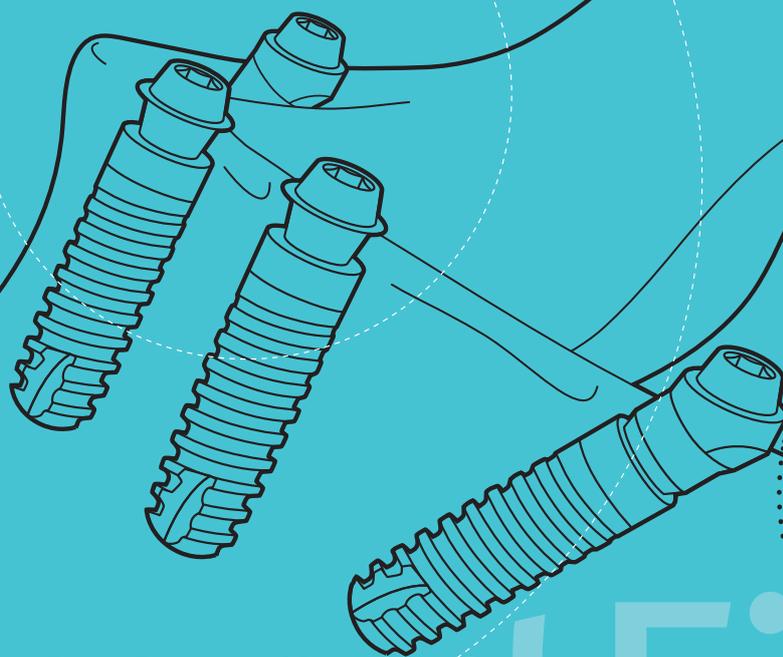


**NEW**

**ANKYLOS**<sup>®</sup> | **DENSPLY**  
FRIADENT

The SmartFix<sup>™</sup> Concept –  
Prosthetic solution on  
tilted implants



SmartFix<sup>™</sup>

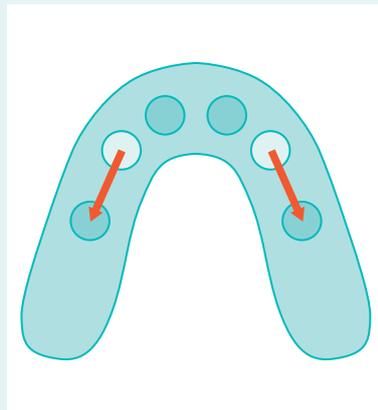
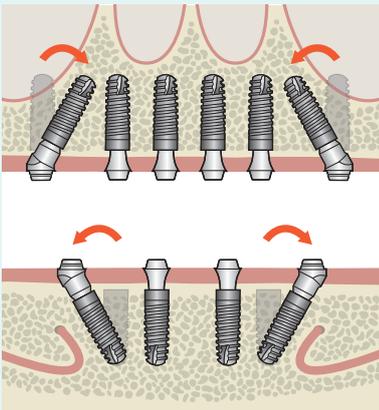
## The SmartFix™ Concept

The SmartFix™ Concept is an implant-prosthetic procedure for the immediate restoration of edentulous patients with screw-retained bridges or bar dentures in the maxilla and mandible.

To obtain a common of insertion direction, the tilted implants are provided with 15° or 30° angled ANKYLOS® Balance Base abutments.

Two procedures of fabrication can be selected for prosthetic restorations: Either the conventional fabrication of a superstructure or CAD/CAM-fabricated ISUS implant superstructures by Compartis® with a high precision fit.

**The implant-prosthetic procedure for the immediate restoration with tilted implants in edentulous patients offers the following advantages:**



### 1 | Avoiding critical anatomical areas

Augmentation and critical anatomical areas can be largely circumvented by using tilted implants. For example, this avoids the need for sinus floor elevation in the maxilla or nerve transposition in the mandible.

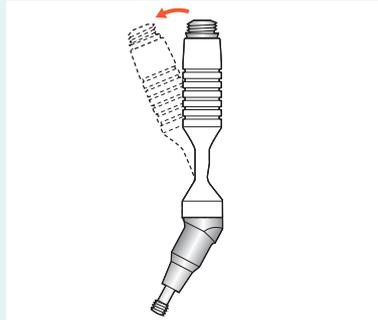
### 2 | Stable prosthetic fit

The area supporting the prosthesis is extended distally by the angled implant position and the local bone is thus utilized optimally.

**Special features of the ANKYLOS® SmartFix™ Concept:**



**3 | The extremely delicate abutment head** provides optimum freedom of design for the superstructure in terms of height and diameter.



**4 | Secure handling**  
The abutment components are pre-mounted on a seating instrument. Delivery of the angled Balance Base abutment is facilitated by the short and flexible seating instrument, especially when space is restricted.



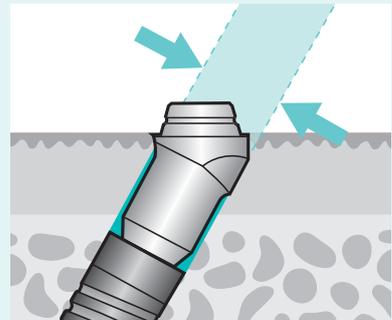
**5 | Utilization of perfect-fit CAD/CAM-fabricated superstructures** made of titanium or cobalt chrome. Optimal connection of the angled Balance Base abutments to the ISUS implant superstructures by Compartis®.



**6 | Free positioning of implant and abutment** by non-indexed ANKYLOS® Balance Base abutments.



**7 | Sub-crestal placement**  
Due to its keyed and friction-locked TissueCare taper connection ANKYLOS® can be placed subcrestally. This largely avoids inflammatory responses in the peri-implant tissue. This benefits the SmartFix™ concept as the distal implant shoulder is always below the bone level for angled placement.

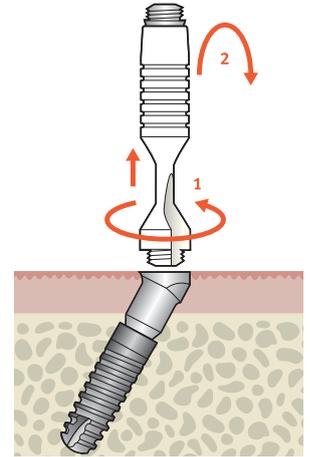
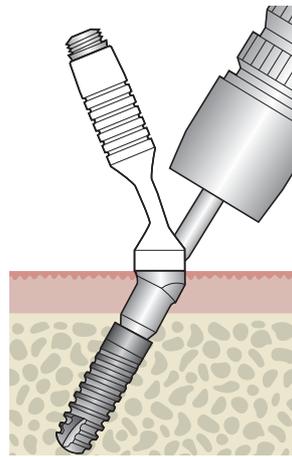
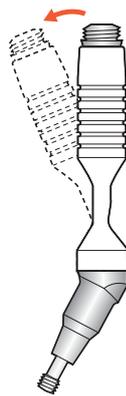
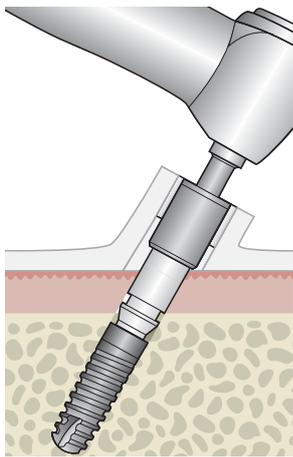


**8 | Pronounced Platform-Switching** shifts the transition between the implant and the abutment in central direction. This enables easier access of the angled abutment to the implant. Mechanical and microbial stimuli are kept from the peri-implant tissue. Collision with the distal bone crest is largely avoided by the extremely narrow abutments.

## The ANKYLOS® SmartFix™ Concept: Step-by-Step

**Please note:**

For easier axial alignment of the angled abutment bodies, first screw the straight Balance Base abutments into the just placed implants at the appropriate gingival height. Place the extra long fixation screws into the abutments. The axis of the seating instrument can be aligned along these to provide a common insertion direction.



### Implant placement

If necessary, the implants are inserted at an angled axis. Preoperative planning is preferably conducted computer-guided, i.e. with ExpertEase™: <http://expertease.dentsply-friadent.com/>. Further information is given in the appropriate surgical instruction manuals.

### Two-piece abutment on seating instrument

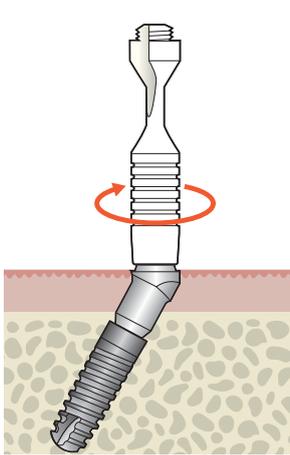
The two components of the Balance Base abutments are pre-mounted on a seating instrument. The seating instrument is made of PEEK plastic and can be pre-shaped outside the oral cavity, if required, to provide easier placement of the angled Balance Base abutment in the implant.

### Screw-retaining of the angled prosthetic abutments

The abutment body of the angled Balance Base abutment is positioned in the implant using the seating instrument. The abutment platform should be parallel to the occlusal plane. The insert for the prosthetic ratchet 1.0 mm Hex is used for screw retention. The torque required for the straining screw is 15 Ncm. If necessary, post-preparation of the surrounding bone may be required prior to delivery of the abutment. Check the final fit of the abutments via radiographic imaging.

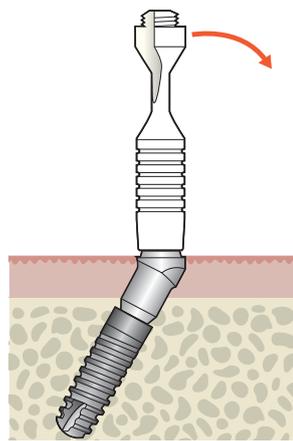
### Unscrew seating instrument and reverse

Then the seating instrument is unscrewed from the abutment body of the angled Balance Base abutment rotating to the left. Then rotate the seating instrument through 180° to position on the abutment head.



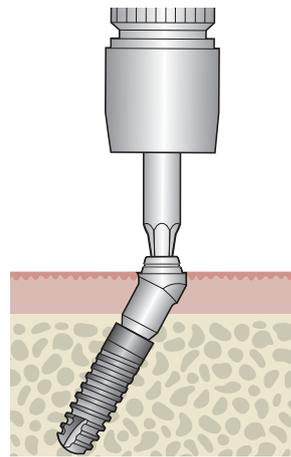
#### Insertion of abutment head

Following final screw retention of the abutment body, the abutment head is hand-tightened into the abutment body using the seating instrument.



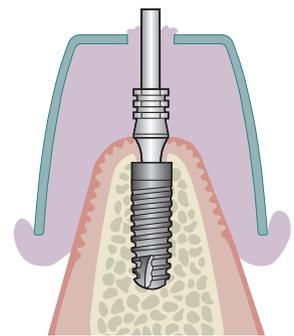
#### Snap off the seating instrument

Then snap off and remove the seating instrument from the abutment.



#### Screw-tightening of abutment head and wound closure

Using the insert for prosthetic ratchet 1.8 mm Hex, the abutment head is finally screwed in at 25 Ncm. Then seal the edges of the wound saliva-proof with monofilament sutures.

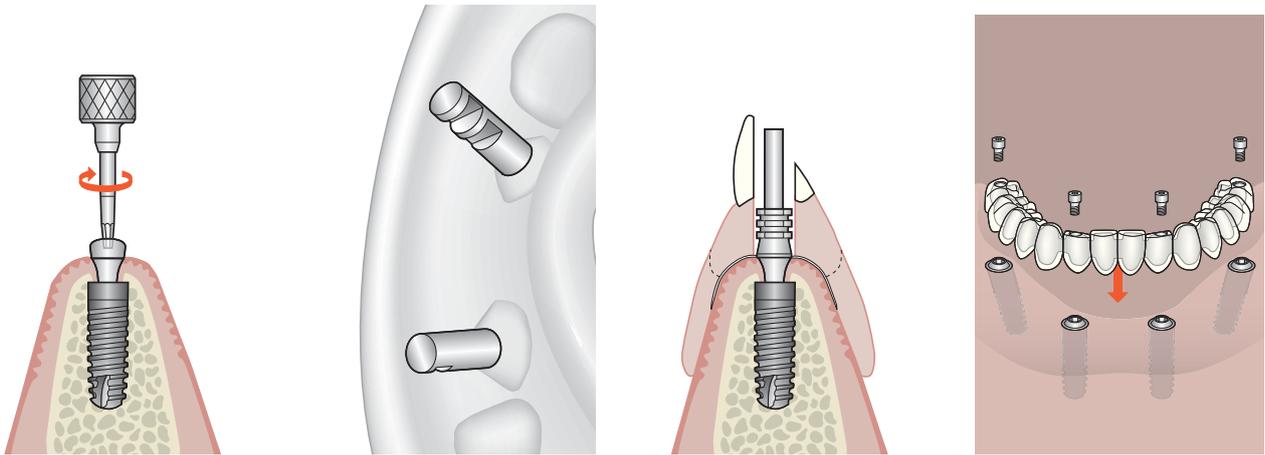


#### Impression making with retention coping

Transfer of the abutment position is performed employing the PickUp technique using the retention copings in combination with the occlusal fixation screw M 1.6 mm Hex extra long. The impression is passed to the dental laboratory.

#### Notes on using the old prosthesis:

- Hollow-grind the prosthesis adequately
- Avoid imperfections at the retention caps
- Avoid excessive polymerization shrinkage
- Protect soft tissue, i.e. using a cofferdam curved incision
- Mix cold-cure polymer (i.e. Selecta plus, DENTSPLY) bubble-free and viscous
- Cover retention copings completely



#### ANKYLOS® protective cap for Balance Base abutment

The Balance Base abutments remain in the patient's mouth. These are sealed with the narrow protective cap for Balance Base abutments until delivery of the prosthetic restoration.

#### Model casting

Using the occlusal fixation screw extra long, screw the implant analogs for the Balance Base abutment narrow together with the retention copings fixed in the impression. Model casting is always performed with straight analogs.

#### Long-term temporary denture

The existing prosthesis can be modified to provide temporary restoration. To avoid misalignment of the retention caps in the prosthesis with resulting changes in occlusion, any transverse and/or vertical displacement of the prosthesis must be avoided during the polymerization process. Extended functional margins can be shortened as far as possible.

#### Screw-retention of superstructure

Clean and disinfect superstructure and screw to Balance Base abutments using the 1.0 mm Hex screwdriver and a torque of 10 Ncm.

	Order No.	Article
	3102 2520	<b>ANKYLOS® Balance Base Abutment C/ narrow*</b> GH 0.75 / straight
	3102 2530	GH 1.5 / straight
	3102 2540	GH 3.0 / straight
	3102 2550	GH 4.5 / straight
	3102 2542	<b>ANKYLOS® Balance Base Abutment C/ angled*</b> GH 3.0 / 15°
	3102 2546	GH 3.0 / 30°
	3102 2552	GH 4.5 / 15°
	3102 2556	GH 4.5 / 30°
	3102 2570	<b>ANKYLOS® Abutment Head for Balance Base Abutment C/ angled (as spare part)*</b>
	3102 2590	<b>ANKYLOS® Protective Cap for Balance Base Abutment narrow</b>
	3105 6212	<b>ANKYLOS® Gold Coping for Balance Base Abutment narrow (Permador® PDF) (incl. screw)</b>
	3105 6216	<b>ANKYLOS® Retention Coping for Balance Base Abutment narrow (incl. screw)</b>
	3105 6218	<b>ANKYLOS® Titanium Coping for Balance Base Abutment narrow (cylindrical, without screw)</b>
	3104 5322	<b>ANKYLOS® Wax-up Coping for Balance Base Abutment narrow (without screw)</b>
	3105 6022	<b>ANKYLOS® Fixation Screw Occlusal M 1.6 mm Hex</b> short (anodized blue)
	3105 6024	long (flush with coping)
	3105 6025	extra long (exceeds coping by 5 mm)
	3104 5332	<b>ANKYLOS® Analog Balance Base Abutment narrow</b>
		<b>ANKYLOS® Insert for Prosthetic Ratchet</b>
	3103 3625	1.0 mm Hex, 15 Ncm
	3103 3627	1.8 mm Hex, 25 Ncm

\* ø 4.2 mm, head height 1.3 mm

Order No. 6-252076/003

**Manufacturer:**

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**CE** for Class I Devices

**CE 0123** for Class IIa, IIb and II Devices

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