remove the implant from its holder.**

**Note:** after removing the implant from the solution, the chemical activity of SLActive® is ensured for 15 minutes.

## 5.4 Implant placement

A Straumann® BLX Implant can be placed using the Handpiece, or manually using the Ratchet. Do not exceed the recommended maximum speed of 15 rpm when using the Handpiece.



Step 1 – Place the implant

Place the implant with the driver in the Implant bed by turning it clockwise.



Step 2 – Final position

Use the Ratchet to move the implant to its final position by turning it clockwise. If strong resistance is occurring before the implant reached its final position, rotate the implant counterclockwise a few turns and continue to insert. Repeat this step a few times if needed.

If resistance is still too strong remove the implant, place the implant together with the implant driver back into the vial and widen the implant bed according to the drill protocol.

**Note:** For immediate function, a final torque of at least 35Ncm should be achieved. Excessive insertion torque must be avoided because this can lead to resorption of the bone.

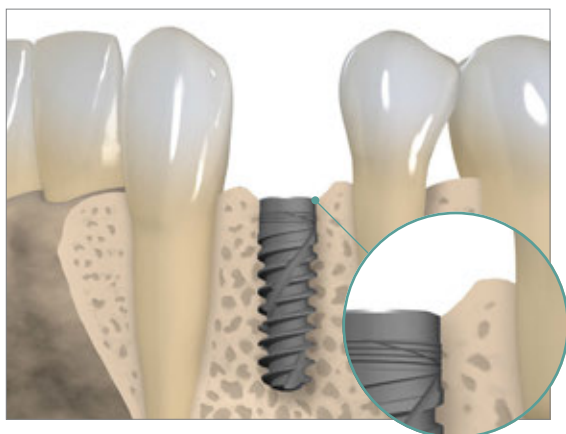
**For ISQ measurements:** The Osstell Smartpeg type 38 (100455) is compatible with the BLX Implant System.

### Final implant position RB/WB implants

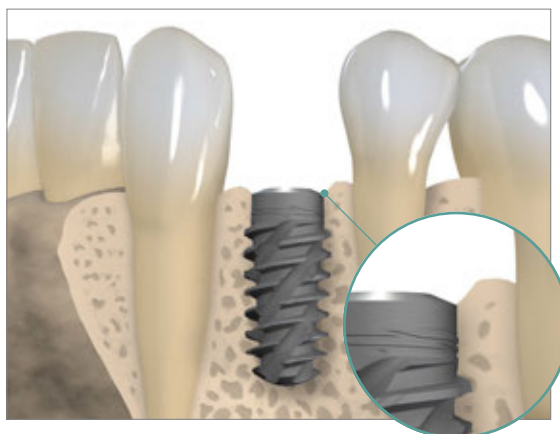
#### Coronoapical implant position

Straumann® implants allow for flexible coronoapical implant positioning, depending on individual anatomy, implant site, the type of restoration planned, and preference. The BLX Implant is best placed with the outer rim of the small 22.5° sloping edge at bone level.

**Note:** In anatomical situations where an initial vertical bone remodeling is expected a subcrestal placement of 0.5 to 1.0 mm is recommended.



Regular Base (RB) Implants with a Ø 3.5 mm neck



Wide Base (WB) Implants with a Ø 4.5 mm neck

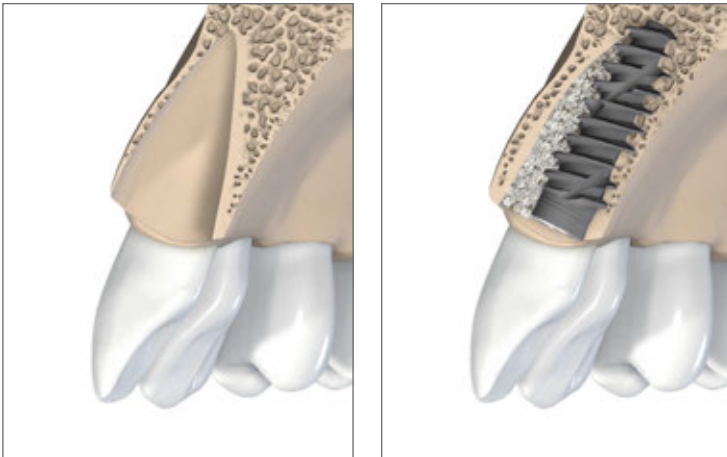


For temporary storage of the implant during surgery the vial can be positioned in the cassette.



## 5.5 Gap management

As no implant will match the individual anatomical situation after tooth extraction, immediate treatment procedures may require additional bone grafting (“gap management”) and soft tissue/wound healing management.



Different grafting materials, barrier membranes and healing agents are being used to support safe, enduring stability of the implant inside the bony compartment as well as sufficient hard and soft tissue to ensure esthetics.

Bone grafting materials	Product	Country availability	Reason why
<b>Allograft</b>	botiss maxgraft®	Selected countries in Europe	Fast graft to bone turnover supporting early and long-term implant stability Full remodeling potential Bone vitality
<b>Xenograft</b>	botiss cerabone®	Global (not US, CD)	Long-term graft presence supporting volume preservation
<b>Synthetic alternative</b>	Straumann® BoneCeramic™	Global	Prolonged graft to bone turnover Volume preservation

Barrier membranes prohibit the penetration of cells, primarily epithelial, through its structure and thus allow the slow growing bone tissue to re-occupy the grafted space.

Barrier Membranes	Product	Country availability	Reason why
Porcine collagen membrane	botiss jason®	Global	Very thin but strong structure Easy handling Prolonged barrier function Fully resorbable
	Straumann® Membrane Flex	North America, Iberia, Distributor & Emerging Markets (Europe, Middle East and Africa)	Appropriate barrier function for non-complex cases Easy handling Fully resorbable
	botiss collprotect®	Europe	
Bovine collagen membrane	Straumann® Membrane Plus	North America	Long barrier function Fully resorbable
Synthetic dPTFE membrane	botiss permamem®	Europe	Ultra thin, strong structure Open healing possible Non-resorbable Has to be removed manually after <4 weeks

The immediacy approach for placing dental implants is demanding on the human body. With its clinically proven beneficial impact on wound healing and treasured influence on scar tissue, Straumann® Emdogain can make a real difference. A thin layer of Emdogain on top of the membrane and after socket closure is our recommendation.











5.6 Primary implant closure












BLX Implant Closure Caps, sterile			
RB Closure Cap		WB Closure Cap	
			
Compatibility	BLX Implant Ø 3.75 BLX Implant Ø 4.5	BLX Implant Ø 5.5 BLX Implant Ø 6.5	
Recommended tightening torque	hand-tight	hand-tight	
Article Number	064.4100S	064.8102S	
Material	Titanium	Titanium	



## 6. Prosthetic workflow overview

### 6.1 Abutment overview

	Anatomic Abutment	Straumann® Variobase® for Crown	Variobase® for Bridge/Bar Cylindrical	Variobase® for Crown AS	Straumann® Screw-retained Abutment	Straumann® CARES® Abutment TAN	Straumann® CARES® Bridge/Bar	Straumann® Novaloc® ADLC
								
<b>Single crown</b>								
Screw-retained		•		•	•			
Cement-retained	•	•		•		•		
<b>Bridge</b>								
Screw-retained			•		•		•	
Cement-retained	•		•				•	
<b>Removable overdentures</b>								
Telescope	•							
Retentive anchor								•
Bar					•		•	
<b>Impression</b>								
Implant level	•	•	•	•	•			
Abutment level					•			
Material*	Titanium alloy	Titanium alloy	Titanium alloy	Titanium alloy	Titanium alloy	Titanium alloy	Titanium alloy	Titanium alloy

Single and multi-unit replacement			Edentulous treatment			
Screw-retained		Cement-retained	Fixed		Removable	
 CARES® Screw-retained Bridge	 Screw-retained Abutment*	 Anatomic Abutment    CARES® Abutment TAN	 CARES® Advanced Fixed Bar	 Screw-retained Abutment*	 CARES® Milled Bar	 Screw-retained Abutment*
			 CARES® Basic Fixed Bar CARES® Screw-retained Bridge			
 Variobase® Abutment		 Variobase® Abutment				









## 6.2 Color code

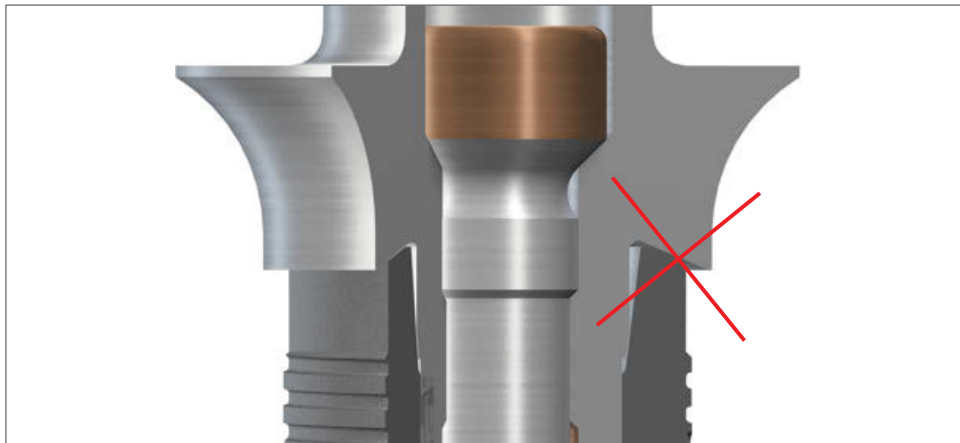
The Straumann® BLX Implant System has a simple and consistent color coding and laser markings for quick and precise identification of secondary parts, and auxiliaries.

This concept allows for correct identification of matching components, and simplifies the communication between the individuals involved in the treatment process.

Components color coded magenta, can be used on all BLX Implants  $\varnothing$  3.75 until  $\varnothing$  6.5.

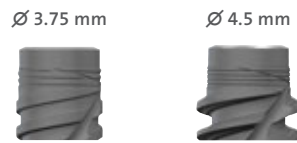
Components color coded brown can only be used on BLX Implants  $\varnothing$  5.5, and  $\varnothing$  6.5.





Prosthetic Color		Implant Diameters	Implant Base
	 RB/WB	$\varnothing$ 3.75 mm $\varnothing$ 4.5 mm $\varnothing$ 5.5 mm $\varnothing$ 6.5 mm	 RB      WB
	 WB	$\varnothing$ 5.5 mm $\varnothing$ 6.5 mm	 WB






































No WB Abutments on RB Implants!

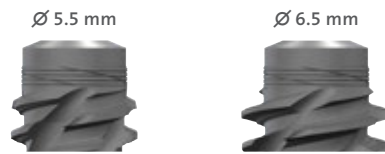
### 6.3 Prosthetic components overview



Impression taking Analog						
	065.0031	065.0033	065.4310	065.0035	065.0021	065.0023










































	Abutment diameter					
	Ø 3.8 mm 	Ø 4.5 mm 				Ø 6.0 mm 
Gingiva Height  GH 0.75 mm						
Gingiva Height  GH 1.5 mm	 062.4934	 062.4501	 062.4507	 062.4944	 062.47225	 062.4972 / 062.4961 *
Gingiva Height  GH 2.5 mm	 062.4935	 062.4502	 062.4508	 062.4945	 062.47235 / 062.47335 / 062.47435	 062.4153 / 062.4104
Gingiva Height  GH 3.5 mm	 062.4936	 062.4503	 062.4509	 062.4945	 062.47245 / 062.47345 / 062.47445	 062.4154 / 062.4103
Gingiva Height  GH 4.5 mm		 062.4504	 062.4510		 062.47255 / 062.47355 / 062.47455	
Gingiva Height  GH 5.5 mm		 062.4505	 062.4511			
Gingiva Height  GH 6.5 mm		 062.4506	 062.4512			

\*Variobase® for Bridge/Bar Cylindrical uses separate healing and temporary parts to create a consistent emergence profile.



#### Impression taking Analog



		Abutment diameter									
		Ø 3.8 mm	Ø 4.5 mm					Ø 6.0 mm	Ø 5.5 mm		
Gingiva Height  GH 0.75 mm									 062.4953		
Gingiva Height  GH 1.5 mm		 062.4934	 062.4501	 062.4507	 062.4944	 062.47225	 062.4972	 062.4961	 062.4954		
Gingiva Height  GH 2.5 mm		 062.4935	 062.4502	 062.4508	 062.4945	 062.47235	 062.47335	 062.47435	 062.4153		
Gingiva Height  GH 3.5 mm		 062.4936	 062.4503	 062.4509	 062.4945	 062.47245	 062.47345	 062.47445	 062.4154		
Gingiva Height  GH 4.5 mm			 062.4504	 062.4510		 062.47255	 062.47355	 062.47455			
Gingiva Height  GH 5.5 mm			 062.4505	 062.4511							
Gingiva Height  GH 6.5 mm			 062.4506	 062.4512							

\*Variobase® for Bridge/Bar Cylindrical uses separate healing and temporary parts to create a consistent emergence profile.

## 7. Important considerations

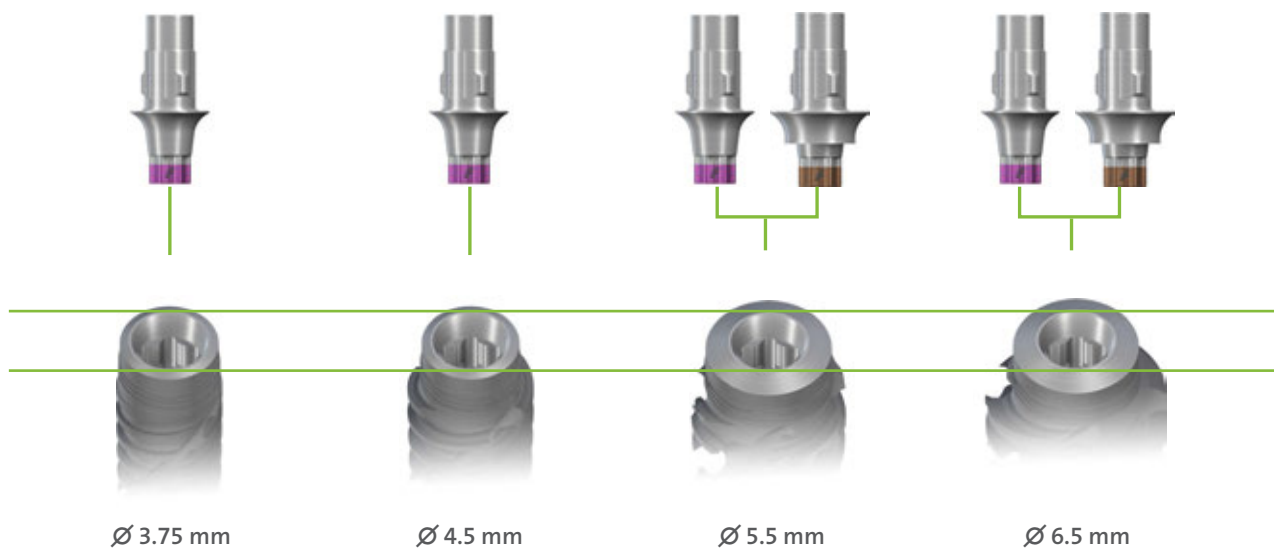
### 7.1 Implant base concept

One prosthetic range

- RB/WB abutments fit on all BLX Implants

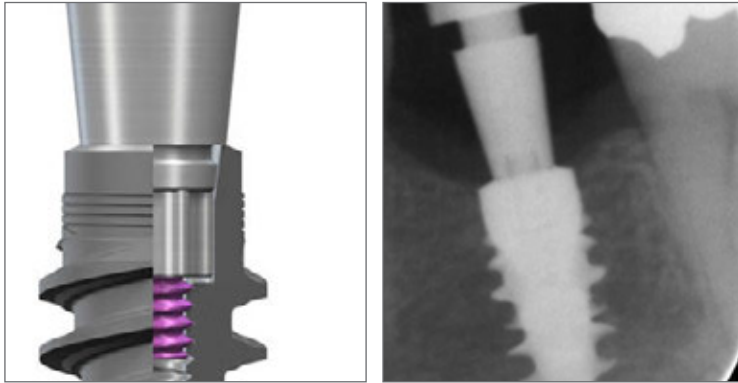
**Optional:**

- WB abutments fit only on implants with an implant diameter larger than 5.0. WB abutments create a wide emergence profile starting from the shoulder



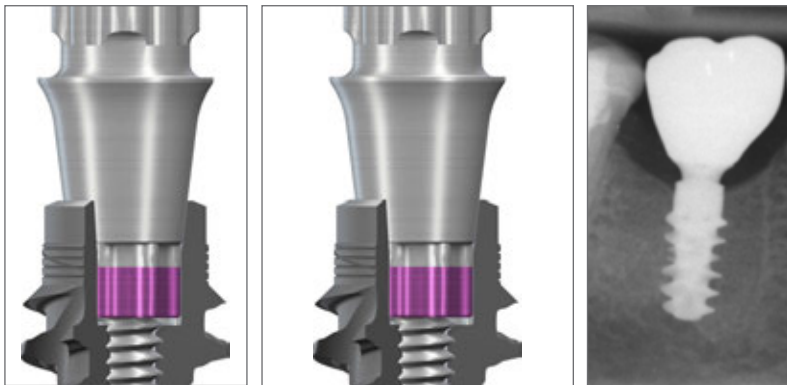
## 7.2 How to verify correct impression post seating

BLX impression post screws will only engage with the implant if correctly seated. Final seated impression posts engage at the flat shoulder of the implant.

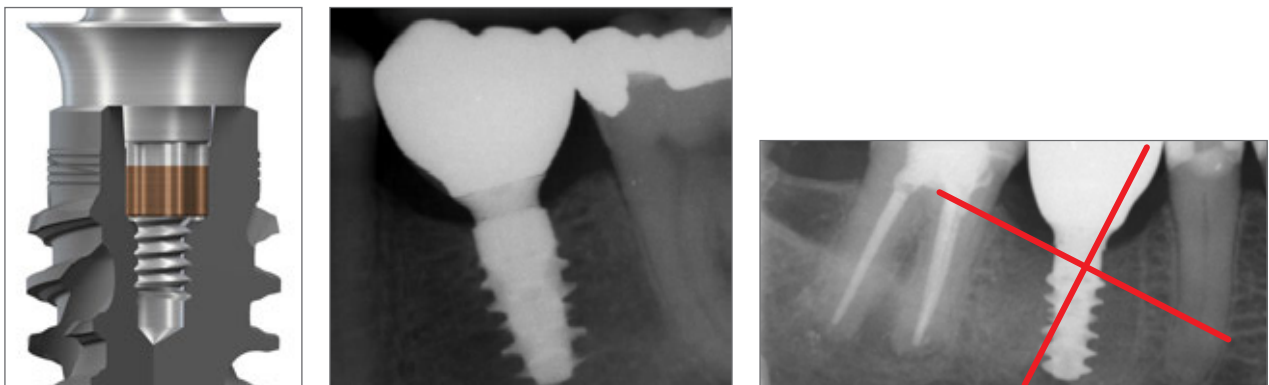


## 7.3 How to verify correct final abutment seating

BLX abutment screws will only engage with the implant if correctly seated.



RB/WB abutments fit both RB and WB implants



WB abutments only fit WB

## 7.4 Removal of finally tightened TorcFit™ abutments

Due to tight sealing of the 7° conus of the TorcFit™ connection, abutments can lock strongly in the implant after final insertion.

The RB/WB Abutment Removal Screw pushes the abutment out of the implant without applying high torque or bending moments to the bone.

### 7.4.1 Removal Tool for BLX Basal Screw (065.0008 and 065.0009)

If the basal screw can not be lifted with the SCS screwdriver after untightening [1] the Removal Tool may be used.

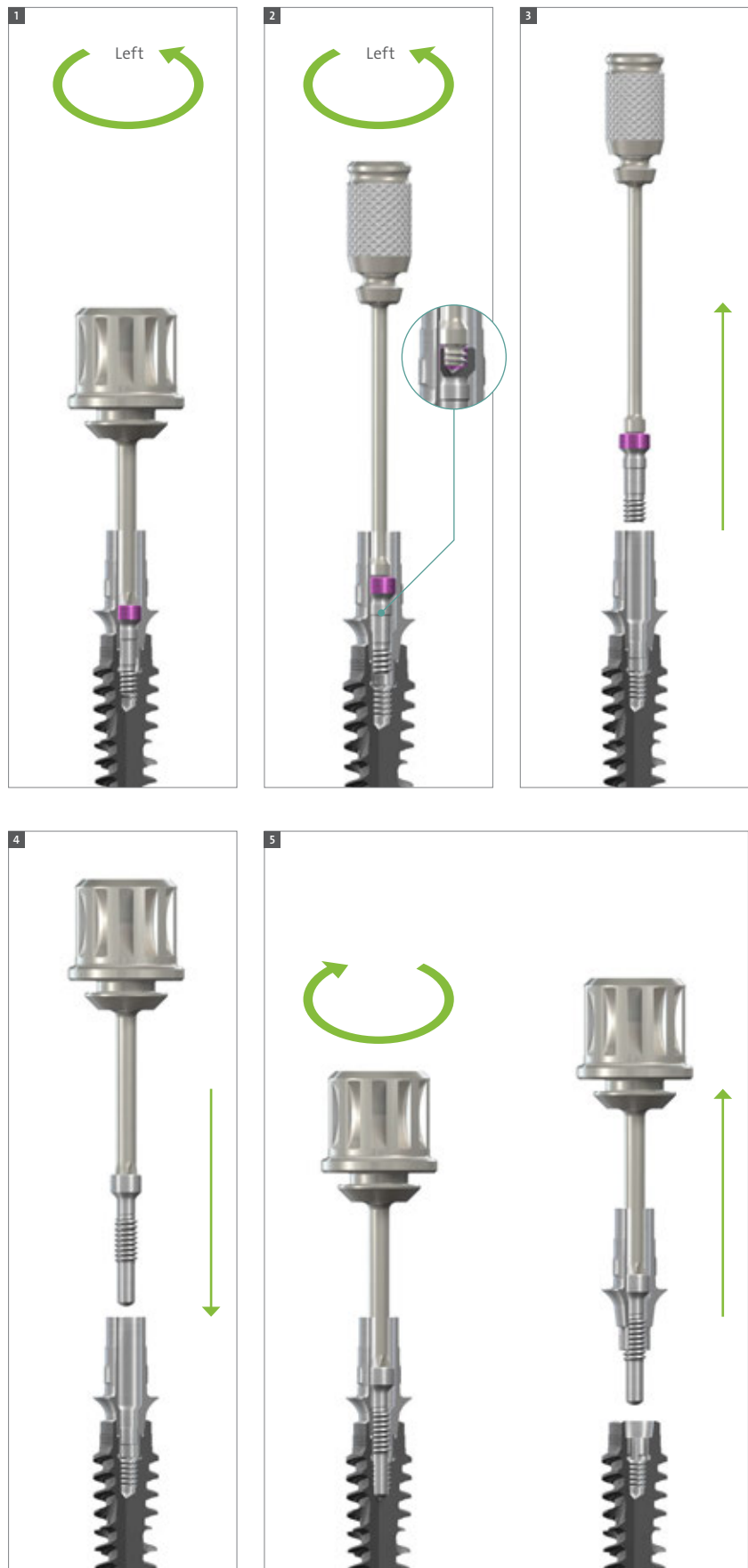
This tool features a left-hand thread that engages in the basal screw head [2] in order to lift the Basal Screw [3].

### 7.4.2 RB/WB Abutment Removal Screw (065.007)

In case the Abutment can not be removed by hand due to the friction fit the Abutment removal screw can be used to push out the Abutment.

Connect the SCS Screwdriver to the removal screw and screw it into the abutment [4] until the abutment is pushed out and can be removed [5].

**Please note:** For Variobase® for Crown AS, it might be necessary to cut the crown to access the screw channel with the RB/WB Abutment Removal Screw.



## 8. Soft tissue management



**Figure 1:** Consistent emergence profile by matching components (RB).

The Straumann® BLX Implant line puts a strong emphasis on esthetic considerations. It offers 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, for easy and fast processing.



























Esthetic results are determined by successful soft tissue management. To optimize the soft tissue management process, all healing abutments, temporary abutments and final abutments feature Consistent Emergence Profiles™. Thus, the emergence profiles are uniform throughout the treatment process.







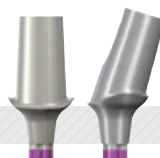



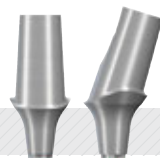














**Figure 2:** Consistent emergence profile by matching components (RB).

## 8.1 Overview of Consistent Emergence Profiles™

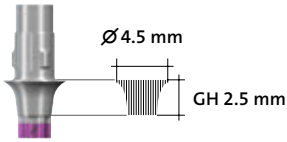

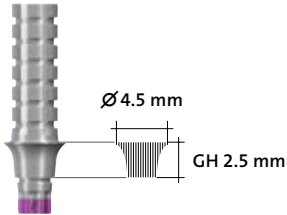
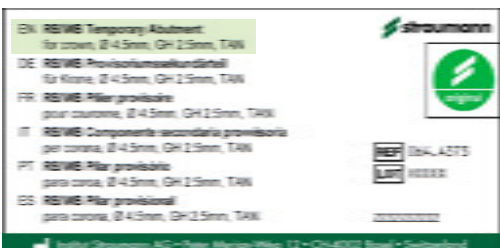
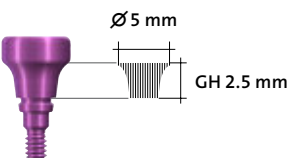

### 8.1.1 Which healing abutments suit which final abutment?

Crowns		Healing Abutments for Crown	Temporary Abutments for Crown	Final Abutments
Ø 3.8 mm 	Gingiva Height  GH 1.5 mm	 064.4202S / 064.4203S	 064.4362	 062.4934
	Gingiva Height  GH 2.5 mm	 064.4204S / 064.4205S	 064.4363	 062.4935
	Gingiva Height  GH 3.5 mm	 064.4206S / 064.4207S	 064.4364	 062.4936
Ø 4.5 mm 	Gingiva Height  GH 1.5 mm	 064.4212S / 064.4213S	 064.4372	 062.4944 / 062.4972 / 062.4501
	Gingiva Height  GH 2.5 mm	 064.4214S / 064.4215S	 064.4373	 062.4945 062.4502
	Gingiva Height  GH 3.5 mm	 064.4216S / 064.4217S	 064.4374	 062.4946 062.4503



Crowns		Healing Abutments for Crown	Temporary Abutments for Crown	Final Abutments
$\varnothing 6.0 \text{ mm}$ 	Gingiva Height  GH 2.5 mm	 064.4224S / 064.4225S	 064.4382	 062.4103 / 062.4153
	Gingiva Height  GH 3.5 mm	 064.4226S / 064.4227S	 064.4383	 062.4104 / 062.4154
$\varnothing 5.5 \text{ mm}$ 	Gingiva Height  GH 0.75 mm	 064.8201S / 064.8202S / 064.8203S / 064.8204S	 064.4391	 062.4953
	Gingiva Height  GH 1.5 mm	 064.8212S / 064.8213S / 064.8214S / 064.8215S	 064.4392	 062.4954      062.4971
Bridges		Healing Abutments for Bridges	Temporary Abutments for Bridges	Final Abutments Bridges
$\varnothing 4.5 \text{ mm}$ 	Gingiva Height  GH 1.5 mm	 064.4232S / 064.4233S	 064.4352	 062.4961

## 8.1.2 How to match fitting components

		<p>RB/WB Variobase® for Crown, incl. screw, Ø 4.5 mm, GH 2.5 mm, AH 5.5 mm, TAN</p>
		<p>RB/WB Temporary Abutment, for crown, Ø 4.5 mm, GH 2.5 mm, TAN</p>
		<p>RB/WB Healing Abutment*, Crown, Ø 5 mm, GH 2.5 mm, AH 2 mm, Ti</p>

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

# 9. Temporary restoration

## 9.1 Prefabricated healing abutment made of Titan grade 4

### 9.1.1 Intended use

- Soft tissue management
- Closure of implant connection for submerged and non-submerged healing

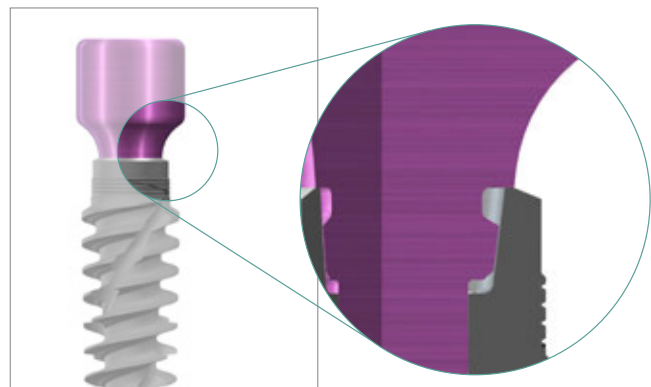
### 9.1.2 Characteristics

#### Simple

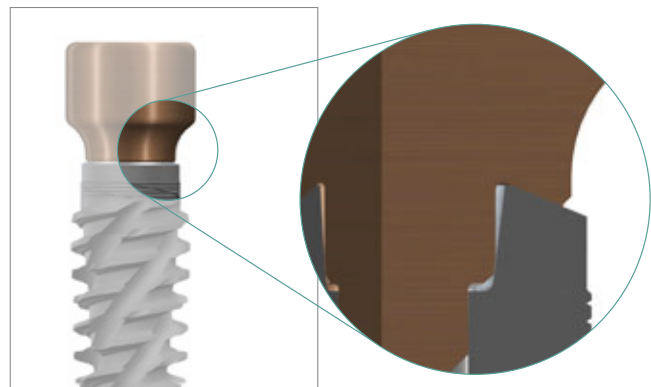
- One-piece design
- Color-coded emergence profile base and laser-marked diameters and gingiva heights
- Two different abutment heights for different soft tissue thickness
- Cylindrical section gives space to soft tissue
- Shape anticipates the emergence profile of the crown
- Anatomically shaped emergence profiles, healing abutments, temporary posts and final abutments (for optimal component selection see chapter "Overview of Consistent Emergence Profiles™")

#### Reliable

- Tight sealing on the top surface of implant
- Keep inner connection untouched for final abutment
- Flat sealing for healing and temporary components to protect inner cone

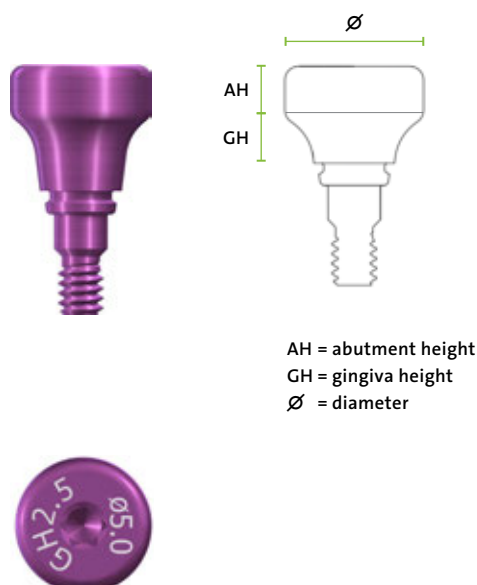


RB/WB healing abutment sealing mechanism



WB healing abutment sealing mechanism

### 9.1.3 Overview of healing abutment dimensions



			Diameter (Ø)			
			For final abutment Ø 3.8 mm (RB/WB)	For final abutment Ø 4.5 mm (RB/WB)	For final abutment Ø 6.0 mm (RB/WB)	For final abutment Ø 5.5 mm (WB)
GH	GH 0,75 mm	AH 2 mm				Ø 6.0 mm and Ø 7.5 mm
		AH 4 mm				Ø 6.0 mm and Ø 7.6 mm
	GH 1,5 mm	AH 2 mm	Ø 4.0 mm	Ø 5.0 mm*	Ø 6.5 mm	Ø 6.0 mm and Ø 7.7 mm
		AH 4 mm	Ø 4.0 mm	Ø 5.0 mm*	Ø 6.5 mm	Ø 6.0 mm and Ø 7.8 mm
	GH 2,5 mm	AH 2 mm	Ø 4.0 mm	Ø 5.0 mm	Ø 6.5 mm	
		AH 4 mm	Ø 4.0 mm	Ø 5.0 mm	Ø 6.5 mm	
	GH 3,5 mm	AH 2 mm	Ø 4.0 mm	Ø 5.0 mm	Ø 6.5 mm	
		AH 4 mm	Ø 4.0 mm	Ø 5.0 mm	Ø 6.5 mm	

\*separate bridge healing abutments available

## 9.2 Temporary abutment – titanium alloy (TAN)

### 9.2.1 Intended use

- Cement-retained temporary crowns

### 9.2.2 Characteristics

#### More solutions

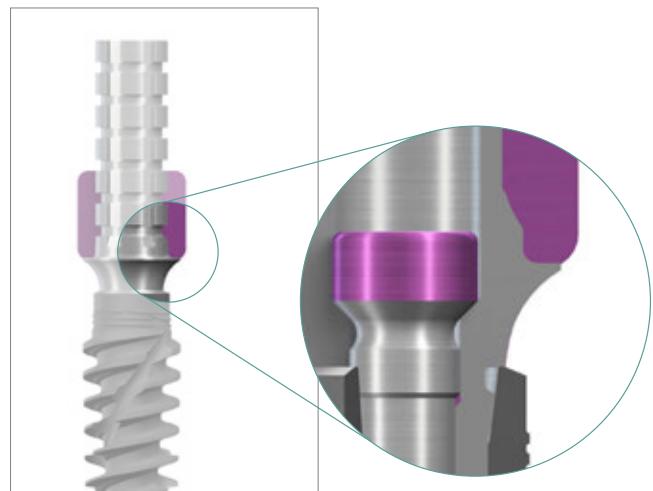
- Narrow diameter for narrow interdental spaces
- Crowns
- Anterior and posterior region
- Color coded emergence profile base

#### Reliable

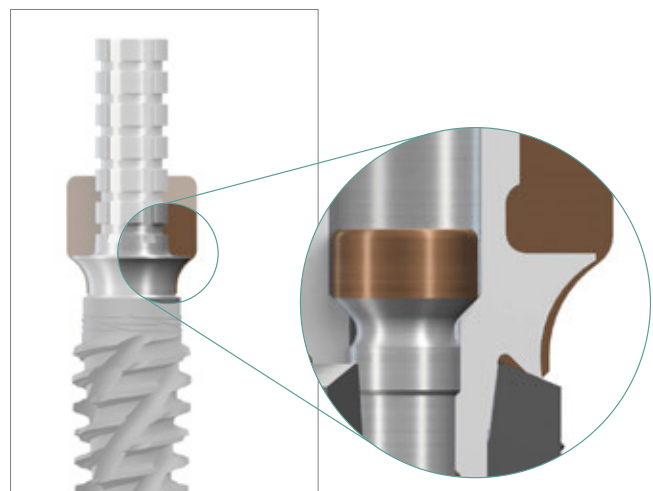
- High stability due to titanium alloy (TAN) material
- BLX connection for engaging abutments
- Tight sealing on top surface of implant
- Keep inner connection untouched
- Flat sealing to protect inner cone for final abutments
- Anatomically shaped emergence profiles, healing abutments, temporary posts and final abutments (for optimal component selection see chapter “Overview of Consistent Emergence Profiles™”)

**Note:** Do not use for longer than 180 days. Place temporary restorations out of occlusion.

The temporary abutment can be shortened vertically no more than 6 mm with standard tools and procedures.

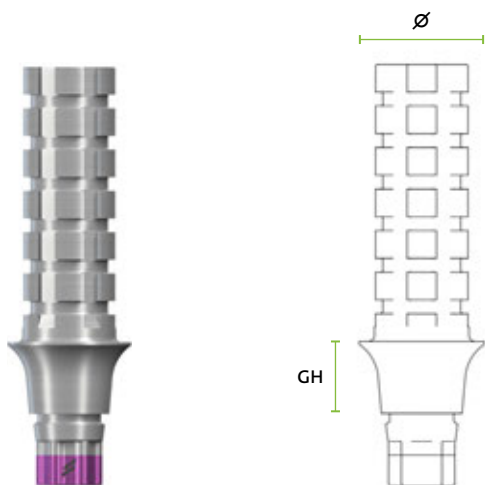


RB/WB temporary abutment



WB temporary abutment

### 9.2.3 Overview of temporary abutment dimensions



GH = gingiva height  
Ø = diameter

		Diameter (Ø)			
		Ø 3.8 mm	Ø 4.5 mm	Ø 6.0 mm	Ø 5.5 mm (WB)
GH	0.75 mm				x
	1.5 mm	x	x*		x
	2.5 mm	x	x	x	
	3.5 mm	x	x	x	
	4.5 mm				

\*separate temporary abutments for bridges available

For detailed instructions how to use temporary abutments, please refer to *Straumann® Bone Level Prosthetic Procedures, Basic Information* (152.810/en).

# 10. Impression taking

## 10.1 Conventional implant level impression taking

### 10.1.1 Intended use

- Open-tray impression procedure
- Closed-tray impression procedure

### 10.1.2 Characteristics

#### Simple

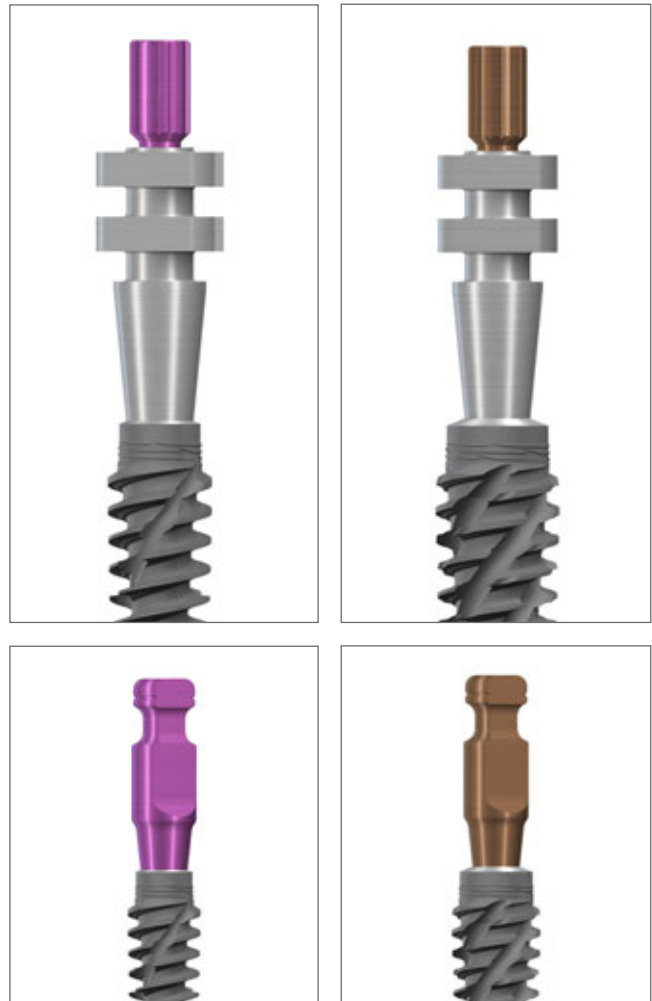
- Color-coded components for easy information transfer from mouth to master model
- Slender emergence profile accommodates space limitations
- Guide screw can be tightened either by hand or with the SCS screwdriver (15Ncm)

#### Reliable

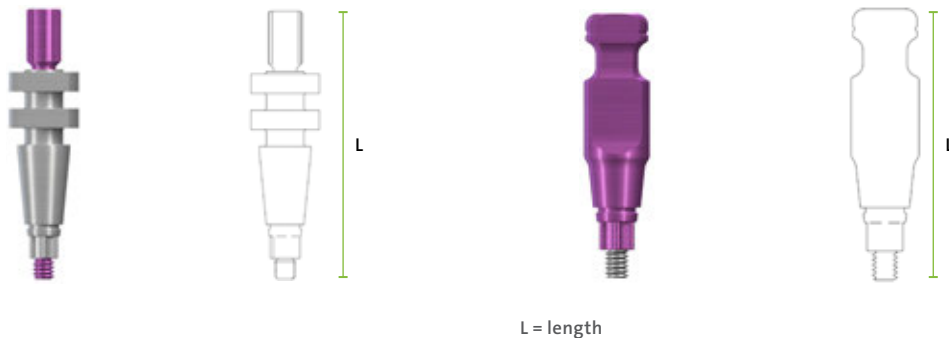
- Seating on top portion of implant ensures high accuracy
- Clear-cut tactile response from the prosthetic connection verifies proper seating of components
- Easy removal

**Note:** Open-tray impression procedure requires a custom-made tray with perforations.

Impression posts are intended for single use to ensure optimal fit and precise impression taking for each patient.



### 10.1.3 Overview of impression post dimensions



For detailed instructions on impression taking, please refer to *Straumann® Bone Level Prosthetic Procedures, Basic Information* (152.810/en).

## 10.2 Digital impressions: Straumann® CARES® Mono Scanbody

### 10.2.1 Product description

The Straumann® scanbodies represent the position and orientation of the respective dental implant, analog or abutment in CAD/CAM scanning procedures. This helps the CAD/CAM software to correctly align the subsequent CAD/CAM restorations.

BLX		
	CARES® RB / WB Mono Scanbody, for implant-level scanning	CARES® Mono Scanbody for Screw-retained Abutment, for abutment level, Ø4.6 mm, PEEK/TAN
		
Compatibility		
Number of components	2: scanbody, self-retaining screw	
Component/material	<b>Scanbody:</b> polymer (PEEK) <b>Screw:</b> titanium alloy (TAN)	

For detailed instructions how to use the CARES® Mono Scanbody, please refer to *Step-by-step instructions on the intraoral scanbodies, Basic Information* (702063/en).

For detailed instructions how to take conventional impression, please refer to *Straumann® Bone Level Prosthetic Procedures, Basic Information* (152.810/en).

# 11. Final restoration

## 11.1 Straumann® Screw-retained Abutments

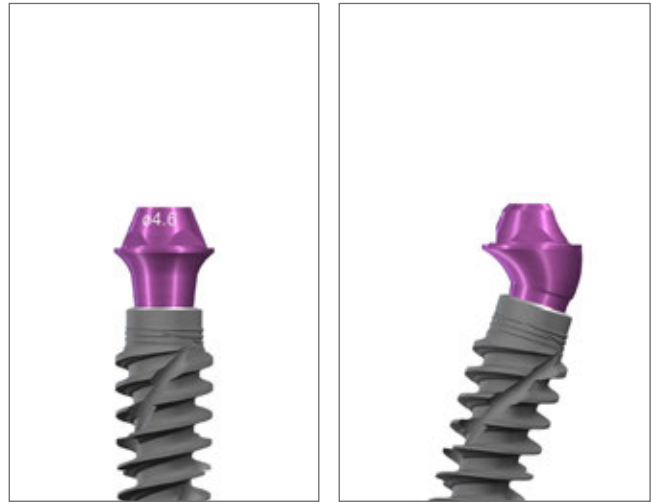
### 11.2.1 Intended use

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

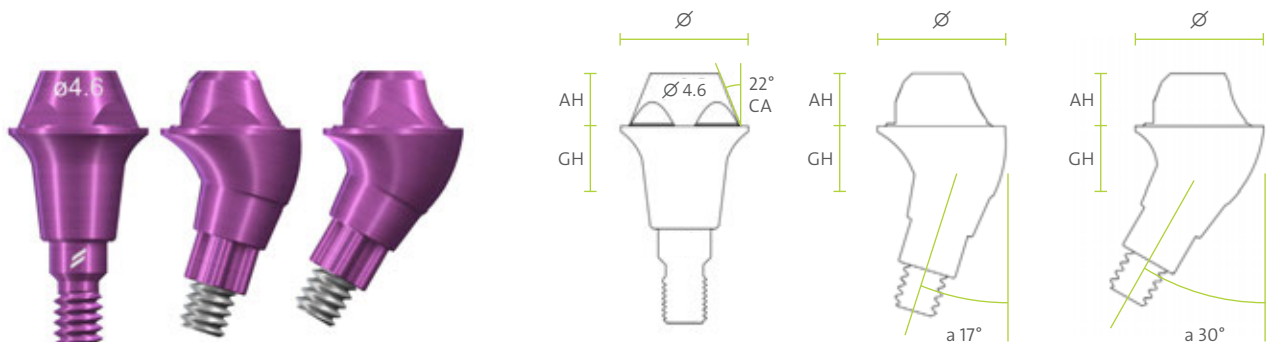
### 11.1.2 Characteristics

#### Sleek design and clear portfolio

- Same low abutment connector design allows streamlined tertiary components over all implant types
- Abutment angulations of 0°, 17° and 30°
- Abutment design allows both multi-unit and single-unit restorations
- Sterile packed for immediate use
- Different gingiva heights of 1.5 mm, 2.5 mm, 3.5 mm and 4.5 mm
- Simplified handling with the BLX connection
- Straight abutments in one-piece design
















### 11.1.3 Overview of screw-retained abutment dimensions



AH = abutment height  
 GH = gingiva height  
 Ø = diameter  
 CA = abutment connector  
 a = angle

		Diameter (Ø)		
		Ø 4.6 mm		
Angle		0°	17°	30°
GH	0.75 mm			
	1.5 mm	x		
	2.5 mm	x	x	x
	3.5 mm	x	x	x
	4.5 mm	x	x	x

Engaging feature for single unit restorations / non-engaging feature for multi unit restorations

Engaging (Crown)			Non-engaging (Bridges/Bar)						
									
									
Burn-out Copping 023.4748	Coping, Ti 023.4747	Coping 023.4753	Coping, Ti, Bridge 023.4751	Coping, Ti, Bar 023.4751	Coping, Bridge 023.4754	Coping, Bar 023.4755	Variobase® for Bridge/Bar Cylindrical 023.0028	Burn-out Copping, for Variobase® for Bridge/ Bar Cylindrical Copping 023.0032	Burn-out Copping 023.4758
									
Occlusal Screw 023.4763									

### Preparation – abutment placement

Clean and dry the interior of the implants thoroughly.

Position the abutments in the implants. Tighten them to 35Ncm using the SCS screwdriver along with the ratchet and the torque control device.

Use the Transfer and Alignment Pin for easier positioning of abutments in the posterior region.

**Note:** Do not modify the abutments. For processing in the dental lab use the Lab Processing screws.




For detailed instructions how to use BLX Screw-retained Abutments, please refer to *Straumann® Bone Level Prosthetic Procedures, Basic Information* (152.810/en).

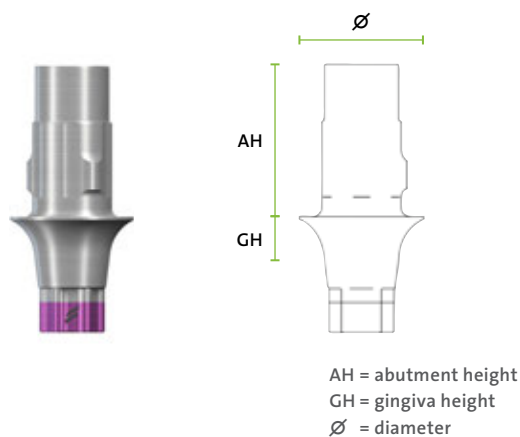




## 11.2 Straumann® Variobase®













The Straumann® Variobase® prosthetic components provide dental laboratories with the flexibility to create customized prosthetic restorations. In addition, Variobase® Abutments come with the benefit of the original Straumann® connection and the unique Straumann® engaging mechanism.










Single-unit restorations		<p><b>Variobase® for Crown</b></p> <ul style="list-style-type: none"> <li>• Abutment heights 5.5 mm available</li> <li>• Possibility to tailor the abutment height 5.5 mm down to 3.5 mm</li> <li>• Different gingiva heights available</li> </ul>
		<p><b>Variobase® for Crown AS</b></p> <ul style="list-style-type: none"> <li>• Screw-channel angulation of up to 25°</li> <li>• Abutment heights 5.5 mm available</li> </ul>
Multi-unit and full-arch restorations		<p><b>Variobase® for Bridge/Bar</b></p> <ul style="list-style-type: none"> <li>• Cementation Aid for Variobase® for Bridge/Bar Cylindrical supporting an easy cementation procedure</li> <li>• Non-engaging interface sitting on the implant shoulder to provide high angulation compensation</li> </ul>



11.2.1Variobase® component overview

Following Variobase® prosthetic components cover the the BLX Implant platforms:

	BLX RB/WB		BLX WB
	Ø 3.8 mm	Ø 4.5 mm	Ø5.5 mm
Abutments Variobase® for Crown	GH 0.75 mm		
			 062.4953
	GH 1.5 mm		
	 062.4934	 062.4944	 062.4954
	GH 2.5 mm		
	 062.4935	 062.4945	
	GH 3.5 mm		
	 062.4936	 062.4946	
Burn-out Copings for Variobase® for Crown	 065.0014	 065.0015	 065.0016
Screws for Variobase® for Crown	 065.0036		

	BLX RB/WB		BLX WB
	Ø 3.8 mm	Ø 4.5 mm	Ø5.5 mm
Abutments Variobase® for Crown AS	GH 1.5 mm		
		 062.4972	 062.4971
Burn-out Copings for Variobase® for Crown AS		 065.0018	 065.0019
	 065.0037		
Screws for Variobase® for Crown AS			
	Ø 3.8 mm	Ø 4.5 mm	Ø5.5 mm
	GH 1.5 mm		
Abutments Variobase® for Bridge/Bar Cylindrical		 062.4961	
Cementation Aid		 160.3	
Burn-out Copings for Variobase® for Bridge/Bar Cylindrical		 065.0017 / 065.0017V4	
Screws for Variobase® for Bridge/Bar Cylindrical		 065.0036	

For detailed instructions on how to use Variobase® Abutments, please refer to *Straumann® Variobase® Basic Information* (490.062/en).

## 11.3 Straumann® Anatomic Abutments

### 11.3.1 Intended use

- Cement-retained restorations

### 11.3.2 Characteristics

#### Simple and Reliable

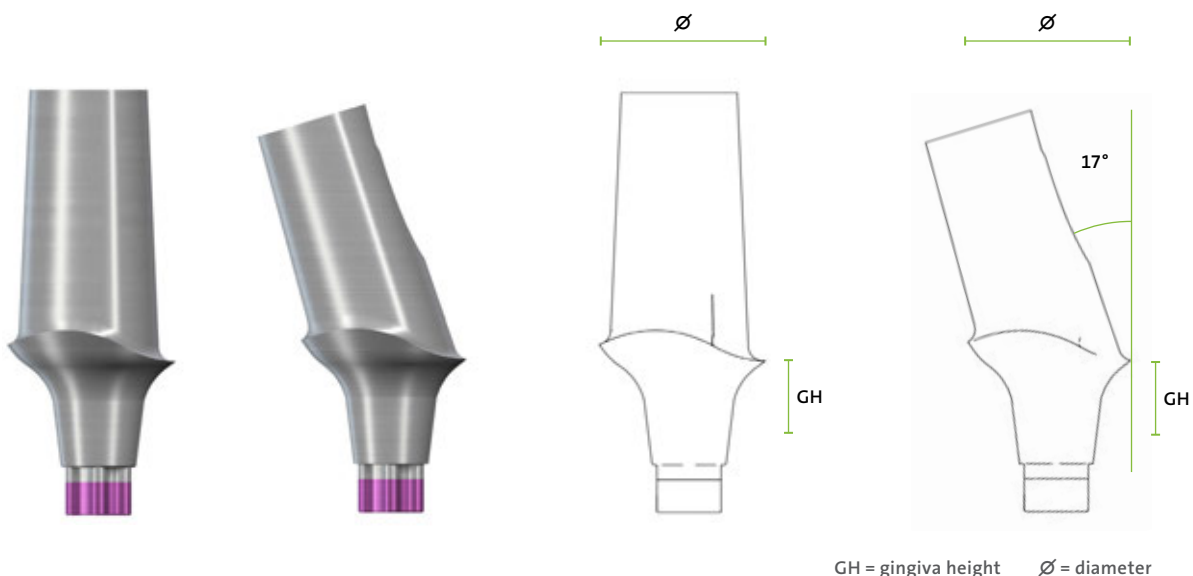
- Less grinding necessary due to prepared mucosa margins
- Adaptation to natural soft tissue contour due to prepared mucosa margins at different heights
- Oval shape resembles emergence profile of a natural tooth
- 0° and 17°
- Anatomically shaped emergence profiles, healing abutments, temporary posts and final abutments (for optimal component selection see chapter "Overview of Consistent Emergence Profiles™")



A minimum height of 3 mm above the mucosa margin of the abutment must be maintained in order to maintain proper stability of the abutment. The cement margin must not be more than 2 mm below the mucosa. Use a new basal screw for the final insertion of the abutment.

### 11.3.3 Overview of anatomic abutment dimensions

		Diameter (Ø)	
		Ø 6 mm	
Angle		0°	17°
GH	0.75 mm		
	1.5 mm		
	2.5 mm	X	X
	3.5 mm	X	X
	4.5 mm		



For detailed instructions how to use BLX Anatomic abutments, please refer to *Straumann® Bone Level Prosthetic Procedures, Basic Information* (152.810/en).

## 11.4 Straumann® Novaloc® Abutments

The Straumann® Novaloc® Retentive System for hybrid dentures offers an innovative carbon-based abutment coating (ADLC<sup>1</sup>) 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 PEEK<sup>2</sup> matrices, the Novaloc® Retentive System provides a unique and long-lasting attachment performance.

### 11.4.1 Characteristics

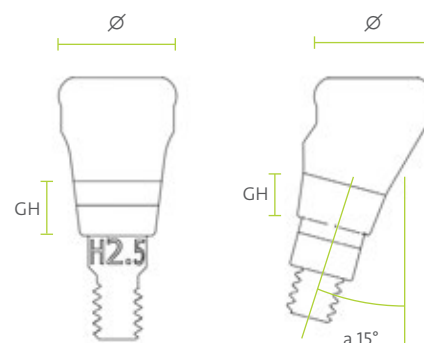
- PEEK<sup>2</sup> matrix inserts offering excellent chemical and physical properties
- Matrix accommodates up to 40° prosthetic divergence between two abutments
- 6 retention strengths offer optimal adjustment of the denture retention
- Matrix Housing available in titanium, or color-neutral PEEK<sup>2</sup> for a more aesthetic outcome
- Carbon-based abutment coating (ADLC<sup>1</sup>) offering a smooth surface and ultimate hardness  
→ for excellent wear resistance



### 11.4.2 Overview of Novaloc® Abutment dimensions



Diameter (Ø)			
Ø 4.5 mm (RB/WB)			
Angle		0°	15°
GH	1.5 mm	062.4501	062.4507
	2.5 mm	062.4502	062.4508
	3.5 mm	062.4503	062.4509
	4.5 mm	062.4504	062.4510
	5.5 mm	062.4505	062.4511
	6.5 mm	062.4506	062.4512



GH = gingiva height  
Ø = diameter  
a = angle

For detailed instructions on how to use BLX Novaloc® Abutments, please refer to *Straumann® Novaloc® Retentive System for Hybrid Dentures* (490.115/en).

<sup>1</sup> Amorphous Diamond-Like Carbon

<sup>2</sup> Polyether ether ketone

## 11.5 Straumann® CARES® Abutments

### 11.5.1 Intended use

- Cement-retained crowns
- Cement-retained bridges via mesostructure
- Directly veneered crowns (CARES® CoCr)

### 11.5.2 Material

- Titanium-Aluminium-Niobium (TAN)
- Cobalt Chromium

### 11.5.3 Characteristics

- CoCr for direct veneering
- Screw-retained one piece metal restorations
- Anatomic emergence profile
- A patient-specific emergence profile
- Straumann® Guarantee for Straumann® CARES® Abutments



For detailed instructions how to use CARES® abutments, please refer to *Straumann® CARES® Implant-borne prosthetics, Basic Information* (152.822/en).

## 11.6 Straumann® Screw-retained Bars and Bridges (SRBB)

### 11.6.1 Intended use

Straumann® CARES® SRBB are prosthetic mesostructures, either directly screwed to the endosseous dental implant or to the screw-retained abutment intended as an aid in prosthetic rehabilitations for multiple-tooth replacement or fully edentulous patients.

### 11.6.2 Material

- Titanium grade 4
- Cobalt-chromium alloy (coron®)



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#### Important note for CARES® SRBB on Straumann® Screw-retained Abutments

Please keep in mind that CARES® SRBB are milled based on their master cast. Therefore, a precise replication of the oral situation is essential for a good fitting of the CARES® SRBBs.

For abutment-level CARES® SRBB, the master cast represents the oral situation. Therefore, it is necessary to use a master model with abutment analogs, created from an oral abutment-level impression of the final abutments, and torqued with 35 Ncm.

Master models with subsequently hand-tightened (< 35 Ncm) abutments may not accurately represent the oral situation and therefore could lead to a poor fitting restoration with height and alignment deviations, although it will fit the model. Therefore, when it is required to place abutments subsequently on the master model, only a torque of 35 Ncm will represent the final oral situation adequately. The subsequently placed abutment should be rotated so that it fits against one end of the implant/abutment interface's play and the dentist must be informed that the abutment has to be rotated in the same direction during oral placement.

If a SRBB on subsequently placed Screw-retained Abutments is ordered, the stone model with the torqued abutments is required for production.

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For detailed instructions how to use CARES® abutments, please refer to *Straumann® CARES® Implant-borne prosthetics, Basic Information* (152.822/en).

### 11.6.3 Straumann® CARES® SRBB working conditions

	CARES® SRBB are available on following Straumann platforms		Divergence compensation between any two platforms		Screws for Straumann® CARES® SRBB
			Ti	coron®	
Implant Level	Straumann® Tissue Level Implants	Regular Neck (RN)	50°	40°	synOcta® Basal screw 048.356
		Wide Neck (WN)			
	Straumann® Bone Level Implants	Regular CrossFit® (RC)	30°	30°	NC/RC SRBB BL screw 025.2926
		Narrow CrossFit® (NC)			
	Straumann® BLX Implants	RB/WB	30°	30°	RB/WB SRBB Basal Screw, straight, TAN 010.6145
Abutment level	Straumann® Screw-retained Abutment	Ø 4.6 mm	50°	40°	NC/RC Occlusal Screw, TAN for Coping, Screw-retained Abutment 023.4763
		Ø 3.5 mm	30°	30°	

**Important:** when combining different platforms with each other, the smallest divergence compensation value is applicable.

#### Note

- Straumann® Repositionable Implant Analogs are not intended to be used for Straumann® CARES® SRBB. Straumann® may return the order if the requirements are not fulfilled
- **Always use new abutment-/occlusal-screws for patient use**
- The screws delivered together with the CARES® SRBB are meant for patient use. For additional screws in case of loss or for lab use, only use the screws mentioned in the chart above

## 11.7 Straumann® CARES® Scan & Shape

CARES® Scan & Shape lets you benefit from the knowledge and experience of a highly trained team of CAD/CAM dental experts to provide a tailored design service. The concept is designed to ensure the best possible fit of the final restorations. You can now order via Scan & Shape: customized abutments, CARES® Screw-retained Bars and Bridges (SRBB), CARES® X-Stream™ Restorative Options and tooth-borne restorations.

Whether you're expanding your business or you have an existing staff member out for an extended period of time, we're open 24/7 so you don't have to be.

### Ordering process

- The CARES® Scan & Shape online ordering platform provides a one-stop-shop for all your customized prosthetics
- Send digital files using our open STL-Files upload\* service or
- Traditional workflows – send us your master cast and/or wax-up model\*

### Premium Straumann® Service

- Custom-made abutment design
- Straumann® Original connection
- Straumann® precision fit between implant and abutment

### Compatible solutions

- Provides a streamlined “one-stop shop” and an efficient digital workflow
- Benefit from Straumann® CARES® Scan & Shape services for customized abutments and CARES® X-Stream™ single restoration for all major implant platforms

**Note:** For detailed information on all Straumann® CARES® offerings, please see *Straumann® CARES® Scan & Shape, Basic Information* (490.190/en).

\* Not all products, services and workflows are available in all countries. Please contact your sales representative for a detailed overview.

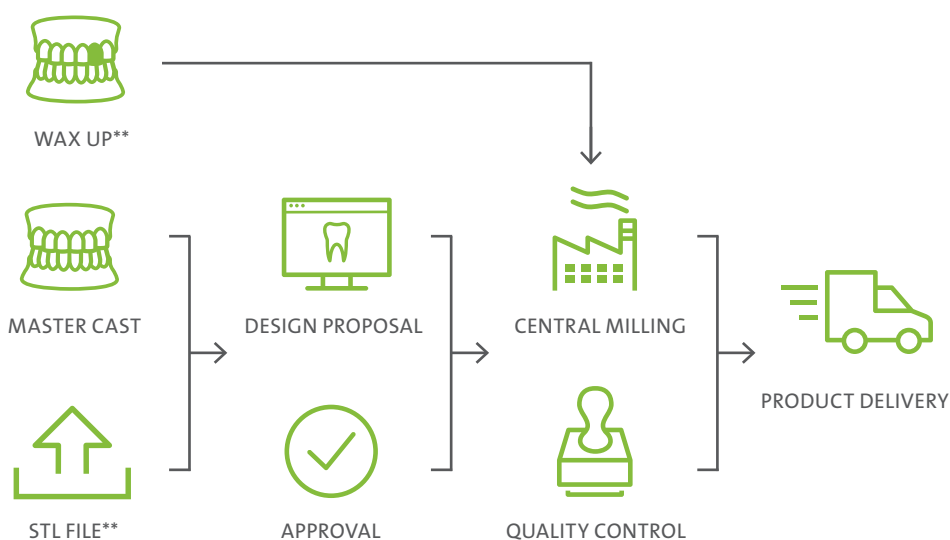


### 11.7.1 Straumann® CARES® Scan & Shape workflow overview \*

Even CAD/CAM proficient labs can take advantage of our design service. If you are using 3Shape, Exocad, Dental Wings or any other dental-design software you can simply upload your open STL files.

#### Digital functionality\*\*

- Upload your case from any open system such as 3Shape, Exocad, Dental Wings, etc.
- Upload your open STL-file of lower jaw, upper jaw, bite registration, together with a scan of diagnostic wax-up for SRBBs



#### Simple workflow

##### Log onto Straumann® CARES® Scan & Shape Online

- Send us your STL files, ship us your models or wax-ups\*\*
- Manage your orders online anytime around the clock
- Receive your CARES® Prosthetics just the way you want it

#### Scan & Shape online platform product portfolio

For a complete overview of the Straumann® CARES® Scan & Shape product portfolio, consult *Straumann® CARES® Scan & Shape Basic Information* (490.190/en) or contact your local Straumann® representative.



\* Product offering may vary from country to country.

Not all products and workflows are available in all countries.

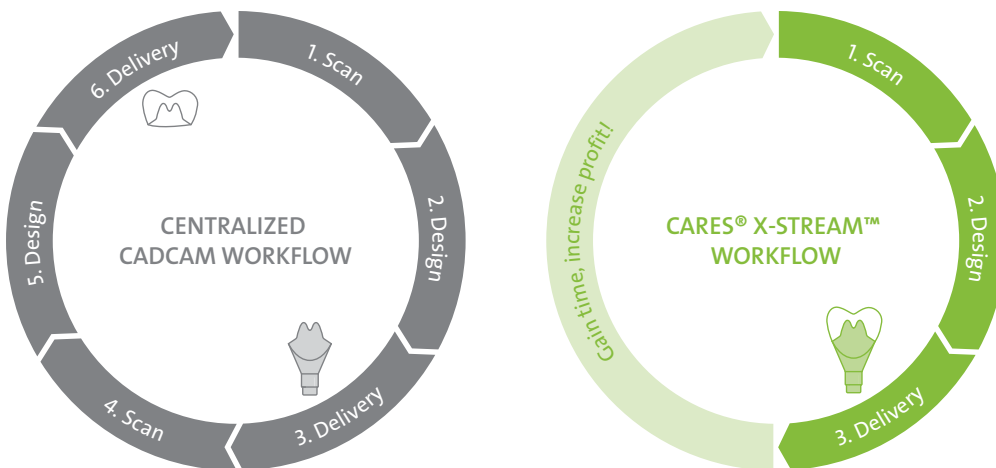
\*\* STL File upload option and model workflow may vary from country to country.

Not all products are available through wax up workflow.

Please contact your local sales representative for a detailed overview of the available workflows and products.

## 11.8 Straumann® CARES® X-Stream™

CARES® X-Stream™ is a highly efficient CAD/CAM workflow that allows you to gain time by creating both, the abutment and the corresponding restoration (crown, bridge) in a single streamlined process. Both parts are then milled simultaneously and shipped in one package.



### Your benefits

#### Efficiency:

Do you want to step up the productivity and efficiency of your business?  
Save up to 50 % of the steps compared to conventional CAD/CAM processing.

#### Precision:

Fed up with checking the fit? Our validated milling center creates the right fit for you.

#### Quality:

The Straumann® original connection ensures a perfect fit with Straumann® implants.

For more information about CARES® X-Stream, please consult *Straumann® CARES® Implant-borne prosthetics, Basic Information* (152.822/en).

## 12. Cleaning and care of BLX surgical instruments and the BLX surgical cassette

Instruments with high cutting performance are a basic requirement for successful implantation. Therefore, careful treatment of all instruments is of the outmost importance. Even slight damage, for instance to the drill tips, impairs cutting performance and thus the clinical result. With correct and careful care, the high quality of the material and excellent execution ensure that the cutting instruments (drills) can be used repeatedly (up to a maximum of ten times is recommended).

If possible, an automated method (cleaning and disinfection unit) should be used for cleaning and disinfection because of its higher effectiveness and reproducibility. A manual method should be used only if an automated method is not available.

The BLX Surgical Cassette allows for automated reprocessing of the BLX surgical instruments in order to simplify the reprocessing workflow and to ensure optimal cleaning and care.

### **During surgery**

Use each instrument only for its intended purpose. Contaminated instruments can be placed back to the designated space in the BLX surgical cassette. Damaged and / or blunt instruments must be sorted out and disinfected, cleaned and disposed of separately.

### **12.1 Pretreatment**

Pretreatment is required prior to both manual and automated cleaning! Never let surgical residues (blood, secretions, tissue residues) dry on an instrument; clean immediately after surgery.

Place the instruments in a water bath or a disinfectant solution. Thoroughly clean off incrustations with soft brushes only. Disassemble multi-piece instruments, clean cavities and lumens especially well. If applicable: Sort the pretreated instruments into the BLX surgical cassette.

It is important to use protective clothing while cleaning contaminated instruments. Always wear protective glasses, face mask, gloves, waterproof gown, etc. for your own safety during all activities.

Please note that the disinfectant used in pretreatment serves only for your own protection and cannot replace the disinfection step to be performed later, after cleaning.

## 12.2 Automated cleaning and thermal disinfection using a disinfecter

Procedure:



**Step 1** – Remove the upper tray and the instruments from the lower tray from the BLX Surgical Cassette.



**Step 2** – Place the instruments for the lower tray in the cleaning tray for the BLX Surgical Cassette (069.0010).



**Step 3** – Place the upper tray including the instruments in the cleaning tray for the BLX Surgical Cassette (069.0010).



**Step 4** – Place the closed cleaning tray, the lid and the lower tray of the BLX surgical cassette in the disinfector and run the appropriate program.



**Step 5** – After the end of the program remove the components from the disinfector.

**Step 6** – Inspect and check all instruments after cleaning and disinfection for corrosion, damaged surfaces and contamination. Reprocess contaminated instruments and sort out damaged instruments.

**Note:** Always follow the instructions stated by the manufacturer of the cleaning agent, disinfectant and disinfector.

### 12.3 Manual cleaning and disinfection

The BLX Surgical Cassette is also suitable for cleaning in an ultra-sonic bath and disinfection in a disinfection bath.

#### Cleaning in the ultrasonic bath:

1. Remove the upper tray of the BLX surgical cassette including the instruments from the cassette and place it in the ultra sonic bath for cleaning.
2. Remove and disassemble the instruments from the lower tray and place them in the Ultrasonic Cleaning Cassette (040.175). Make sure that the instruments do not touch one another. To improve the cleaning effect in the ultrasonic bath, cleaning without the lid is recommended.
3. After cleaning remove instruments from the Ultrasonic Cleaning Cassette and rinse thoroughly at least three times (3×) with water. Rinse out all cavities of the instruments three times (3×) using a disposable syringe (minimum volume 20 ml). Also rinse the upper tray of the BLX surgical cassette including the instruments thoroughly at least three times (3×) with water.
4. Inspect all components.

**Disinfection:**

1. Place the components for the specified action time in the disinfection bath. Ensure that the instruments are sufficiently covered by the disinfection solution and that the instruments do not touch each other.
2. Rinse out all cavities of the components three times (3×) at the beginning or at the end of the action time using a disposable syringe (minimum volume 20 ml).
3. Then remove the components from the disinfection bath and rinse them thoroughly with water at least five times (5×).
4. Rinse out all cavities of the instruments five times (5×) using a disposable syringe (minimum volume 20 ml).
5. Dry the components inside/out with filtered compressed air.
6. Pack the components as quickly as possible after removal. If additional drying is necessary, dry in a clean location.

## 12.4 Sterilization

**Step 1 – Reassemble all instruments**

Reassemble the BLX Surgical Cassette and replace missing devices by properly cleaned and disinfected ones.

**Step 2 – Packaging**

Pack the instruments or the sterilization cassettes singly or doubly in disposable sterilization packaging corresponding to the following requirements:

- Suitable for steam sterilization (temperature resistance up to at least 138°C (280°F), sufficient steam permeability)
- Sufficient protection of the instruments or sterilization packaging against mechanical damage

**Note:** An indicator strip with the date of the sterilization, the expiration date and the operator should be affixed to every sterilization packaging. This will help to indicate if, when and by whom the material was sterilized.

**Step 3 – Steam sterilization**

Sterilization Parameter Europe

Fractionated vacuum. Assembled cassette at least 3 min. at 132°C (270°F) up to 134°C (273°F), drying time 20 min.

**Step 4**

The sterile BLX Surgical Cassettes must be stored dry and free of dust in the sterilization packaging after sterilization.

For further information regarding cleaning and care of instruments please refer to the brochure *Straumann® Surgical and Prosthetic Instruments, Care and Maintenance* (152.008/en) available on [ifu.straumann.com](http://ifu.straumann.com) -> “General product information”

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### **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](http://www.straumann.com)

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