

# EL

ESTHETIC LINE Implant





## ESTHETIC LINE implant

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All of the materials produced by C-TECH follow a validated procedure, which includes surface treatment and packing as well, in conformity with European and international directives EN ISO 13485, 93/42/EEC and MDR 2017/745 relative to medical devices.



## **OUR HISTORY**

Emilia-Romagna, 1964.

The history of C-Tech begins in this Italian region that, over the years, has become globally known thanks to the work and creativity of its industries and its people.

Our origins started exactly there, with a precision machining workshop. At the beginning, we produced high precision parts for the automotive, aeronautical and the medical device industries. Then, due to our experience in producing orthopedic implants, in 1966 we received our very first order for a dental implant.

Following the increasing success of our products, we specialized in the production, treatment, packaging and certification of dental implants for other companies. Our vast expertise in the design, production and certification of implants finally resulted in the creation of our own brand in 2010.

Since then, we quickly expanded and our production facilities are now completely dedicated to satisfying our growing market demands.

Currently C-Tech offers 4 different implant lines, its own CAD/CAM milling center, as well as guided surgery planning services.









## WHO IS C-TECH TODAY

We are an Italian company based in San Pietro in Casale, a town in the metropolitan area of Bologna. This area, as well as the entire Emilia-Romagna region, represents a territory long known in Europe for its tradition and know-how in the production of high precision mechanical components.

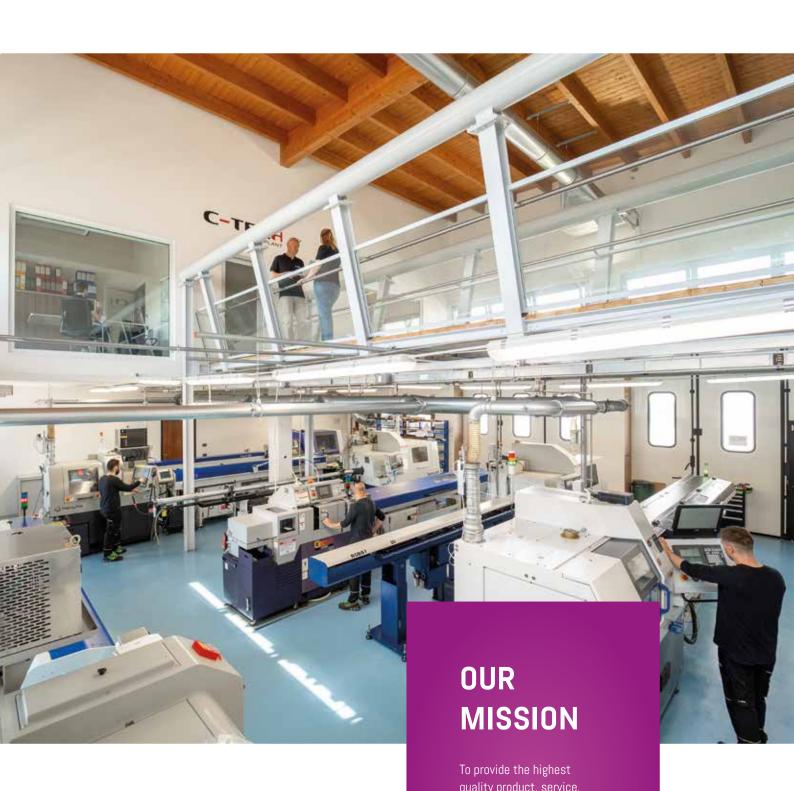
Our production facilities are among the finest in Europe and we use our expertise in implant design to make the best and most up to date implant systems and implant-based services. In addition to in house production, our facilities include a guided surgery planning, a milling centre and a training centre.

To back up our designs, we carry our research and long-term studies in the leading universities in Europe, while regularly publishing articles and studies on our products.

With our main markets consisting of Italy, Germany and China, we are certified and export our products to over 34 countries.

We also provide educational and training opportunities on a regular basis, both in our headquarters and abroad. This important service aims to address a critical aspect of dental and medical products: the required education to correctly use them.

For this reason, our training activities aim to help professionals in reaching their full potential, while providing the patient the highest level of care.



education and dental implantology solutions to the world's dental practitioners.

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## EL implant characteristics

#### Bevelled shoulder

- Facilitates bone growth above the shoulder
- Long term implant stability
- Biological repartition of the forces in cortical bone

#### Micro grooving

- Softens forces to the cortical bone during insertion
- Facilitates cortical bone maintenance

#### Triple acid etched surface topography

- Best surface for osseointegration and bone to implant contact

#### Aggressive apical design

- Ideal for immediate implant placement
- Guarantees primary stability

#### Rounded apex

 Promotes the protection of the sinus floor, nerve canal and other important anatomical structures during insertion

#### Subcrestal seating

- Hinders exposure of the implant through bone resorption
- Ideal for the esthetic zone
- Long term esthetic stability

#### Three different threading profiles

- Thread designs adapted to different bone structures that occur along the lenght of the implant
- Enhanced surface area
- Round but cutting apex design

#### Double lead thread

- Insertion rate of 2 mm per rotation
- Guarantees primary stability
- Increased bone to implant contact
- Faster and even insertion while protecting bone structure

#### Thread in thread / groove in groove

- Increased bone to implant contact

#### Concave esthetic concept

- Non surgical thickening of the peri-implantary tissue
- Facilitates the papilla reconstruction technique

#### Platform switching

- Reduces bone loss
- Better representation of the biological width
- Promotes long term esthetic stability

#### One connection for all 4 diameters

- Simplifies the system
- Reduces inventory
- Ease of use

#### Cold weld seal

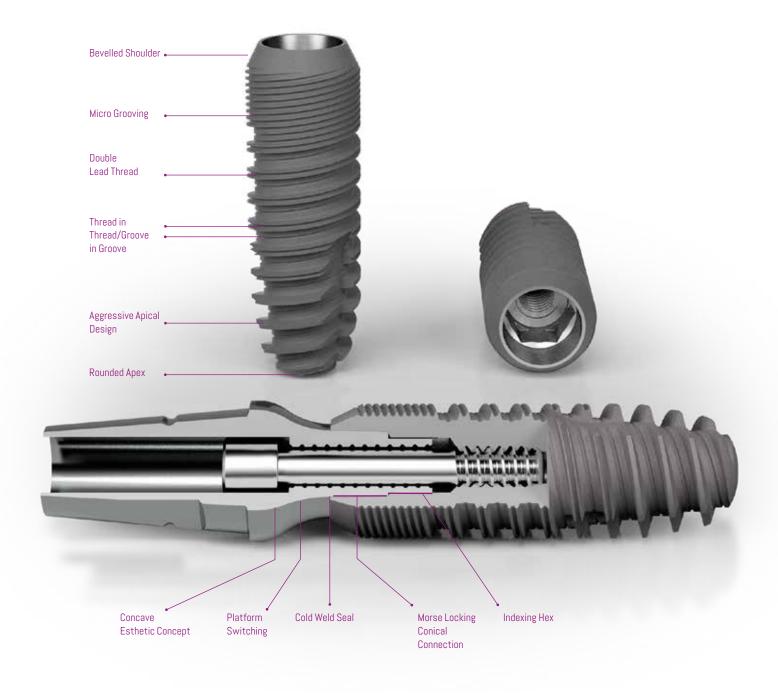
 Prevents bacterial infiltration of the implant/prosthetic connection and consequent bone loss

#### Morse locking conical connection

- Eliminates micro-movements
- Reduces the risk of screw loosening

#### Indexing hex

- Provides antirotational security



## Purity and precision

#### Material purity and surface treatment

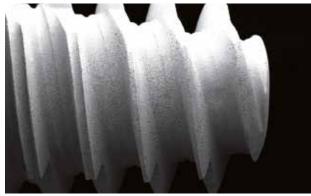
Material purity starts with the acquisition of raw material from only the most reliable sources of which each lot is accompanied by its own material certificate and is completely traceable at all phases of production and later use. The production facility in which all the implants and components are made is owned and operated by C-TECH and is certified to the highest standards governing the production of dental/ medical devices. To maintain these standards, regular and independent audits are performed by the German auditor, TUV Süd. All up to date certificates are available for download on the company's website.

The machining of the EL implant is an intricate process due to the precision required for the Morse conical connection and the exterior complexity of the implant. This intricacy requires double the machining time that would be necessary for that of an average implant.

Throughout and following each step of the production process, the implants are thoroughly cleaned in 5 seperate cleaning stages, consisting of a total of 20 cleaning cycles. This attention to cleanliness is in order to assure that no risk of any production residue is remaining on the implant surface.

The surface topography is created through a patented acid etching process. The adjacent photos made with a scanning electron microscope (SEM) demonstrate the lack of impurities on the implant surface as well as the abundant surface area created through the patented acidification process.

The purity of the grade 4 titanium used for the EL implant and the surface topology were independently verified through an investigation carried out with a scanning electron microscope (SEM) by the University of Cologne and Medical Material Research Center of Berlin, Germany. The investigation demonstrated the highest level of purity and cleanliness resulting in the award of the BDIZ quality seal. This investigation is avaliable in its long form on the C-TECH website.



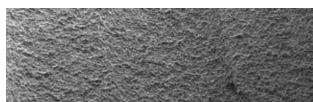
Magnification images 50x

200µm ⊢



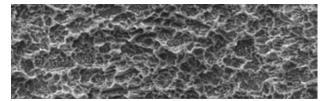
Magnification images 200x

100µm ⊢



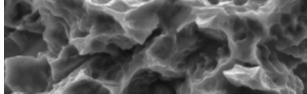
Magnification images 500x

20µm ⊢



Magnification images 3000x

10µm ⊢



Magnification images 20000x

## Precision components

The successful achievement of a Morse lock and cold weld seal in the implant-prosthetic connection depends on high precision machining. A perfect Morse connection will result in a structural integrity and strength that will be as if the 2 parts were fused together and thus will practically eliminate the gap between the implant and the abutment. Accordingly, the C-TECH components are machined to a tolerance of within 10 microns.

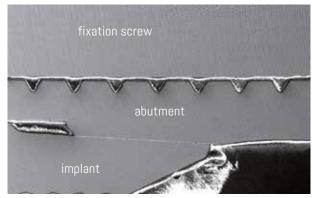
This mechanical fusion of the prosthetic part and the implant has 2 important benefits: prevention of the bacterial colonization of the gap, which can lead to bone loss around the implant; the elimination of micro-movements between the implant and abutment and the consequent screw loosening which can lead to prosthetic failure.

The SEM photos on the right show different magnifications of the tight abutment and implant connection. The final photo at the bottom, at 1000 X magnification, shows a fine line where the abutment and the implant meet. This practically nonexistent gap is less than the 1,5 microns.



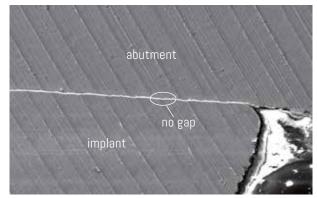
Magnification images 50x

200µm H



Magnification images 100x

100µm ⊢

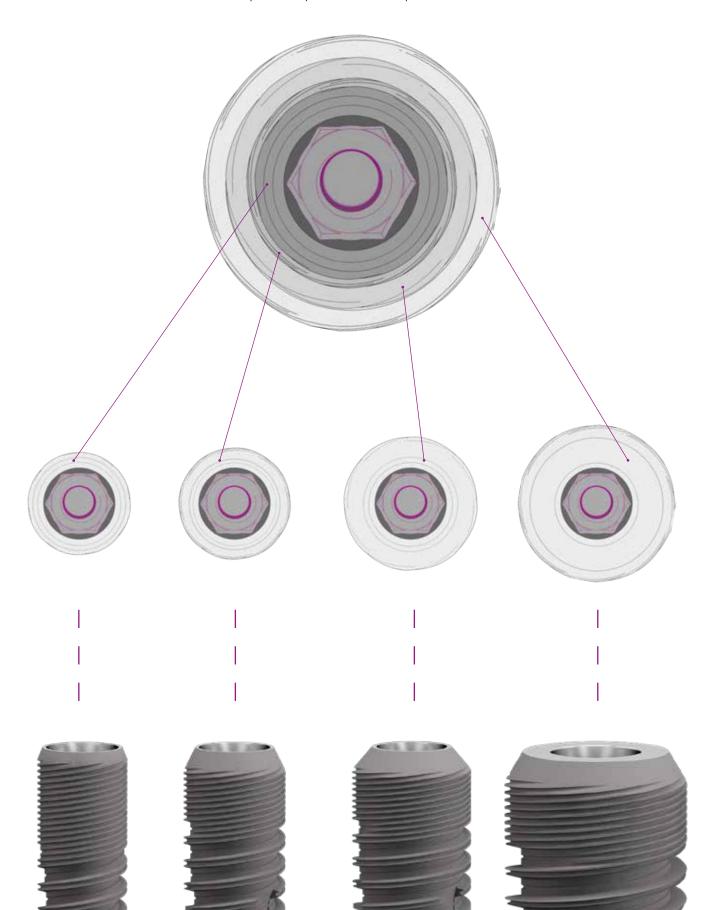


Magnification images 1000x

10µm ⊢

## One connection

Same prosthetic platform for all 4 implant diameters



## C-Tech abutment extraction

#### 3 possible solutions:

- Manual (Short and Long)
- Combined (Screw + Screwdriver)

#### Screwing/tightening process

Screw on the crown and tighten to 25 Ncm.

#### Unscrewing process

Unscrew the internal screw using the manual or ratchet driver.

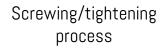
Remove the prosthetic screw.

#### Extraction

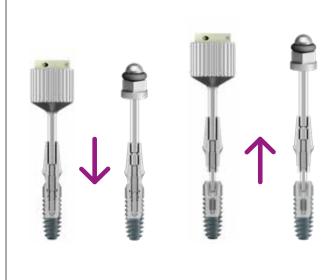
Insert the manual extractor in place of the removed internal screw and turn clockwise until the abutment/base comes out of of the implant.







Unscrewing process

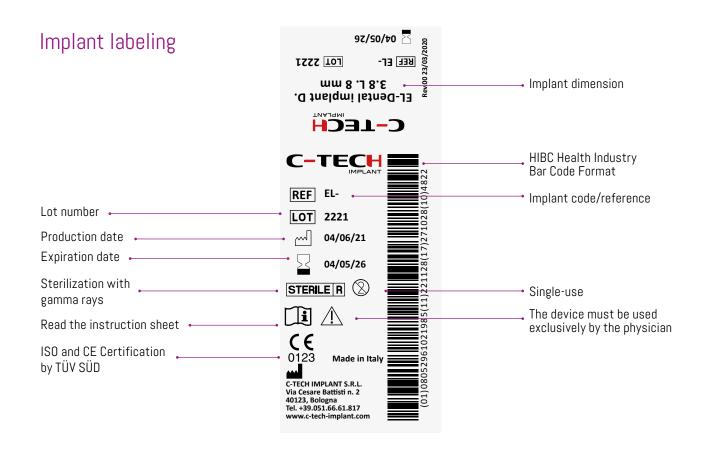


Extraction

## Implant packaging

To ensure the highest level of security, our implants are placed into a double vial inside an airtight blister pack. Within the vials the implant is maintained upright by a titanium ring and supported at the implant apex by the titanium cover screw.





# Implant vial protocol











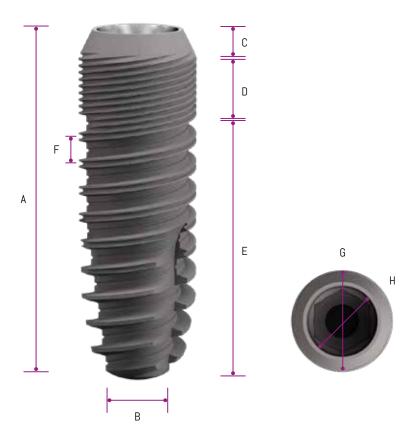








## Dental Implants



## EL implant ø3.8

G	3.8	3.8	3.8	3.8	3.8
Α	8	9	11	13	15
В	1.75	1.55	1.55	1.55	1.55
С	0.5	0.5	0.5	0.5	0.5
D	3.3	3.3	4.0	4.0	4.0
Е	4.2	5.2	6.5	8.5	10.5
F	1.0	1.0	1.0	1.0	1.0
Н	3	3	3	3	3

Material: titanium grade 4



# ESTHETIC LINE implant

#### EL implant ø4.3

G	4.3	4.3	4.3	4.3	4.3
A	7	9	11	13	15
В	2.1	2.1	2.1	2.1	2.1
С	1	1	1	1	1
D	1	2.3	2.3	2.3	2.3
Е	5	5.7	7.7	9.7	11.7
F	1.0	1.0	1.0	1.0	1.0
Н	3	3	3	3	3

Material: titanium grade 4



#### EL implant ø5.1

G	5.1	5.1	5.1	5.1	5.1
Α	7	9	11	13	15
В	3.0	3.0	3.0	3.0	3.0
С	1	1	1	1	1
D	1	2.3	2.3	2.3	2.3
Е	5	5.7	7.7	9.7	11.7
F	1.0	1.0	1.0	1.0	1.0
Н	3	3	3	3	3

Material: titanium grade 4



#### EL implant ø6

G	6.0	6.0	6.0
Α	7	8	10
В	2.3	2.5	2.5
С	1	1	1
D	1	2.0	2.0
Е	5	5	7
F	F 1.0		1.0
Н	3	3	3

Material: titanium grade 4



EL-6007 E

EL-6008 8 mm EL-6010 10 mm

## Titanium healing abutments

#### Cover screws

Н	L	D	#
1.8	5.5		BL-4305
2.8	6.5		BL-4305/1
3.8	7.5	3	BL-4305/2
4.8	8.5		BL-4305/3

#### TIGHTENING: with torque ratchet 10 Ncm

Material: titanium grade 5

#### EL CEC titanium healing abutments ø4.5

D	L Fixture	С	#
	3	2	EL-4502HT
4.45	4	3	EL-4503HT
4.45	5	4	EL-4504HT
	7	6	EL-4506HT

TIGHTENING: with torque ratchet 10 Ncm

Material: titanium grade 5

# BL-4305 BL-4305/1 BL-4305/2 BL-4305/3

EL-4502HT EL-4503HT EL-4506HT h2 h3 h4 h6

#### EL CEC titanium healing abutments ø5.5

	D	L Fixture	С	#
ľ		3	2	EL-5502HT
	F 4F	4	3	EL-5503HT
	5.45	5	4	EL-5504HT
		7	6	EL-5506HT

TIGHTENING: with torque ratchet 10 Ncm

Material: titanium grade 5



## Straight Protruding Cover Screws

The EL implant, with its subcrestal placement, favors the growth of bone over the platform and even over the standard cover screw which is flush with the top of the implant. C-TECH thus offers a choice of protruding cover screws which hinder bone growth over the screw top and thus facilitates finding a deeply set implant and consequent removal of the cover screw.



Protruding Cover Screw



Standard/Flush Cover Screw

## PEEK healing abutments

## EL CEC PEEK healing abutments Ø4.5 Include prosthetic screw

D	L Fixture	С	#
4.45	3	2.5	EL-4502H
4.45	3.5	3	EL-4503H
4.55	4.5	4	EL-4504H
4.55	6.5	6	EL-4506H

EL-4506H\* EL-4502H EL-4503H EL-4504H\* h2 h3 h4 h6

TIGHTENING: with torque ratchet 10 Ncm

Material: PEEK

#### EL CEC PEEK healing abutments ø5.5 Include prosthetic screw

D	L Fixture	С	#
	3	2.5	EL-5502H
- ·-	3.5	3	EL-5503H
5.45	4.5	4	EL-5504H
	6.5	6	EL-5506H



h4

h6

h3

h2

TIGHTENING: with torque ratchet 10 Ncm

Material: PEEK

Please Note: the extractor screw (BL-6060 or BL-6061) is required to remove the PEEK healing abutment from the implant.

\*Uses the long screw EL-5052HXL

CEC = Concave Esthetic Concept

## Open tray impression transfers

#### Open tray impression post Includes BL-5050L

L1	L2	D	С	#
11.6	-	4.5	5.55	EL-4544L
12.3	-	4.5	4.3	EL-4544S
10	25.7	3	-	BL-5050L
6	21.7	3	-	BL-5050S

BL-5050S BL-5050L EL-4544S EL-4544L Short

Material: Titanium grade 5

Long

#### Analog

L	D
11.5	4

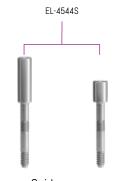
Material: Titanium grade 5

BL-5143

## Open tray transfer



## Open tray impression post



Guide screw

For open tray impression post

BL-5050L Long BL-5050S Short

#### Intended use

Open tray impression technique.

#### Characteristics

- Slender emergence profile accommodates space limitations.
- Guide screw can be tightened either by hand or with the prosthetic driver.
- High precision impression components give an exact replica of the intraoral situation.
- Clear-cut tactile response from the prosthetic connection verifies proper seating of components.

#### Note

Open tray impression procedure requires a custom-made tray with perforations. Impression posts are intended for single use only to ensure optimal fit and precise impression taking for each patient.

#### STFP 1

Place the impression post accurately into the implant and hand-tighten the guide screw.

#### STEP 2

Make perforations in the custom-made impression tray (light cured resin) according to the individual situation so that the positioning screw of the impression post sticks out.

#### STEP 3

Take the impression using an elastomeric impression material (polyvinyl siloxane or polyether rubber).

#### STEP 4

Reposition and fix the analog in the impression using the screw.

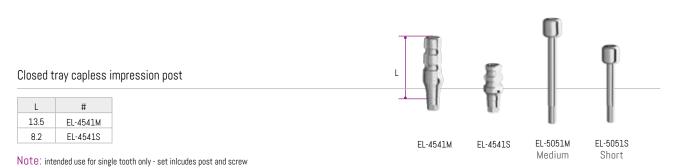




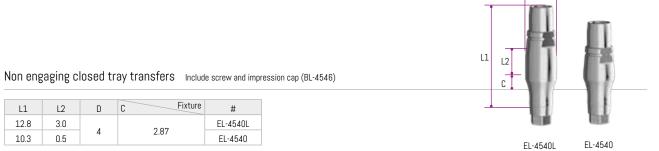




## Closed tray impression transfers



Material: Titanium grade 5



Short

Material: Titanium grade 5



#### Internal prosthetic screws

L	D	#
8.65	2.47	BL-5052HX
10.8	2.25	EL-5052HXL

#### TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5



lenghts 4 and 6 mm

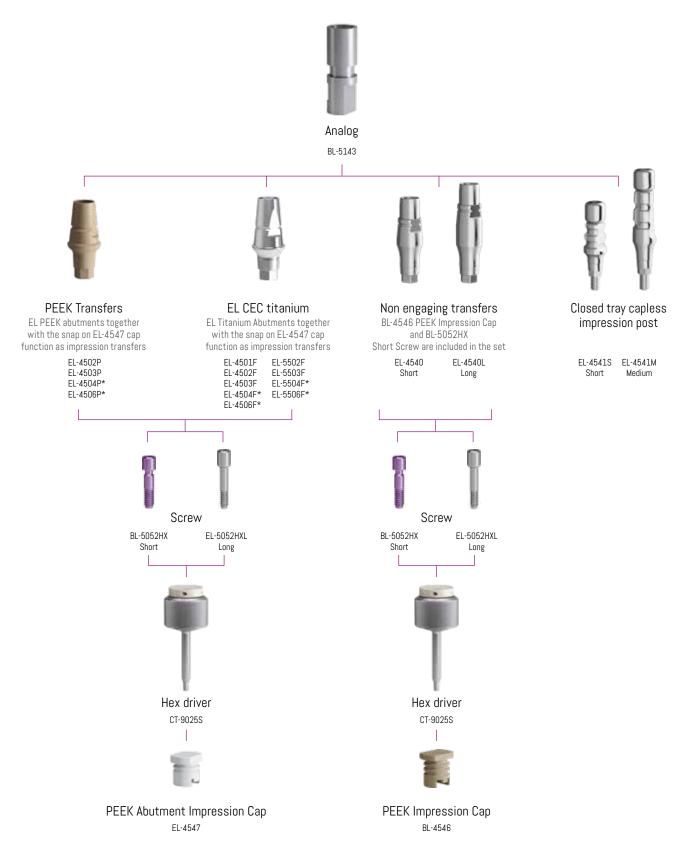
#### PEEK Impression Cap for titanium or PEEK Abutments

L	D
6	6.5

Note: together with the EL-4547 impression cap, the EL temporary PEEK and EL titanium abutments can be used as closed tray impression transfers. Material: PEEK

EL-4547

## Closed tray transfers



<sup>\*</sup> Uses the long screw EL-5052HXL

#### Intended use

Closed tray impression technique.

#### Characteristics

- Slender emergence profile to accommodate space limitations.
- No additional preparation (i.e. perforation) of tray required.
- High precision impression components giving an exact replica of the intraoral situation.
- Clear-cut tactile response from the prosthetic connection verifyng proper seating of components.

#### Note

Impression posts ensure optimal fit and precise impression taking for each patient.

#### STEP 1

Place the impression post accurately into the implant and hand-tighten the prosthetic screw.

#### STEP 2

Push the impression cap on the top of the impression transfer.

#### STEP 3

Take the impression using an elastomeric impression material (polyvinyl siloxane or polyether rubber).

#### STEP 4

Use a standard impression tray.

#### STEP 5

Mount the impression transfer on the analog using the screw (ref. EL-5052HXL - BL-5052HX).

#### STEP 6

Reposition the impression transfer in the tray. Push the impression transfer until you feel that the tip of the transfer is completely and firmly reseated into the impression cap.













## Technical planning abutments

#### $\emptyset$ 4.5 straight planning abutments Include prosthetic screw

L	D	C Fixture	#
	1	EL-401	
		2	EL-402
6	6 4.5	3	EL-403
		4	EL-404
	6	EL-406	

Material: Alluminium



#### $\emptyset$ 5.5 straight planning abutments $\,$ Include prosthetic screw

L	D	C Fixture	#
	7 5.5	2	EL-502
_		3	EL-503
/		4	EL-504
	6	EL-506	

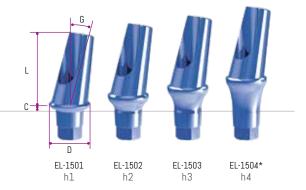
Material: Alluminium



#### 15° angled planning abutments Include prosthetic screw

L	D	C Fixture	G	#
	1		EL-1501	
	2	150	EL-1502	
7./5	7.75 4.5	3	15°	EL-1503
	4		EL-1504	

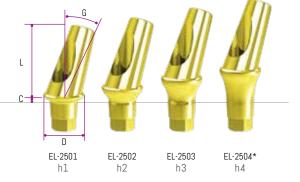
Material: Alluminium



#### 25° angled planning abutments Include prosthetic screw

L	D	C Fixture	G	#
7.6 4.5	1		EL-2501	
	2	0.0	EL-2502	
	3	25°	EL-2503	
	4		EL-2504	

EL-2503 EL-2504 Over angle



Material: Alluminium

Complete set of 17 abutments + screws : Ref PLANKIT01 \*Uses the long screw EL-5052HXL

#### Intended use

Extra-oral planning of prosthetic restoration.

#### Characteristics

- Color-coded planning abutments.
- Comprehensive planning set containing all planning abutments arranged clearly.
- Proper seating of planning abutments verified through the clear-cut response from the prosthetic connection.
- Planning abutments fabricated of sterilizable material.

#### Step 1

Place the planning abutment into the technical lab model situation in order to plan and choose the appropriate titanium abutment in cost effective manner.

#### Step 2

Place the titanium abutment and hand-tighten the screw.

#### Step 3

Prepare the titanium abutment and modify it as required.

#### Step 4

Fabricate the superstructure on the modified abutment using the standard modelling, casting and veneering methods.

#### Step 5

Cast the framework using the standard casting methods.

#### Step 6

Veneer the superstructure.















#### Titanium abutments

#### Intended use

Cement-retained restorations.

#### Characteristics

- Concave esthetic concept (CEC) abutments allow the maintenance of the maximum amount of gingival volume around the abutment. The CEC helps to provide a gingival seal against the bacteria in the oral cavity as well as to promote a natural emergence profile.
- Less grinding necessary due to prepared mucosa margins.
- Adaptation to natural soft tissue contour due to prepared mucosa margins in different heights (H1, H2, H3, H4, H6).
- Reliable.
- Morse locking connection: Abutment and implant are joined together so as to form a single fused unit.
- Extractor system allows easy abutment removal from the implant or the analog.

#### Note

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.

#### EL CEC Titanium ø4.5 abutments Include prosthetic screw

L	D	C Fixture	#
	1	EL-4501F	
		2	EL-4502F
6	6 4.5	3	EL-4503F
	4	EL-4504F	
	6	FL-4506F	

TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5

#### EL CEC Titanium ø5.5 abutments Include prosthetic screw

L	D	C Fixture	#
	7 5.5	2	EL-5502F
-		3	EL-5503F
/		4	EL-5504F
	6	EL-5506F	

TIGHTENING: with torque ratchet 25 Ncm

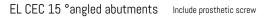
Material: Titanium grade 5

\*Uses the long screw EL-5052HXL





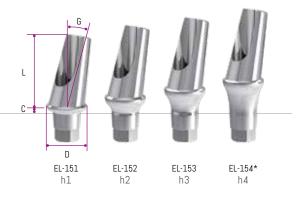
## ESTHETIC LINE implant



L	D	C Fixture	G	#
7.75 4.5	1.1		EL-151	
	2	150	EL-152	
	3	15°	EL-153	
	4		EL-154	



Over and



TIGHTENING: with torque ratchet 25 Ncm

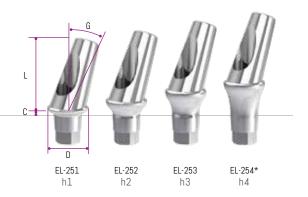
Material: Titanium grade 5

EL CEC 25° angled abutments Include prosthetic screw

L	D	C Fixture	G	#
T.O. 4.5	1.1		EL-251	
	2	0.50	EL-252	
/.b	7.6 4.5	3	25°	EL-253
	4		EL-254	



Over angle



TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5

Castable chrome cobalt base Includes casting cylinder and prosthetic screw BL-5052HX

L	D
8.8	4.2

TIGHTENING: with torque ratchet 25 Ncm

Material: Chrome Cobalt and Plexiglass



EL-6041CC

## Temporary abutments

#### Intended use

Temporary prosthesis

#### Characteristics

#### PEEK ABUTMENTS

- usable as cemented
- different heights from 2 to 6 mm
- non-rotating, for single crowns

#### TITANIUM ABUTMENTS

- ideal for temporary screw-retained single crowns or temporary screw-retained bridges
- rotating and non-rotating
- customizable height based on to the restoration

## Temporary PEEK abutments

#### EL CEC PEEK ø4.5 abutments Include prosthetic screw

L	D	C Fixture	#
5.7		2	EL-4502P
	4.5	3	EL-4503P
	4.5	4	EL-4504P
		6	EL-4506P

TIGHTENING: with torque ratchet 25 Ncm

Material: PEEK

## EL CEC PEEK ø5.5 abutments Include prosthetic screw

L	D	C Fixture	#
		2	EL-5502P
0.77		3	EL-5503P
6.77	5.5	4	EL-5504P
		6	EL-5506P

TIGHTENING: with torque ratchet 25 Ncm

Material: PEEK

Material: PEEK

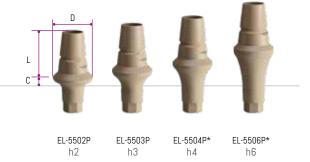
#### PEEK glue-on temp cap

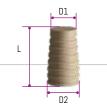
L	D1	D2
7.8	3.59	4.5

Note: Together with the EL-4543 Temp-Cap, the EL temporary PEEK abutments can be used to temporarily stabilize a prosthesis.

\*Uses the long screw EL-5052HXL







EL-4543

## Temporary titanium abutments

#### Non rotating temporary abutments $Include\ prosthetic\ screw\ BL-5052HX$

L	D	C Fixture	#
		0.9	BL-4528/1
10	4.96	2	BL-4528/2
		3	BL-4528/3

TIGHTENING: with torque ratchet 25 Ncm

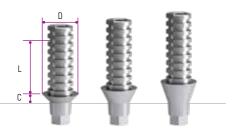
Material: Titanium grade 5

#### Rotating temporary abutments Include prosthetic screw BL-5052HX

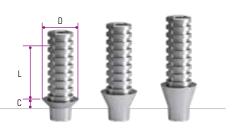
L	D	C Fixture	#
		1	BL-4528/1R
10	10 4.95	2	BL-4528/2R
		3	BL-4528/3R

TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5



BL-4528/1	BL-4528/2	BL-4528/3
h1	h2	h3



BL-4528/1R	BL-4528/2R	BL-4528/3R
h1	h2	h3

## **CAD-CAM Components**

#### Non rotating CEC titanium bases Include prosthetic screw BL-5052HX

L	D	C Fixture	#
_		0.5	EL-60405
	4.0	1	EL-6041
5	4.2	2	EL-6042
		3	EL-6043

TIGHTENING: with torque ratchet 25 Ncm



#### Rotating CEC titanium bases Include prosthetic screw BL-5052HX

L	D	C Fixture	#
		0.5	EL-60405R
5	4.0	1	EL-6041R
	4.2	2	EL-6042R
		3	EL-6043R



#### TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5

Material: Titanium grade 5

#### Non rotating Dual Channel titanium bases Include hexalobular screw EL-5052D

L	D	C Fixture	#
		1	EL-6041D
4	4 4.6	2	EL-6042D
		3	EL-6043D

TIGHTENING: with torque ratchet 15 Ncm

Material: Titanium grade 5



EL-6041D EL-6042D h2

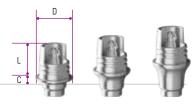
EL-6043D

#### Rotating Dual Channel titanium bases Include hexalobular screw EL-5052D

L	D	C Fixture	#	
	1	EL-6041DR		
4	4.6	4 4.6 2	2	EL-6042DR
		3	EL-6043DR	

TIGHTENING: with torque ratchet 15 Ncm

Material: Titanium grade 5



EL-6041DR

EL-6042DR

EL-6043DR h3





L	D	C Fixture	#
		1	BL-6047
4.65	4.25	2	BL-6047H2
		3	BL-6047H3

TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5

#### ONE TIME Scan cap for CEREC® bases



Material: Plastic



Material: Titanium grade 5



EL-9040D

#### Hexalobular ratchet driver for Dual Channel

L	#
26	EL-9025D
32	EL-9025LD

Material: Stainless steel

Non rotating scan body Available for EXOCAD, 3SHAPE and DENTALWINGS - Includes prosthetic screw BL-5052HX

L	D
11.7	4.8

TIGHTENING: with torque ratchet 25 Ncm

Material: PEEK

E	L-			10	P
	Р	Ε	Ε	K	

Intra-oral scan body

Available for EXOCAD, 3SHAPE and DENTALWINGS - Includes a prosthetic screw

L	L1	D
12	5	4.2

TIGHTENING: with torque ratchet 15 Ncm

Material: Titanium with anti scatter coating

EL	6	0	7(	)
Γit	aı	nii	п	m

#### Screw for scan cap

L	D
7.5	2.4

TIGHTENING: with torque ratchet 15 Ncm

Material: Titanium grade 5



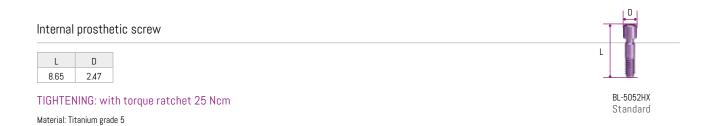
EL-SCANSCREW

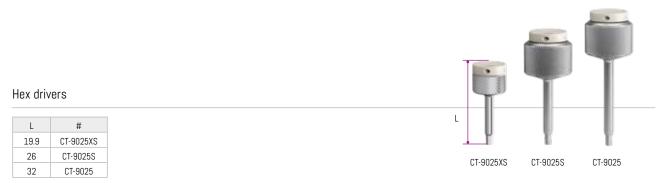
# ESTHETIC LINE implant



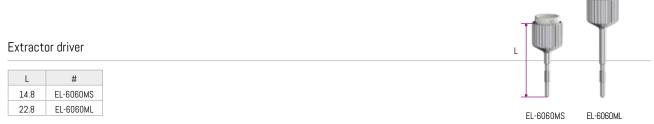
TIGHTENING: with torque ratchet 20 Ncm

Material: Titanium grade 5



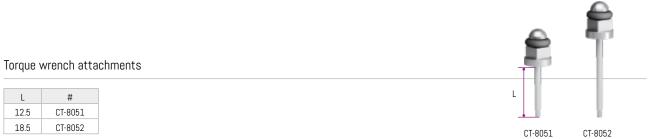


Material: Stainless steel



Material: Stainless steel



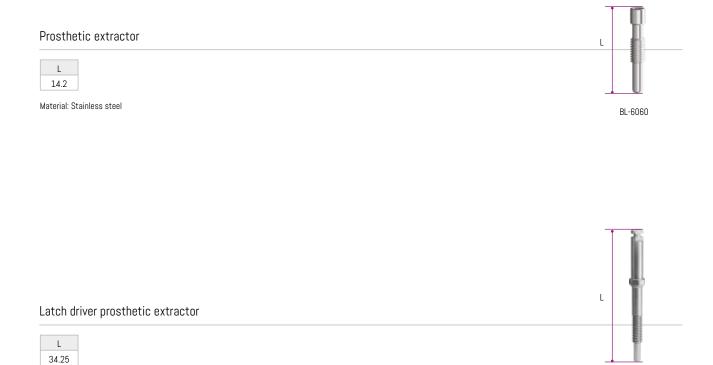


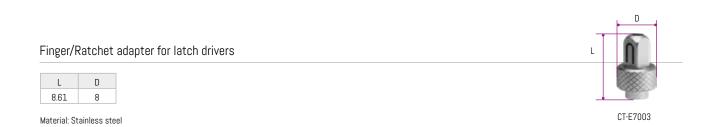
Material: Stainless steel

## Abutment extractor screw

Material: Stainless steel

As the abutment extractor screw is driven in, it will push the abutment out of the analog or implant.





BL-6061

## O-Ball attachment system

#### O-ball abutment and MUA driver

L	D1	D2
19.3	7.9	4.8

Material: Titanium grade 5



#### 0-ball abutments

L	D	C Fixture	#
		1	BL-5641
0.7		2	BL-5642
3.7	4	3	BL-5643
		5	BL-5645

TIGHTENING: with torque ratchet 25 Ncm

#### Complete set includes:

- 1. O-Ring (Ref. MC-3005) 1 piece
- 2. Metal Housing (Ref. MCH-2) 3. O-Ball Abutment (Ref. BL-5641, BL-5642, BL-5643, BL-5645)

Material: Titanium grade 5

BL-5645

### 0-ball analog

L	D
11.5	4

Material: Titanium grade 5

BL-5144

#### Soft retention caps

L	D
3.5	4.7

Material: Titanium grade 5

o-ring D

Material: FDA Buna

х5 x10 x25 MC-3005B/10 MC-3005B/25 MCH-1 MC-3005B 0-RING 0-RING 0-RING soft

5 pieces

0-RING

5 pieces

Available in single packages: MCH-1 Available in packages of 4 caps: MCH-1/4

#### Medium and hard retention caps

L	D	#
3.2	4.2	MCH-2
2.9	4	MCH-3

o-ring D 3.8



BL-5641

BL-5642

BL-5643

х5 x10 MC-3005 MC-3005/10 MC-3005/25

10 pieces

0-RING

10 pieces

x25

0-RING

25 pieces

25 pieces

Material: Titanium grade 5

Material: FDA Buna

Available in single packages: MCH-2, MCH-3 Available in packages of 4 caps: MCH-2/4, MCH-3/4

### Intended use

Removable dentures retained by implants in the mandible and maxilla.

### Characteristics

- The clinical process for the O-ball attachment is quick, easy and functional.
- The O-ring attachment is designed to virtually eliminate wear on the O-ball abutment and minimize the need for maintenance.
- 4 different gingival heights.
- 3 different grades of resistance provided by the combination of different o-rings and housings which offer the most suitable retention for each situation.

### Note

Dual retention for optimal abutment-denture connection. Excellent long-term performance due to wear resistant components.

#### STEP 1

Screw the spherical abutment into the implant using the torque ratchet (25 Ncm) and the driver (ref. BL-0600).

### STEP 2

Rebase the overdenture according to standard procedure.

#### STEP 3

Use a laboratory burr to relieve the denture base in the indicated areas.







### Anchor abutment system

CE marked products by Rhein83

#### Smart Box Set

330SBE set includes:

- 1 Smart Box housing
- 1 Black positioning cap

#### Complete 335SBC set includes:

- 1 Smart Box housing with black positioning cap (Ref. 330SBE)
- 2 Stainless steel housings (Ref. 141CAE)
- 1 Retentive caps violet "strong" (Ref. 140CEV)
- 1 Retentive caps white "standard" (Ref. 140CET)
- 1 Retentive caps pink "soft" (Ref. 140CER)
- 1 Retentive caps yellow "extra-soft" (Ref. 140CEG)



330SBE 335SBC (complete set)

#### Metal housing 2 pieces

L	D
1.98	4.5

Material: Titanium grade 5



141CAE

### Caps 4 pieces

L	D
1 78	3.8

Material: 140CEV - kepital 140CET/140CER/140CEG - pebax









140CEV

140CET

140CER

140CEG strong standard soft extra-soft retention 2.7kg retention 1.8kg retention 1.2kg retention 0.6kg

#### Anchor abutment

L	D1	D2	#
1			134BL1
2			134BL2
3	4.3	0.5	134BL3
4		2.5	134BL4
5			134BL5
6			134BL6

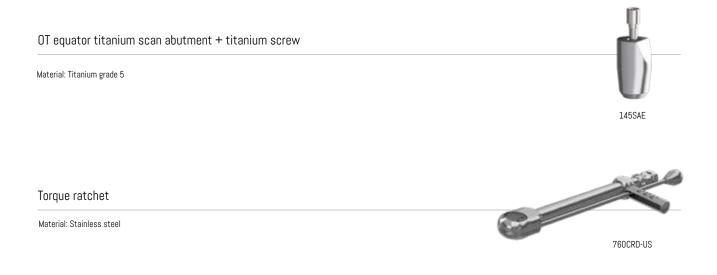


#### TIGHTENING: with Rhein83 torque ratchet 25 Ncm

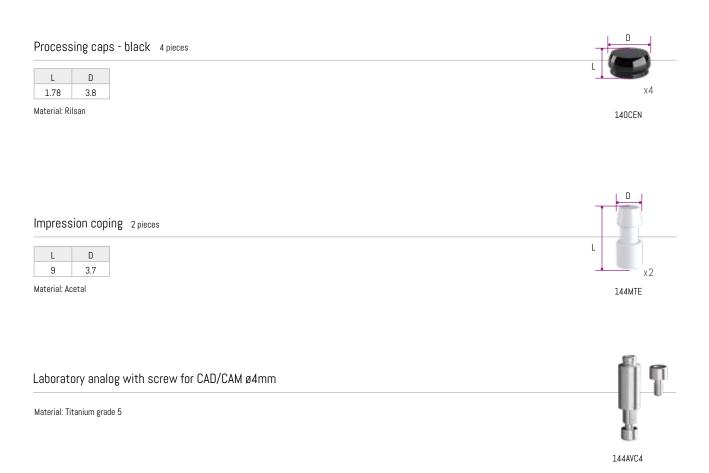
#### Complete set includes:

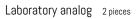
- 1 Anchor abutment (Ref. 134BL1, 134BL2, 134BL3, 134BL4, 134BL5)
- 1 Stainless steel housings (Ref. 141CAE)
- 1 Retentive caps violet "strong" (Ref. 140CEV)
- 1 Retentive caps white "standard" (Ref. 140CET)
- 1 Retentive caps pink "soft" (Ref. 140CER)
- 1 Retentive caps yellow "extra-soft" (Ref. 140CEG)
- 1 Processing caps black (140CEN)

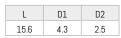
Material: Titanium grade 5



### Laboratory accessories







Material: Stainless steel AISI 303



### Pull-off impression coping

L	D
5.5	4.6

Material: Stainless steel AISI 303



044CAIN

### Castable cap

L	D	
2.45	3.8	

Material: Crystal polystyrene



151SS

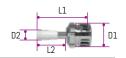
### Anchor system instruments

### Metal insertion/extraction tool for caps

Material: Nylon and Stainless steel

485IC

### OT-Equator square screw driver for Anchor abutment Compatible only with Rhein83 torque ratchet



L1	L2	D1	D2
17	10.5	9	3.5

Material: Stainless steel

774CHE square 1.25 mm

### OT-Equator square latch driver for abutment



L	D
22	2.3

Material: Stainless steel

760CE

### Full arch screw retained restorations

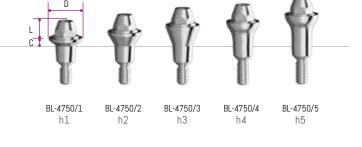
Full arch screw retained/Multi unit abutments can be used only with splinted full arch restorations and only with a minimum of 4 units.

### Straight abutments Include positioner EL-POS

L	D	С	#			
		1	BL-4750/1			
		2	BL-4750/2			
2.5	2.5 5	3	BL-4750/3			
					4	BL-4750/4
		5	BL-4750/5			

TIGHTENING: with torque ratchet 25 Ncm Bridge screw torque 10 Ncm

Material: Titanium grade 5

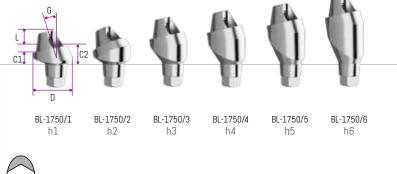


### 17° angled abutments Include internal screw BL-5052MUA

L	D	C1	C2	G	#
		1.1	2.6		BL-1750/1
		2	3.5		BL-1750/2
0.5		3	4.5	17°	BL-1750/3
2.5	5.5	4	5.5		BL-1750/4
		5	6.5		BL-1750/5
		6	7.5		BL-1750/6

TIGHTENING: with torque ratchet 25 Ncm Bridge screw torque 10 Ncm

Material: Titanium grade 5

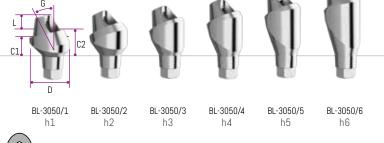


# 30° angled abutments Include internal screw BL-5052MUA

L	D	C1	C2	G	#
		1	3.5		BL-3050/1
		2	4.5		BL-3050/2
0.5	.5 5	3	5.5	000	BL-3050/3
2.5	5	4	6.5	30°	BL-3050/4
		5	7.5		BL-3050/5
		6	8.5		BI -3050/6

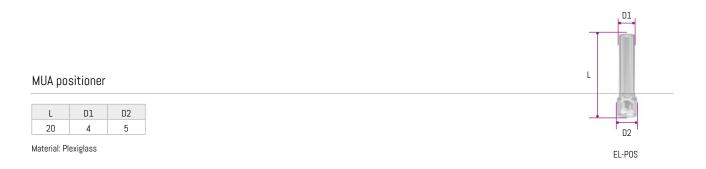
Over angle

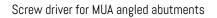
Over angle



TIGHTENING: with torque ratchet 25 Ncm Bridge screw torque 10 Ncm

Material: Titanium grade 5

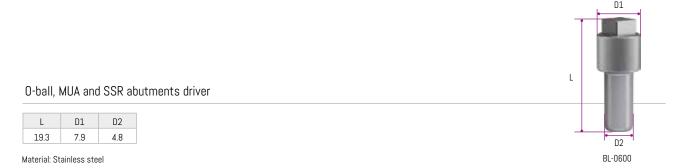




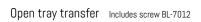
Material: Titanium grade 5



BL-7013

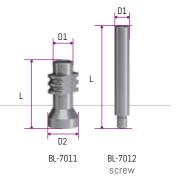


Healing cap	L
L D 5.7 5	
Material: Titanium grade 5	BL-7000



L	D1	D2	#
10.5	4.2	5	BL-7011
15	2.1	-	BL-7012

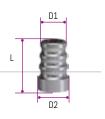
Material: Titanium grade 5



### Closed tray transfer

L	D1	D2
8	4.2	5

Material: Titanium grade 5



BL-7010

### Multi-unit analog

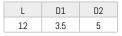
L	D
14.7	5

Material: Titanium grade 5



BL-5146





TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5



### Castable abutment Includes bridge screw BL-6051

L	D1	D2
12.45	3.3	4.6

TIGHTENING: with torque ratchet 10 Ncm

Material: Plexiglass



BL-5647

### Bridge screw

L	D
3.5	2

TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5



Internal prosthetic screw For angled MUA

L	D
8.1	2.2

TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5

BL-5052MUA

### MUA CAD-CAM Components

MUA scan Available for EXOCAD, 3SHAPE and DENTALWINGS - includes bridge screw BL-6051

L

L	D
10	5.2

TIGHTENING: with torque ratchet 10 Ncm

Material: PEEK

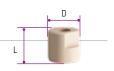
EL-MUASCANP PEEK

 $Short\ MUA\ scan\ \ \text{Available for EXOCAD, 3SHAPE and DENTALWINGS-includes bridge screw BL-6051}$ 



TIGHTENING: with torque ratchet 10 Ncm

Material: PEEK



EL-MUASCANS PEEK

 $\hbox{MUA bases} \ \ \hbox{Available for EXOCAD, 3SHAPE and DENTALWINGS-Include prosthetic screw BL-6051}$ 

L	D1	D2	#
5	F 0		EL-DG4526S
8	5.8	4	EL-DG4526L

TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5



### Bridge screw

n

TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5



Available for EXOCAD, 3SHAPE and DENTALWINGS - Includes prosthetic screw BL-6051ASC



L	D1	D2
5.35	4	5.6

Material: Titanium grade 5

### MUA Bridge Screw for Angled Screw Channel



L	D	
4.4	2.4	

TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5

### Hexalobular latch driver medium

Material: Titanium grade 5





TIGHTENING: with torque ratchet 20 Ncm

Material: Titanium grade 5

14



### Closed tray technique

### Patient procedure

### STEP 1

Remove the healing abutments.

#### STEP 2

Screw the abutment into the implant.

### STEP 3

Screw each closed tray transfer onto the protruding abutments.

### STEP 4

Take the impression using an elastomeric impression material (polyvinyl siloxan or polyether rubber).

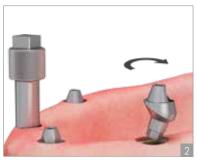
#### STFP 5

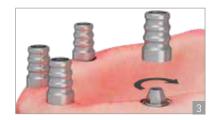
Remove the closed tray transfer from the abutment.

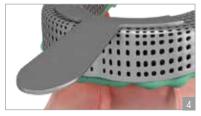
### STEP 6

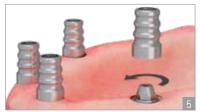
Screw onto the abutments the healing cap screws so as to keep the soft tissue in place until the final prosthesis is completed.

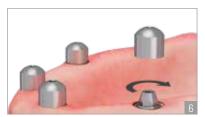












### Laboratory procedure

### STEP 1

Screw the closed tray transfer onto the analog.

### STEP 2

Reposition the transfer into the previously taken impression material being sure that the transfers are properly seated.

### STEP 3

Master model.







### Screw retained restorations

#### STEP 1

Fabricate the stone model including analogs and gingival mask

#### STEP 2

Place and screw the castable abutments onto the protruding multi-unit analogs.

Shorten the cylinders down to the height of the occlusal plane.

### STEP 3

Remove the gingiva modeling material to permit easy access for submucosal contouring and verification of component seating. Wax-up the bridge framework to appropriate dimensions. The layer of wax must have sufficient thickness to avoid the wrong coefficient of thermal expansion and a negative effect on porcelain firing.

#### STED /

Prepare the wax-up for investing and casting procedures.

#### STEP 5

Attach the resulting framework to the models and create final prosthesis.

### STEP 6

Passively fit the resulting prosthesis onto the abutments.













# Multi-unit screw retained abutment drill guide

### Intended use

This drill guide facilitates the placement of the implants at the correct angulations which helps assure that the final position of the multi-unit abutment will be perpendicular to the patient's jaw.

### Characteristics

- Durable titanium construction.
- Adjustable and foldable, allowing to be parallel to and follow the contour of the crestal bone.
- Sterilizable.

#### STEP 1

Make a 2.0 pilot hole in order to place the guide pin.

#### STEP 2

After placement of the guide pin into the drilled site, the angle and position of the guide band can be adjusted to be parallel to the crestal bone.

#### STEP 3

The titanium band can be bent in order to follow the arch of the crestal bone.

#### STEP 4

Three different angulations are indicated on the outside of the guide, 0°, 17° and 30°. These angulations match the angulations of the different C-TECH multi-unit screw retained abutments.

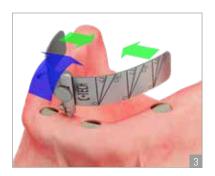
### STEP 5

Placement of the screw retained abutments.







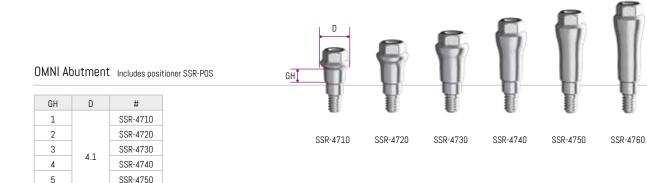






### **OMNI System**

OMNI abutments can be used both on a bridge and a full arch. Their small diameter facilitates aesthetics, especially in the anterior region. They are endowed with 1.8 mm bridge screw.



TIGHTENING: with torque ratchet 25 Ncm

SSR-4760

Material: Titanium grade 5

6



TIGHTENING: with torque ratchet 15 Ncm

Material: Titanium grade 5

# OMNI open tray impression post Includes screw SSR-7012

L	D1	D2	#
10.5	3.1	4.12	SSR-7011NR SSR-7011
17.5	2.1	-	SSR-7012

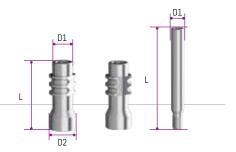
Material: Titanium grade 5



Non rotating = Hexagonal connection; for single crown



Rotating = Round connection; for bridges



SSR-7011NR S

SSR-7011 rotating

SSR-7012 included

#### OMNI closed tray impression transfer

L	D1	D2
8	3.32	4.12

Material: Titanium grade 5



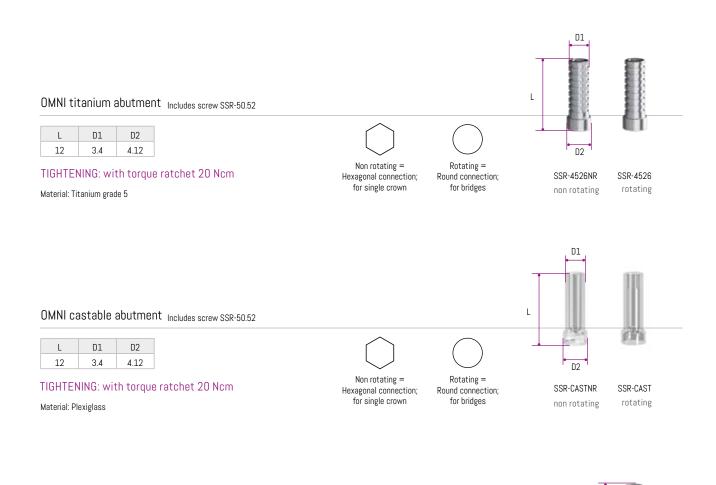
Non rotating = Hexagonal connection; for single crown



Rotating =
Round connection;
for bridges



non rotating rotating





OMNI Bridge screw

Material: Titanium grade 5

TIGHTENING: with torque ratchet 20 Ncm

4.9

SSR-50.52

### OMNI CAD-CAM Components



L	D
7	4.12

TIGHTENING: with torque ratchet 15 Ncm

Material: PEEK



OMNI Ti-base Available for EXOCAD, 3SHAPE and DENTALWINGS - Includes prosthetic screw SSR-50.52

L	D
8	4.1

Material: Titanium grade 5

TIGHTENING: with torque ratchet 20 Ncm

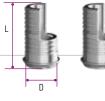
Note: You can modify the Ti-base and use it as a short and long base. For Angled screw channel, you must always use the short base. For Angled screw channel use the screw SSR-ASCSCREW



Non rotating = Hexagonal connection; for single crown



Rotating = Round connection; for bridges



SSR-4526SNR non rotating SSR-4526S rotating

#### OMNI screw for angulated abutment



TIGHTENING: with torque ratchet 20 Ncm

Material: Titanium grade 5

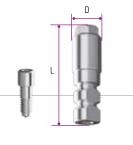


SSR-ASCSCREW

 ${\color{blue} \textbf{OMNI Digital Analog}} \quad \text{Available for EXOCAD, 3SHAPE and DENTALWINGS - Includes screw DG-SCREW}$ 

L	D
13.8	4.1

Material: Titanium grade 5



DG-SCREW included

SSR-DGAN

### Hexalobular latch driver medium For OMNI, MUA and Flat angled screws

Material: Titanium grade 5



HEXA-M

### Finger/Ratchet adapter for latch drivers



Material: Stainless steel



CT-E7003

### O-ball, MUA and SSR abutments driver

L	D1	D2
19.3	7.9	4.8

Material: Stainless steel



### One Time System

### Titanium healing abutment

L	D	C Fixture	#
5.5	4.5	2	EL-ONE TIME GS2
6.5	4.5	3	EL-ONE TIME GS3

TIGHTENING: with torque ratchet 10 Ncm

Material: Titanium grade 5

EL-ONETIME GS2 h2

EL-ONETIME GS3

#### ONE TIME Cover screw

Material: Titanium grade 5



EL-ONETIME-CS

#### Titanium Base Includes prosthetic screw

L	D
6.75	4.5

TIGHTENING: with torque ratchet 25 Ncm

Note: The height of the base does not change, only the height of the screw varies  $\ensuremath{\mathsf{Note}}$ 

Material: Titanium grade 5



EL-ONETIME-BASE2 must be used with EL-ONETIME GS2

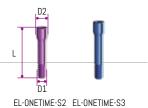
EL-ONETIME-BASE3 must be used with EL-ONETIME GS3

### Internal prosthetic screws

L	D1	D2	#
10.4	1.7	2.25	EL-ONETIME-S2
11.4	1.7	2.25	EL-ONETIME-S3

TIGHTENING: with torque ratchet 25 Ncm

Material: Titanium grade 5





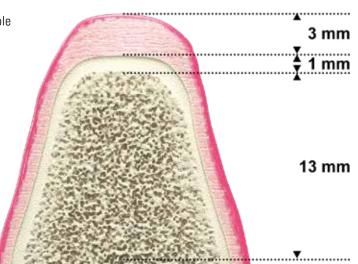
### Step 1

### Measure + Calculate

The aim of the concept is to maintain the thickest possible gingiva. A height of 3 mm is considered to be ideal. The implant should be placed 1 mm subcrestally.

That is why the overall depth is also determined by the gingiva. It follows that the tissue punching offers advantages in the concept. This can easily be done using guided surgery.

Deep implant + desired gingival height e.g. 13 mm implant length = 17 mm Measured from the gingiva.



### Step 2

### Implantation









Instead of raising a flap, in most cases the surgical procedure will be initiated by using a tissue punch to create a mucotomy. (Pic 1)

After inserting the implant, the ONE TIME concept is used immediately, so that the wound does not have to be completely sutured. (Pic 5)





### Step 3

### ONE TIME - Cover screw



The gingival sleeve is placed in the implant and fastened with the cover screw. The final position of the cover screw is slightly below the level of the gingiva.



The cover screw is tightened to 25 Ncm, then loosened again and then tightened to 15 Ncm.

**Explanation** There is a Morse taper connection between the implant and the abutment. Therefore, the cover screw must be tightened to the final position so that the gingival sleeve can be placed into the final position.

### Healing phase



During the healing phase, the gingiva forms around the healing screw, bonding tightly.

# Step 4 (post-healing)

### Prosthetics



After complete healing, the cover screw is removed. No anesthesia is required for the impression.



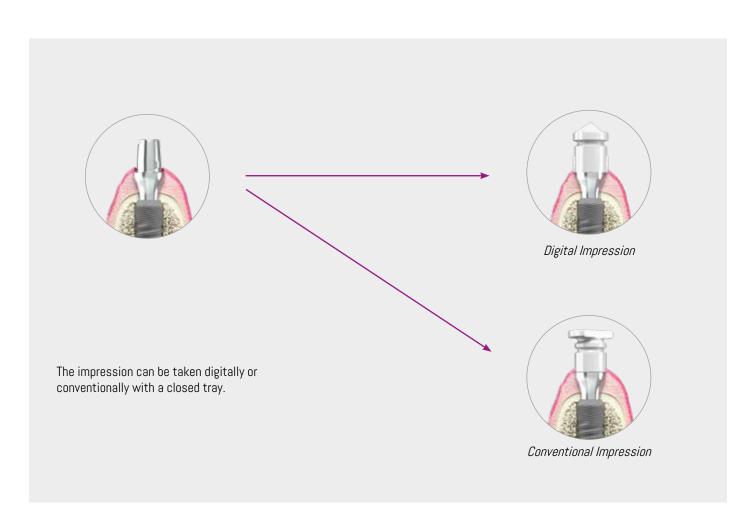


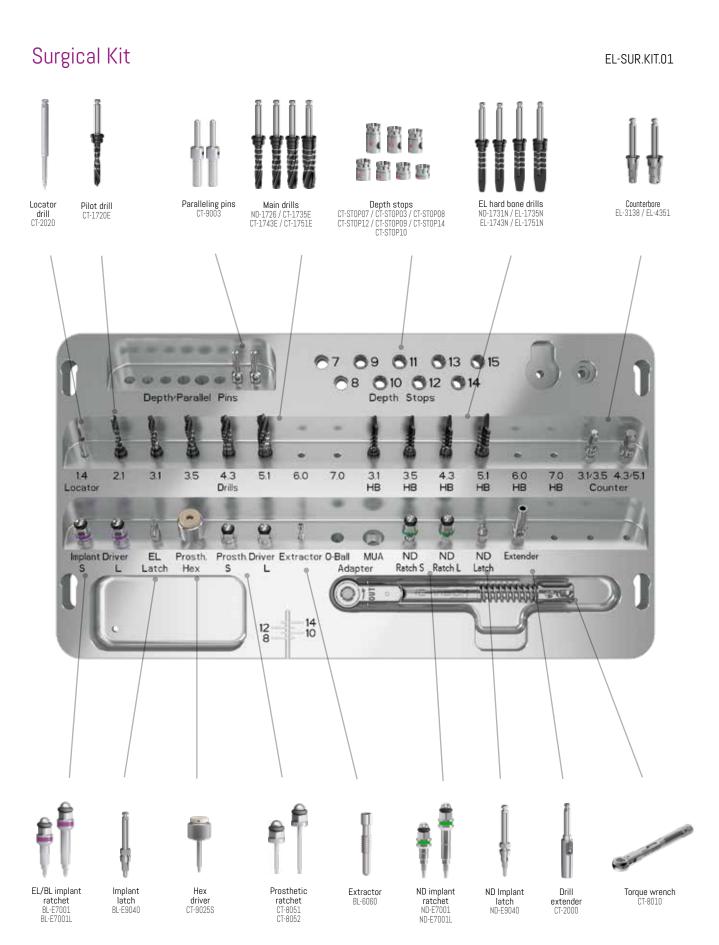
After the gingiva has completely healed and the implant has osseointegrated, the cover screw is removed, the titanium base is placed on the gingival sleeve and tightened to 25 Ncm.

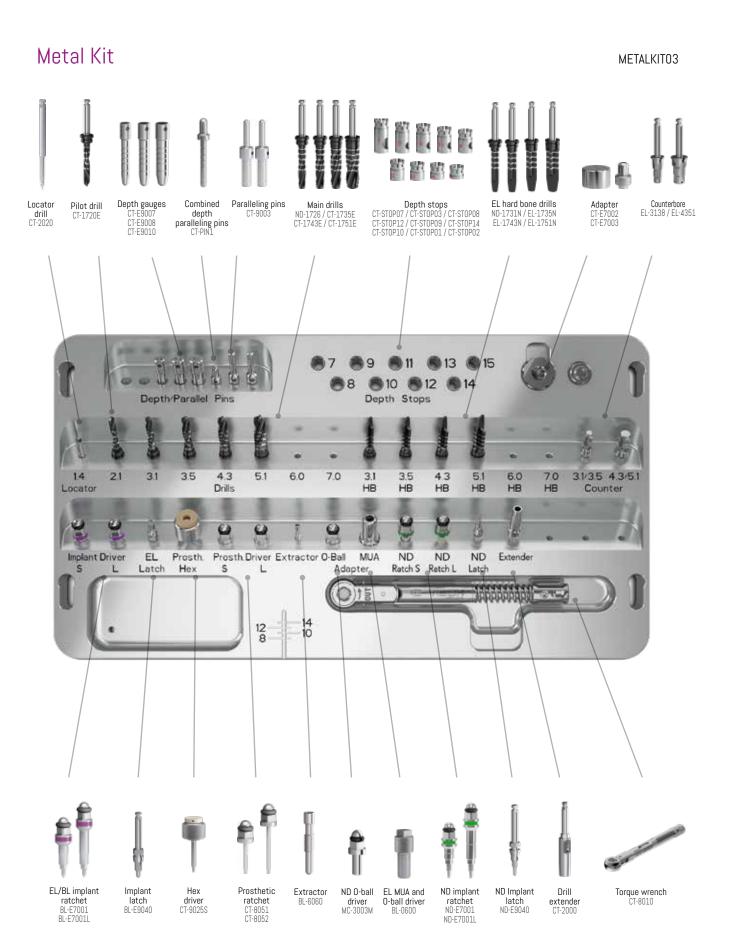


Recall should be done and checked and, if necessary, the internal screws should be re-tightened to  $25\ \text{Ncm}.$ 

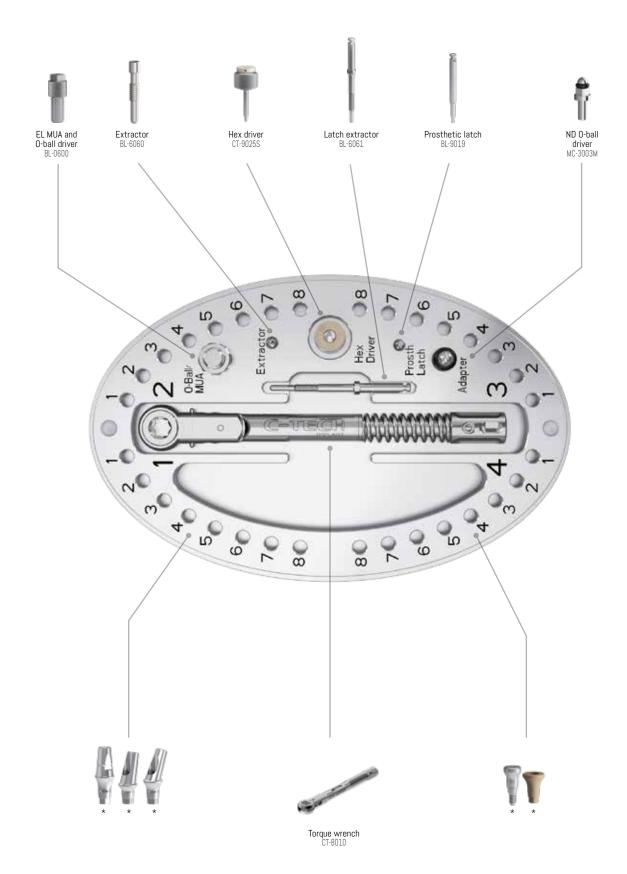
### Digital/Conventional Impression





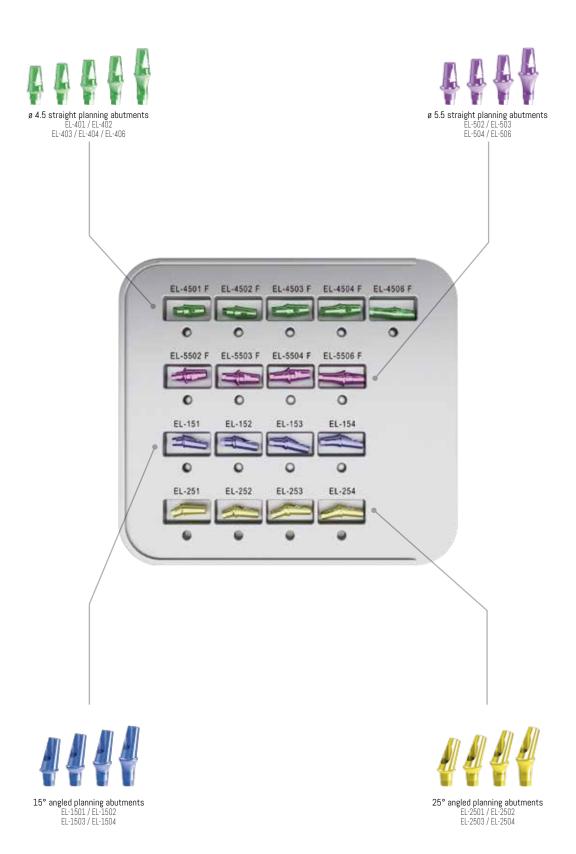


EL Prosthetic Kit PRSKIT01



<sup>\*</sup>Prosthetic parts are not included in the kit

EL Planning Kit PLANKIT01



### Drill Stop Kit

### STOPKITOO: Emtpy/No Contents

### STOPKIT01 Contents

Stop L.6 - CT-STOP06

Stop L.7 - CT-STOP02

Stop L.8 - CT-STOP01

Stop L.9 - CT-STOP07

Stop L.10 - CT-STOP03

Stop L.11 - CT-STOP08

Stop L.12 - CT-STOP12

Stop L.13 - CT-STOP09

Stop L.14 - CT-STOP14

Stop L.15 - CT-STOP10



# Healing Screw Organizer

SCREWBOX00: Emtpy/No Contents



### Instruments

### Combined depth paralleling pins

L1	L2	L3	D1	D2
23.5	16.5	5.5	1.9	2.5

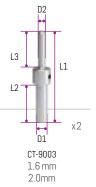
Material: Titanium grade 5



### Paralleling pin

L1	L2	L3	D1	D2
24.2	14.2	10.2	2	2.6

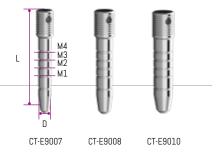
Material: Titanium grade 5



### Depth gauges

L	D	M1	M2	М3	M4	#
	3					CT-E9007
18.5	3.8	7	9	11	13	CT-E9008
	4.6					CT-E9010

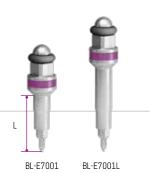
Material: Titanium grade 5

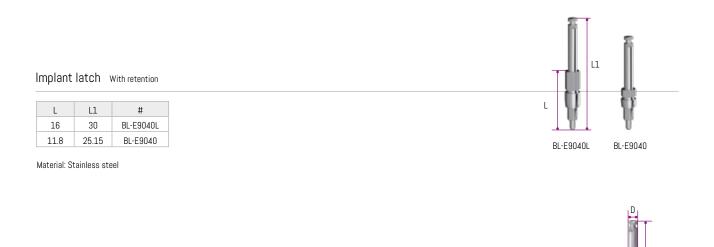


### Implant ratchet drivers With retention

L	#
10.8	BL-E7001
17.8	BL-E7001L

Material: Stainless steel





#### Locator drill

L1	L2	D
29	15	1.6

Material: Stainless steel



CT-2020

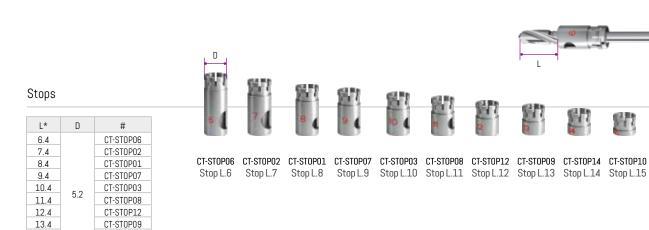
### Pilot drill

L1	L2	D
35.2	17.2	2.1

Material: Stainless steel



Note: This item is intended as a drill extender and will not support more than 40Ncm. It is not intended as an implant driver extension. Material: Stainless steel



Intended use: Main drills diameter 2.1 mm, 3.5 mm, 4.3 mm.

CT-STOP14

CT-STOP10

Material: Titanium grade 5

### Stops XL

14.4

15.4

L*	D	#
7.4	8.3	XLSTOP-07
8.4		XLSTOP-08
10.4		XLSTOP-10
12.4		XLSTOP-12

Intended use: Main drills diameters 6 mm and 7 mm.

Material: Titanium grade 5



XLSTOP-07 XLSTOP-08 XLSTOP-10 XLSTOP-12 Tope L.07 Tope L.08 Tope L.10 Tope L.12

### Main drills

L	D Fixture	#
19.2	3.3	CT-1735E
	4	CT-1743E
	4.8	CT-1751E
17	6.0	CT-1760E
	6.5	CT-1770E

Material: Stainless steel



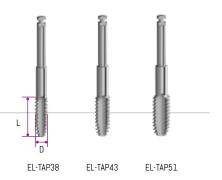
#### Counterbore

L	D Fixture	#
27.5	3.1	EL-3138
	4.3	EL-4351

Material: Titanium grade 5



<sup>\*</sup>Note: to place a 1 mm subcreatal implant, it is recommended to use the stop following the real length of the implant. E.g. for a 9 mm long implant, use Stop L.10



### Bone Taps

L	D Fixture	#
12	3.8	EL-TAP38
	4.3	EL-TAP43
	5.1	EL-TAP51

Material: Stainless steel



### Hard bone drills

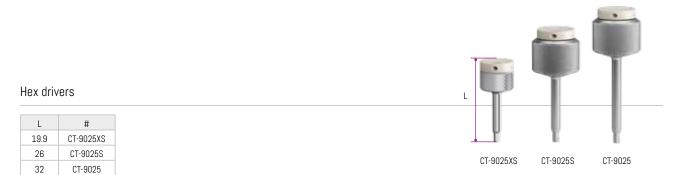
L	D Fixture	#
18.66	3.45	EL-1735N
	4.1	EL-1743N
	4.9	EL-1751N
16.7	5.7	EL-1760N
	6.75	EL-1770N

Material: Titanium grade 5

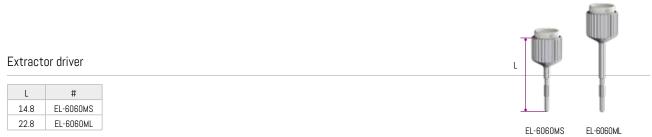




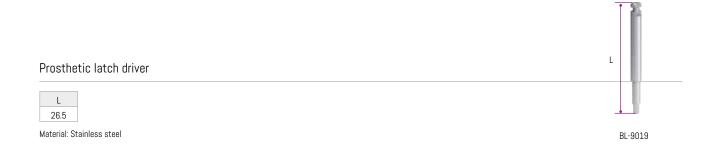
### Prosthetic drivers



Material: Stainless steel



Material: Stainless steel





Material: Stainless steel

## Finger/Ratchet adapter for latch drivers



Material: Stainless steel



Hexalobular latch driver medium For OMNI, MUA and Flat angled screws

Material: Titanium grade 5

HEXA-M

EL-9025LD

EL-9025D





#### # 26 EL-9025D EL-9025LD

Material: Stainless steel

### Prosthetic extractor

L 14.2

Material: Stainless steel



### Latch driver prosthetic extractor

L 34.25

Material: Stainless steel



### Finger adapter

L	D	#
5.8	12.7	CT-E7002
8.61	8	CT-E7003

Material: Stainless steel



CT-E7002 for ratchet drivers CT-E7003 for latch drivers

### Torque wrench 50Ncm

Material: Stainless steel



### ND 0-ball driver



Material: Stainless steel



MC-3003M

### Site preparation D2/D3





<sup>\*</sup>Depth: Minimum 1mm deeper than the length of implant to allow for subcrestal seating.

To avoid bone overheating, set the cutting speed between 100 and 750rpm.

Note: an additional 0.4 mm must be added to the length of the drill due to the length of the cutting tip.

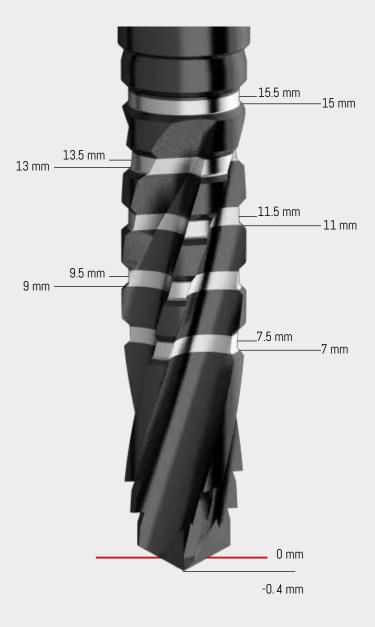
### D1 additional steps





### **Explanation of Drill Marking**

- The drill markings do not include the point of the drill.
- The point of the drill is 0.4 mm long, thus the drill marking of 7 mm is actually 7.4 mm from the very tip to the bottom of the black line.
- The implant should be set approximately 1 mm subcrestally, thus for a 13 mm implant, one should drill to the 14 mm.
   The use of metal stop is recommended.
- The height of the grey drill marking is 1 mm



Note: Metal stoppers can not be mounted on  $\emptyset$  5.1 drills

 $<sup>\</sup>ensuremath{^{\star}}$  To avoid bone overheating, set the cutting speed between 100 and 750 rpm.

### Site preparation D2/D3





<sup>\*</sup>Depth: Minimum 1mm deeper than the length of implant to allow for subcrestal seating.

To avoid bone overheating, set the cutting speed between 100 and 750rpm.

Note: an additional 0.4 mm must be added to the length of the drill due to the length of the cutting tip.

### D1 additional steps





 $<sup>^{\</sup>star}$  To avoid bone overheating, set the cutting speed between 100 and 750rpm.











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