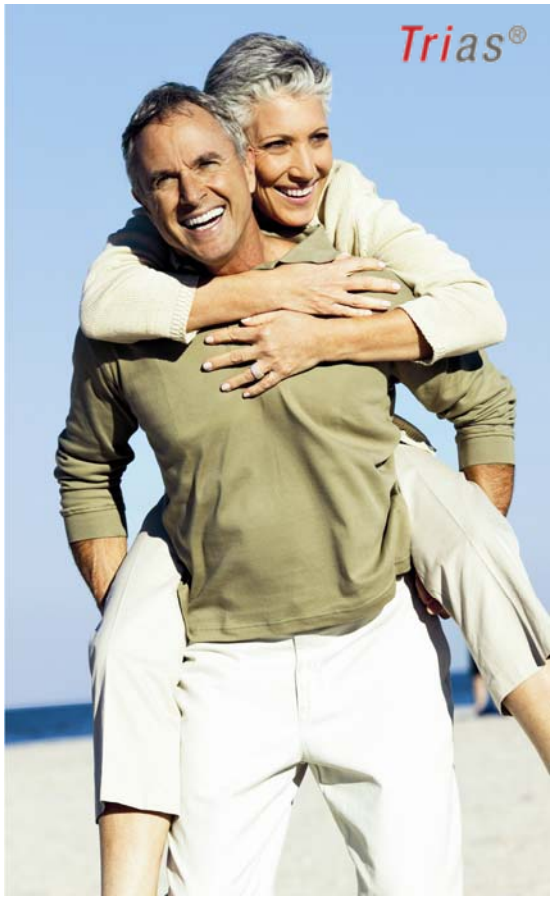
Trias®

Your system for
safe handling & success in implantology!

Trias®-Implant system

1. System description

1.1 Introduction



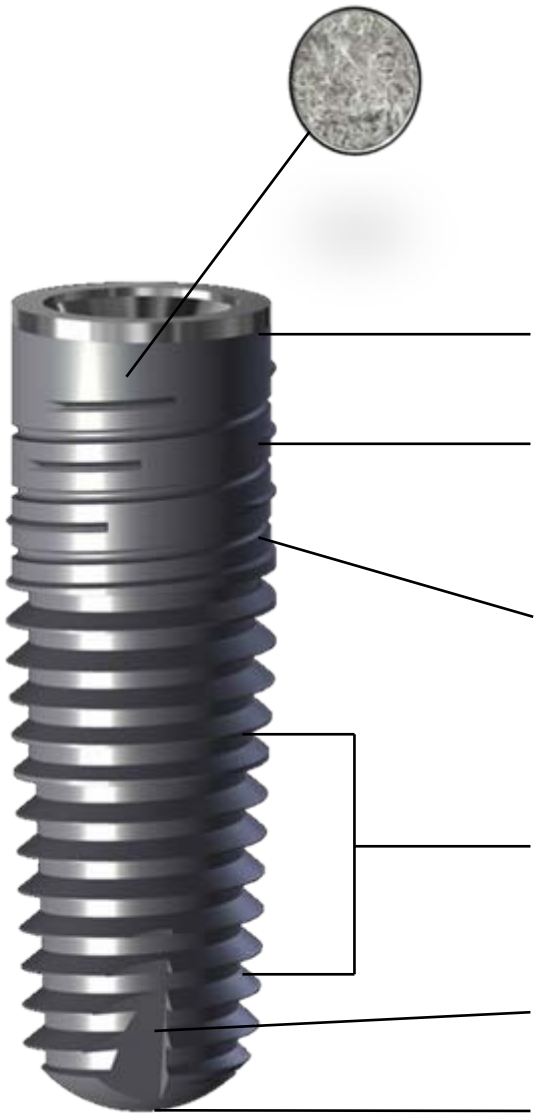
Modern implant prosthetics is now an established component of dentistry. The expectations and demands of patients are steadily increasing. Therefore, the ultimate goal of modern implant-supported treatment concepts is for full esthetic, functional, phonetic, and psychosocial rehabilitation.

All this was realized in the Trias®-Implant system which in fact is an innovative combination of established implant features.

Trias®-Implant system

1. System description

1.2 Micro and macro design



Material / Surface
- Titanium Grade 4
- Sand blasted and acid etched
- Surface roughness of 20µm

Polished neck (0,3mm)

Circular grooves
- Increase in surface
- Optimized osseointegration

Extension lamellae
- Improved primary stability
- Reduction of heat generation during insertion

Smooth transition between compression thread and tapping thread
- Selftapping thread
- Compression thread: Compression of the cancellous bone

Apical notch
- Anti-rotation device

Rounded apical area
- Protects the soft tissue during insertion of the implant

1. System description

1.3 Lengths and diameters

∅ in mm	length in mm				
	8.0	10.0	12.0	14.0	16.0
3.3	-	x	x	x	x
3.8	x	x	x	x	x
4.4	x	x	x	x	x
5.0	x	x	x	x	-

Available diameters and lengths as well as matching color-code

Trias®-Implant system

1. System description

1.4 Delivery form

Gamma sterilized implants in double blister package.

Healing screw

Color coded sure grip wheel

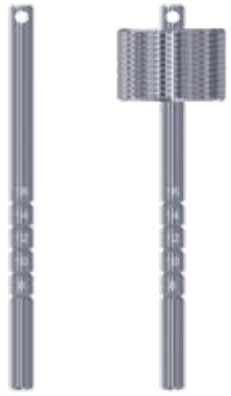
Transport pin

Trias implant

2. Equipment

2.1 Tools and instruments

01. Round drill
02. Cortical drill
03. Twist drill ø2.0mm
04. 2-Caliber drill ø3.0mm
05. Final drill (green ring) for ø3.3mm
06. Final drill (yellow ring) for ø3.8mm
07. Final drill (two red rings) for ø4.4mm
08. Final drill (blue ring) for ø5.0mm
09. Taper for ø3.3mm
10. Taper for ø3.8mm
11. Taper for ø4.4mm
12. Reamer for ø5.0mm
13. Paralleling pin
14. Depth gauge
15. Torque ratchet



15

Trias®-Implant system

2. Equipment

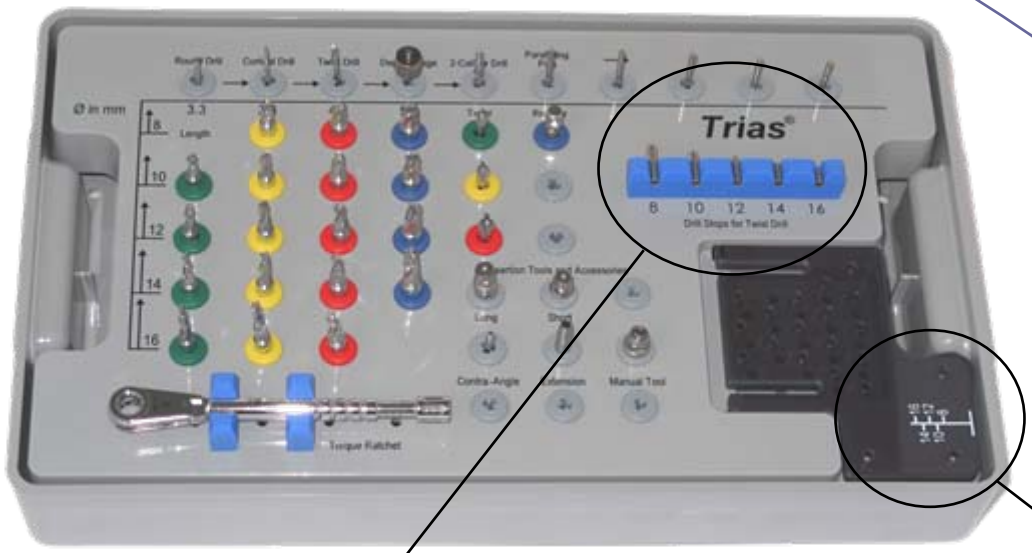
2.2 Surgical tray 1

This tray offers a cost effective solution to organizing and protecting the valuable instruments of the surgeon.
Made of Radel® R, stainless steel and latex-free silicone this tray is made of materials of high quality.
All instruments are placed according to their sequence during the surgical procedure.

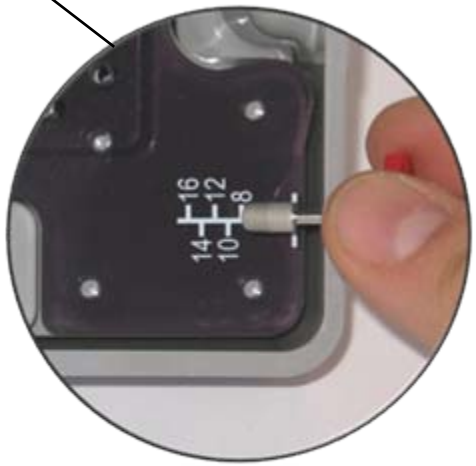
Dimensions: 15.5cm x 10.1cm x 5.5cm

2. Equipment

2.2 Surgical tray 2



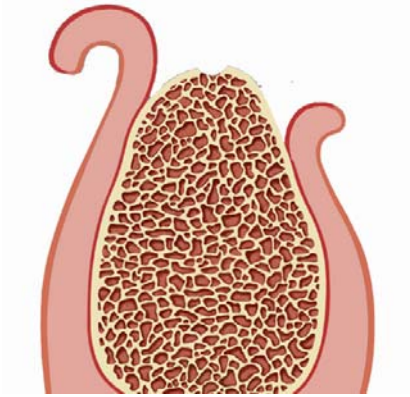
Drill stops for Twist drill



Measuring scale for implant length

3. Surgical procedure

3.1 Preparation of the implant bed 1



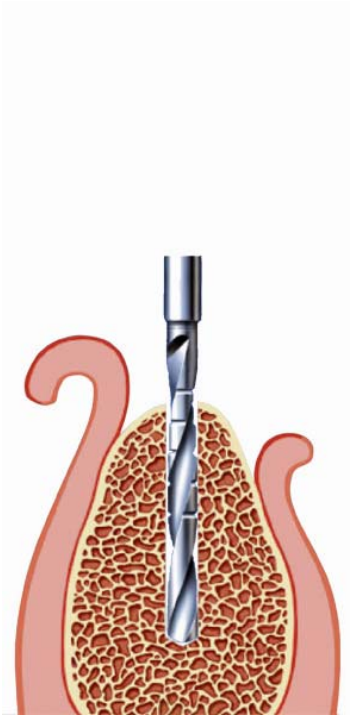
After conservative opening of the gingiva the location of the implant is determined using the round drill or the cortical drill.

Recommended drilling speed for round drill: 1.400 rpm.

Recommended drilling speed for cortical drill: max. 1.000 rpm.

3. Surgical procedure

3.1 Preparation of the implant bed 2



The definitive implant depth is now determined with the twist drill (ø 2mm). For this purpose the twist drill has depth marks matching the available implant lengths (8, 10, 12, 14, 16mm).

Recommended drilling speed:
800 rpm.

3. Surgical procedure

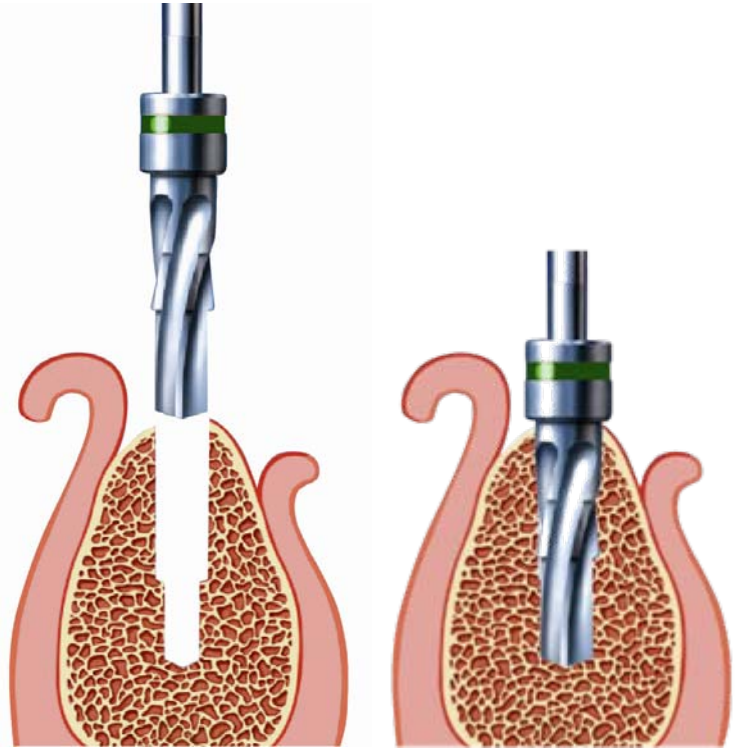
3.1 Preparation of the implant bed 3

Using a 2-Caliber drill the diameter of the cavity is then increased to 3mm. Due to the rounded tip of the 2-Caliber drill the cavity depth remains unchanged.

Recommended drilling speed:
800 rpm.

3. Surgical procedure

3.1 Preparation of the implant bed 4



After this the cavity diameter is increased again, step by step, using the final drill next in size in each case, up to the desired implant diameter. All final drills have drill stops so that only the correct length has to be observed.

Recommended drilling speed:
800 rpm.

Abundant and continuous rinsing with cool, sterile saline solution must be performed. Also, applying too much pressure during preparation of the implant bed must be avoided, especially for diameter 5.0mm.

3. Surgical procedure

3.1 Preparation of the implant bed 5

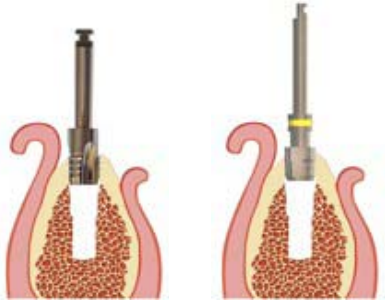
Example:
Desired implant ø = 3.8mm
First use final drill 3.3mm with green ring, then final drill 3.8mm with yellow ring.

The special cutting blade geometry enables autologous bone material to be harvested.

3. Surgical procedure

3.1 Preparation of the implant bed 6

In case of difficult cortical bone situations like dense cortical bone (up to 6mm) and reduced perfusion the use of a taper or a reamer is recommended.

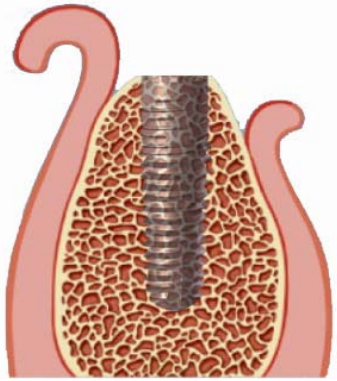


Tool for manual use of taper and reamer

Taper

3. Surgical procedure

3.2 Implant insertion



For the insertion the transport pin, to which the implant is attached and which also serves as an insertion key, is then removed from the packaging and the implant is fixed in the bone preparation with 1-2 turns.

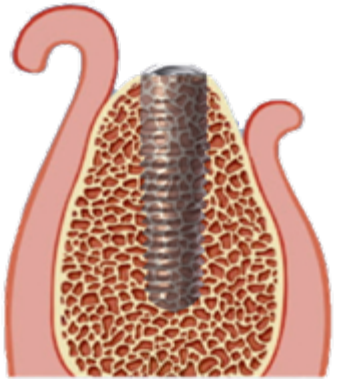
Manual insertion: Ratchet with universal insertion tool long or molar (extra short), depending on vertical dimension and situation.

Motor driven handpiece: Insertion tool for contra-angle.

Recommended torque in each case: 35-45Ncm.

3. Surgical procedure

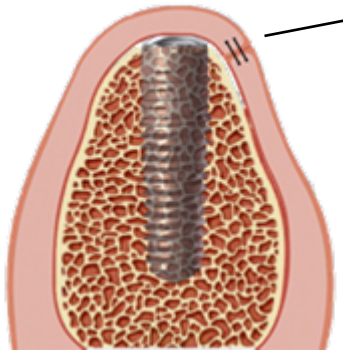
3.3 Inserting the healing screw



Then the healing screw is inserted and tightened by hand (equals approx. 15 Ncm) using the universal insertion tool long or molar.

3. Surgical procedure

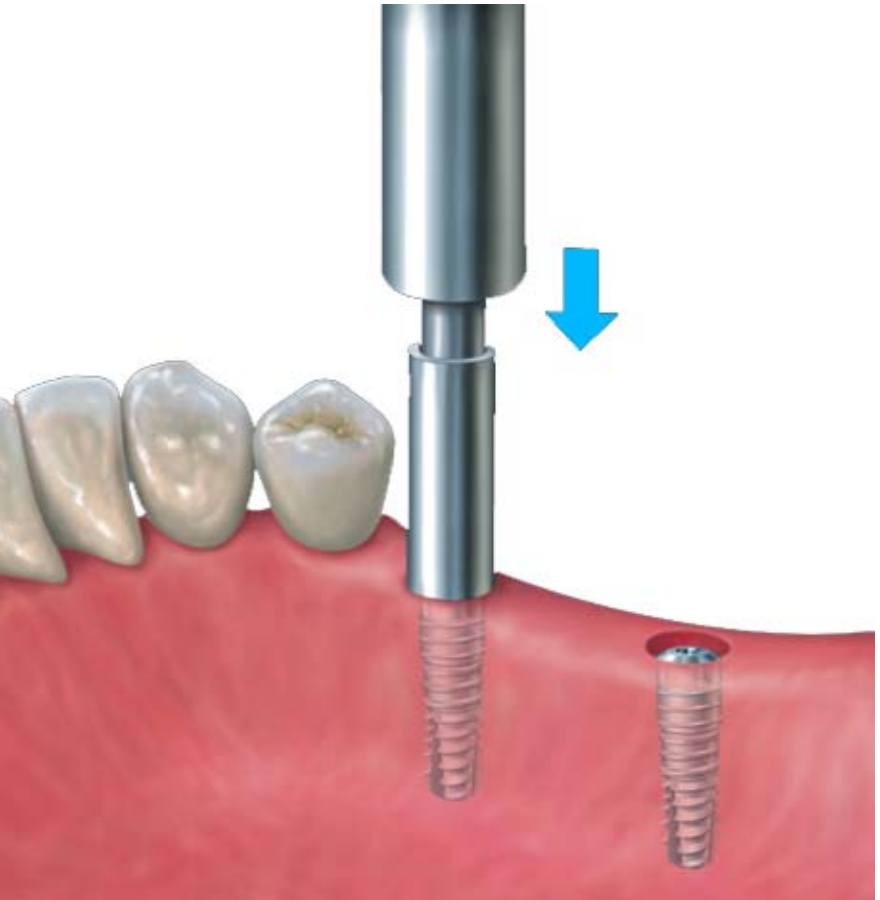
3.4 Wound closure



Wound closure.

4. Prosthetics

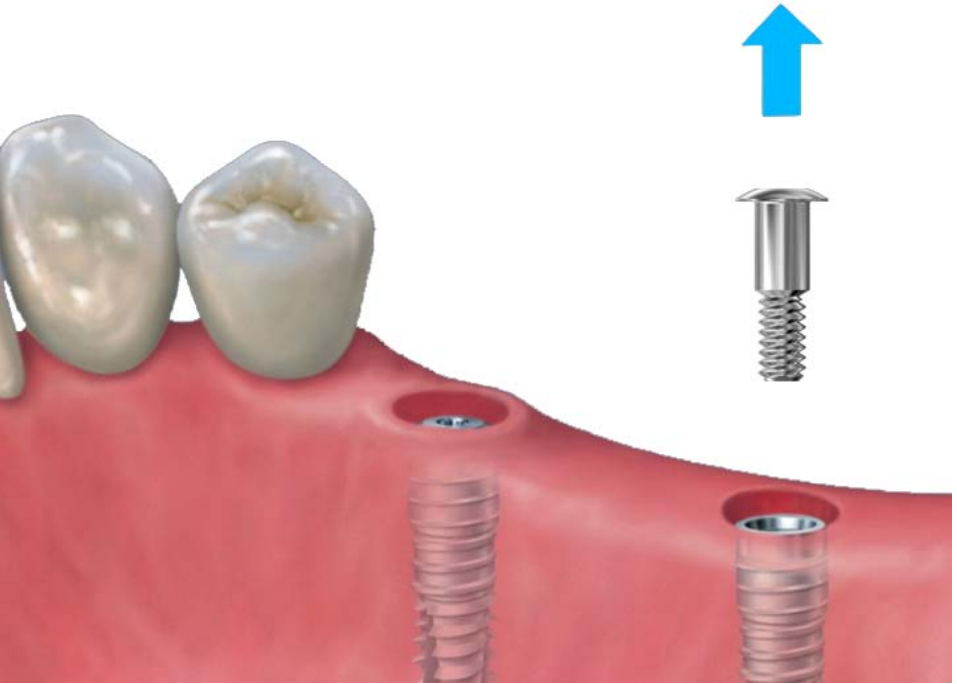
4.1 Implant exposure



After osseointegration the implant is exposed again using a gingival punch or a scalpel.

4. Prosthetics

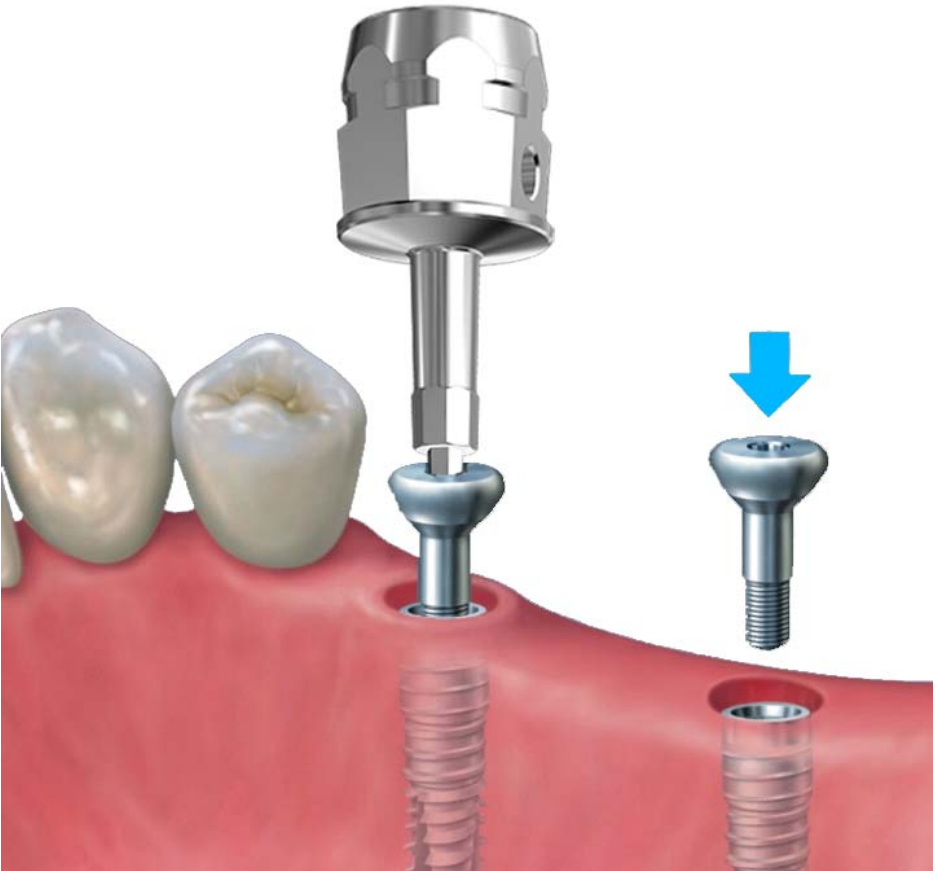
4.2 Removal of healing screw



Then the healing screw is removed using the universal insertion tool long or molar.

4. Prosthetics

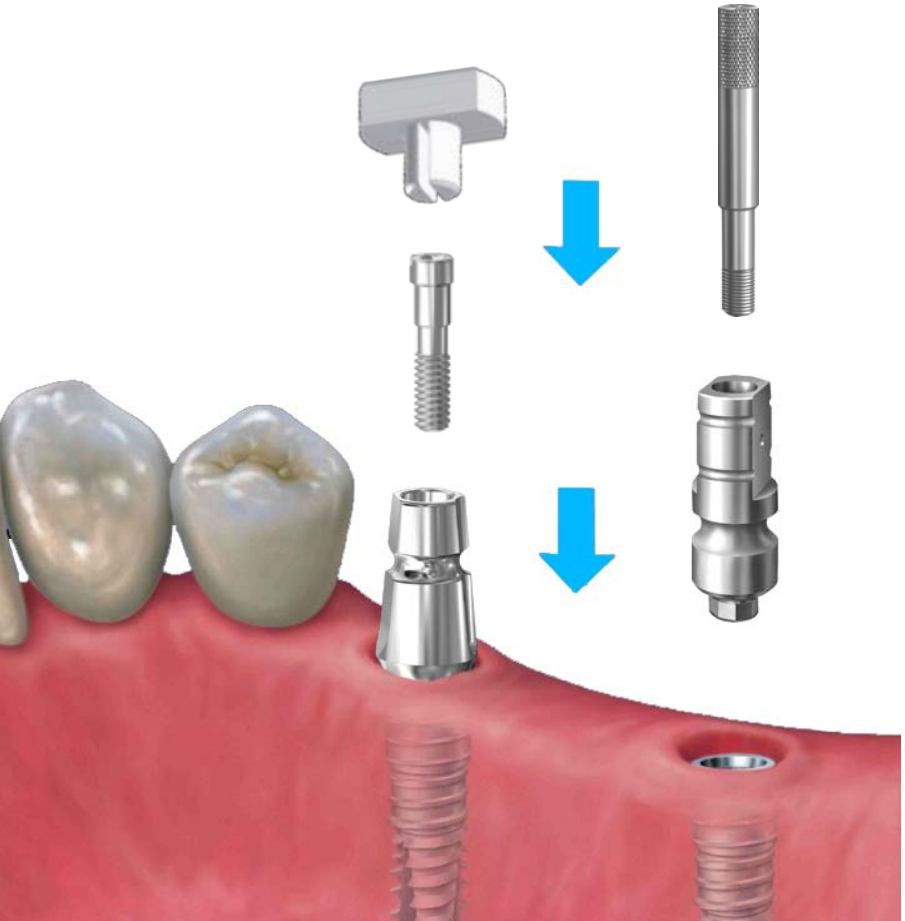
4.3 Gingiva forming



The removal of the healing screw is followed by forming the gingiva using gingiva shapers that are available in different sulcus heights and remain on the implant for 10 to 14 days.

4. Prosthetics

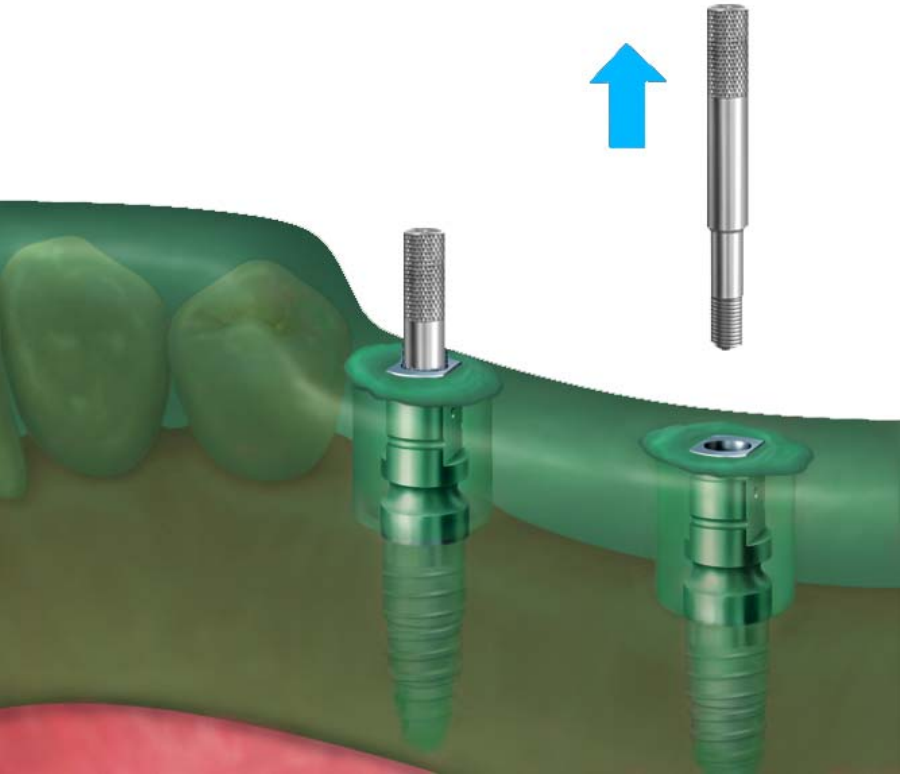
4.4 Impression taking 1



After forming the gingiva the impression is taken by means of impression posts using the closed tray or the open tray method. For closed tray impressions the central screw is used which is compatible to all abutment types. For open tray impressions a special screw is available.

4. Prosthetics

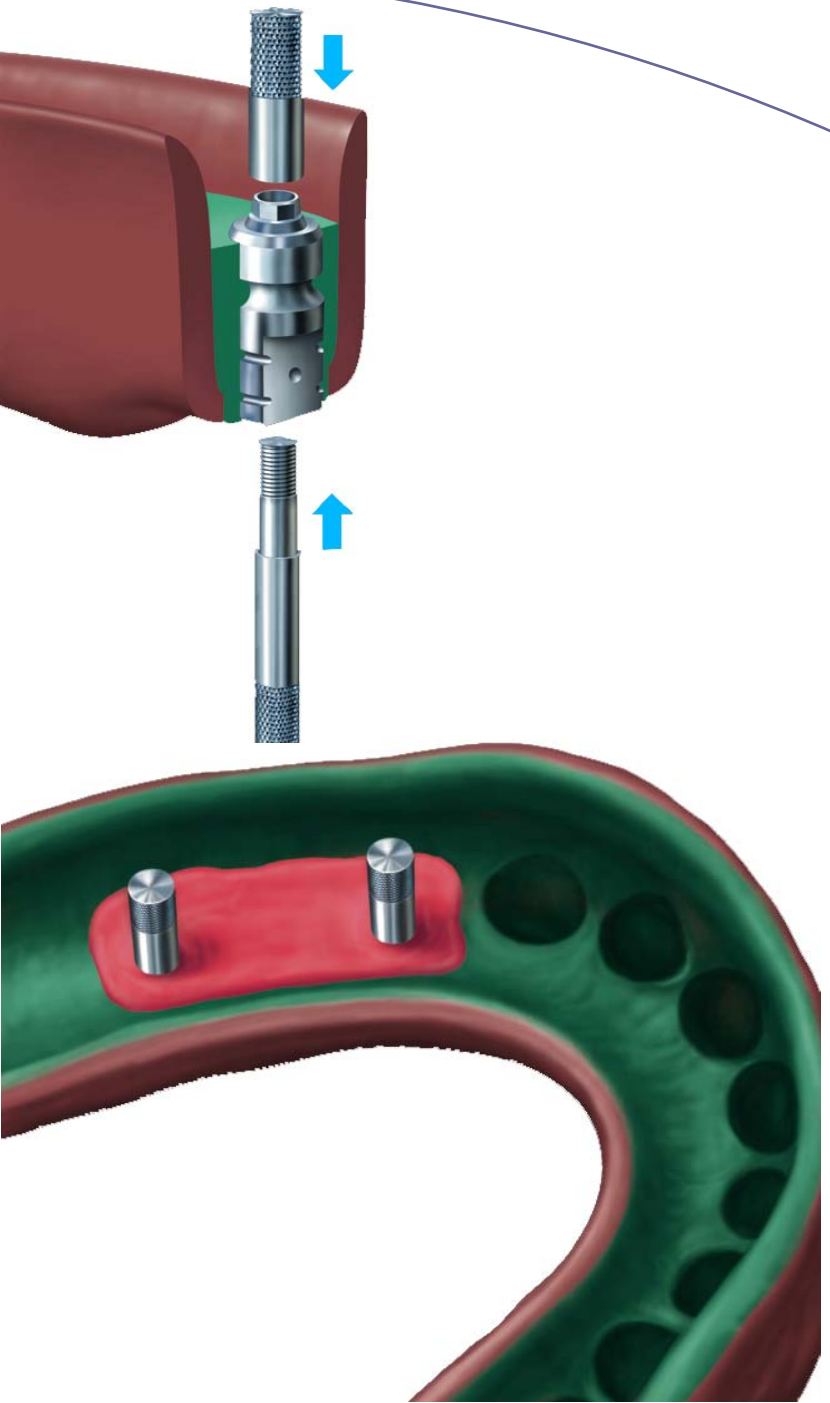
4.4 Impression taking 2



A customized impression tray is required for the open impression method. The tray must be perforated at the extension of the implant axis for the impression screws on the impression posts. After impression taking the impression screws and the tray can be removed.

4. Prosthetics

4.5 Cast preparation 1

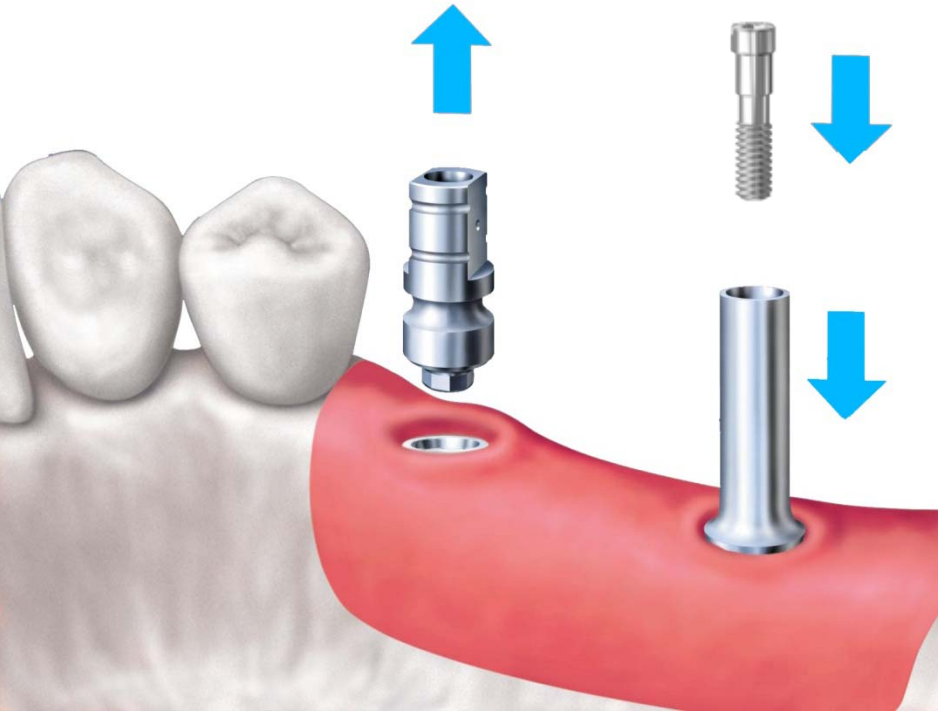


Now the impression posts are tightened to the model analogs with a torque of approx. 5 N/cm using the central screw or the impression screw.

It is recommended that a master model with gingival mask is produced for processing in the dental laboratory. The gingival mask is detachable and thus enables better control of the fit of the framework structure.

4. Prosthetics

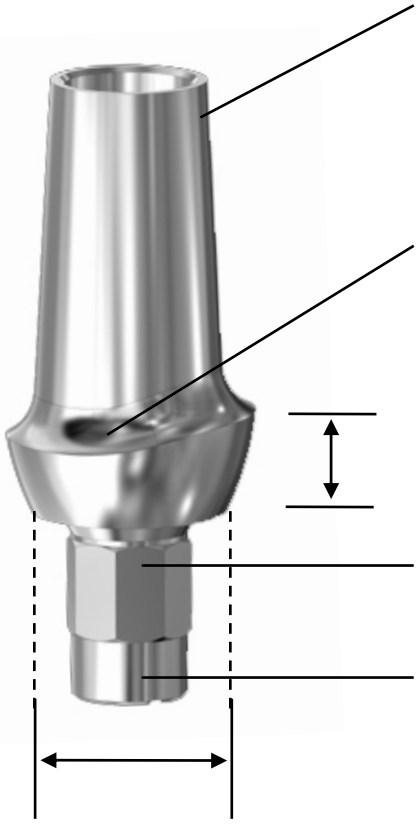
4.5 Cast preparation 2



The removal of the impression posts is then followed by the desired prosthetic procedure.

4. Prosthetics

4.6 Abutments and central screw



Material / Surface
- Titanium Grade 4
- polished

Emergence Profile
or
Standard Profile

Different gingiva heights

External octagon

Tube

Abutment diameter

Internal hexagon

Material / Surface
- Titanium Grade 5
- polished

Undercut
- allows pre-fixation of the central screw in the abutment

Trias®-Implant system

4. Prosthetics

4.7 Crown and bridge restaurations

Titanium abutment 0°
Standard Profile

Titanium abutment
optional: plastic sleeve

Titanium abutment
Emergence Profile
(0°, 15° and 25°)

Temporary acrylic abutment

Individual titanium
abutment

Ti-base for
ZrO2 abutments

Trias®bar abutment

Bar screw

Connector

Bar segment

Different bar profiles

Housing

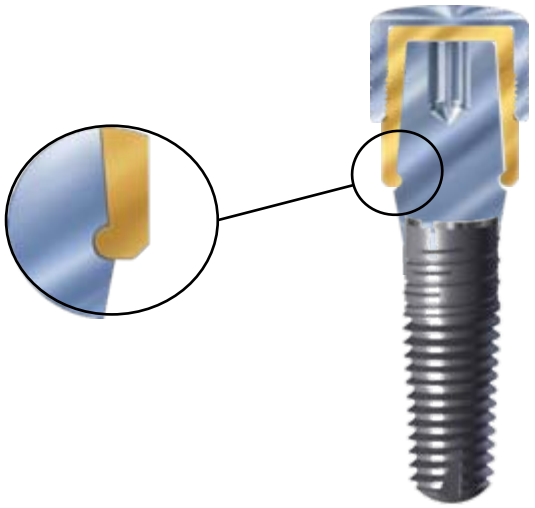
Different females

Trias®-Implant system

4. Prosthetics

4.9 Prefabricated constructions

4.9.1 Trias®cone abutment



Housing

Cone Cap

Cone abutment

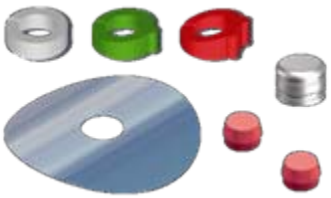
Trias®Locator® abutment

Prosthetic kit for
Locator® abutments

Locator® abutments

Manufacturer Locator®: Zest Anchors, Inc., Escondido, CA 92029, USA
Locator® is a registered trademark of Zest Anchors, Inc.

Trias®ball abutment

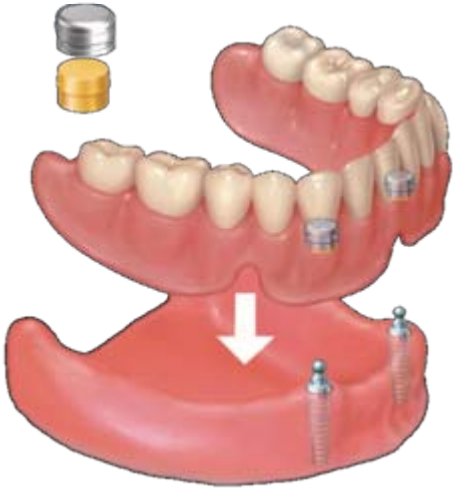


Prosthetic set for ball abutments including:

- 2x pink cap
- 1x housing for glueing or soldering
- 1x spacer
- 3x directional ring (0˚, 7˚, 14˚)

Ball abutments with
ball diameters 1.8mm or 2.5mm

white cap (standard retention)
pink cap (soft retention)
yellow cap (medium retention)



Trias®tsa abutment

Female

Abutment
(for fixed/removable dentures)

Impression cap

Model analog

Trias®magnet abutment

Magnet S3
(removal force 300g)

Magnet S5
(removal force 500g)

Abutment

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