QuattroFix treatment concept
by MEDENTIKA®
**The QuattroFix treatment concept**

QuattroFix - Fix 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° angulated 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
- Titanium grade 4
- Sterile packaged

<table>
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<tr>
<th>Length</th>
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Quattrocone® implant

- D 4.3
- Titanium grade 4
- Sterile packaged

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Quattrocone30® implant

- angled 30°
- D 4.3
- Titanium grade 4
- Sterile packaged

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How to measure the Implant length
Quattrocone30®
Specially developed and patented for the QuattroFix treatment concept and all indications with angulated implant placement. Unique. «

QUATTROCON30 THREAD DESIGN
The uniquely shaped and patented design of Quattrocone30® implants was specially developed to coordinate with inclined implant placement and thus fully preserve the bone. The QuattroFix indication stands out in particular with special requirements, which have now been competently addressed both scientifically and technically for the first time.

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.

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

<table>
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<th>Pilot drill</th>
<th>D 2.0 mm</th>
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<tr>
<td>standard drill</td>
<td>D 2.0/3.2 mm</td>
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<tr>
<td>cortical drill</td>
<td>D 2.3/3.2/3.3 mm</td>
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QUATTROCONETM

| Pilot drill | D 2.3/3.2/3.3 mm |

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.

**Quattrocone® drills D 3.5 mm**

SHORT DRILL 0-13-63

LONG DRILL 0-13-70
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°.

**Implant placement Quattrocone30®**

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

2. Insert the QuattroFix drill gauge and prepare the implant bed for the Quattrocone30® with the pilot drill in the indicated implant length.
Enlarge the implant bed with the final drill according to the implant width.

If the implant is inserted with the placement instrument, either for manual use with the torque ratchet or with the angled handpiece, 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.

QuattroFix DRILL GAUGE 30°

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.

4-13-07
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
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.

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**Wichtig:**

- Vermeiden Sie Brüche durch eine ausreichende Stabilität des Provisoriums
- Das „Einkleben“ muss spannungsfrei erfolgen
- Die Hygieneanforderungen müssen sichergestellt werden

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**QuattroFix advantages**

- Immediate
- reliable
- a top quality based on the proven product concepts for fixed edentulous solutions
- at an affordable cost
Clinical QuattroFix case

initial Situation

checking the implant beds

radiograph

situation after suturing

3D Planning

implant placement

abutment placement

provisioning
situation after healing time

zirconia bridge after milling

final restoration

final situation

Clinical Case:
Dr. med. dent. Martin Müllauer