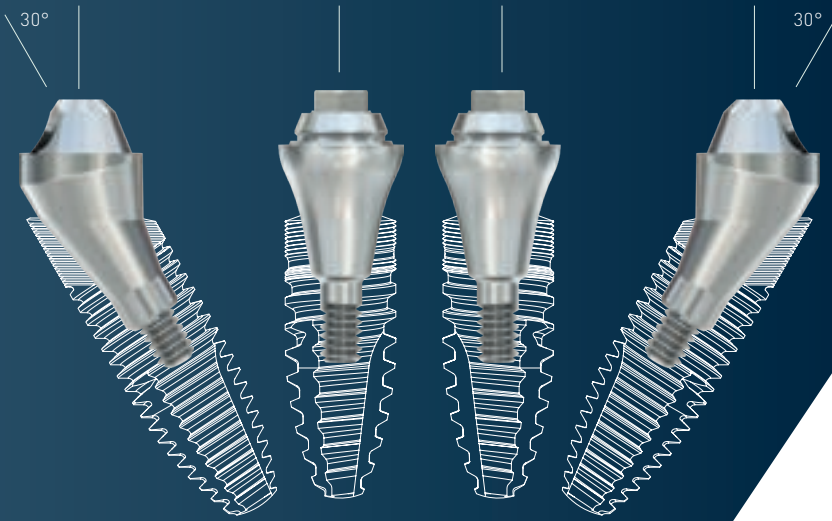




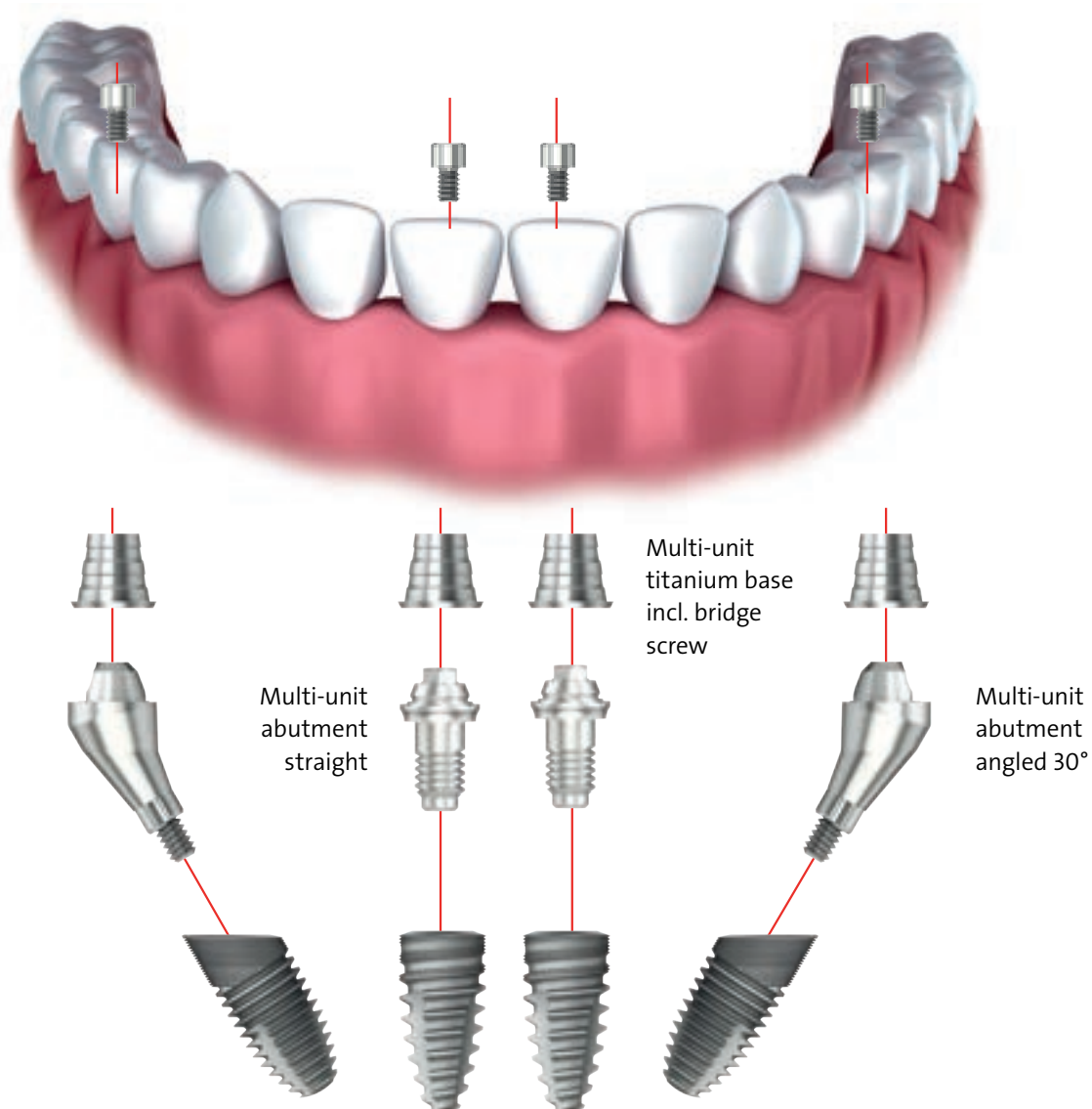
IPS

IMPLANT SYSTEMS

The QuattroFix treatment concept



The QuattroFix treatment concept



QuattroFix - fixed restoration for atrophic ridges allows for a comprehensive treatment plan for edentulous patients, of full-arch immediate restoration, using just two straight and two 30° angulated Quattrocone Implants restored with Multi-unit Abutments.

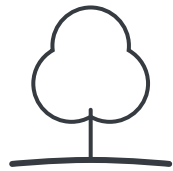
Multi-unit Abutments and final fixed screwretained restoration is immediately placed over the implants. The straight and 30° angulated Multi-unit Abutments allow for optimal distribution of force thanks to the unique insertion tool of the angulated units.

Advantages of the QuattroFix treatment concept



IMMEDIATE

Immediate esthetic functional solution



PERMANENT

Permanent fixed full-arch restoration



HIGH PRIMARY STABILITY

High stability achieved by ideally designed implants for a 30° angled placement



CHAIR TIME

Less chair time and more affordable treatment compared to full-arch alternatives



VERSATILITY

Reduced need for bone augmentation, even in low bone volume cases

The Quattrocone implants

Quattrocone implant

D 3,5 mm

- D 3,5
- Titanium Grade 4
- Sterile packaged
- Incl. closure screw



Length	9 mm	11 mm	13 mm	15 mm
Implant connection	RI	RI	RI	RI
Article No.	3-01-02	3-01-03	3-01-04	3-01-05

Quattrocone implant

D 3,8 mm

- D 3,8
- Titanium Grade 4
- Sterile packaged
- Incl. closure screw



Length	7 mm	9 mm	11 mm	13 mm	15 mm
Implant connection	RI	RI	RI	RI	RI
Article No.	3-01-16	3-01-17	3-01-18	3-01-19	3-01-20

Quattrocone implant

D 4,3 mm

- D 4,3
- Titanium Grade 4
- Sterile packaged
- Incl. closure screw



Length	7 mm	9 mm	11 mm	13 mm	15 mm
Implant connection	RI	RI	RI	RI	RI
Article No.	3-01-06	3-01-07	3-01-08	3-01-09	3-01-10

Quattrocone30 implant

D 4,3 mm

- angled
- D 4,3
- Titanium Grade 4
- Sterile packaged



Length	9 mm	11 mm	13 mm	15 mm
Implant connection	AI	AI	AI	AI
Article No.	4-01-01	4-01-02	4-01-03	4-01-04

Quattrocone implant

D 5,0 mm

- D 5,0
- Titanium Grade 4
- Sterile packaged
- Incl. closure screw



Length	7 mm	9 mm	11 mm	13 mm	15 mm
Implant connection	RI	RI	RI	RI	RI
Article No.	3-01-11	3-01-12	3-01-13	3-01-14	3-01-15

Quattrocone30 implant

D 5,0 mm

- angled
- D 5,0
- Titanium Grade 4
- Sterile packaged

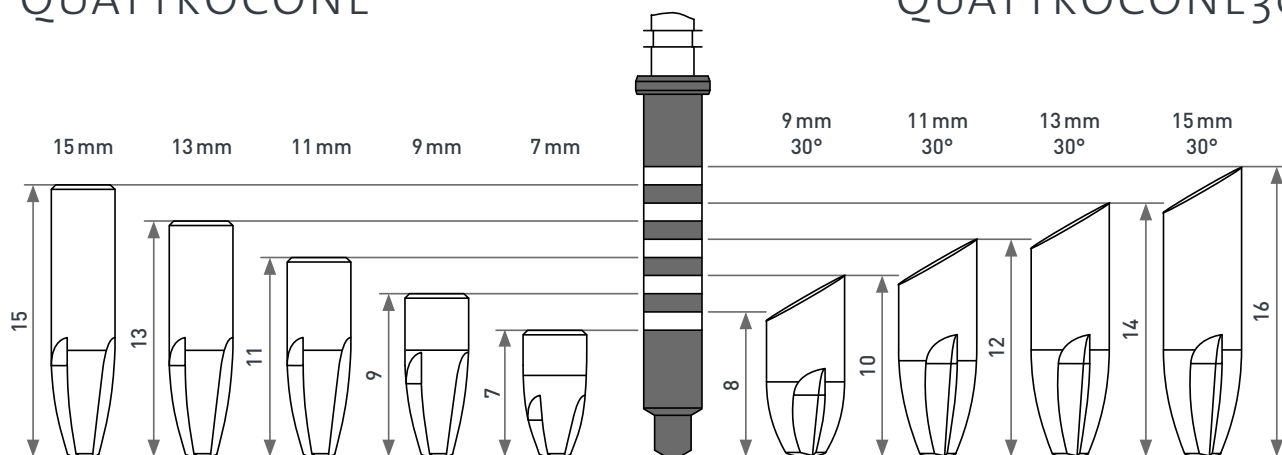


Length	9 mm	11 mm	13 mm	15 mm
Implant connection	AI	AI	AI	AI
Article No.	4-01-06	4-01-07	4-01-08	4-01-09

How to measure the Implant length

QUATTROCONE

QUATTROCONE₃₀



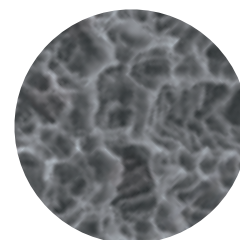
QUATTROCONE30

SPECIALLY DEVELOPED AND PATENTED FOR THE QUATTROFIX TREATMENT CONCEPT AND ALL INDICATIONS WITH ANGULATED IMPLANT PLACEMENT. UNIQUE.



SURFACE

The highly pure, sandblasted and acid-etched surface extends over the entire length of the implant to the implant shoulder. It has ideally dimensioned micro-macro roughness to allow the apposition of bone-forming cells, thus promoting optimum and particularly reliable long-term osseointegration of the implant. In combination with the coronal micro-thread and conical interface it ensures exceptional crestal bone formation, over the implant shoulder to the interface.



SHAPE

The implant body of the Quattrocone implant extends root shaped and, in combination with a high-profile thread and 3 cutting edges, ensures high primary stability, even in challenging situations. Perfect for immediate implant placement and immediate loading.

MARCO THREAD

Macro-thread geometry developed for a 30° inclined position. 30° thread flanks ideally transfer the forces in the bone. No tipping of the implant.

Reduced thread pitch to 0.60 mm (revolution) enables precise vertical positioning of the implant body in the bone and guarantees very high primary stability.

IMPLANT SHOULDER 30°

Shoulder inclined by 30°. For final positioning flush with the bone when positioning at a 30° incline in QuattroFix use.

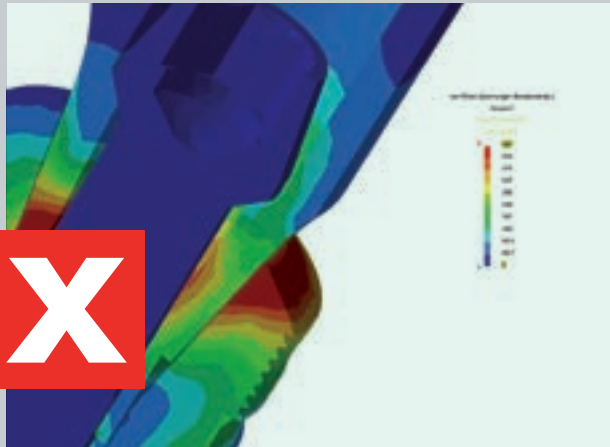
MIICRO-STRUCTURE

Crestal micro-groove structure. Ensures perfect bone retention with QuattroFix use

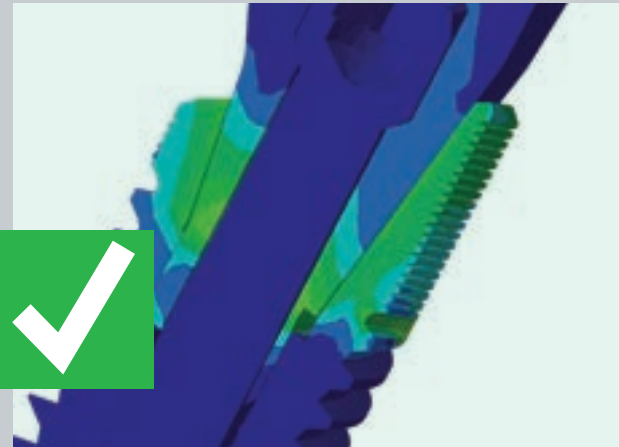
IMPLANT CONNECTION

The deep conical connection has been designed to distribute the forces applied at a 30° angle deep into the implant and ensures high mechanical stability reserves. Only one possible rotational position excludes incorrect positioning of the abutment.

Comparison of workload on the implant shoulder



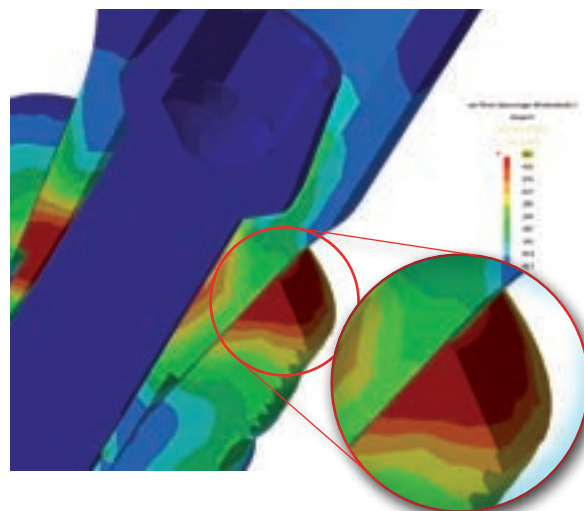
CONVENTIONAL IMPLANT



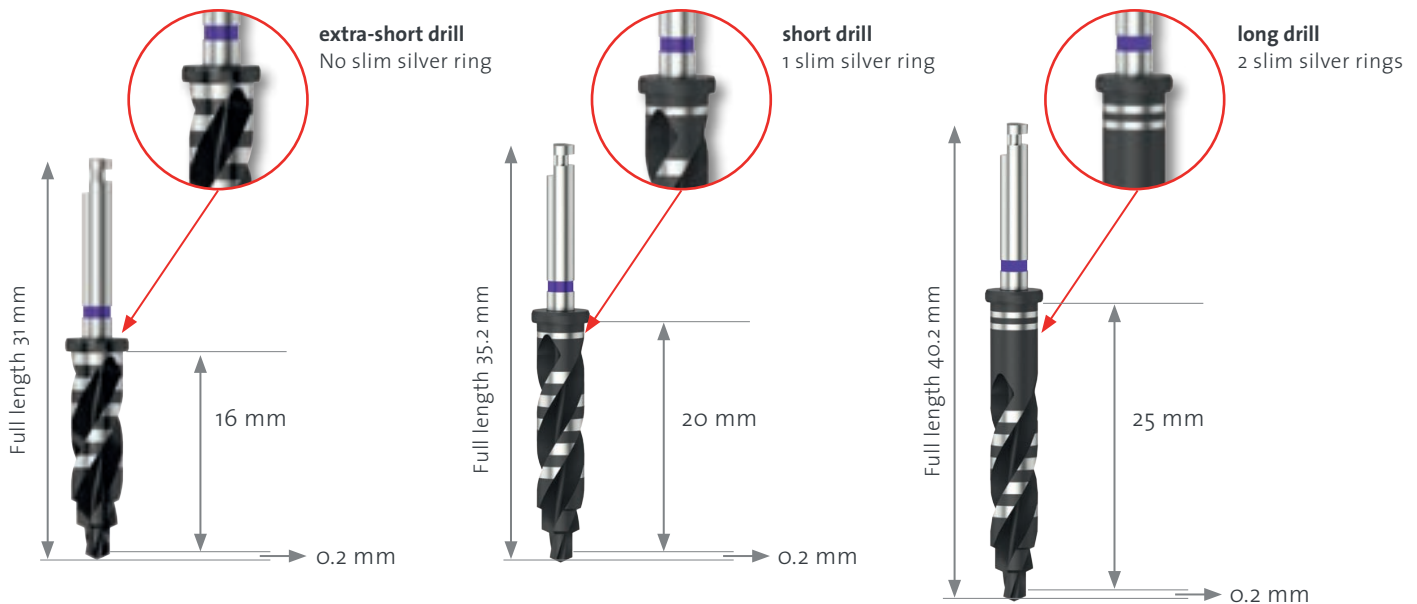
QUATTROCONE30

The implant connection with a very deep primary force and friction locking conical connection, specially developed to match inclined placement of the implant, distributes the initial forces in the implant via extensive surfaces. The finite element analyses performed with the Quattrocone30 show a very uniform and completely uncritical distribution of the von Mises stresses in the implant shoulder region with a loading of 250 N. The stress peaks otherwise usually experienced with this loading can be effectively prevented by the special Quattrocone30 implant connection. This in turn protects the surrounding bone in this particularly sensitive area.

Conventional implant interface connections show partial, high stress peaks in the region of the implant shoulder with placement of the implant at an angle of 30°. These can negatively influence the surrounding bone.



THERE ARE THREE DRILL BIT LENGTHS:



Quattrocone drills D 3.5 mm



D 3.5 mm

Pilot drill
D 2.0 mm
Standard drill
D 2.0/3.2 mm
Cortical drill
D 2.3/3.2/3.3 mm

EXTRA-SHORT DRILL
0-13-96
SHORT DRILL
0-13-89
LONG DRILL
0-13-90

The 3-blade stepped drills are coordinated with the outer shape of the implant.
Quattrocone is placed using generally 2 drilling stages:
1. Pilot drill 2 mm
2. Final stepped drill
Different stepped drills for D1/D2 bone and D3/D4 bone. Bright depth markings ensure optimum visibility.
Long service lives due to black surface coating.
Clear colour coding and a total of 4 drills greatly simplify the protocol.

Implant placement

For use, a hole for a straight implant must be drilled in the lower or upper jaw with a pilot drill. Once the pin of the gauge is in place within this hole, it may be aligned to the needs of the clinical situation. When fixed it's showing guide-lines for the drilling angle. This is in order to prevent drilling at an angle different than 30°.

Preparation implant bed

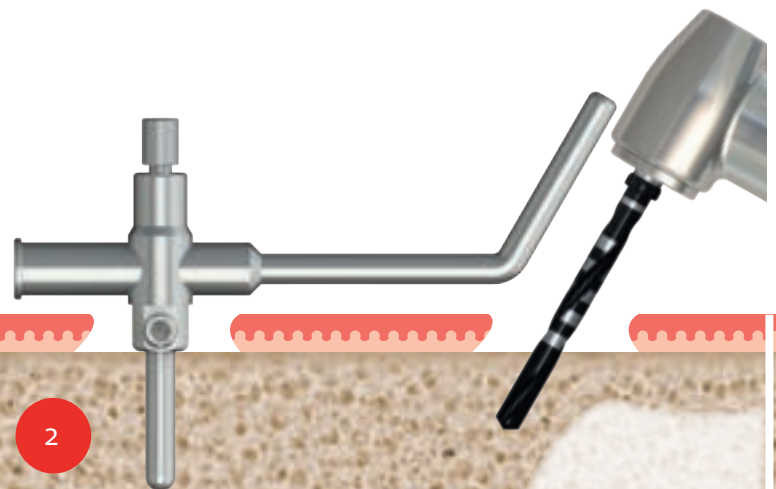
Preparation of the later on implant bed for an straight implant with the pilot drill. Preparation depth min. 9 mm.

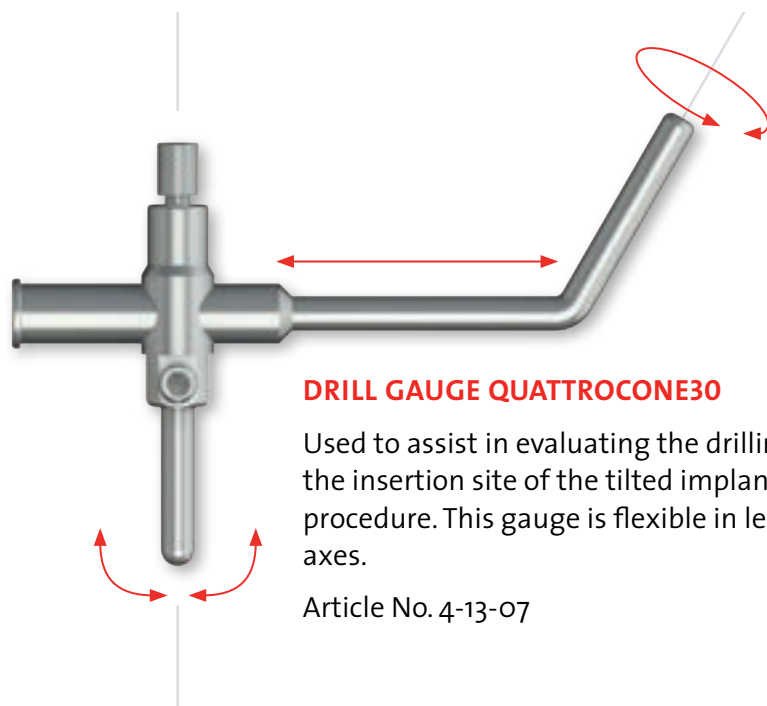


During the drilling, it is essential to ensure sufficient cooling, e.g. NaCl liquid, to avoid overheating and thus damage to the bone.

Insertion drill gauge

Insert the QuattroFix drill gauge and prepare the implant bed for the Quattrocone30 with the pilot drill in the indicated implant length.





DRILL GAUGE QUATTROCONE30

Used to assist in evaluating the drilling angle, while preparing the insertion site of the tilted implants during the QuattroFix procedure. This gauge is flexible in length and is rotatable in two axes.

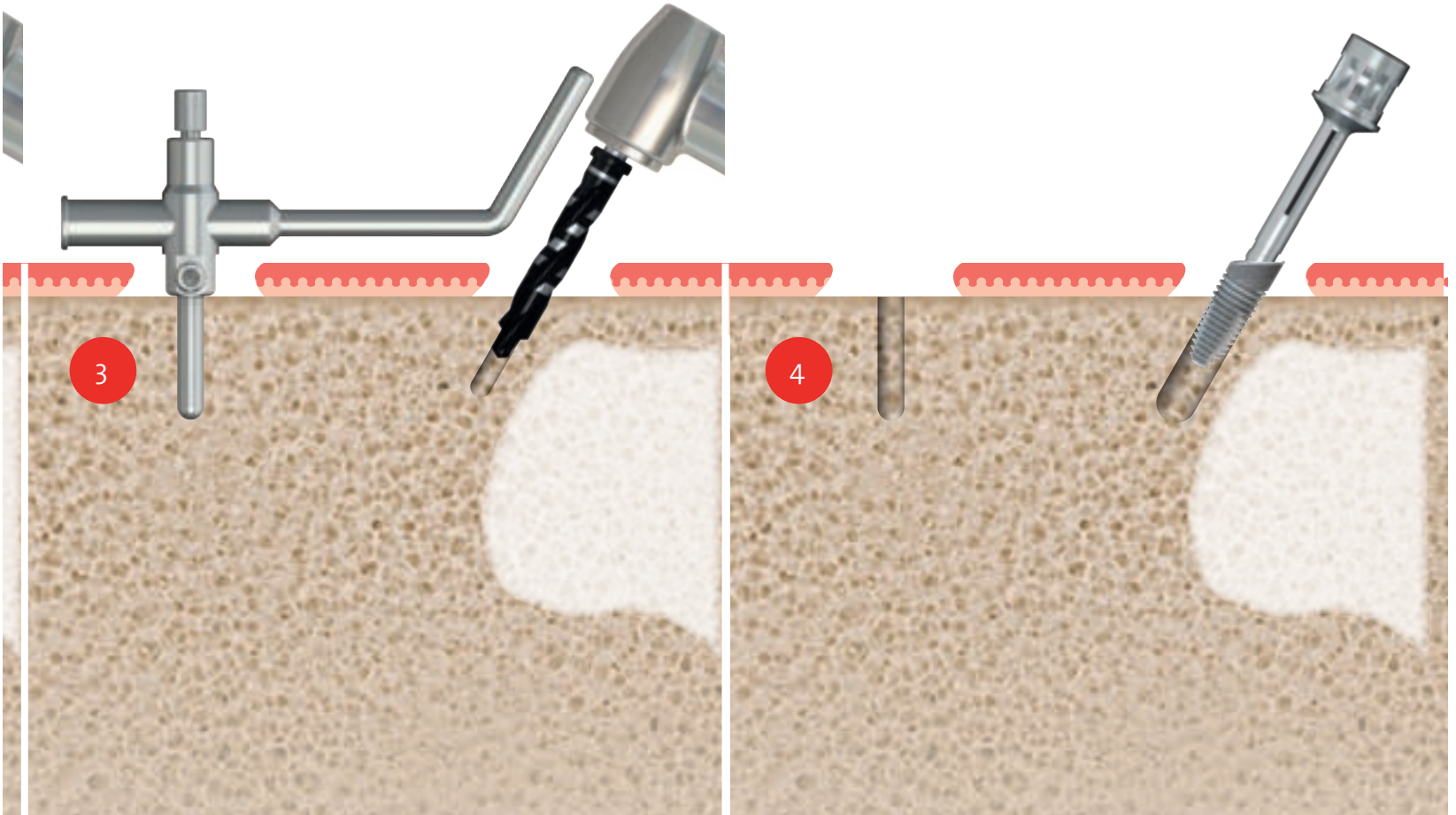
Article No. 4-13-07

Enlarging implant bed

Enlarge the implant bed with the final drill according to the implant diameter.

Insertion implant

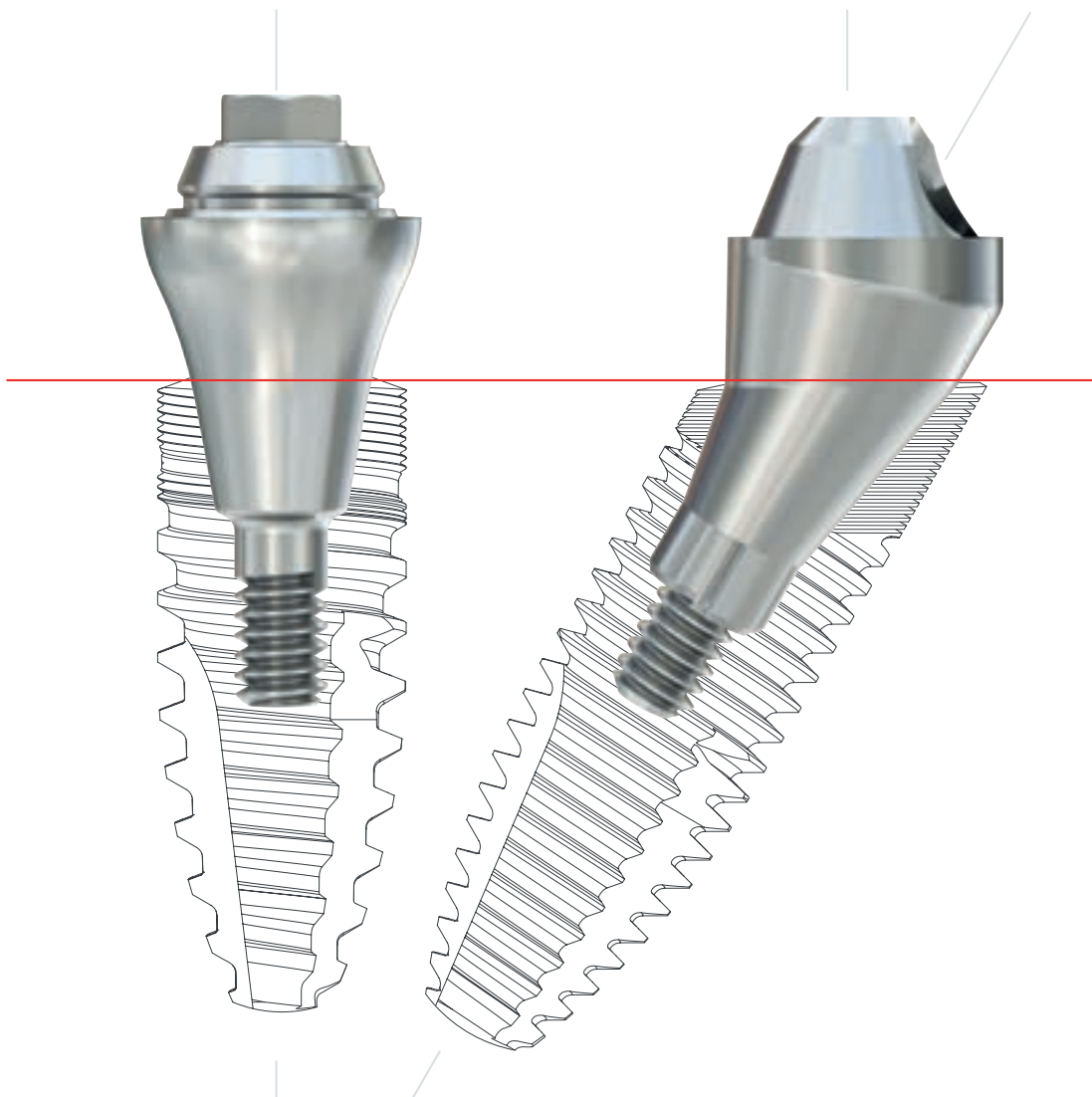
If the implant is inserted with the placement instrument, either for the manual use with the torque ratchet or with the angled hand-piece, a max. torque of 35 Ncm should not be exceeded. When 35 Ncm must be clearly exceeded before getting the final implant position, we recommend that you carefully unscrew the implant and use the cortical drill for enlarging the implant bed.



Multi-unit Abutment

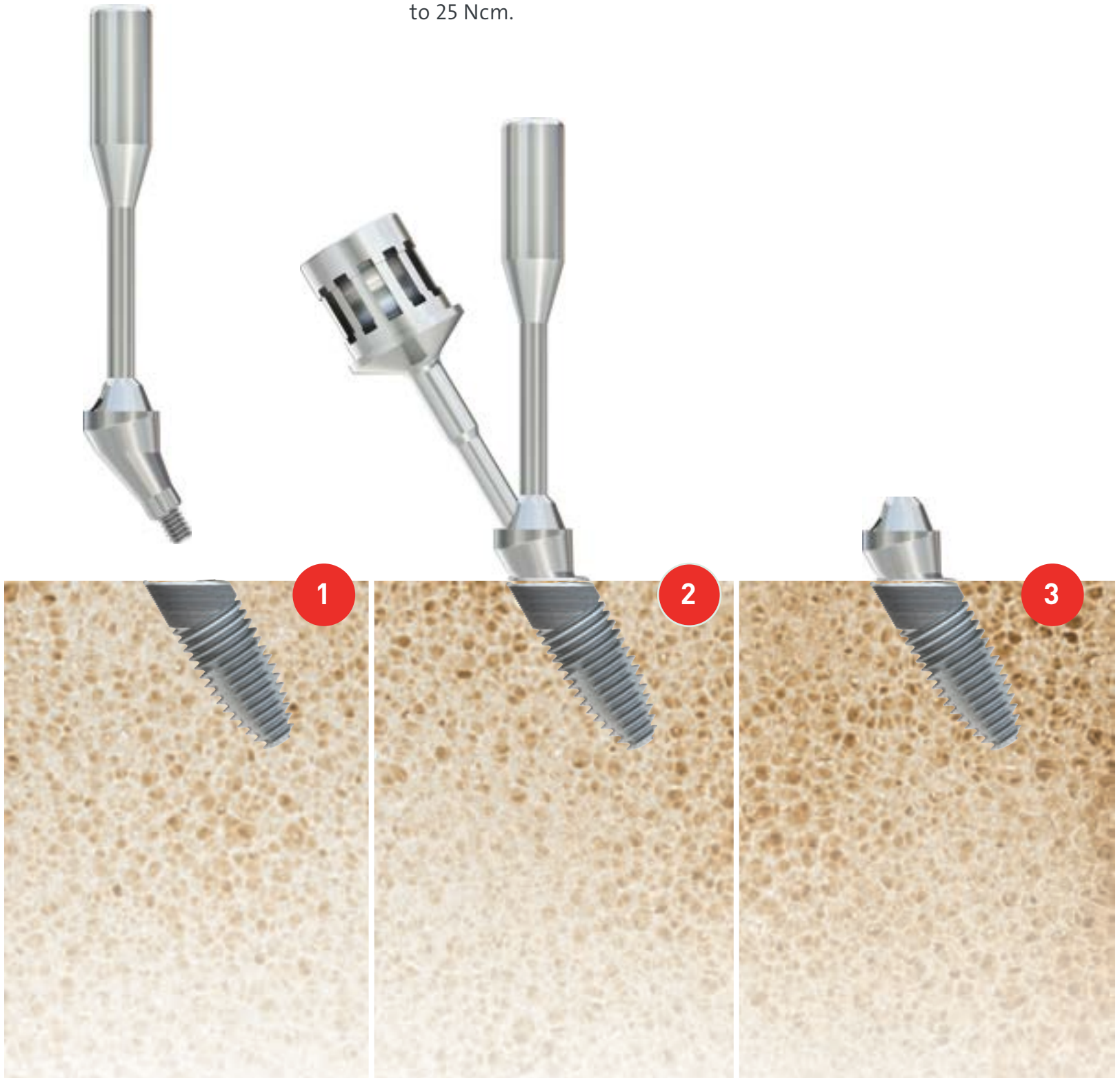
The Multi-unit Abutment supports a variety of prosthetic restorations. Thus it is ideal for creating patient oriented individual hybrid restorations or being the base for an individualized QuattroFix restoration.

- in straight and angled configurations
- in various gingiva heights
- great variety of prosthetic components



How to use

After the implant placement, the 30° angulated Multi-unit Abutment is connected to the Quattrocone30 implant with its special insertion tool and tightened with the screw up to 25 Ncm.

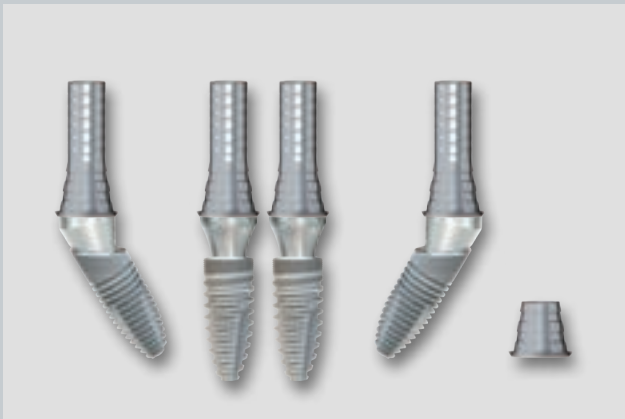


Notes on the prosthetic workflow



MASTER CAST MODEL

After impression taking the transmitted clinical situation in the master cast model in the Lab.



CHOICE AND ADAPTATION OF THE CAPS

In the articulator, the height of the titanium caps is checked and, if necessary, shortened with a cutting disc. Alternatively, the short titanium bases can also be used.



PREPERATION OF THE CAPS

In the case of the titanium cap/base, which is to be worked in, the screw channel is covered with e.g. a closing pin, for protection against incoming plastic during the incorporation. For laboratory work, the use of an additional set of screws is recommended. The screws included in the delivery of the prosthetic caps are only intended for use in the mouth. Scrape and clean the scaffold at the gluing sites with 2 bar with aluminum oxide 110 μm . Regions which are not to be conditioned can be protected by wax or silicone. Clean the titanium caps/bases after blasting at 3-4 bar in the oil-free air jet. Apply primer on the titanium caps/bases using a disposable brush and allow them to dry for approx. 30 sec.



FIXING OF THE PROSTHETIC CAPS

The protection caps are exchanged against the titanium caps/bases. The position of the titanium cap/base already fixed in the supply on the mastercast model in the Lab remains free. The denture is positioned and screwed in with the already integrated titanium cap/base. For a stress-free seat there must not be a contact from the overdenture to the titanium caps/bases which have not yet been fixed. The gum may not be squeezed..



BONDING

The oral bonding compensates for inaccuracies and avoids stress.

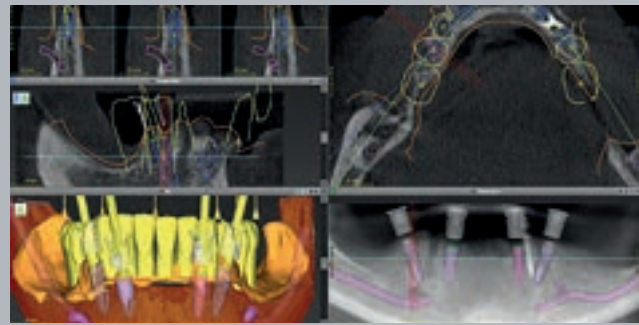
Important:

- Avoid fractures by ensuring sufficient stability of the temporary restoration
- Bond without tension
- Ensure hygiene requirements

Clinical QuattroFix case



initial situation



3D planning



checking the implant beds



implant placement



radiograph



abutment placement



situation after suturing



provisioning



situation after healing time



zirconia bridge after milling



final restauration



final situation



Clinical Case:
Dr. med. dent. Martin Müllauer





Editor

Medentika® GmbH

As at: October 2020

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Annex II

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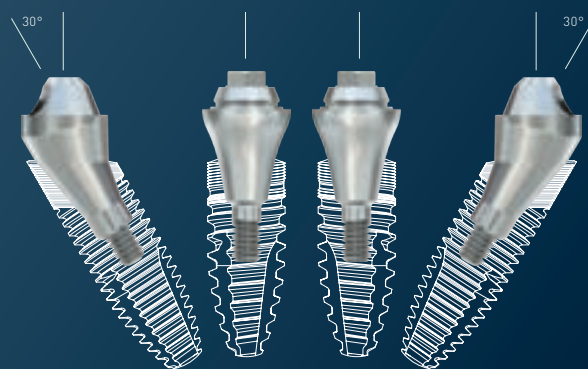
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