twinkon® 4

Surgical Manual
Advanced Surgery

CATALOG-0024-V01-02

twinKon® 4

Surgical Manual
Advanced Surgery

Introduction

The instructions in this document describe the various stages of the surgical procedure to be used with the twinKon® 4 implant system.

This document cannot under any circumstances be treated as a general teaching aid on implant practice or give right to any claim.

Warning:

The insertion of twinKon® 4 implants is intended for practitioners who have already been trained in dental implantology and who have an infrastructure suitable for this type of procedure.

The twinKon® 4 system must only be used in combination with original brand components and in accordance with the recommendations in this document. Global D will not be liable for any insertion which does not comply with this manual.

General precautions:

Before using any product in the twinKon® 4 range, please read the instructions which are available online. Please also take note of the aspects concerning patient eligibility, organisation of the room, preparation of the operating staff, preparation of the equipment, preparation of the patient, and cleaning and decontamination of the equipment.

Practical information:

The instructions for use given in this document can only be copied or distributed with the prior authorization of Global D, which reserves the right to modify the technical characteristics of the products and/or make changes or improvements to the twinKon® 4 system without notice.

Advanced surgery:

The twinKon® 4 system is an implant involving an advanced level of surgery. The dental surgeon is solely responsible for assessing his/her level of proficiency in implant surgery techniques.

This manual supersedes all previous versions.

Link to instructions for twinKon® implant
(doc-globald.com/0188.html)

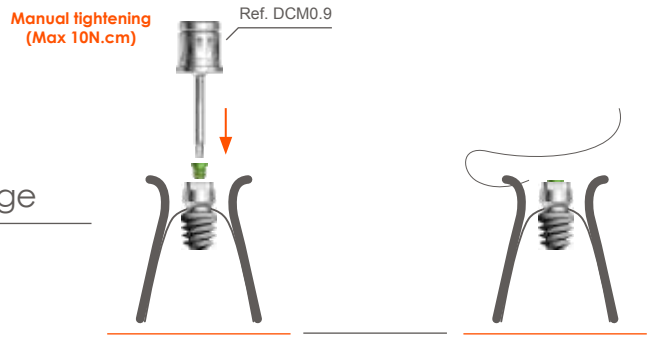
Contents

1. Protocol for inserting a twinKon® Ø4L4 implant

1. Flap | 2. Drill Ø2 mm (800-1000 rpm) | 3. Drill Ø2.5 mm (100 rpm) | 4. Drill Ø3 mm (30-50 rpm) | 5. Drill Ø3.5 mm (30-50 rpm)

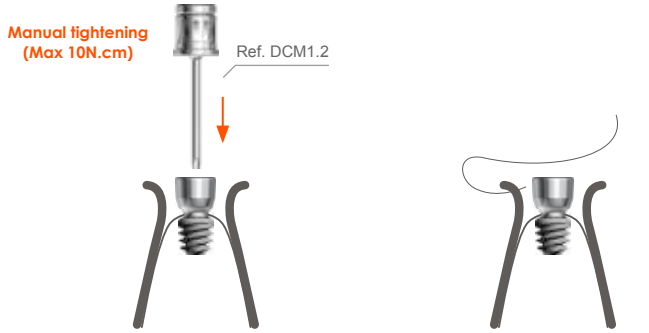
6. Screw in the implant | 7. Remove the implant holder

a- 1st surgical stage



8a. Cover screw | 9a. Close the flap

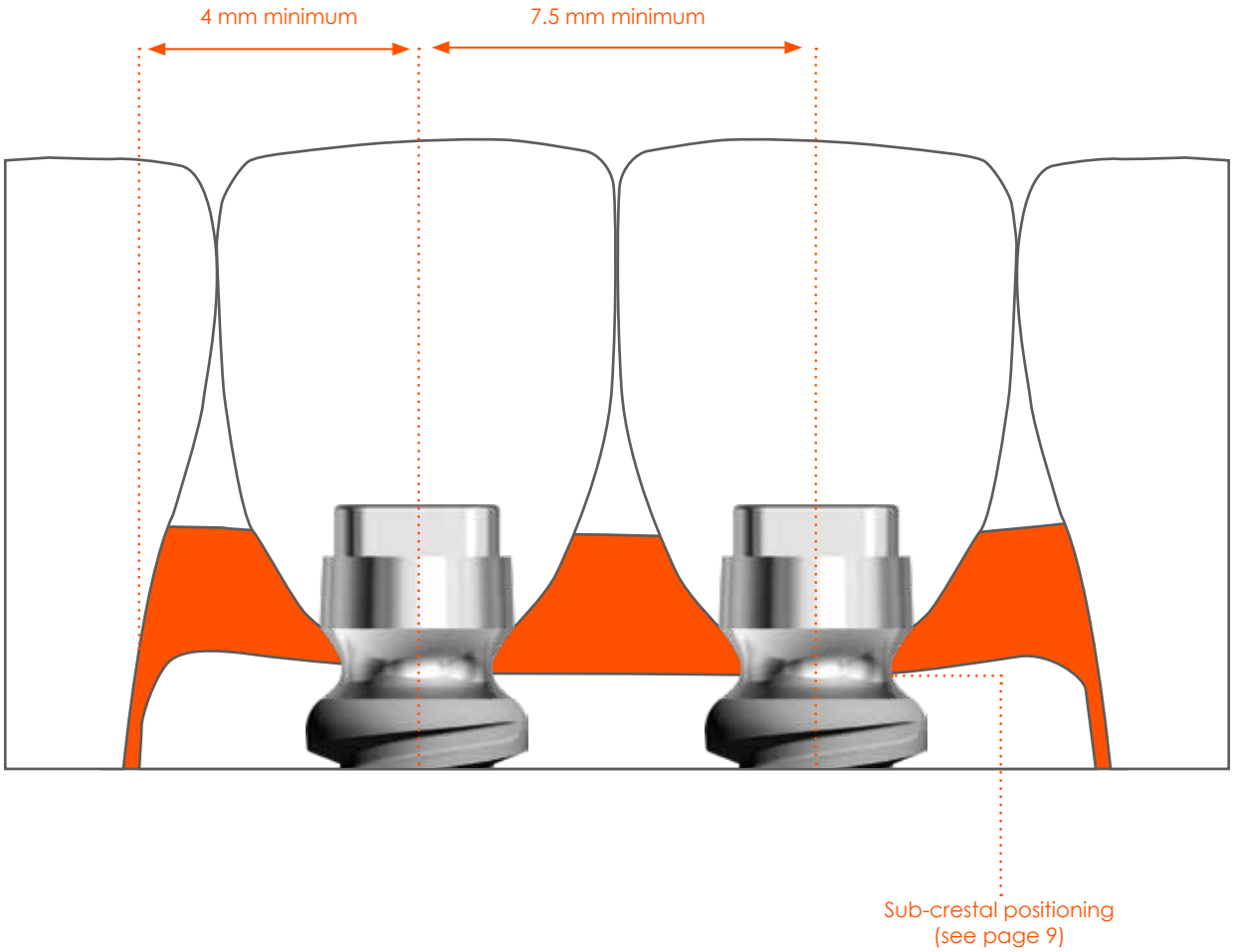
b- 2nd surgical stage



8b. Healing screw | 9b. Close the flap

*Key manufactured and CE marked by Josef Ganter Gmbh. Respect the cleaning, decontamination and sterilization recommendations provided by the manufacturer.

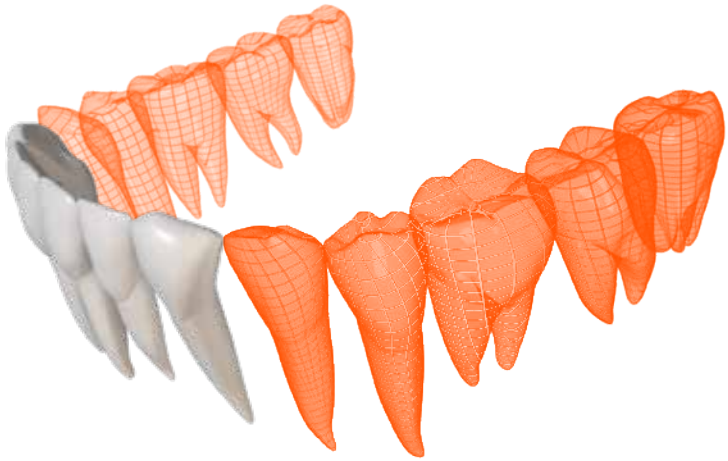
2. Positioning the implant



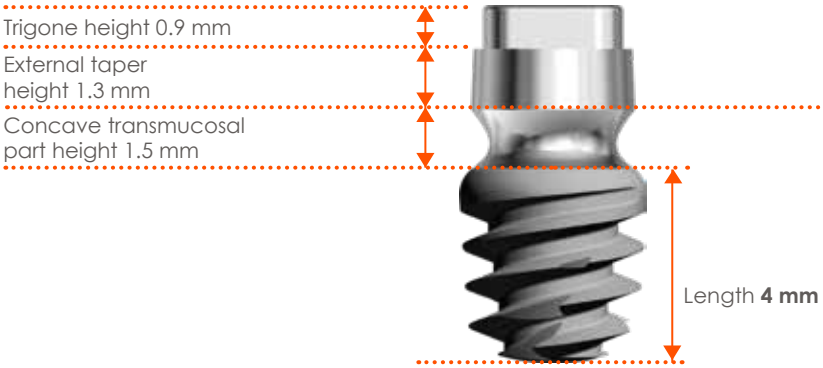
*Key manufactured and CE marked by Josef Ganter Gmbh. Respect the cleaning, decontamination and sterilization recommendations provided by the manufacturer.

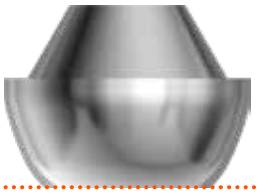
1. General

Indications



- Multiple reconstruction on severely resorbed posterior mandibular section
- Minimum residual bone height of 6 mm from the dental nerve
- One implant per tooth





Multiple screw-retained prosthesis

Formats

Ø / L	Ø 4 mm	Ø 4.5 mm
4 mm	DPTWKCT4L4	DPTWKCT4.5L4

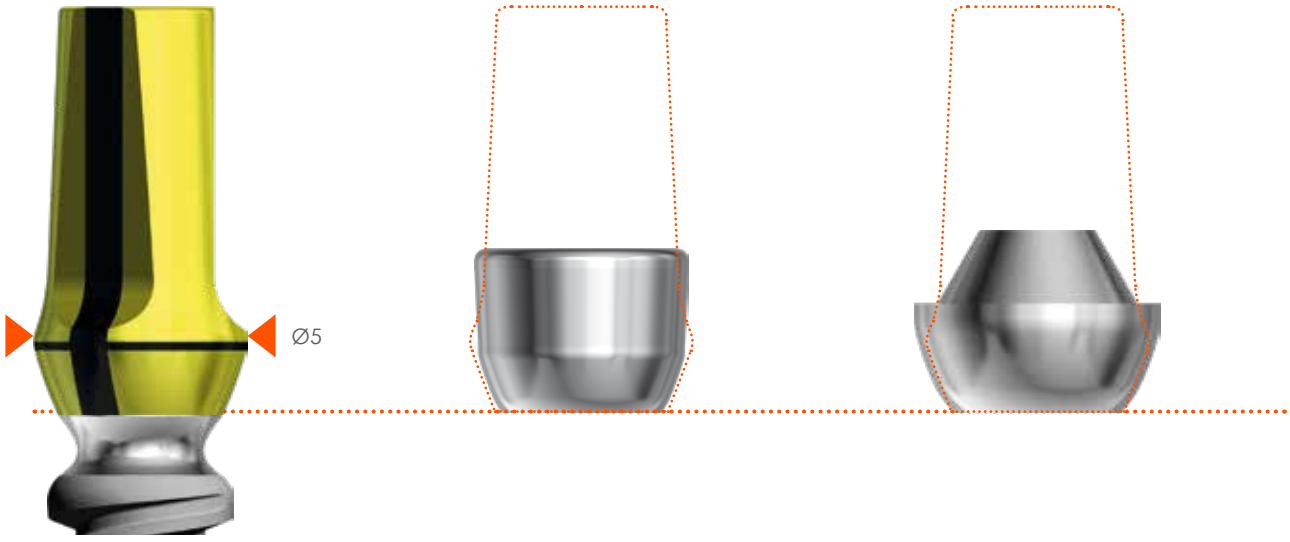
Sterile packaging

Pre-mounted implant holder

Extra-flat cover screw

NB : the extra-flat cover screw (DCCTWK) is exclusively used with the hexagonal manual screwdriver 0.9 (Ref : DCM0.9 or DCM0.9C).

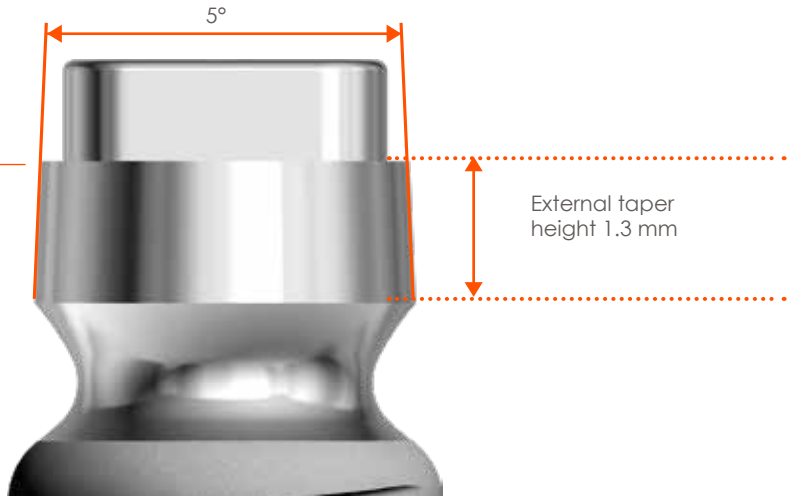
Implant holder and preview



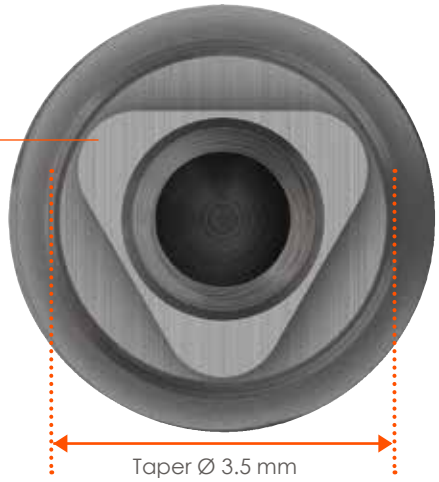
Important: Do not use the implant holder as a temporary abutment. The implant holder is not supported on the taper to make it easier to disengage it after the implant has been screwed in. It cannot therefore withstand occlusal or shear forces.

2. Prosthetic connection

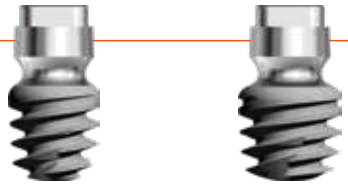
5° external taper



Trigone indexing



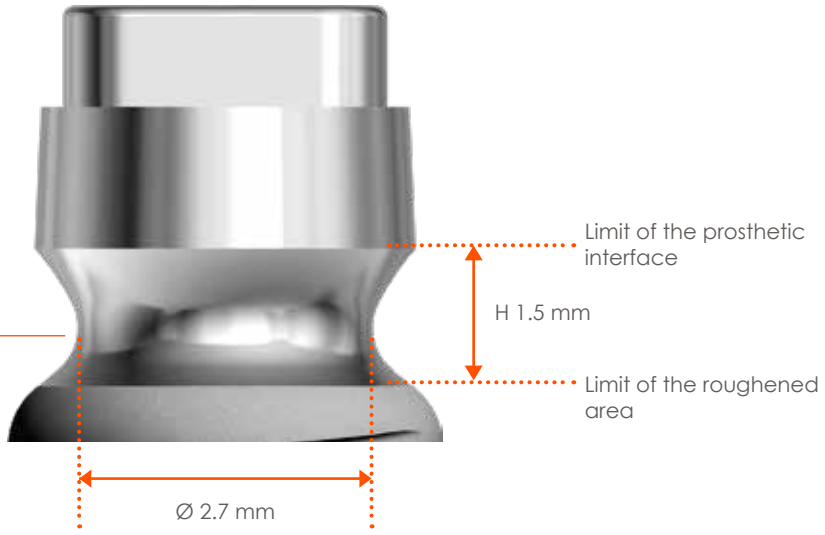
Single connection



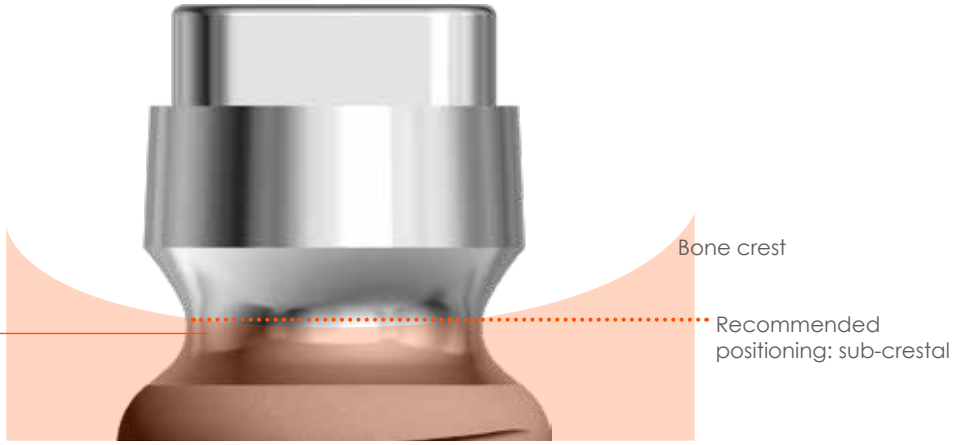
ø 4 mm **ø 4.5 mm**

3. Periodontal concept

Concave collar



Positioning of the collar



4. Bone concept

Surgical protocol

- Specific twinKon® 4 implant insertion kit
- Drills with integrated depth stops
- Protocol according to bone density

Ancillary equipment*

Ref. DKITTWK4

1. Torque wrench *
2. Counter-torque wrench
3. Parallelism indicators
4. Drills with integrated depth stops
5. Manual implant driver
6. Short manual implant driver
7. Contra-angle implant driver
8. Short contra-angle implant driver
9. Manual hexagonal screwdriver, hexagonal 1.2 mm
10. Space for optional prosthetic instruments
11. Manual hex screwdriver 0.9mm

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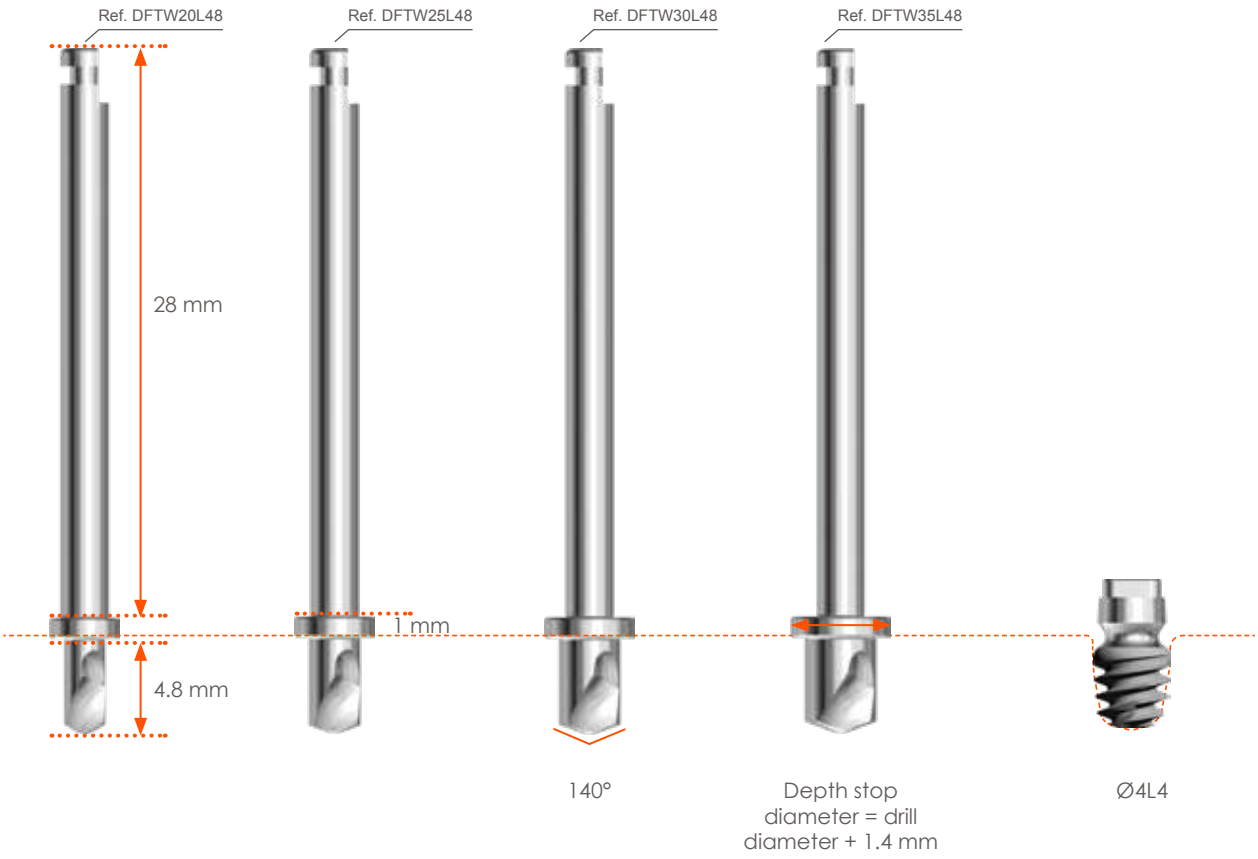
Range of drills with integrated depth stops



Optional instrument

Extension (ref: DPROL)

This extends the length of drills by 15 mm, resulting in a total mandrel length of 43 mm.

Drilling protocol chart

	1	2	3	4	5
Ref.	Drill Ø 2 mm DFTW20L48	Drill Ø 2.5 mm DFTW25L48	Drill Ø 3 mm DFTW30L48	Drill Ø 3.5 mm DFTW35L48	Drill Ø 4 mm DFTW40L48
Ø4L4	■	■	D3/D4	D1/D2	
Ø4.5L4	■	■	■	D3/D4	D1/D2

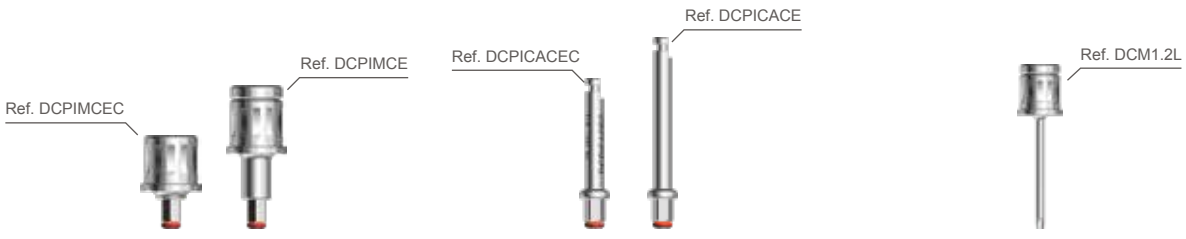
Rpm	800-1000	100	30-50

Recommandations

- Strictly comply with the indicated drilling speeds.
- While drilling, stabilize the contra-angle head using the index finger of the other hand to maintain the working axis.
- Use water and aspiration to effectively remove bone residue after each drilling action and avoid excessive heat build-up.

Screwing in the implant

Screwing instruments



Manual implant drivers

Implant drivers for contra-angle

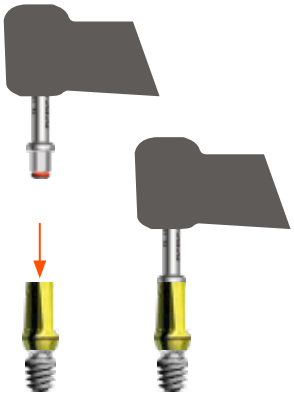
Hexagonal screwdriver 1.2 mm

Torque wrench

Counter-torque wrench

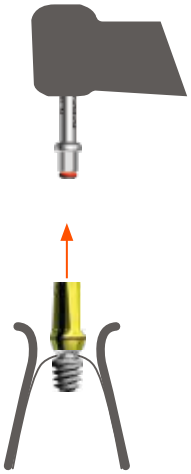
*Key manufactured and CE marked by Josef Ganter Gmbh. Respect the cleaning, decontamination and sterilization recommendations provided by the manufacturer.

Screwing in the implant using the contra-angle wrench



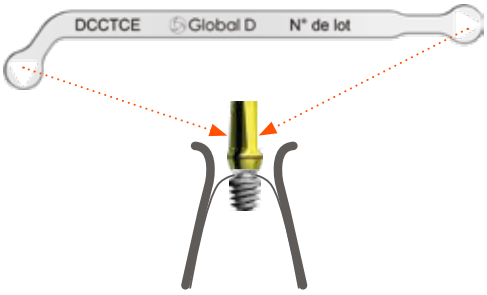
1. Hold the implant in its tube using the tightening mandrel mounted on the contra-angle wrench

2. Screw the implant directly into the bone using the motor

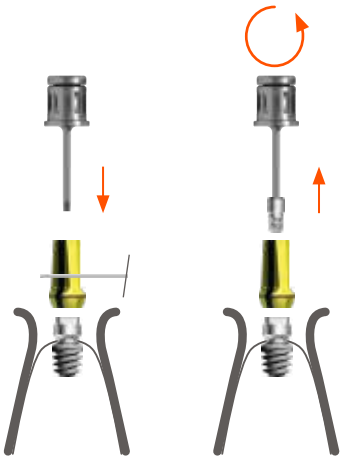


3. When tightening is complete, remove the implant driver

2 possibilities

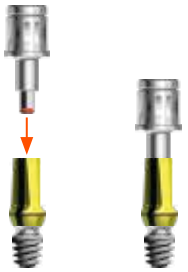


5. Fit the counter-torque wrench on the implant holder if bone density is low

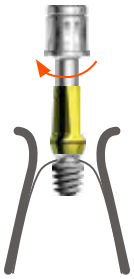


6. Insert the 1.2 mm hexagonal screwdriver into the implant holder, unscrew and remove the implant holder using holding forceps

Screwing the implant in manually



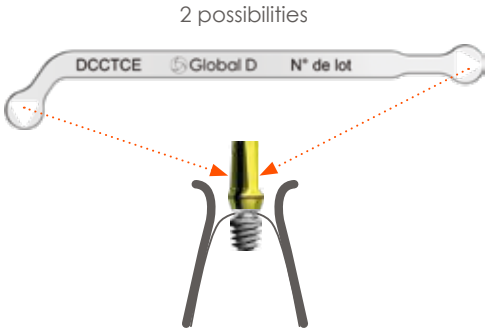
1. Hold the implant in its tube using the manual implant driver



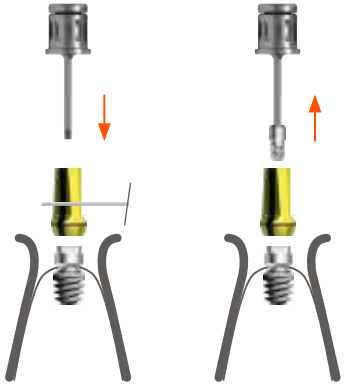
2. Start screwing into the bone manually

3. Complete tightening using the adjustable torque wrench

4. When tightening is complete, remove the implant driver



5. Fit the counter-torque wrench on the implant holder if bone density is low

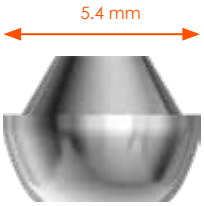


6. Insert the 1.2 mm hexagonal screwdriver into the implant holder, unscrew and remove the implant holder using holding forceps

3-dimensional positioning of the implant

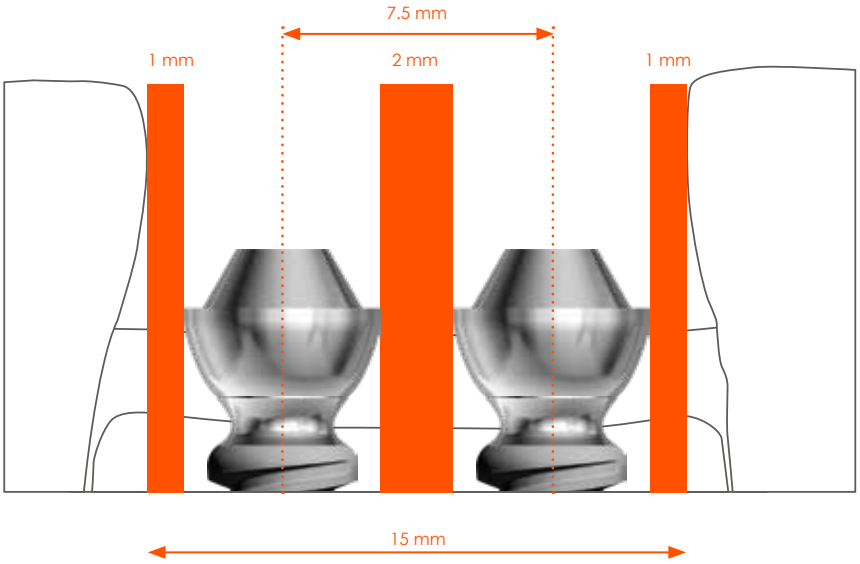
1. Minimum mesiodistal space

Minimum mesiodistal space for Ø 5.4 mm conical abutment



conical abutment

Allow a 1 mm space either side of the conical abutment so that embrasures can be created: i.e. a centre-to-centre distance of at least 7.5 mm between two implants.

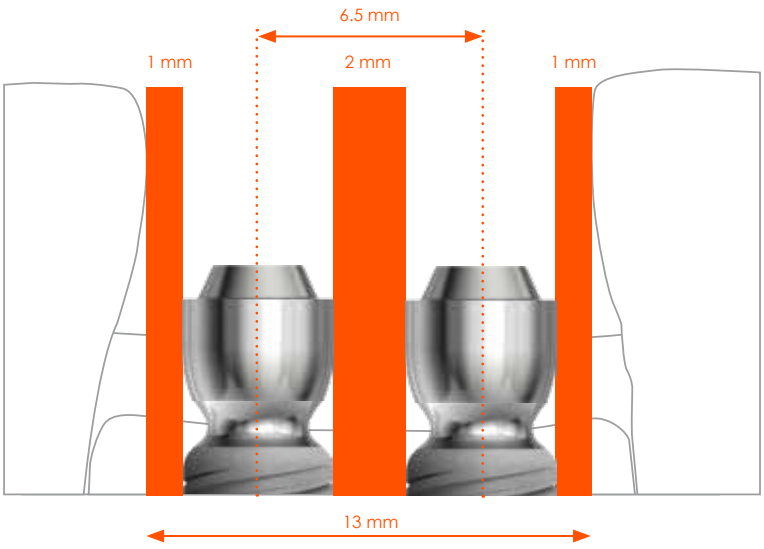


Note: a minimum space of 15 mm is required for inserting 2 implants.

Minimum mesiodistal space for Ø 4.3 mm conical abutment

conical abutment

Allow a 1 mm space either side of the conical abutment so that embrasures can be created: i.e. a centre-to-centre distance of at least 6.5 mm between two implants.



Note: a minimum space of 13 mm is required for inserting 2 implants.

2. Apical-coronal positioning

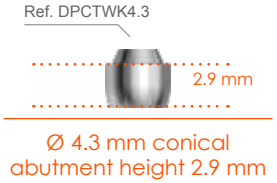
Sub-crestal positioning: Position the implant so that the vestibular bone crest is halfway up the concave collar (see page 9).

3. Prosthetic axis

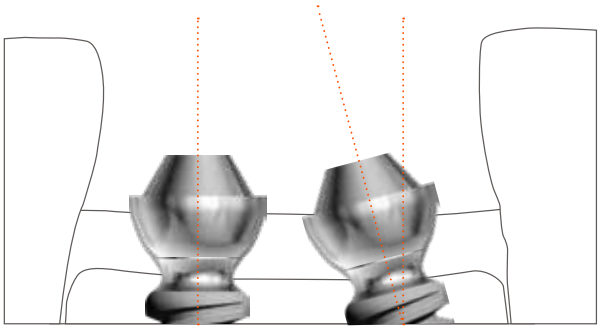
Ensure that the prosthetic axes emerges at the centre of the occlusal faces of the future teeth.

Use the implant holder (Ø 5 mm) to preview the size and prosthetic axis.

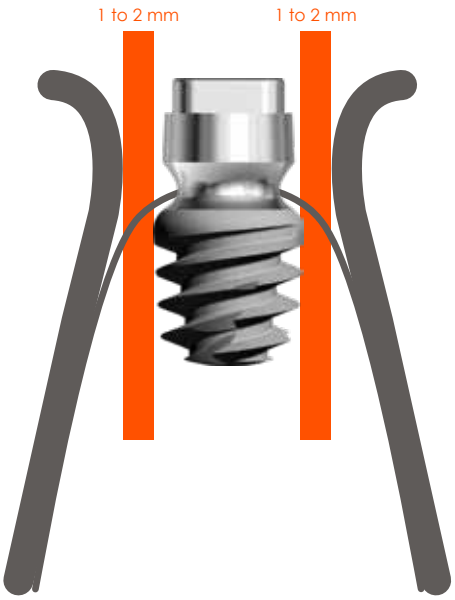
1. It is advisable to validate the prosthetic project before surgery by making a wax-up.
2. When conical abutments are used no orientation of the trigone is necessary when inserting the implant. Conical abutments are available in rotational version only.



Important: Conical abutments are not available in an angled version. The maximum tolerated axial divergence is 15°, ensuring that the emergence of the prosthesis screw is always compatible with the prosthetic project



Choosing the implant diameter



The implant diameter must be chosen so that there is a minimum bone partition of 1 mm. A minimum thickness of 2 mm is highly recommended on the vestibular faces.

Implant diameter	Minimum width of bone crest
Ø 4.0 mm	6.0 mm min.
Ø 4.5 mm	6.5 mm min.

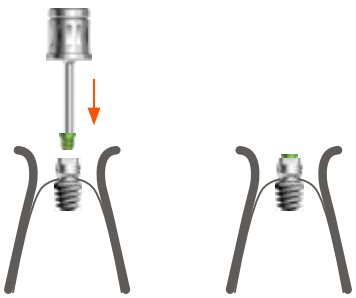
Healing

1. One stage surgery

Cover screw

Screw the cover screw onto the head of the implant using the 0.9 hexagonal screwdriver and suture the flap hermetically, ensuring that there is no tension on the sutures.

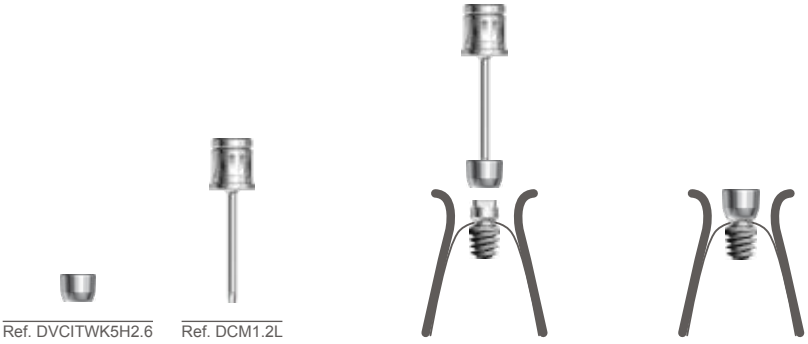
Ref. DCCTWK Ref. DCM0.9



Manual tightening: 10 N.cm

2. Two stage surgery

With healing screw



Ref. DVCITWK5H2.6 Ref. DCM1.2L

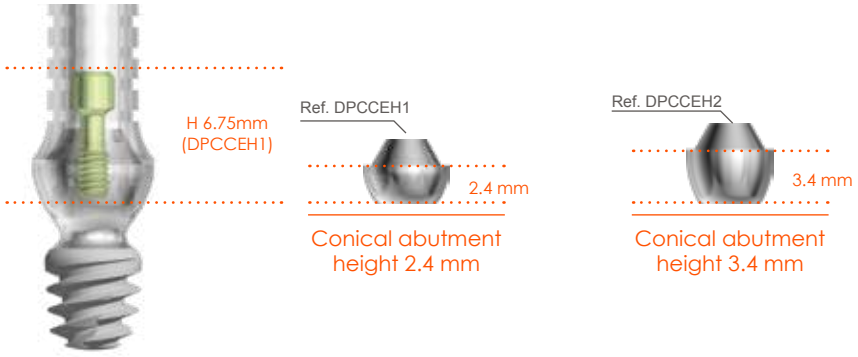
Manual tightening: 10 N.cm

Suture the flap so that the gingival level is on the top part of the healing screw (i.e. above line “c” below).

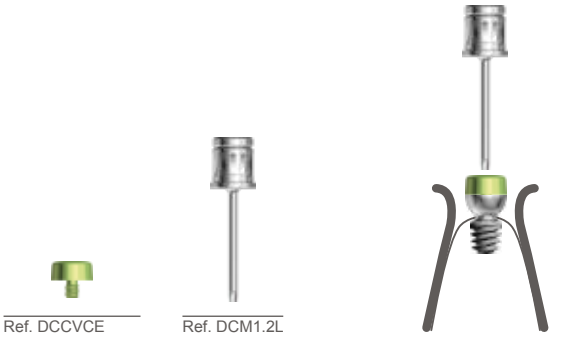
Healing screws are available in two heights: 2.6 mm and 4.0 mm.

Ref. DVCITWK5H2.6 Ref. DVCITWK5H4

With Ø 5.4 mm conical abutment



1. The conical abutment is embedded on the external tapered part by friction and screwed into the implant using the prosthesis fixing screw. This assembly has the benefit of the characteristics of tapered connections.

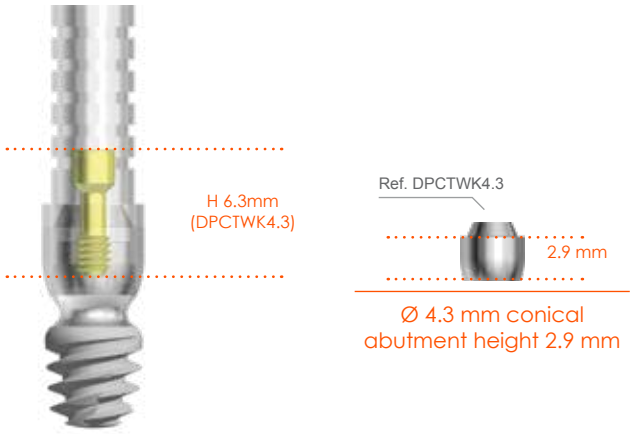


2. Screw the conical abutment cover screw manually using the hexagonal screwdriver.

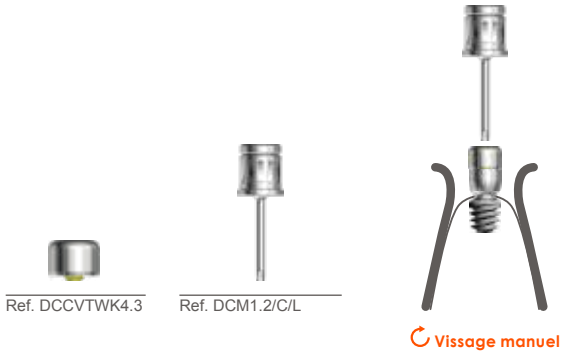
Prosthesis on conical abutment

Use the titanium cylinder for conical abutment in accordance with current practice.

With Ø 4.3 mm conical abutment

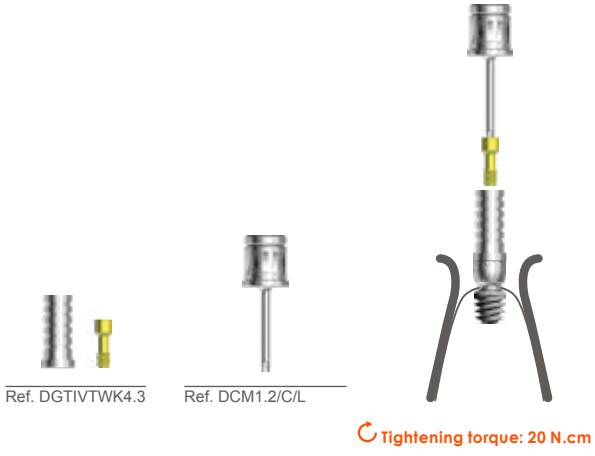


1. The conical abutment is embedded on the external cone by friction and screwed into the implant using the prosthesis fixing screw. This assembly has the benefit of the characteristics of tapered connections.



2. Screw the conical abutment cover cap on manually using the hex screwdriver.

Prosthesis on conical abutment



Use the rotational titanium cylinder in accordance with current practice.

Instrument maintenance

- Before any use of the instrument, check its wear, its good functioning and/or its retention force so that the performances of the instrument are preserved. Proper maintenance of your instruments extends the longevity of your instrumentation.

- Apart from some instruments delivered sterile, the instrument is generally delivered non-sterile. To be cleaned, checked and sterilized before use.

- The instruments supplied by Global D have been freed from manufacturing residues (lubrication, shavings, etc.) and then cleaned, but do not have a sufficient state of decontamination to be sterilized directly. A decontamination and cleaning treatment is therefore essential before any sterilization.

- Global D disclaims all responsibility in the event of non-compliance with these conditions.

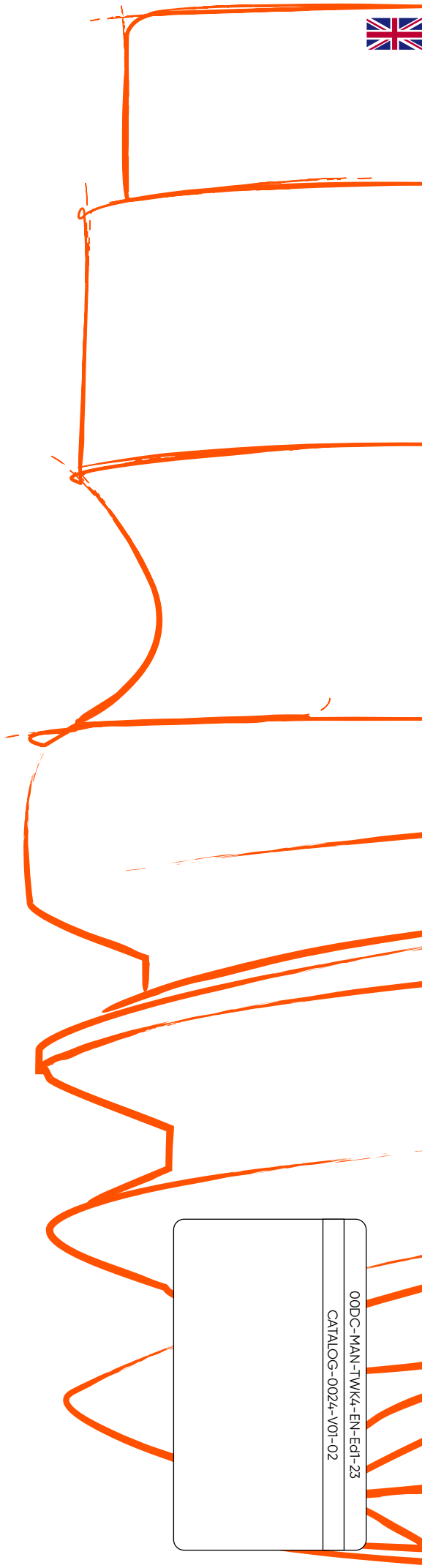
The products shown are Class I, IIa and IIb Medical Devices and as such bear the CE mark in compliance with Directive 93/42/EEC. In France, these devices are not subject to the social security reimbursement scheme.

The medical devices shown may not available for sale in all countries. If you require any further information please contact the Global D sales department.

Please read the user instructions before use. If in doubt, please contact the Global D sales department.

In some cases the instructions may not be provided in printed form. In this case a QR code and a URL link are given on the label of the device. The instructions can however be obtained on request and at no additional cost and will be sent to you within 7 days. Send your request to the following address: quality@globald.com.

Notes



00DC-MAN-TWK4-EN-Ed1-23
CATALOG-0024-V01-02

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