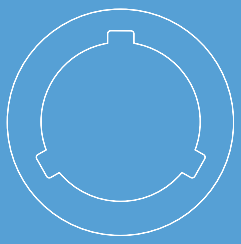
CAMLOG®
SYSTEM



CONELOG®
SYSTEM

GUIDE SYSTEM

PRECISION TEMPLATE-GUIDED IMPLANTATION FOR CAMLOG® AND CONELOG® IMPLANTS

a perfect fit™

camlog

TABLE OF CONTENTS

GENERAL SYSTEM INFORMATION

CAMLOG® and CONELOG® Implant systems have been developed based on longstanding clinical and laboratory experience. The two systems are user-friendly and consistently prosthetical-oriented.

CAMLOG® and CONELOG® products are always manufactured using the most state-of-the-art technology. Both implant systems are continuously being developed by the company's research and development team in collaboration with clinics, universities and dental technicians and therefore stay abreast of the latest technology.

The CAMLOG® and CONELOG® Implant Systems are very well documented scientifically. Studies* support this with respect to a great many parameters including the implant surface, time of implantation and/or implant loading, primary stability and the connection design. The long-term results of the Promote® Surface are convincing.

IMPORTANT NOTE

The descriptions that follow are not adequate to permit immediate use of the CAMLOG® and CONELOG® Implant System. Instruction by a surgeon experienced in using one of the both systems is strongly recommended. CAMLOG® and CONELOG® dental implants and abutments should only be used by dentists, physicians, surgeons and dental technicians who have been trained in using the system. Appropriate courses and training sessions are regularly offered by CAMLOG.

Methodological errors in treatment can result in loss of the implant and significant loss of the peri-implant bone.

COLOR CODING OF THE SURGICAL AND PROSTHETIC CAMLOG PRODUCTS

	COLOR	DIAMETER
	gray	3.3 mm
	yellow	3.8 mm
	red	4.3 mm

* See section «Further documentation» on page 32

SYSTEM DESCRIPTION

INTRODUCTION

The components of the Guide System are used for template-guided preparation of the implant bed and for insertion of Guide System CAMLOG® and CONELOG® SCREW-LINE Implants, Promote® plus, in a partially or fully edentulous maxilla and mandible.
Drilling templates with Guide System Guiding sleeves are used as:

a) Positioning implant analogs during preoperative fabrication of the modeand the long-term temporary restoration.
b) Guiding surgical instruments of the Guide System during implant bed-preparation.
c) Guiding Guide System SCREW-LINE implants during insertion.

The Guide System comprises:

- Laboratory instruments for converting an x-ray template into a drilling template
- Surgical instruments for template-guided endosseously respectively periodontally supported implant bed preparation and implant insertion.
- Guide System CAMLOG® SCREW-LINE Implants, Promote® plus
- Guide System CONELOG® SCREW-LINE Implants, Promote® plus.

Guide System CAMLOG® and CONELOG® SCREW-LINE Implants, Promote® plus are available in the diameters 3.3, 3.8 and 4.3 mm and are screwed with a system-specific color-coded insertion post for template-guided insertion. The prosthetic restoration is completed with single crowns, bridges or complete prosthesis.

In order to be able to use the Guide System, the practice/laboratory must be equipped with a suitable 3D planning system and, where necessary, the appropriate guiding sleeve positioning system. Suitable systems are currently listed on the CAMLOG homepage at www.camlog.com/products/camlog/digital-technology/ and www.camlog.com/products/conelog/digital technology.

Using the planning software and the guiding sleeve positioning system (referred to hereafter as positioner), an existing x-ray template is converted into a drilling template using the Guide System laboratory instruments.

An alternative to fabricating a drilling template on a positioner, some manufacturers of planning systems offer modules for the construction of drilling templates. Depending on the system, the design can be manufactured locally or centrally.

If these alternatives are used, the Guide System laboratory instruments (checkup pin, seating tool and template drill) are not required to fabricate the template.

IMPORTANT NOTES

- ALTATEC GmbH/CAMLOG Biotechnologies GmbH waive all liability for the performance of planning and its transfer to the drilling template. Before using the Guide System, the user must be familiar with the 3D planning system and the used positioner.

- Guide System CAMLOG® and CONELOG® SCREW-LINE Implants, Promote® plus differ from CAMLOG® and CONELOG® SCREW-LINE Implants Promote® plus only due to a modified insertion post. Only the appropriate drivers for the Guide System, manual/wrench or with ISO shaft for angled hand piece, are to be used for the implantation of Guide System CAMLOG® and CONELOG® SCREW-LINE Implants Promote® plus.

- With some planning systems, only the use of gingiva-supported drilling templates is possible. However, CAMLOG does not recommend such templates because correct positioning cannot be ensured due to anatomical conditions. In addition, the resilience of the mucous membrane can lead to shifts in the position of the drilling template and therefore inaccuracies in application.

PRODUCT OVERVIEW

IMPLANTS

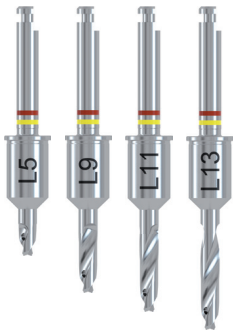
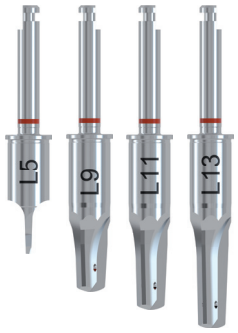
	Article	Art. No.	Ø	L	A Ø
	**Guide System CAMLOG® SCREW-LINE Implant, Promote® plus** incl. Guide System Insertion post and cover screw, sterile **Material** Titanium Grade 4	K1053.3311	3.3 mm	11 mm	2.7 mm
		K1053.3313		13 mm	
		K1053.3316		16 mm	
		K1053.3809	3.8 mm	9 mm	3.5 mm
		K1053.3811		11 mm	
		K1053.3813		13 mm	
		K1053.3816		16 mm	
		K1053.4309	4.3 mm	9 mm	3.9 mm
		K1053.4311		11 mm	
		K1053.4313		13 mm	
		K1053.4316		16 mm	

	Article	Art. No.	Ø	L	A Ø
	**Guide System CONELOG® SCREW-LINE Implant, Promote® plus** incl. Guide System Insertion post and cover screw, sterile **Material** Titanium Grade 4	C1063.3309	3.3 mm	9 mm	2.7 mm
		C1063.3311		11 mm	
		C1063.3313		13 mm	
		C1063.3316		16 mm	
		C1063.3807	3.8 mm	7 mm	3.5 mm
		C1063.3809		9 mm	
		C1063.3811		11 mm	
		C1063.3813		13 mm	
		C1063.3816		16 mm	
		C1063.4307	4.3 mm	7 mm	3.9 mm
		C1063.4309		9 mm	
		C1063.4311		11 mm	
		C1063.4313		13 mm	
		C1063.4316		16 mm	

Legend to page 5:

* All Guide System drills are intended for single use only.
** Necessary Guide System Pilot drills or form drills for implant length 16 mm, following obligatory prior use of the pilot drill set or surgery set lenght 13 mm.
*** Only for CONELOG® Guide System Implants

INSTRUMENTS

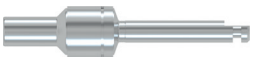
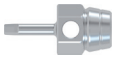
	Article	Art. No.	Ø	L
	**Guide System Pilot drill set*** internal irrigation, sterile (for pilot drilling Ø 2.0 mm) **Material** Stainless steel	J5063.3309***	3.3 mm	9 mm (incl. 5 mm)
		J5063.3311		11 mm (incl. 5 and 9 mm)
		J5063.3313		13 mm (incl. 5, 9 and 11 mm)
		J5064.3316**		16 mm
		J5063.4307***	3.8 mm	7 mm (incl. 5 mm)
			4.3 mm	
		J5063.4309	3.8 mm	9 mm (incl. 5 mm)
			4.3 mm	
		J5063.4311	3.8 mm	11 mm (incl. 5 and 9 mm)
			4.3 mm	
		J5063.4313	3.8 mm	13 mm (incl. 5, 9 and 11 mm)
			4.3 mm	
		J5064.4316**	3.8 mm	16 mm
			4.3 mm	
	**Guide System Surgery-set*** **SCREW-LINE** internal irrigation, sterile **Material** Stainless steel	J5065.3309***	3.3 mm	9 mm (incl. 5 mm)
		J5065.3311		11 mm (incl. 5 and 9 mm)
		J5065.3313		13 mm (incl. 5, 9 and 11 mm)
		J5066.3316**		16 mm
		J5065.3807***	3.8 mm	7 mm (incl. 5 mm)
		J5065.3809		9 mm (incl. 5 mm)
		J5065.3811		11 mm (incl. 5 and 9 mm)
		J5065.3813		13 mm (incl. 5, 9 and 11 mm)
		J5066.3816**		16 mm
		J5065.4307***	4.3 mm	7 mm (incl. 5 mm)
		J5065.4309		9 mm (incl. 5 mm)
		J5065.4311		11 mm (incl. 5 and 9 mm)
		J5065.4313		13 mm (incl. 5, 9 and 11 mm)
		J5066.4316**		16 mm

Note: All Guide System sets include a 5 mm long drill, as well as all further drills necessary for the selected implant length.

ADDITIONAL COMPONENTS

	Article	Art. No.	Ø	L
	**Guide System Form drill* SCREW-LINE, Cortical bone** internal irrigation, sterile **Material** Stainless steel	J5068.3309	3.3 mm	9 mm
		J5068.3311		11 mm
		J5068.3313		13 mm
		J5068.3316		16 mm
		J5068.3807	3.8 mm	7 mm
		J5068.3809		9 mm
		J5068.3811		11 mm
		J5068.3813		13 mm
		J5068.3816		16 mm
		J5068.4307	4.3 mm	7 mm
		J5068.4309		9 mm
		J5068.4311		11 mm
		J5068.4313		13 mm
		J5068.4316		16 mm
	**Guide System Gingiva punch*** sterile **Material** Stainless steel	J5041.3303	3.3 mm	-
		J5041.3803	3.8 mm	
		J5041.4303	4.3 mm	
	**Guide System Guiding sleeve*** height 3.0 mm (2 units) **Material** Titanium alloy	J3734.3303	3.3 mm	-
		J3734.3803	3.8 mm	
		J3734.4303	4.3 mm	
	**Guide System CAMLOG® Insertion post** for CAMLOG® Lab analogs, incl. fixing screw (2 units) **Material** Titanium alloy	K2026.3300	3.3 mm	-
		K2026.3800	3.8 mm	-
		K2026.4300	4.3 mm	-
	**Guide System CONELOG® Insertion post** for CONELOG® Lab analogs, incl. fixing screw (2 units) **Material** Titanium alloy	C2026.3300	3.3 mm	-
		C2026.3800	3.8 mm	-
		C2026.4300	4.3 mm	-
	**CAMLOG® Implant analog** **Material** Titanium alloy	K3025.3300	3.3 mm	-
		K3025.3800	3.8 mm	
		K3025.4300	4.3 mm	
	**CONELOG® Implant analog** **Material** Titanium alloy	C3025.3300	3.3 mm	-
		C3025.3800	3.8 mm	
		C3025.4300	4.3 mm	
	**HANDLE FOR CAMLOG®/ CONELOG® Implant analog** **Material** Stainless steel	J3025.0010	3.3 mm	-
			3.8 mm	
			4.3 mm	

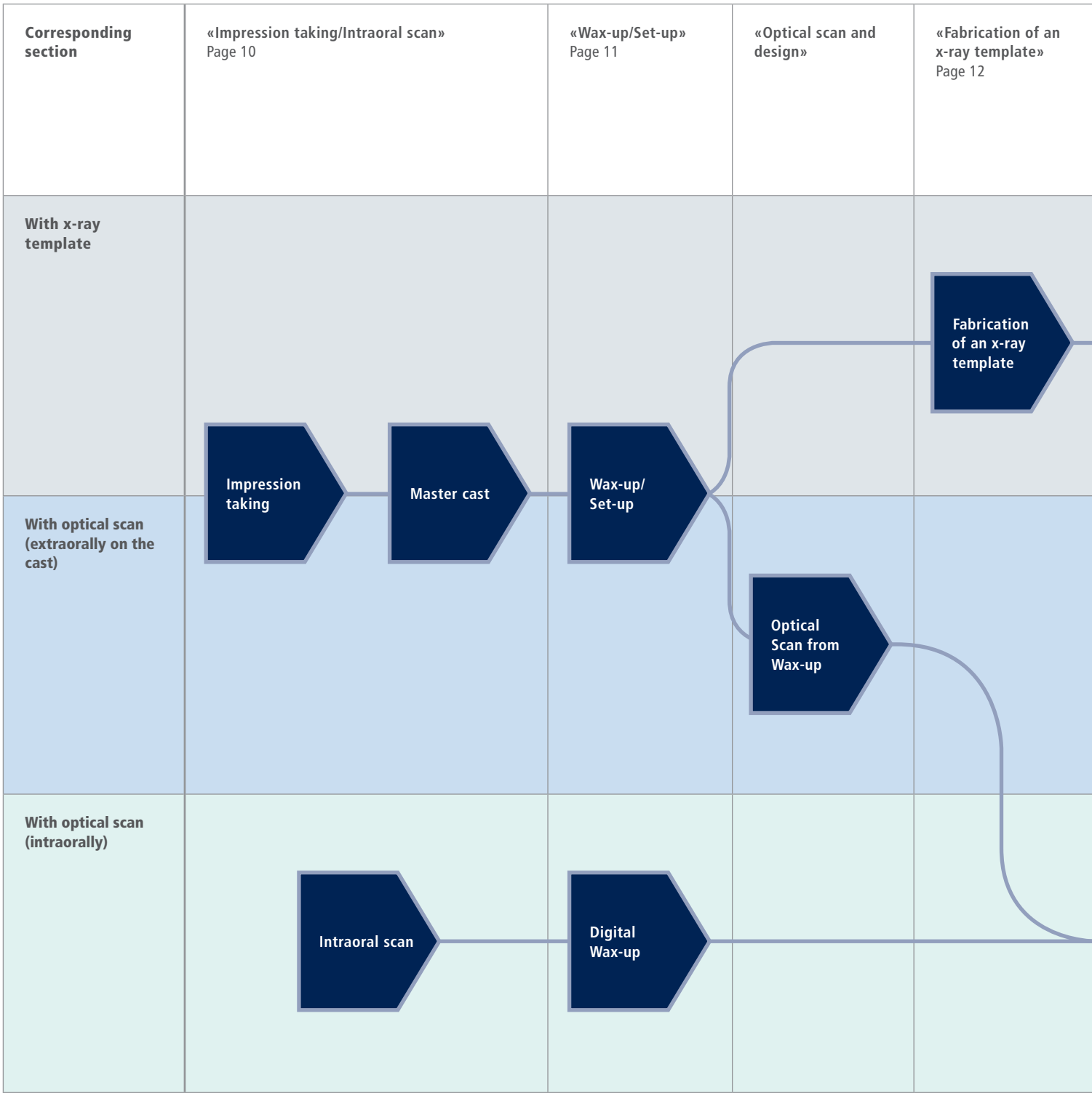
* All Guide System drills, gingiva punches and guiding sleeves are intended for single use only.

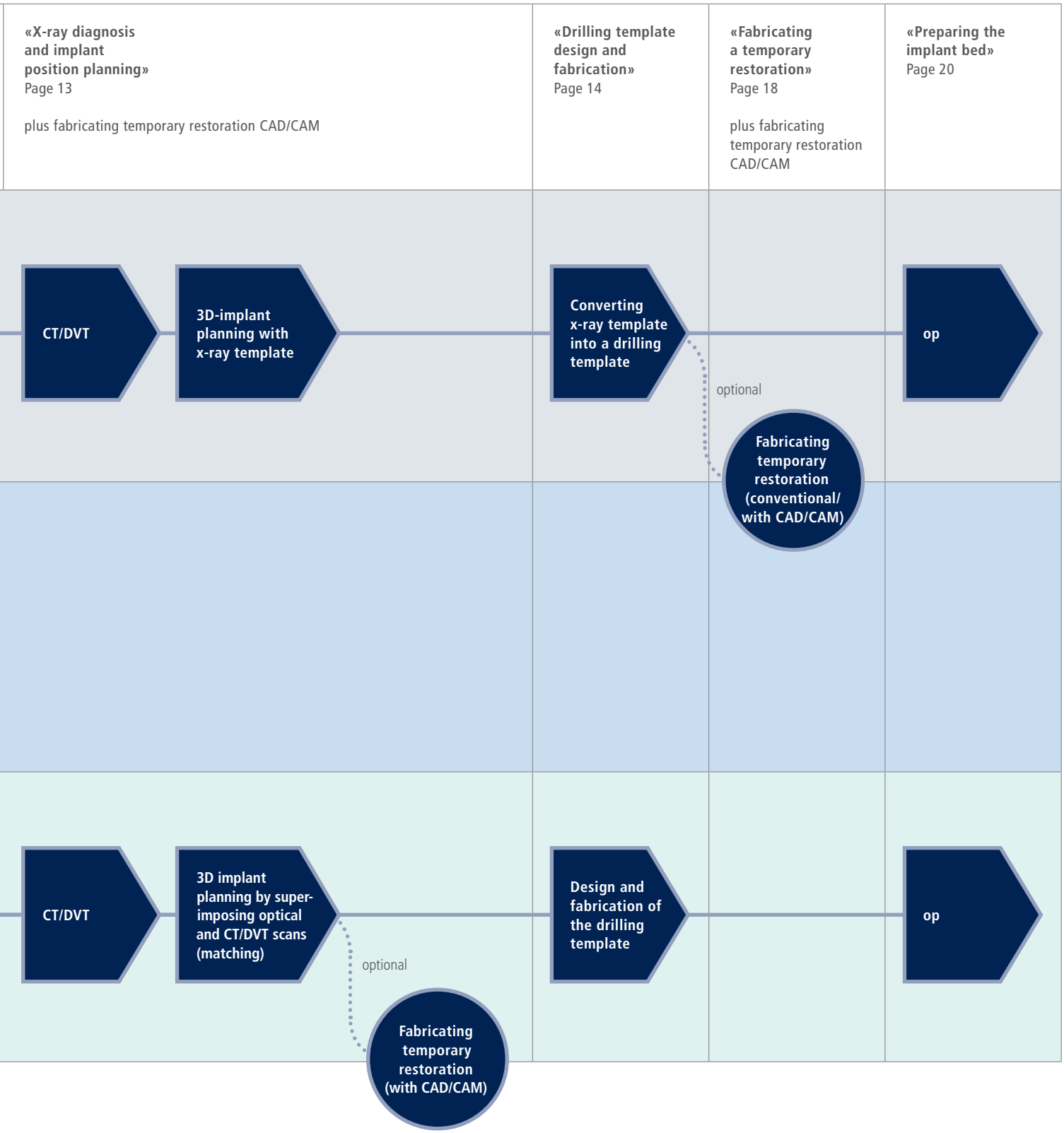
	Article	Art. No.	Ø	L
	**Guide System Template drill** for Guide System guiding sleeve **Material** Stainless steel	J3733.3300	3.3 mm	-
		J3733.4300	3.8 mm	
			4.3 mm	
	**Guide System Seating tool** for Guide System Guiding sleeve **Material** Stainless steel	J3716.3300	3.3 mm	-
		J3716.4300	3.8 mm	
			4.3 mm	
	**Guide System Check-up pin** for Guide System guiding sleeve **Material** Stainless steel	J5301.3300	3.3 mm	-
		J5301.4300	3.8 mm	
			4.3 mm	
	**Guide System Driver** for Guide System implant Ø 3.3/3.8/4.3 mm, manual/wrench **Material** Stainless steel	J5303.4300	3.3 mm	-
			3.8 mm	
			4.3 mm	
	**Guide System Driver** for Guide System implant Ø 3.3/3.8/4.3 mm, with ISO shaft for angled hand piece **Material** Stainless steel	J5304.4300	3.3 mm	-
			3.8 mm	
			4.3 mm	
	**Drill extension** ISO shaft, for drills with internal irrigated **Material** Stainless steel	J5002.0005	-	26.6 mm
	**Torque wrench** with continuous torque adjustment until maximal 30 Ncm **Material** Stainless steel	J5320.1030	-	
	**Screwdriver** Hex, extra short, manual/wrench **Material** Stainless steel	J5317.0510	-	14.5 mm
	**Screwdriver** Hex, short, manual/wrench **Material** Stainless steel	J5317.0501	-	22.5 mm
	**Screwdriver** Hex, long, manual/wrench **Material** Stainless steel	J5317.0502	-	30.3 mm

APPLICATION

OVERVIEW OF APPLICATION OPTIONS

BELOW IS AN OVERVIEW OF THE WORK STEPS:




«X-ray diagnosis and implant position planning»
Page 13
plus fabricating temporary restoration CAD/CAM
«Drilling template design and fabrication»
Page 14
«Fabricating a temporary restoration»
Page 18
plus fabricating temporary restoration CAD/CAM
«Preparing the implant bed»
Page 20
CT/DVT
3D-implant planning with x-ray template
Converting x-ray template into a drilling template
optional
Fabricating temporary restoration (conventional/ with CAD/CAM)
op
CT/DVT
3D implant planning by super-imposing optical and CT/DVT scans (matching)
optional
Fabricating temporary restoration (with CAD/CAM)
Design and fabrication of the drilling template
op

APPLICATION

IMPRESSION TAKING/INTRAORAL SCAN

A. IMPRESSION TAKING FOR ADEQUATELY PARTIALLY EDENTULOUS JAW

If the existing teeth can guarantee sufficiently stable and repositionable fixation of an x-ray template, an impression is taken of the oral situation and a master cast is fabricated.

B. IMPRESSION TAKING FOR EDENTULOUS OR INADEQUATELY PARTIALLY EDENTULOUS JAW

In the case of an edentulous or partially edentulous jaw where the residual teeth do not guarantee stable and/or reproducible fixation of an x-ray template, a sufficient quantity (3 units minimum in an edentulous jaw) of "temporary implants" (snap-action mechanism with matrix) are first set so as to be able to fix the x-ray template precisely in the mouth at a later stage. The positioning must be selected so that the best possible mechanical stability is achieved and later insertion of the final implants is not obstructed.

An impression is taken of the oral situation with the impression components belonging to the temporary implants (depending on the temporary implants used) and a master cast is fabricated with corresponding analogs.

INTERORAL SCAN

As an alternative to conventional impression taking with elastomers, it is also possible to realize the oral situation with an intraoral scan.

WAX-UP/SET-UP

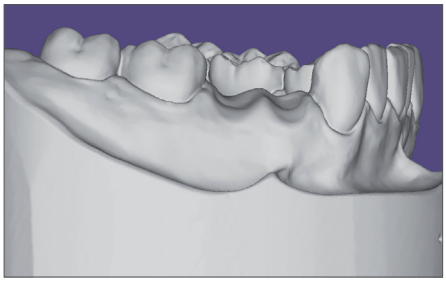
CONVENTIONAL

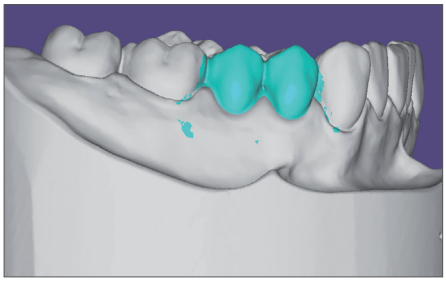
A wax-up/set-up of the teeth to be replaced is prepared on the master cast to determine the optimal tooth position from a prosthetic perspective for later restoration (planning of prosthetic restorations in the articulator). The wax-up/set-up serves as a basis for the following subsequent stages of the technique used:

- Production of a deep-drawn x-ray template for later conversion to a drilling template if necessary.
- Planning of prosthetic restoration using CAD software based on a scan.

DIGITAL

As an alternative to a wax-up/set-up, the tooth configuration can be created in entirely virtual fashion using the CAD software.

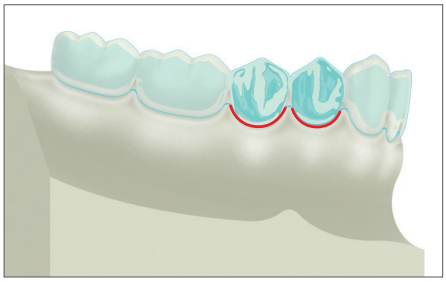


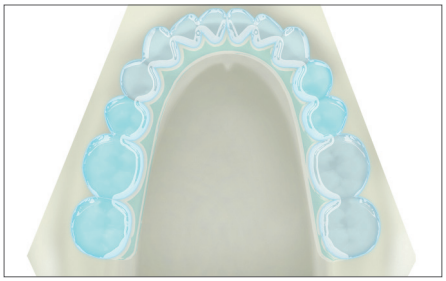


APPLICATION

FABRICATION OF AN X-RAY TEMPLATE

The x-ray template is functional and preferably made of transparent plastic. In the previously deep-drawn template, the missing teeth are then filled with suitable x-ray opaque plastic (at least 15–20% barium sulphate content). The teeth filled in this manner must be flush with the gingiva (see graphic) in order to represent the exact gingiva height.





NOTE
Further information on fabricating a suitable x-ray template incl. correct positioning of any reference objects that may be required is available from the manufacturer of the 3D planning system.

X-RAY DIAGNOSIS AND IMPLANT POSITION PLANNING

A. USING AN X-RAY TEMPLATE

The x-ray template is placed on the residual teeth and/or on the temporary implants. The implants must exhibit adequate primary stability. The x-ray tomography (CT/DVT) is performed with the template accurately and securely attached. After this, the data acquired from the CT or DVT is transferred to the 3D planning software.

B. BY SUPERIMPOSING OPTICAL AND RADIOLOGICAL SCANS

By means of selected reference points, the surface data of the wax-up/set-up scan, the scan of the real oral situation or a virtual tooth configuration can be overlaid with the volume data of the x-ray tomography. Both methods allow implant planning to be carried out according to anatomical, surgical and prosthetic requirements.

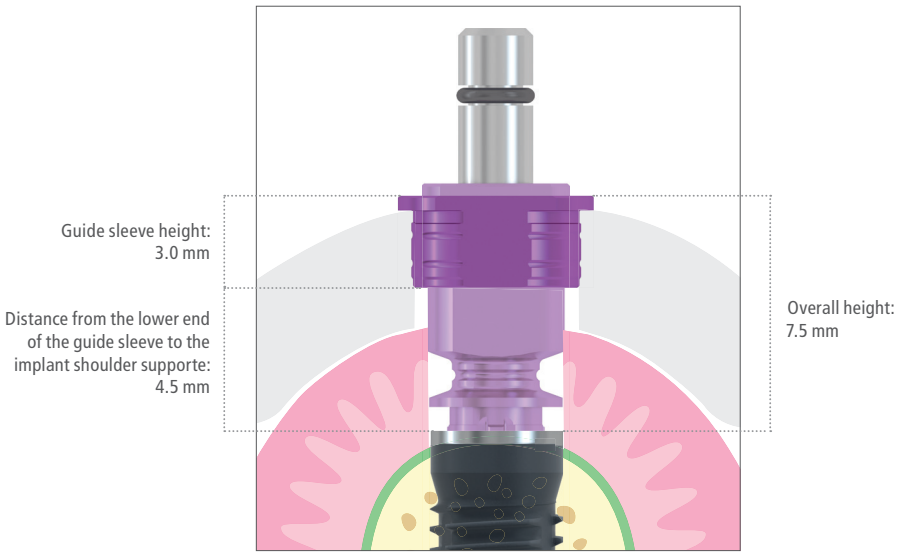
Once planning of the implant positions in the 3D software is complete, the data is available for positioning and alignment of the guiding sleeves in the drilling template.

WARNING:

During planning, the surgeon must maintain an appropriate safety margin from teeth and vital structures. Maintain a safety margin of 1.5 mm from the mandibular nerve or inferior alveolar nerve. Otherwise permanent injury may be caused to nerves or other vital structures. Implant diameters and lengths must be sized to leave adequate bone (at least 1.0mm exists around the implant). Maintain a minimum distance of 1.5 mm to an adjacent natural tooth and 3.0 mm to an adjacent implant.

The dimensions to be considered in the planning software (if not yet implemented by the manufacturer of the software):
The total height (vertical distance from the implant shoulder to the upper rim of the guiding sleeve) is 7.5 mm. A guiding sleeve height of 3 mm allows a maximal gingival thickness of 4.5 mm.
The total height must not be altered otherwise there is a risk of incorrect drilling depth and implant positioning!

If planning shows that the basal rim of the guiding sleeve lies in the soft tissue, then the gingiva is to be folded out until correct intraoperative positioning of the template is ensured.



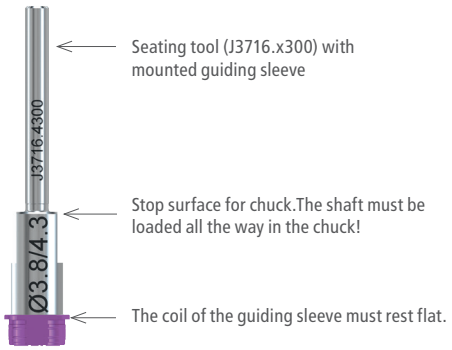
APPLICATION

DRILLING TEMPLATE DESIGN AND FABRICATION

PREPARING THE TEMPLATE AND DEPTH REFERENCING

To convert the x-ray template into a drilling template for the region of the implant positions, the teeth of the x-ray template are ground down.

When grinding, care should be taken to ensure that adequate stability of the template is maintained so as to prevent breakage during subsequent laboratory and surgical use (potential warping of the template).



After checking the safety marks, the depth stop settings for the depth of the guiding sleeve are to be made on the positioner. For that, the Guide System seating tool with a mounted guiding sleeve is inserted into the milling spindle.

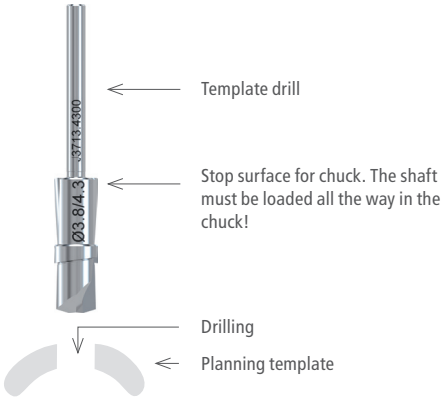
The depth stop of the positioner is readjusted by mounting the guiding sleeve **between the burlings** of the test piece (see also positioner instruction manual), whereby the guiding sleeve has to sit on the coil of the seating tool. The seating tool itself must not lie on the test piece.

WARNING:
In order to ensure reproducible seating depth of the guiding sleeves, the seating tool must be loaded with its complete shaft length up to the stop in the milling spindle chuck.

After setting the depth stop, the seating tool is replaced by the Guide System template drill.

WARNING
In order to ensure the correct seating depth of the guiding sleeves, the template drill must be loaded with its complete shaft length up to the stop in the milling spindle chuck.

The length of the template drill already matches the length of the seating tool, so that the depth stop does not have to be readjusted on the positioner.



APPLICATION

DRILLING OUT THE TEMPLATE AND INSERTING THE SLEEVES

The hole for the guiding sleeve can now be drilled according to the positioner settings specified by the planning software and documented in the drilling plan/print protocol.

After drilling in the template is complete, the template drill is replaced with the seating tool. Here, care should be taken to ensure that the seating tool is loaded up to the stop.

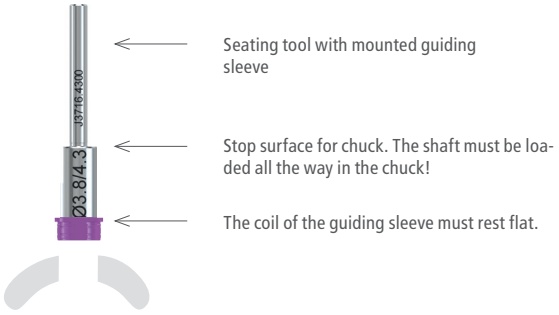
The Guide System guiding sleeve that matches the implant diameter is mounted onto the seating tool.

NOTE

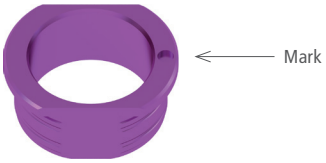
To prevent overheating possibly associated deformation of the drill hole, we recommend predrilling with a twist drill, max. Ø 4.0 mm for implant diameter 3.3 mm and max. Ø 5.0 mm for implant diameter 3.8 mm and 4.3 mm. Drilling in plastic should be performed intermittently and under cooling with compressed air!

IMPORTANT NOTE

In order to ensure the correct setting depth of the guiding sleeves, the template drill must be loaded with its complete shaft length up to the stop in the milling spindle chuck.



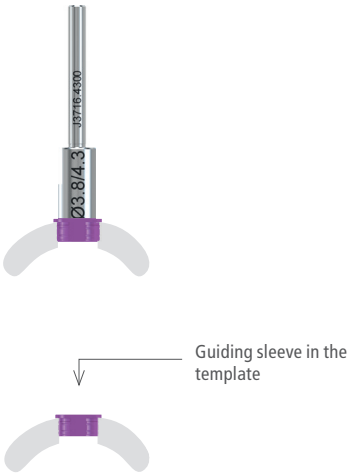
If the 3D plan specifies the orientation of the grooves, e.g. due to the planned use of angled abutments, the mark on the sleeve is to be turned to the position of a groove. If there are no specifications, vestibular orientation of the mark is recommended.



The seating tool with mounted guiding sleeve is to be lowered to the depth stop of the positioner. In this position the guiding sleeve is to be bonded or to be attached with plastic (light-curing).

IMPORTANT NOTE
Before bonding/embedding the guiding sleeve, it must be ensured that the depth stop of the positioner is reached. Further information on using the respective positioner is available from the manufacturer.

In addition, observe the manufacturer›s instructions of the positioning system used.



APPLICATION

FABRICATING A TEMPORARY RESTORATION

The finished drilling template can be used to craft a long-term temporary restoration in the laboratory for the partially or fully edentulous jaw before the actual implantation is performed. Guide System insertion posts for integrating implant analogs in the working model are available, separately.

Drilling the holes for the implant analogs

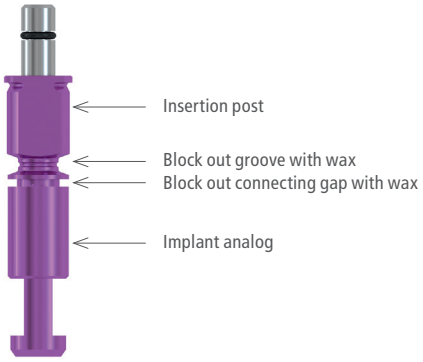
The finished drilling template with the guiding sleeves is placed on the working model or snapped to the analogs of the temporary implants in the model to mark the future implant positions on the model through the guiding sleeves. The template is then removed to grind the required cavities for placing the implant analogs of sufficient size, taking into account the implant axes in the plaster. In this way the guiding sleeves are not damaged by rotary instruments.

NOTE
For easier mounting of the implant analogs, it is recommended that the relevant implant positions should be drilled through the model so that a suitable material (e.g., plaster, epoxy etc.) can be poured in from below later on. Lateral retention in the holes serves as a rotation securing device for the material introduced.

Mounting the implant analogs

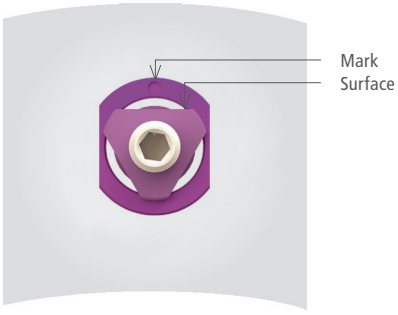
Before mounting, the implant analogs are attached to the corresponding insertion posts, and both the connection gap and the groove on the insertion post above being blocked out with wax.

The implant analogs are inserted in the guiding sleeves of the template. Here, care must be taken to ensure that the orientation fits the position of the mark on the top of the guiding sleeve. The orientation of the groove is identical to the position of the surfaces on the insertion post.
The mark on the top of the guiding sleeve and the surface of the insertion post must therefore meet up directly (see graphic).



IMPORTANT NOTE
The shoulders of the insertion posts must lie on the top of the guiding sleeves. Only then is the exact final position achieved!

To ensure the correct position of the insertion posts, a sufficient quantity of wax is used to mount the insertion posts fitted in the exact position in the template. The drilling template is placed on the working model or snapped into position on the analogs of the temporary implants. The implant analogs may not come into contact with the walls of the drill holes in the model.



Template with insertion post, occlusal view

The implant analogs are then mounted in the model and the material (e.g., plaster, epoxy, etc.) preferably flows from the underside of the model into the drill hole.

After the material has cured, the template is removed from the model by loosening the mounted insertion posts. Any residual wax on the coronal margin of the implant analogs is removed.

Fabricating the temporary restoration

The long-term temporary restoration can then be fabricated on the working model using, for example, bar components (Passive-Fit) or the temporary abutment as an esthetic, non-functional bridge restoration.

To guarantee a tension-free seating, a temporary reconstruction must be bonded in the mouth to the bar bases or the temporary abutment (Passive-Fit). For stability reasons, the implants should be splinted together with a temporary restoration.

Temporary single tooth restorations can be fabricated on the temporary abutment in the conventional manner.
Alternatively, temporary restorations can be fabricated using CAD/CAM techniques.

APPLICATION

PREPARING THE IMPLANT BED

The diagnostic documentation and the previously prepared cleaned and disinfected drilling templates must be made available for surgical intervention.
Preparation of the implant bed is identical for CAMLOG® and CONELOG® implants. This means that the same instruments and the same drill protocol are used.

Inserting the template and flap preparation

The cleaned, disinfected and if possible sterilized drilling template is placed in the mouth and checked for proper seating. In the edentulous or inadequately dentulous jaw, it is mounted to the previously placed temporary implants to ensure a stable seat. If the jaw is sufficiently partially edentulous, it can be supported on the residual teeth.

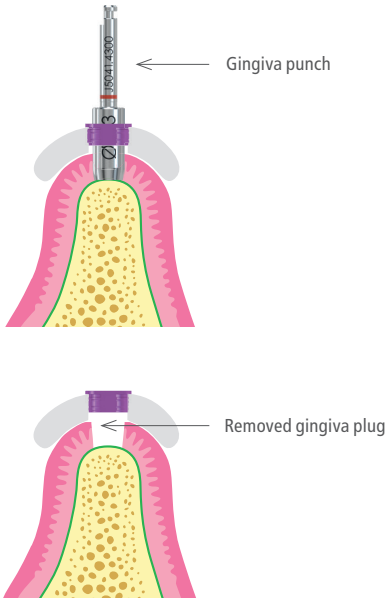
Creation of a gingival flap improves the visibility of the surgical field. Opening is necessary if the planning shows that a guiding sleeve of the drilling template will be positioned in soft tissue.

If the gingiva is open, the flap should not hinder correct positioning of the template.

Gingiva punching (optional)

As an alternative to conventional flap preparation of the gingiva, the Guide System gingiva punch can be inserted into the guiding sleeve and the gingiva pierced and removed at the implant position. **15 rpm** should not be exceeded if rotating application is used.

To prevent connective tissue encapsulation in the implant bed, any remaining gingiva must be removed from the drilling area and the marginal gingiva mobilized, if necessary.



General information on pilot, pre- and form drilling

- To avoid abrasion of the guide sleeves with drill cutting edges, the drill should not be set in rotation until its cylindrical guide shaft is incontact with inner surface of the guide sleeve.
- The pilot drill, pre-drill and form drill are used with an intermittent technique, i.e. drill the bone for two to three seconds and then with draw the drill upwards from the bone without stopping the hand motor. Repeat this procedure until the desired depth is reached.
- Drilling must be carried out with adequate cooling using pre-chilled (5° C) sterile physiological saline solution. The drills are used in ascending lengths.

Maximum permitted drill speed:	
Guide System pilot drill Ø 2.0 mm	800 rpm
Guide System pre-drill and form drill Ø 3.3 mm	550 rpm
Guide System pre-drill and form drill Ø 3.8 mm	500 rpm
Guide System pre-drill and form drill Ø 4.3 mm	400 rpm
Guide System form drill, cortical bone Ø 3.3/3.8/4.3 mm	300 rpm

APPLICATION

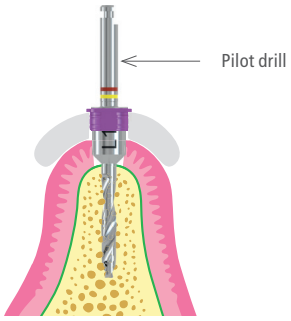
Pilot drilling (optional)

A. For bone condensation in weak bone

If bone density is insufficient at the implant site, a pilot drill hole can be set of 2.0 mm in diameter. This drill hole is laterally extended with osteotomes, the surrounding bone being compressed. The compression ensures increased primary stability of the implant.

B. For improved guidance in BICORTICAL IMPLANTATION/IMMEDIATE IMPLANTATION

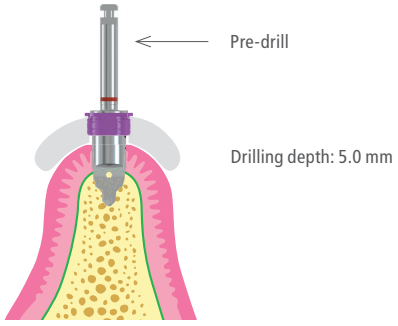
In the case of a bicortical implant fixation or immediate implantation, the pilot drill hole can prevent the form drill from slipping off when it makes contact with the apical cortex or alveolar wall. The pilot drill hole therefore provides additional guidance for the form drill. The pilot drill hole is drilled in ascending length (5, 7* respectively 9, 11, 13 and 16 mm) up to the desired implant length.



Pre-drilling

Drilling into the cortex is carried out using an internal irrigation Guide System pre-drill. This clearly defines the drill and implant axis insofar as no pilot drill hole has been made.

*7 mm only with CONELOG® SCREW-LINE implants with a diameter of 3.8 mm and 4.3 mm



Form drilling

After pre-drilling, the implant bed is prepared up to the planned implant length in ascending drill length (7* respectively 9, 11, 13, 16 mm) using the internal irrigation Guide System form drills.

*only with CONELOG® SCREW-LINE implants with a diameter of 3.8 mm and 4.3 mm

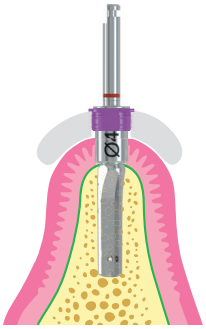
Length
7 mm | 9 mm | 11 mm | 13 mm | 16 mm

Internally irrigated Guide System form drills

Drilling sequence in ascending length to the borehole extension up to the defined implant length.

APPLICATION

Form drill SCREW-LINE, Cortical bone (optional)
If during implant bed preparation it is shown that mainly cortical bone (bone qualities 1* and 2*) is present, the apical portion of the implant bed can be widened using the form drill SCREW-LINE, cortical bone (see "Product overview"). This has the effect of reducing the insertion torque of the implant.



Prior to implant insertion the implant bed has to be rinsed with sterile physiological saline solution to remove titanium chips (generated through contact of the drill cutting edge with the guiding sleeve).

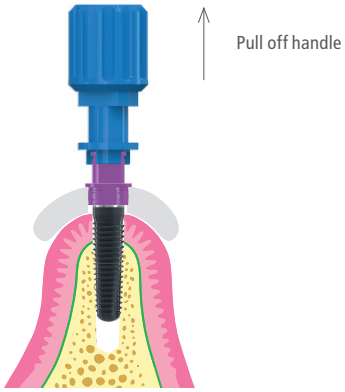
*see [A] in section «Further documentation», page 32

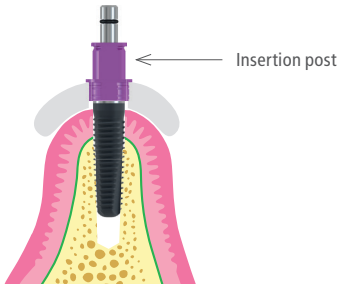
IMPLANTATION

The Guide System CAMLOG® and CONELOG® SCREW-LINE Implants, Promote® plus are supplied in sterile condition including cover screw and mounted insertion post and are fixed with a handle in their primary package (blister). The primary package of the implant is opened and the implant is removed from the package by its handle only.

The primary package of the implants contains a label with the lot number, which must be recorded in the patient's documentation. This makes it possible to trace each implant if needed.

CAUTION
The silicone plug and cover screw must be removed from the handle prior to implant insertion.



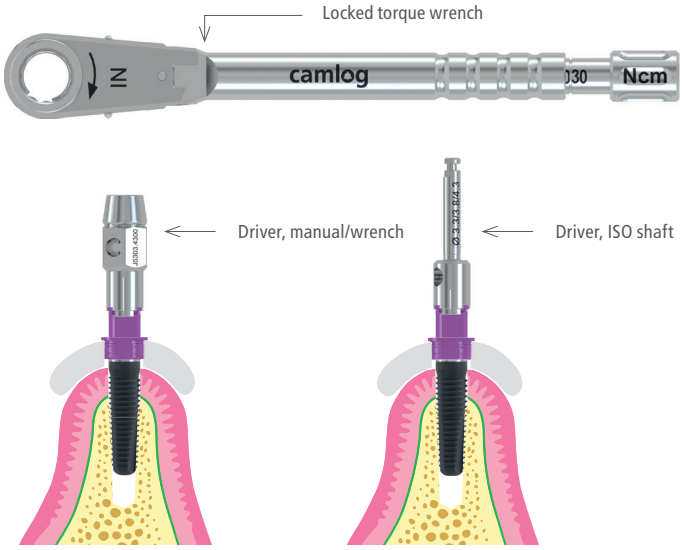


The further worksteps include:

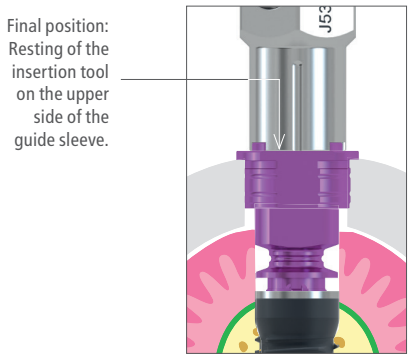
- Holding the implant by the blue handle, it is inserted through the guide sleeve of the drilling template into the implant bed.
- Screw the implant in with the handle up to its first stabilization.
- Pull handle from the implant.

APPLICATION

The Guide System driver, manual/wrench or Guide System driver with ISO shaft is inserted up to the stop on the insertion post. After this, the **locked torque wrench or angled hand piece with torque limiter** is placed on the driver. The implant is then screwed into final position in the bone.

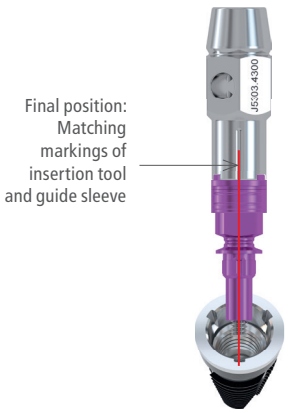


IMPORTANT NOTE
The implant has reached the planned vertical end position when the shoulder of the insertion post rests on the top of the guide sleeve. After reaching the final position, the implant may not be rotated further in the template as this can lead to loss of primary stability.



After the vertical end position has been reached, a longitudinal mark on the insertion tool (position corresponds to the position of the grooves in the internal configuration of the implant) should be oriented in vestibularly or - if the orientation is defined by the preoperatively fabricated interim prosthesis, in the direction of the mark on the top of the sleeve.

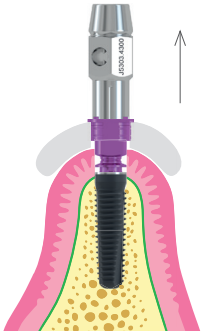
If this is not the case, then fine adjustment is required.

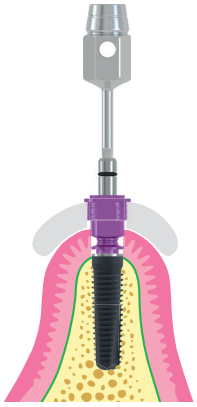


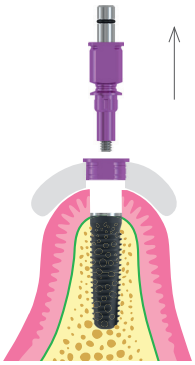
Fine adjustment of the implant position
The implant position can **only be finely adjusted when the templated has been removed**. For this purpose, the insertion post and the template must be removed. After that, reinsert and tighten the insertion post, attach the insertion tool incl. torque wrench and correct the groove position.

Removal of insertion post and template

Pull the torque wrench or angled hand piece and the driver off the insertion post, use the screwdriver, hex, to loosen the insertion post fixing screw and extract the insertion post.





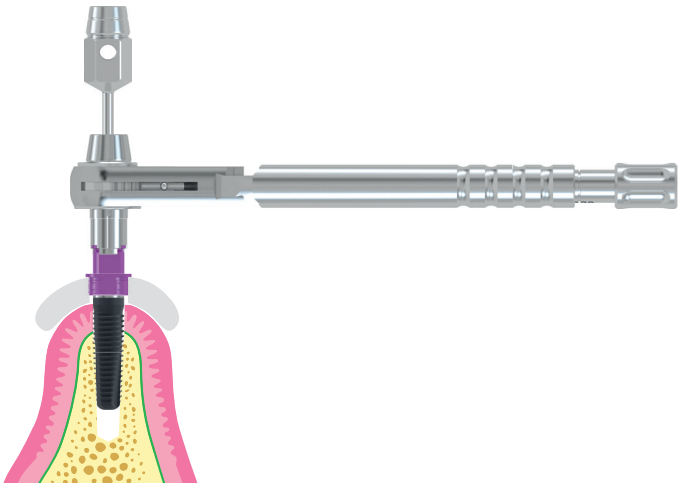


NOTE

In case of soft bone conditions (e.g. 3* and 4*), the insertion post should be fixed with the driver before loosening the fixing screw with the screwdriver, hex, long, manual/wrench.

For that purpose, the screwdriver is inserted into the fixing screw from above through the driver.

The drilling template can now be removed.



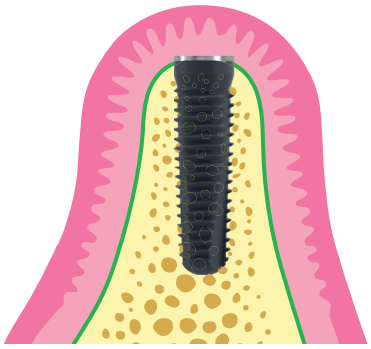
* see [A] in section «Further documentation», page 32

APPLICATION

Healing options

The healing options for Guide System CAMLOG® and CONELOG® SCREW-LINE Implants, Promote® plus are as follows:

- subgingival healing with cover screw
- transgingival healing with healing cap
- transgingival healing with a long-term temporary restoration as immediate restoration



In the case of a subgingival implantation, a healing cap for soft-tissue conditioning must be screwed into the implant three weeks before impression-taking.

Clean the inner configuration of the implant for restoring the implant. Depending on the planning, the implant will be supplied for the healing phase with a cover screw or a healing cap. A long-term temporary restoration can also be used as needed.

The healing cap enables transgingival healing (one-time). The healing cap must match the implant diameter and the thickness of the gingiva. Confirm complete seating of the healing cap. In particular, ensure that no tissue is pinched between the implant shoulder and healing cap. The mucosa must fit tightly against the healing cap.

When preparing a flap, the wound margins are closed tightly with the appropriate suture material. Do not tie the sutures too tightly. They must placed in such a way that the wound margins are free of tension above the cover screw or around the healing cap or provisional restoration.

TEMPORARY RESTORATION

Fabrication of the temporary restoration, see page 18.

SUPPORT ON TEMPORARY IMPLANTS

A temporary prosthetic restoration may be inserted only after ensuring that no mechanical friction occurs against the final implant or against the suture.

IMMEDIATE RESTORATION/IMMEDIATE LOADING

To guarantee a tension-free seating, a temporary reconstruction must be bonded in the mouth to the bar bases or the temporary abutment (Passive-Fit). For stability reasons, the implants should always be firmly splinted together with a temporary restoration.

NOTE

- If the residual teeth are inadequate, support the temporary restoration on the temporary implants.
- The temporary abutments made of PEEK may not remain in situ for longer than a maximum of 180 days.

HEALING PHASE

The healing phase should last at least 6 weeks in good bone quality and 12 weeks in cancellous bone quality. These times apply to both maxilla and mandible.

FINAL PROSTHETIC RESTORATION

The final prosthetic restoration of the implant should be performed only after the soft tissue has healed completely and is not inflamed. Beforestarting the prosthetic restoration, radiographs should be taken after 6–12 weeks of healing.

Depending on the situation, the final prosthetic restoration is completed with the diameter-specific prosthetic system components of the CAMLOG® or CONELOG® Implant system, or with individually fabricated DEDICAM® prosthetics for fixed superstructures such as crowns and bridges, or hybrid restorations.

Impression taking can be carried out conventionally using the open or closed method, or else by scanning the oral situation.

FURTHER DOCUMENTATION

Further information about products is available in the following documentations:

- CAMLOG® and CONELOG® product catalog
- Work instructons
- Instruction manuals
- Preparation instructions
- CAMLOG® literature overview
- CAMLOG and science

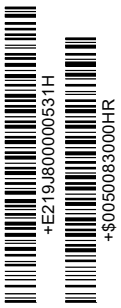
[A] Bone quality as documented in Lekholm U, Zarb GA. «Patient selection and preparation», In: Branemark PI, Zarb GA, Albrektsson T, editors. «Tissue-integrated prostheses- Osseointegration in Clinical Dentistry», Chicago: Quintessence Publishing Co 1985; p. 199-209.

The documents, with the exception of [A], are available from the local CAMLOG representative.

See also:

https://ifu.camlog.com
www.camlog.com

Art. No. J8000.0107 Rev.05 06/2018



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