IPS

IMPLANT SYSTEMS

Multi-unit abutments

MEDENTiKA®

A Straumann Group Brand

Multi-unit abutment

The multi-unit abutment supports a wide range of prosthetic restorations. So it's ideal for producing personalized multi-unit restorations, for example, or as a basis for customized restorations with implant-borne fixed full dentures according to the QuattroFix treatment concept.

A wide range of options exists for prosthetic restorations.

- Bonding of titanium bases in full dentures as a temporary solution.
- Production of superstructure frameworks with CoCr or HSL caps.
- CAD/CAM milled bars or bridges.
- QuattroFix treatment concept

Full denture

A provisional full denture is prepared appropriately in the area of the titanium bases and then placed on the model and/or inserted in the mouth free of tension.

Final bridge restoration on two implants in the posterior region

A metal framework is prepared appropriately in the area of the titanium bases and then bonded in the mouth free of tension. Alternatively, directly cast HSL or CoCr bases can be used to prepare the framework. After final preparation, the bridge is screw-retained occlusally.
This procedure is also suitable for preparing a final full restoration on at least four implants in the mandible or six implants in the maxilla.

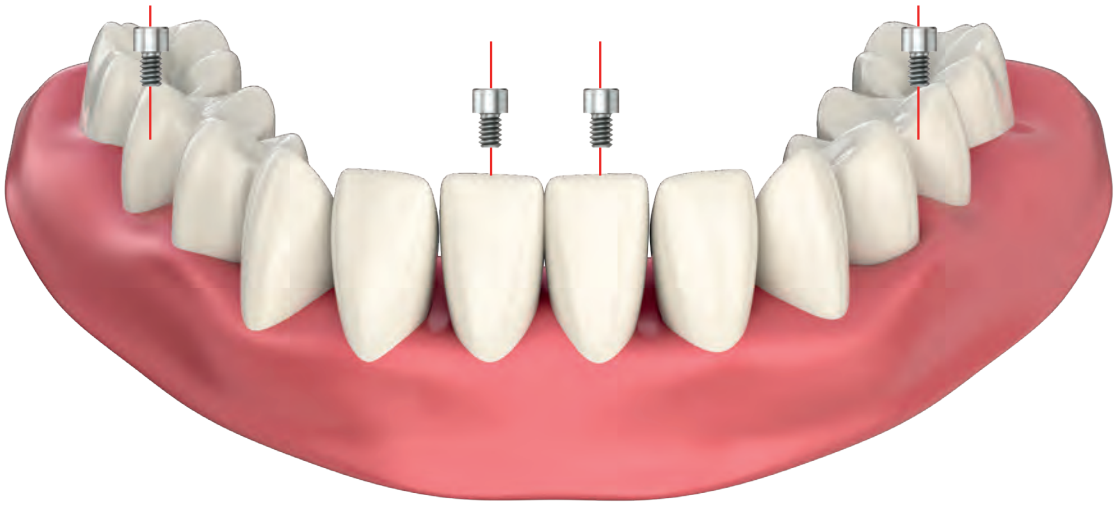
Bar with removable full denture

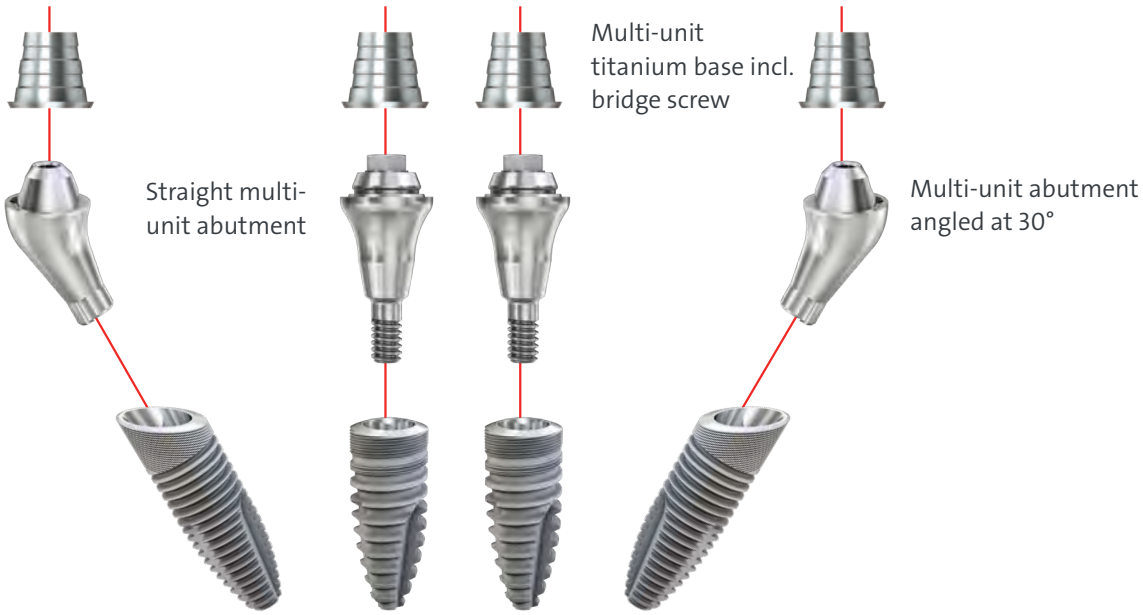
An individually milled or CAD/CAM fabricated bar is screwed onto the multi-unit abutments. The final removable restoration can now be completed according to the respective indication and the patient's wishes.

The QuattroFix treatment concept

The QuattroFix treatment concept is a special treatment concept for an implant-borne, fixed, full-arch restoration for edentulous patients with an atrophic alveolar ridge on two straight and two 30 degree-angled implants.

The temporary restoration is immediately screwed onto the implants with the multi-unit abutments. The straight and 30 degree-angled multi-unit abutments allow a common insertion path for the prosthetic restoration.





All multi-unit abutments, incl. insertion aid, are delivered sterile-packed.

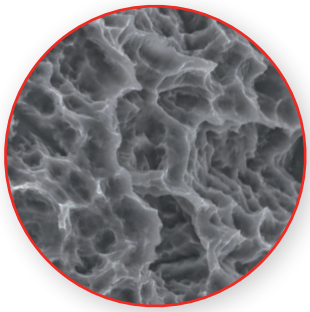
The QUATTROCONE30 implant

international patent pending

Specially developed and patented for the QuattroFix* treatment concept and all indications with angled implant insertion.

SURFACE

The high purity, sand-blasted and acid-etched surface extends the entire length of the implant to the (machined) implant shoulder. It possesses macro-micro roughness that is ideally dimensioned for the deposition of bone-forming cells and thus enhances the ideal and above all reliable long-term osseointegration of the Microcone. It ensures well above average crestal bone formation in conjunction with the coronal microthread and the conical interface, throughout the implant shoulder to the interface.



FORM

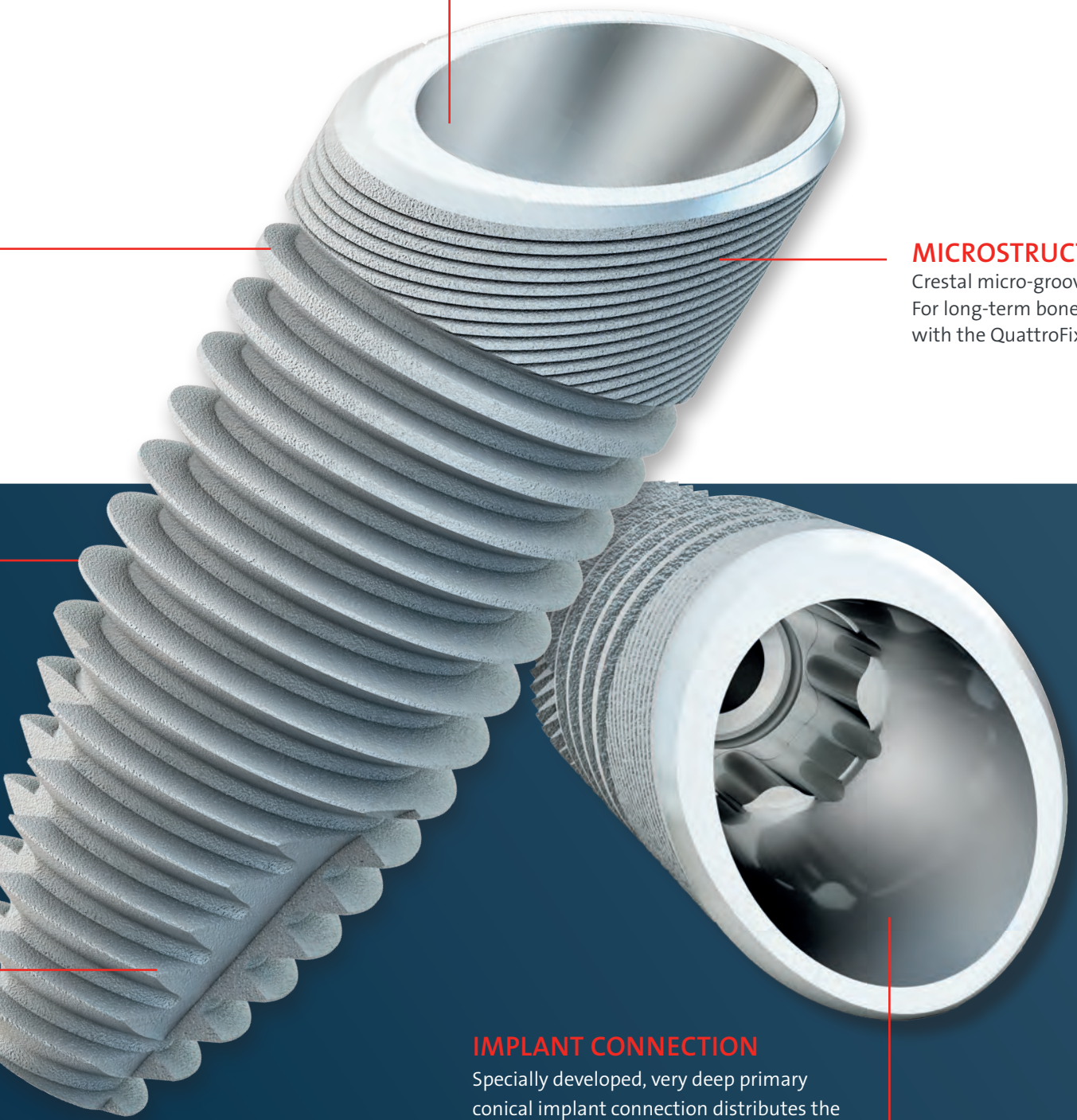
The body of the QUATTROCONE30 implant extends in a root shaped pattern and, in combination with a high-profile thread and three cutting edges, ensures high primary stability, even in challenging situations. Perfect for immediate implant placement and immediate loading.

MACROTHREAD

The macrothread geometry has been developed for a 30° inclined position. 30° thread flanks ensure optimal transfer of forces in the bone.. No implant tilting.
Thread pitch reduced to 0.60 mm per rotation enables precise vertical positioning and rotational alignment of the implant body in the bone and guarantees very high primary stability.

IMPLANT SHOULDER 30°

Shoulder angled at 30°. For final positioning flush with the bone when positioned at a 30° angle with QuattroFix*.



MICROSTRUCTURE

Crestal micro-groove structure. For long-term bone preservation with the QuattroFix*.

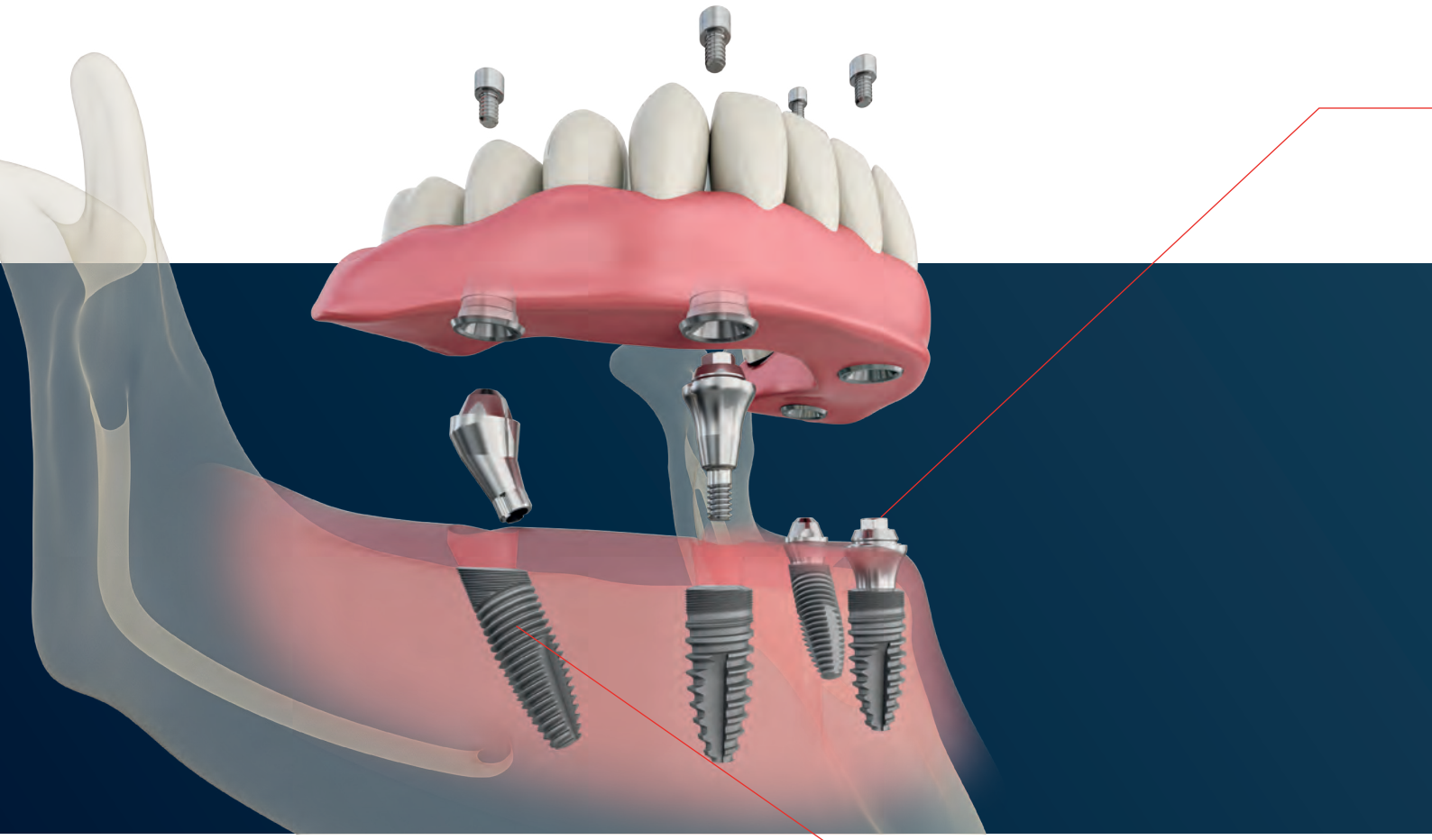
IMPLANT CONNECTION

Specially developed, very deep primary conical implant connection distributes the forces applied at a 30° angle deep into the implant and ensures high mechanical stability reserves. Incorrect positioning of the abutment is impossible as there is only one single possible rotational position.

* QuattroFix is a special treatment concept for fixed, full-arch restoration for edentulous patients with an atrophic alveolar ridge on two straight and two 30 degree-angled implants.

QUATTROCONE30 - QuattroFix

QuattroFix is a special concept for fixed, full-arch restoration for edentulous patients with an atrophic alveolar ridge on two straight and two 30 degree-angled implants.



ADVANTAGES OF THE QUATTROFIX TREATMENT CONCEPT

IMMEDIATE TREATMENT

Immediate esthetic and functional solution

PERMANENT

Treatment with fixed prosthetic solution.

HIGH PRIMARY STABILITY

High stability achieved by implants designed specifically for 30 degree-angled positioning.

TREATMENT TIME

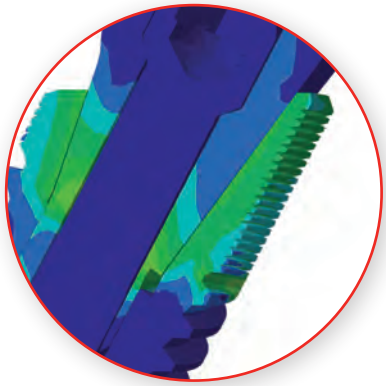
Shorter treatment time

VERSATILITY

Even in low bone volumes, bone augmentation is rarely required.

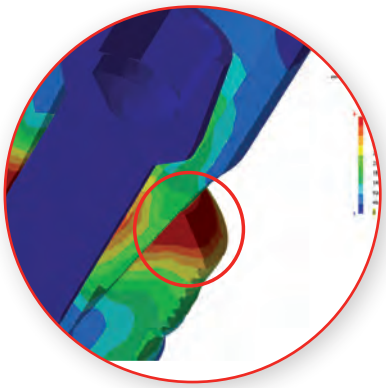
MULTI-UNIT ABUTMENTS

The final restoration is screwed onto the implants with the multi-unit abutments. The straight and 30 degree-angled multi-unit abutments allow optimal distribution of force on the bone.



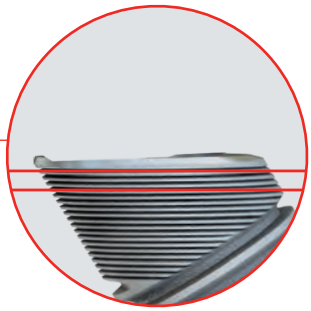
QUATTROCONE30 IMPLANT CONNECTION

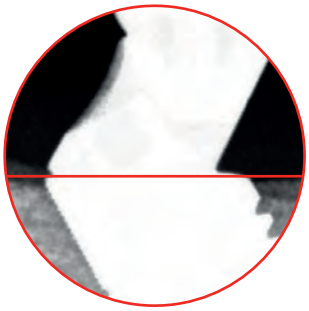
The implant connection has been developed specifically for angled insertion. Its very deep conical force-locking and interlocking tapered connection widely distributes the applied forces into the implant. The finite element analyses performed with the QUATTROCONE30 show a very uniform and completely uncritical distribution of the von Mises stresses in the implant shoulder region with a loading of 250 N. The special QUATTROCONE30 implant connection efficiently prevents the stress peaks that would otherwise arise under these conditions. This in turn protects the surrounding bone in this particularly sensitive region.

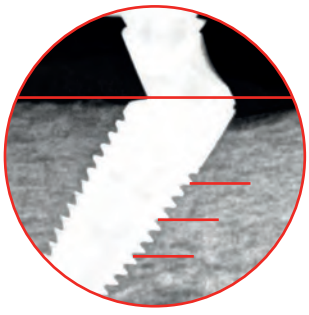


CONVENTIONAL IMPLANT CONNECTION

Conventional implant interface connections have partially high stress peaks in the implant shoulder region when an implant is inserted at an angle of 30°.
These can have a detrimental effect on the surrounding bone.







QUATTROCONE30 THREAD DESIGN

The uniquely shaped and patented design of the QUATTROCONE30 implants has been specially developed for inclined implant insertion and thus bone preservation. Cases in which QuattroFix* is indicated have their own special requirements. This is the first solution to proficiently address these requirements both scientifically and technically.

As the flanks of the macrothread are angled at 30°, inserted at an angle, these implants behave like a conventional implant when an axial load is introduced – ideal! Both tipping movements of the implant and excessive stress in the critical crestal bone region are eliminated. This ensures reliable implant placement with lasting stability.

* QuattroFix is a special treatment concept for fixed, full-arch restoration for edentulous patients with an atrophic alveolar ridge on two straight and two 30 degree-angled implants.

Multi-unit abutments

Treatment options
Various prosthetic components are available for the different treatment options.

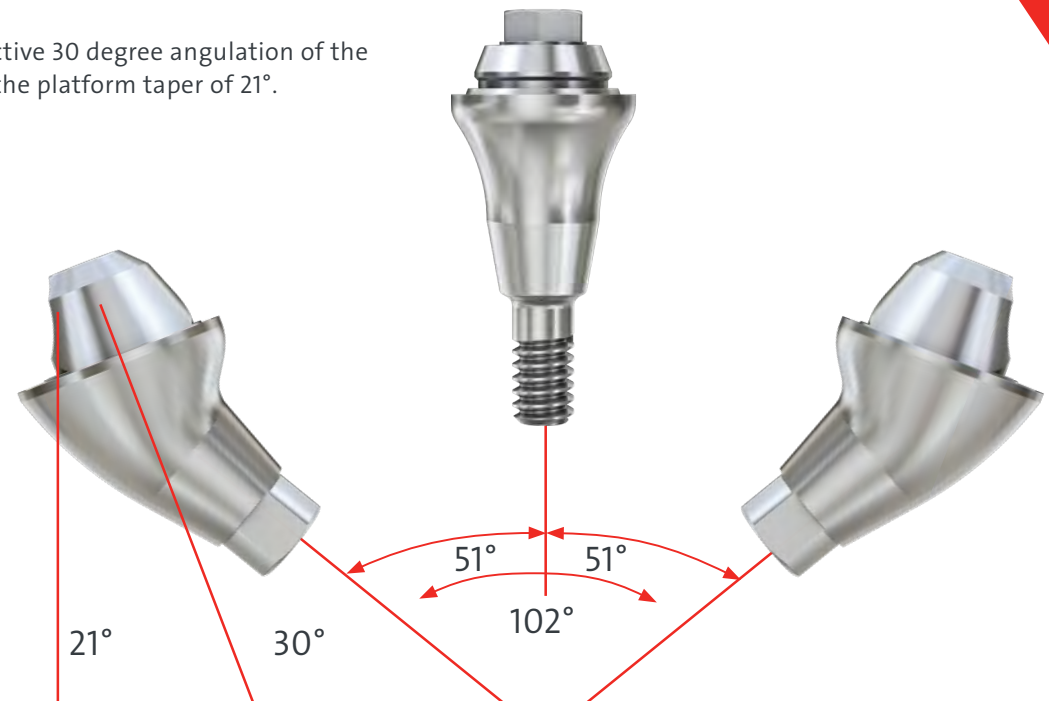
Gingival height
The multi-unit abutments are available in different gingival heights.

Multi-unit divergence compensation

The multi-unit abutments share a uniform platform for prosthetic components with a taper of 21° (on one side).

If the 30 degree-angled multi-unit abutments are used, compensation of divergences between implants of up to 102° is possible.

This results from the respective 30 degree angulation of the multi-unit abutments and the platform taper of 21°.



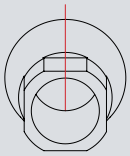
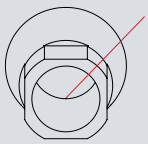
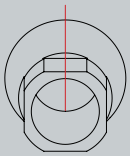
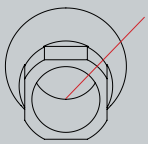
NEW

Now with optimized, s
oft-tissue-sparing emergence profile.

Treatment options
Various prosthetic components are available for the different treatment options.

Gingival height
The multi-unit abutments are available in different gingival heights.

Two angulations
The multi-unit abutments are available with angulations of 17° and 30°.

Angulation	Variant		Gingival height (GH)*	Quattrocone30
Straight			1.5 2.5 (new) 3.5 5.5	
17°	Type 1: over flat 	Type 2: over corner 	GH 1.1/2.5 GH 2.1/3.5 GH 4.1/5.5	
30°	Type 1: over flat 	Type 2: over corner 	GH 0.6/3.0 GH 1.6/4.0 GH 3.1/5.5	GH 1.5 GH 3.0 GH 3.1/5.5

Multi-unit prosthetic components

digital

conventional

bridge screw

for any cap and including the titanium base

Titanium base

for insertion in the bridge/ prosthesis (passive fit) incl. bridge screw

Titanium cap

for individual cutting to length and insertion in the bridge or prosthesis, or for the fabrication of temporary restorations, incl. bridge screw

conventional

Modeling aid

for modeling on the titanium cap or titanium base, only for use in combination with the titanium base or titanium cap

HSL cap

for casting gold alloys, incl. bridge screw

CoCr cap

for casting non-precious alloys, incl. bridge screw

Digital libraries are available for the following manufacturers*:

3shape exocad dental wings A Straumann Group Brand

NEW

Titanium cap Flex

for cutting to length for optimal use in the digital workflow.

Multi-unit screw patrix MedentiLOC and Novaloc

the new multi-unit screw patrix gives you yet another option for restoration.

Titanium base ASC

for insertion in the bridge/prosthesis with angled screw channel

* to some extent this depends on the availability of the updates of the specific manufacturer.

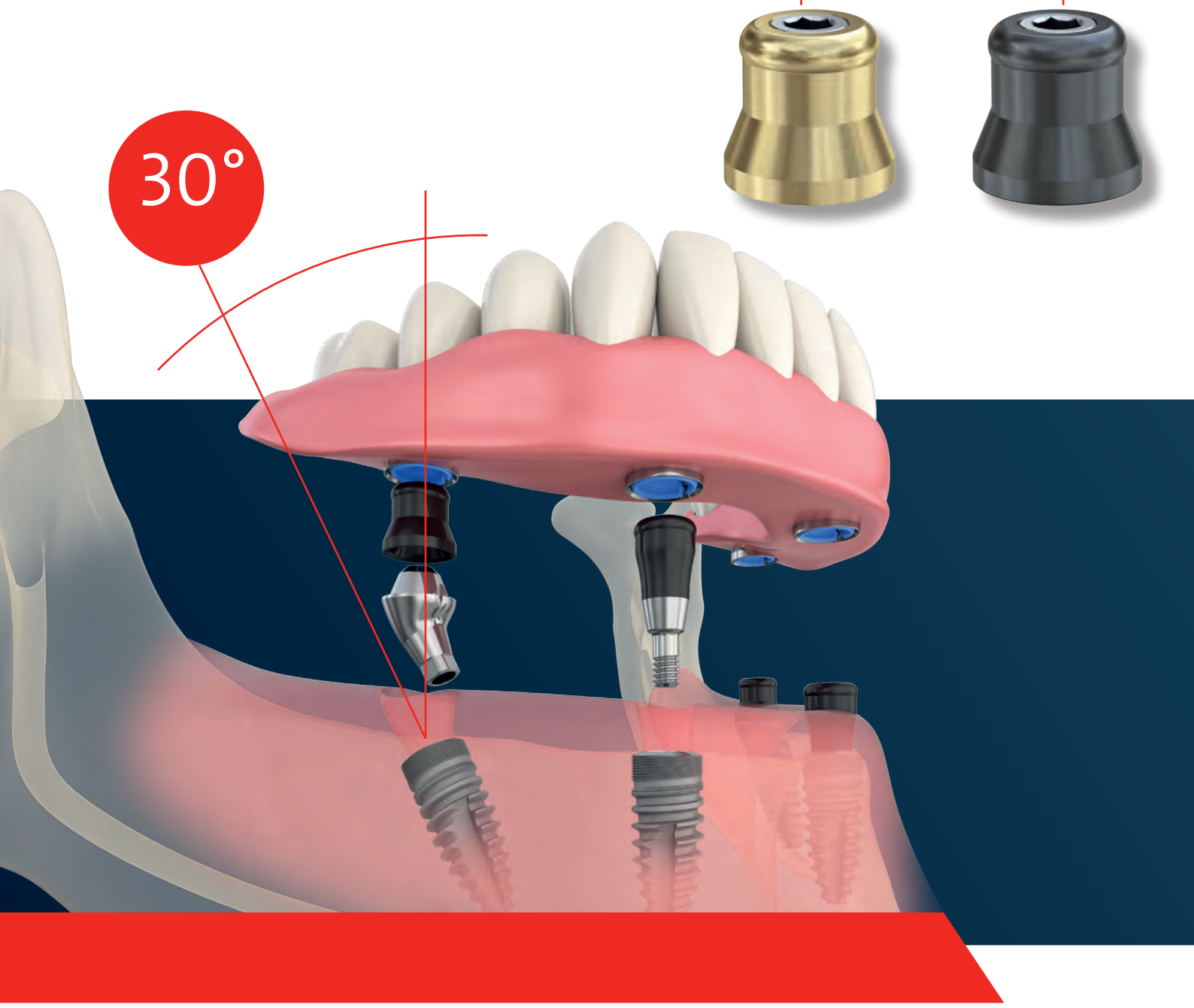
Multi-unit prosthetic components

Multi-unit screw patrix MedentiLOC/Novaloc

The new multi-unit screw patrix offers you yet another option for restoration. It enables you to switch easily from a screw-retained restoration to a removable overdenture construction.

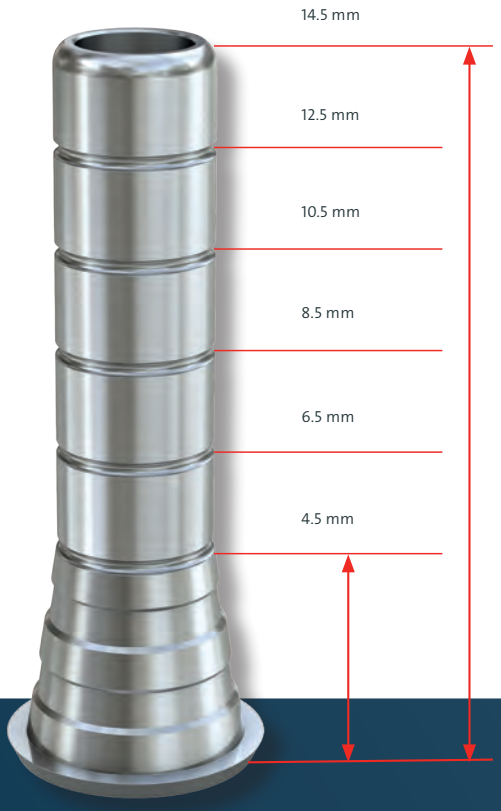
Use the multi-unit abutment in combination with MedentiLOC or Novaloc abutments to achieve angulation up to 30°, enabling divergences to be compensated for in the ideal way.

The screw patrix is tightened with the corresponding screwdriver for the respective implant system.



Bridge screw ASC

The supplied bridge screw incorporates the proven slot for the Ball-Torx placement instrument M 03-8 , M 10-8 or 6-13-06.



Titanium cap Flex

The titanium cap Flex offers a variable chimney height. The 14.5 mm chimney height also supports high restorations, whether for a provisional or definitive restoration. However, this can be individually shortened in 2 mm increments to 4.5 mm. The different chimney heights are defined in the CAD library.

Titanium base ASC

For unfavorably positioned implants or in an esthetically demanding site, the screw channel can optionally be moved to the non-visible area.

Digital libraries are available for the following manufacturers: (May depend on the updates of the respective manufacturers)

3shape exocad dental wings
A Straumann Group Brand

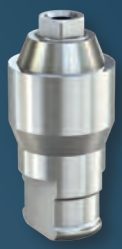
Laboratory implants multi-unit abutments

Laboratory implant

for use in conventional model fabrication

Angled laboratory implant

for use in conventional model fabrication Angled at 17°+ 30°.



CAD/CAM laboratory implant

for use in digital model fabrication (printed model)

Angled CAD/CAM laboratory implant

for use in digital model fabrication (printed model)
Angled at 17°+ 30°.

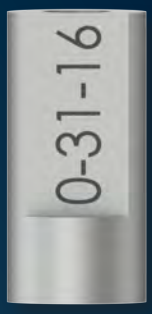
Digital libraries are available for the following manufacturers*:

3shape exocad dental wings
A Straumann Group Brand

Multi-unit accessories

Scanbody

Straight multi-unit for taking digital impressions of straight multi-unit abutments

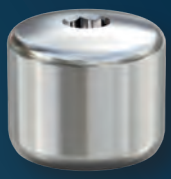


Scanbody

Angled multi-unit for taking digital impressions of the angled multi-unit abutments 17° and 30°

Implant pick-up

for taking impressions of the multi-unit abutments



Closure cap

for protecting the abutments during the healing phase

Placement instrument

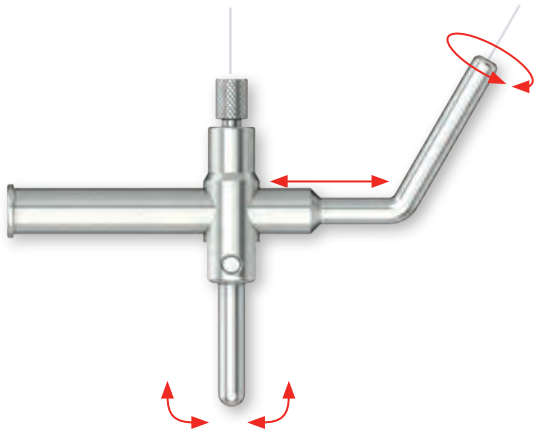
for the straight multi-unit abutments

* to some extent this depends on the availability of the updates of the specific manufacturer.

QUATTROCONE30
Implant bed preparation

Example for QUATTROCONE30 D 4.3 x L 11.0

The first drill hole for the straight implant is drilled into the upper or lower jaw with a pilot drill. Once the tip of the drill aid is positioned in this drill hole, it can be aligned according to the clinical requirements. Once secured, it is used as a drill guide. This ensures that drilling is exactly at an angle of 30°.

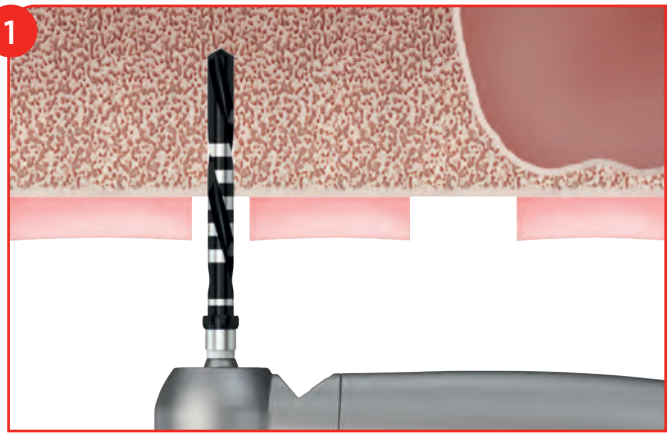


Drill aid QUATTROCONE30

This is used during implant preparation based on the QuattroFix concept to establish the exact angle for drilling. The length of the drill aid is flexible and it can be rotated in three axes.
Art. No. 4-13-07

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

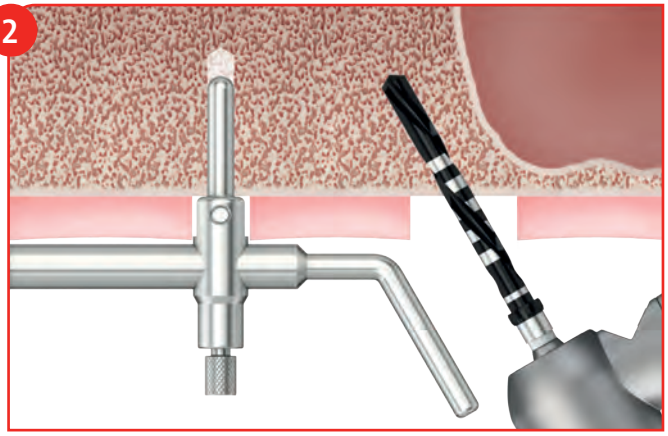
1



Implant bed preparation

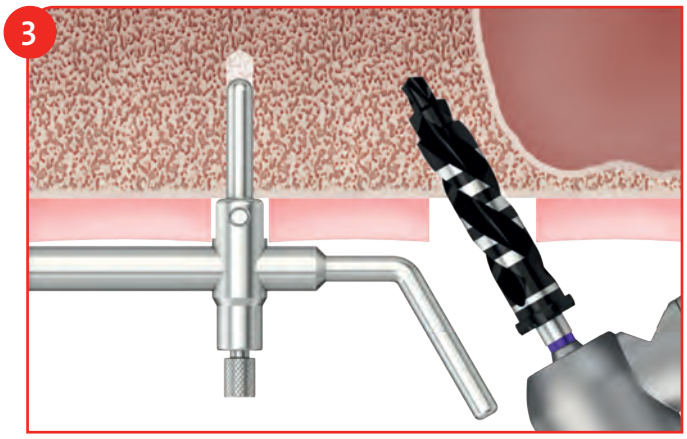
Preparing the later implant bed for the straight implant with the pilot drill. Minimum drill depth 9 mm.

2



Inserting the drill aids

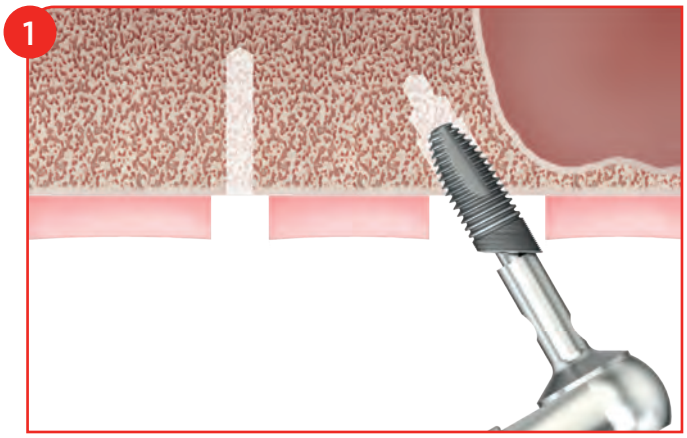
Insert the QUATTROCONE30 drill aid and prepare the implant bed for the QUATTROCONE30 implant with the pilot drill to the required implant length.



Enlarging the implant bed

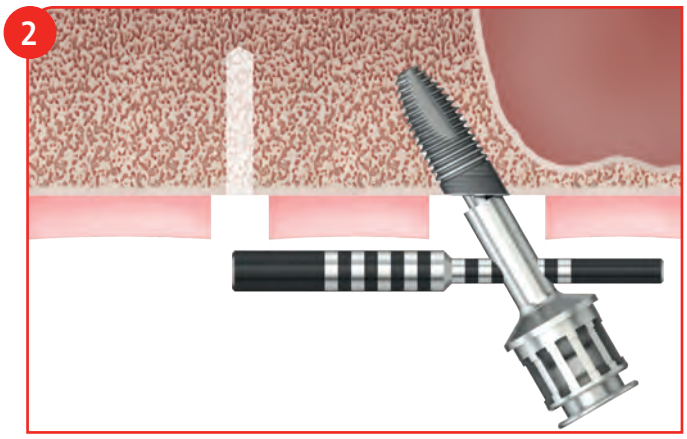
Enlarge the implant bed with the final drill according to the implant diameter.

Implant insertion



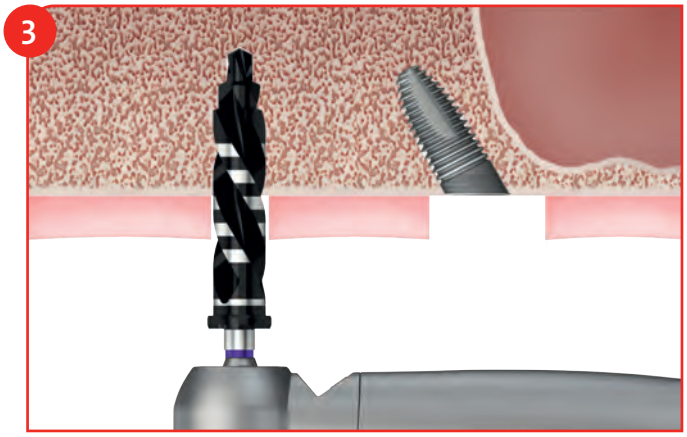
Inserting the implant

The implant is inserted with the placement instrument (manually with a ratchet or the angled handpiece) without exceeding the maximum torque of 35 Ncm. However, if this torque of 35 Ncm has to be exceeded in order to achieve the final implant position, carefully unscrew the implant and enlarge the implant bed with the cortical drill.



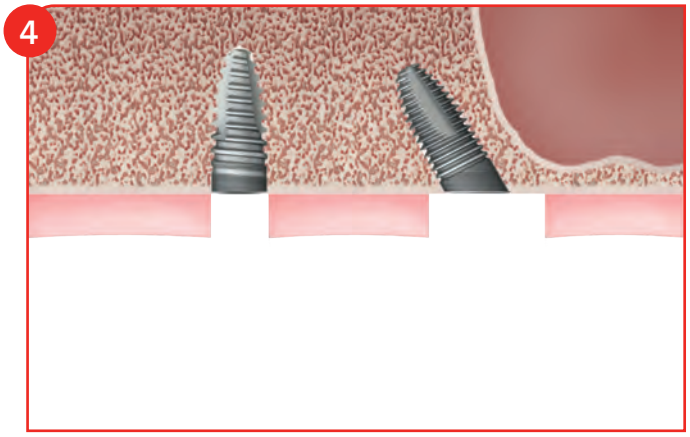
Paralleling aid

For the correct insertion of the QUATTROCONE30 implant, you can use the parallelization guide to check the 30° axis and the correct alignment of the prosthetic axis on the alveolar ridge.



Enlarging the implant bed

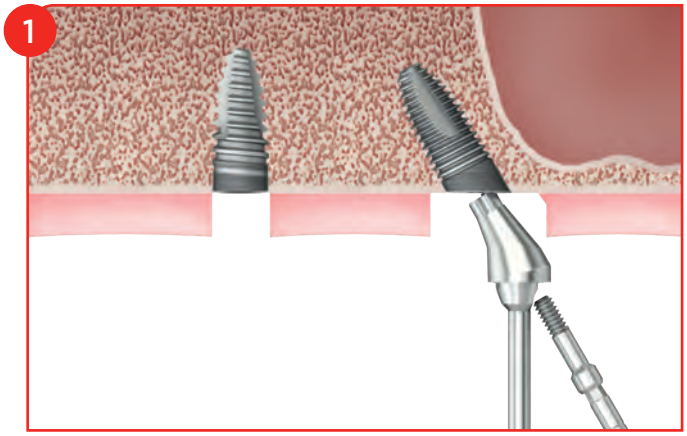
After inserting the angled QUATTROCONE30 implant, enlarge the implant bed with the final drill based on the implant diameter of the straight QUATTROCONE implants.



QuattroFix

Straight and angled implants inserted in the correct ratio for the QuattroFix treatment.

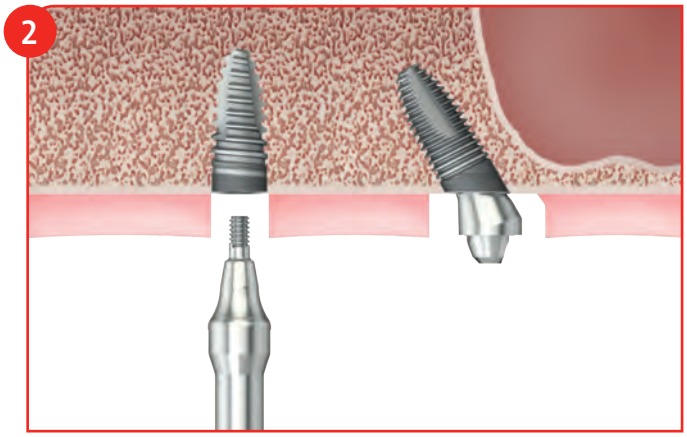
Inserting the abutment



Multi-unit abutment 30°

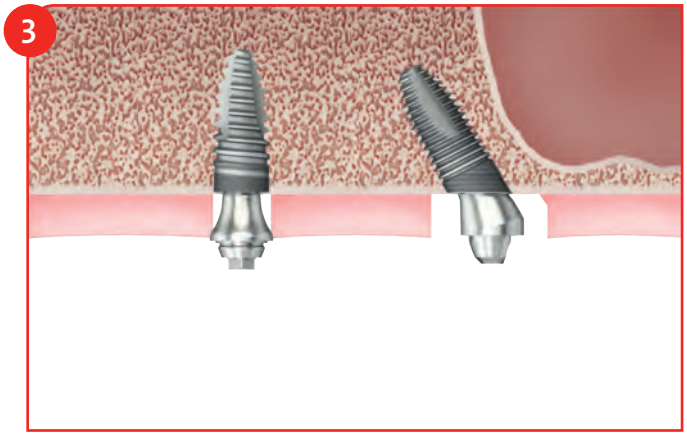
After inserting the implant, the 30° angled multi-unit abutment is connected to the implant with the special insertion aid.

Once the abutment is positioned, it is tightened with the screw with a maximum torque of 25 Ncm.



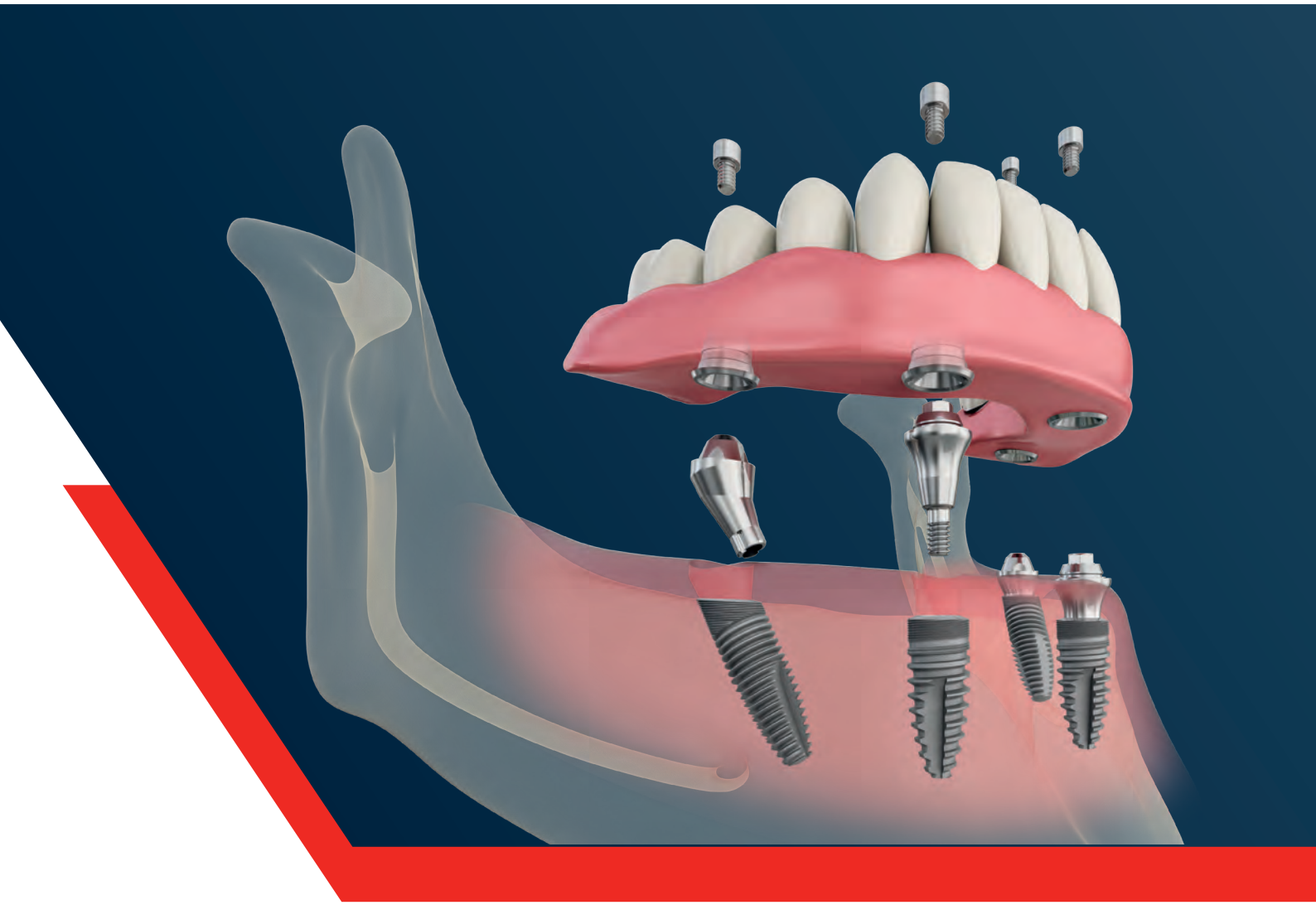
Straight multi-unit abutment

The straight multi-unit abutment is screwed into the implant with the placement instrument 0-13-76.



Final situation

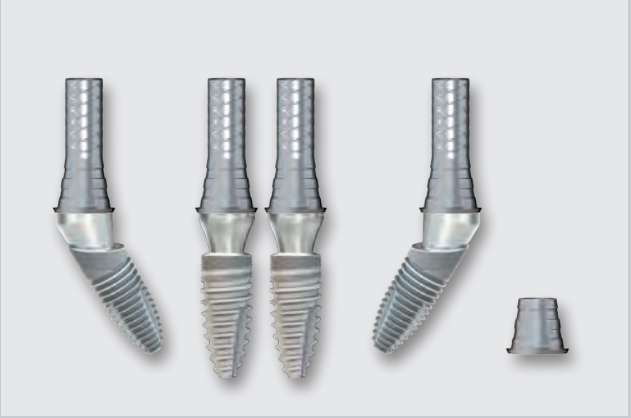
Once the multi-unit abutment has been positioned, the restoration treatment is continued.



The prosthetic workflow

MASTER CAST MODEL

After impression taking, the clinical situation is transferred in the lab to the master cast model.



SELECTING AND ADAPTING THE PROSTHETIC CAPS

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

PREPARATION OF THE CAPS

In the case of the titanium cap/base to be inserted into the denture, we recommend covering the screw channel, e.g. with a cover plug, to prevent the ingress of plastic during mounting. The use of an additional set of screws is recommended for working in the lab. The screws supplied with the caps/bases are only intended for use in the mouth. Sandblast and clean the framework at the gluing points with 110 µm aluminum oxide particles at a pressure of 2 bar. Areas that are not scheduled to be conditioned can be covered with wax or silicone. After sandblasting, clean the titanium caps/bases in an oil-free air jet at 3-4 bar. Next, use a disposable brush to apply the primer to the titanium caps/bases and leave them to dry for approx. 30 sec.

INTEGRATION OF THE TITANIUM CAPS/BASES

The end caps are replaced with the titanium caps/bases. The position of the titanium cap/base, which was fixed in the master cast model set-up in the lab, can be freely determined. The denture is positioned and screwed tight over the integrated titanium cap/base. For a passive fit, there should not be any contact between the overdenture and the titanium caps/bases that have not yet been integrated. Do not blanch the soft tissue.

BONDING

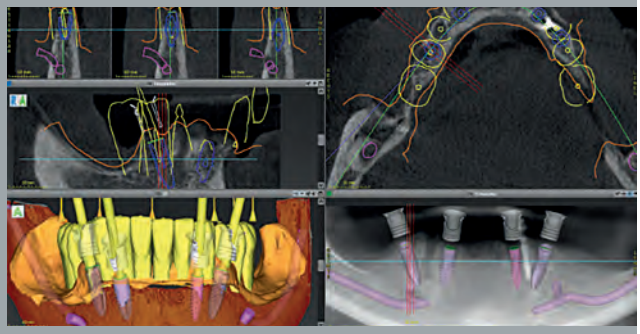
The intraoral bonding compensates for inaccuracies and ensures a passive fit.

NB:

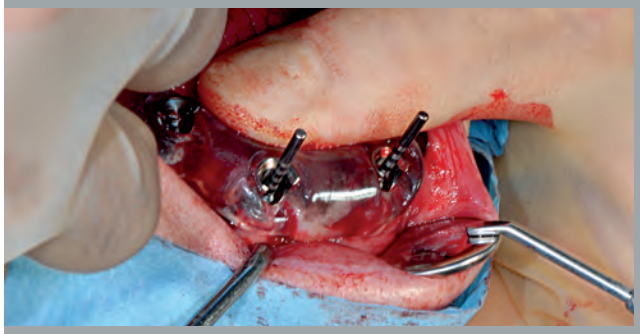
- Avoid fractures by ensuring sufficient stability of the temporary restoration
- Bond without tension
- Ensure hygiene requirements are observed

Clinical QuattroFix case

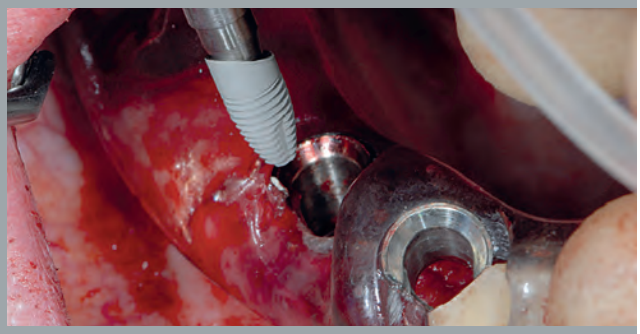
Initial situation



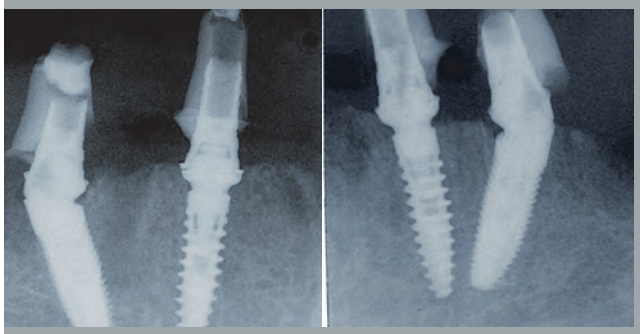
3D planning



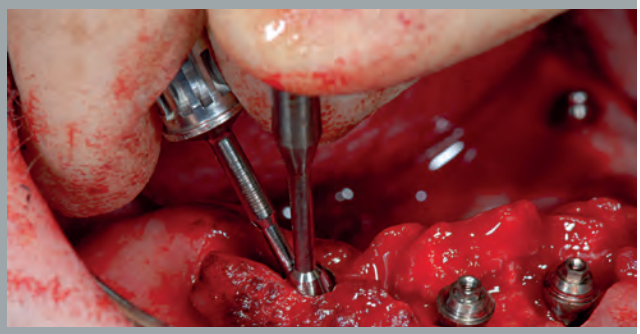
Check the implant bed



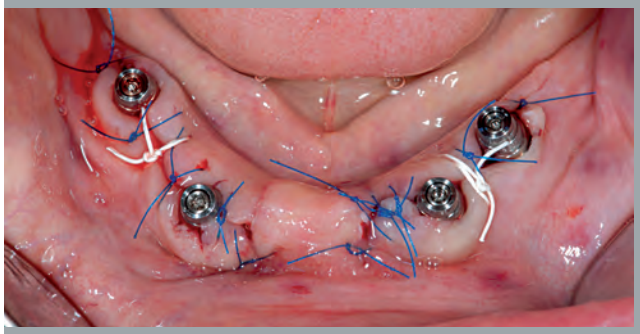
Insert the implant



X-ray image



Position the abutment



Situation after suture closure

Temporary restoration

Situation after healing time

Milled zirconium bridge

Final restoration

Final situation

Clinical case:
Dr. med. dent. Martin Müllauer


MOTOR SPORTS 1
TUR LEN
1
SCHRAUF
M5B
BRAKES

Medentika®
Multi-unit abutments

Product overview

Multi-unit abutment straight

- Titanium Grade 5 CF
- Sterile packaged
- Recommended torque: 25 Ncm

Implant connection	RI	RI	RI	RI
Gingiva height	1.5 mm	2.5 mm	3.5 mm	5.5 mm
Placement instrument	0-13-76	0-13-76	0-13-76	0-13-76
Article No.	**2-31-01**	**2-31-16**	**2-31-02**	**2-31-03**

Multi-unit abutment angled 17°

- Titanium Grade 5 CF
- Sterile packaged
- incl. abutment screw
- Type 1 = angled over flat
- Type 2 = angled over corner
- Recommended torque: 25 Ncm

Type 1  Type 2 

Implant connection	RI	RI	RI
Gingiva height (mm)	1.1/2.5	2.1/3.5	4.1/5.5
Placement instrument	Hex 1.26	Hex 1.26	Hex 1.26
Abutment screw	2-06-02	2-06-02	2-06-02
Article No. Type 1	**2-31-04**	**2-31-05**	**2-31-06**
Article No. Type 2	**2-31-10**	**2-31-11**	**2-31-12**

Multi-unit abutment angled 30°

- Titanium Grade 5 CF
- Sterile packaged
- incl. abutment screw
- Type 1 = angled over flat
- Type 2 = angled over corner
- Recommended torque: 25 Ncm

Type 1  Type 2 

Implant connection	RI	RI	RI
Gingiva height (mm)	0.6/3.0	1.6/4.0	3.1/5.5
Placement instrument	Hex 1.26	Hex 1.26	Hex 1.26
Abutment screw	2-06-02	2-06-02	2-06-02
Article No. Type 1	**2-31-07**	**2-31-08**	**2-31-09**
Article No. Type 2	**2-31-13**	**2-31-14**	**2-31-15**

Multi-unit abutment angled 30°

- Titanium Grade 5 CF
- Sterile packaged
- incl. abutment screw
- Recommended torque: 25 Ncm

Implant connection	AI	AI	AI
Gingiva height	1.5 mm	3.0 mm	4.5 mm
Placement instrument	Hex 1.26	Hex 1.26	Hex 1.26
Abutment screw	4-06-01	4-06-01	4-06-01
Article No.	**4-31-01**	**4-31-02**	**4-31-03**

Multi-unit bridge screw

NEW

- Material: Titanium grade 5 KV
- Recommended torque: 15 Ncm


Placement instrument	Hex 1.26	Ball Torx
Article No.	**0-31-02**	**6-31-01**

Multi-unit prosthetic components

- Recommended torque: 15 Ncm
- titanium base / titanium cap: incl. bridge screw Material: Titanium grade 5 KV
- modelling sleeve: without Bridge screw Material: Tecanat (PC)

NEW NEW




Description	titanium base	titanium base ASC	titanium cap Flex	modelling sleeve
Placement instrument	Hex 1.26	Ball Torx	Hex 1.26	
Screw	0-31-02	6-31-01	0-31-02	
Article No.	**0-31-09**	**6-31-02**	**0-31-20**	**0-31-11**
Please note:	The Multi-unit modelling sleeve can be used with the Multi-unit titanium base and Multi-unit titanium cap.			

Multi-unit prosthetic components

- incl. bridge screw
- Recommended torque: 15 Ncm
- Material gold cap, castable: "(AU 60%; Pd 20%; Pt 19%; Ir 1%)"
- Material CoCr cap: CrCo alloy / CTE 14.1


Description	gold cap, castable	CoCr cap
Placement instrument	Hex 1.26	Hex 1.26
Screw	0-31-02	0-31-02
Article No.	**0-31-07**	**0-31-08**

Multi-unit screw patrix

NEW NEW

- Material Novaloc: Titanium grade 5 KV ADLC coated
- Material MedentiLOC: Titanium grade 5 KV TiN coated
- Recommended torque: 15 Ncm


Description	Novaloc	MedentiLOC
Placement instrument	Hex 1.26	Hex 1.26
Article No.	**0-31-18**	**0-31-19**

Multi-unit scanbody

- Titanium specially coated
- incl. bridge screw

Version		straight	angled
Placement instrument		Hex 1.26	Hex 1.26
Screw		0-31-02	0-31-02
Article No.		**0-31-01**	**0-31-16**
Please note:	The Scanbody is sterilisable and for intra-oral scanning.		

Multi-unit Laboratory implant

- Titanium Grade 5 CF



Version	straight	angled	angled
Type		17°	30°
Article No.	**0-31-05**	**0-31-12**	**0-31-13**

Multi-unit Laboratory implant CADCAM

- Titanium Grade 5 CF



Version	straight	angled	angled
Type		17°	30°
Placement instrument	0-13-76	0-13-17	0-13-17
Article No.	**0-31-10**	**0-31-14**	**0-31-15**

Multi-unit accessories

- 0-13-76 Placement instrument Multi-unit abutment
- 0-31-03 Multi-unit cover cap
- 0-31-04 Multi-unit implant pick-up
- 0-31-17 Placement instrument laboratory implant CADCAM




Article No.	**0-13-76**	**0-31-03**	**0-31-04**	**0-31-17**

Placement instrument Hex 1,26

- Stainless steel




Version	Contra-angle	Contra-angle	Manual and ratchet	Manual and ratchet
Type	long	short	long	short
Article No.	M 03-1	M 09-1	M 10-1	M 11-1

Placement instrument Ball Torx

- Hardened stainless steel



Version	Contra-angle	Manual and ratchet	Contra-angle
Type	6-13-06	0-13-59	0-13-60
Suitable for:	titanium base ASC Flex		

Placement instrument Multi-unit abutment straight

- Stainless steel

Version	Manual and ratchet
Article No.	**0-13-76**

Torque ratchet

- with infinitely variable torque setting
- 10-40 Ncm
- Hardened stainless steel

Article No.	M 12

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We are certified according to:
DIN EN ISO 13485
Medical Devices Directive 93/42/EEC

CE 0483

The electronic Instructions for Use for our products are available on the website www.medentika.com/ifu

Passion for
Precision

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