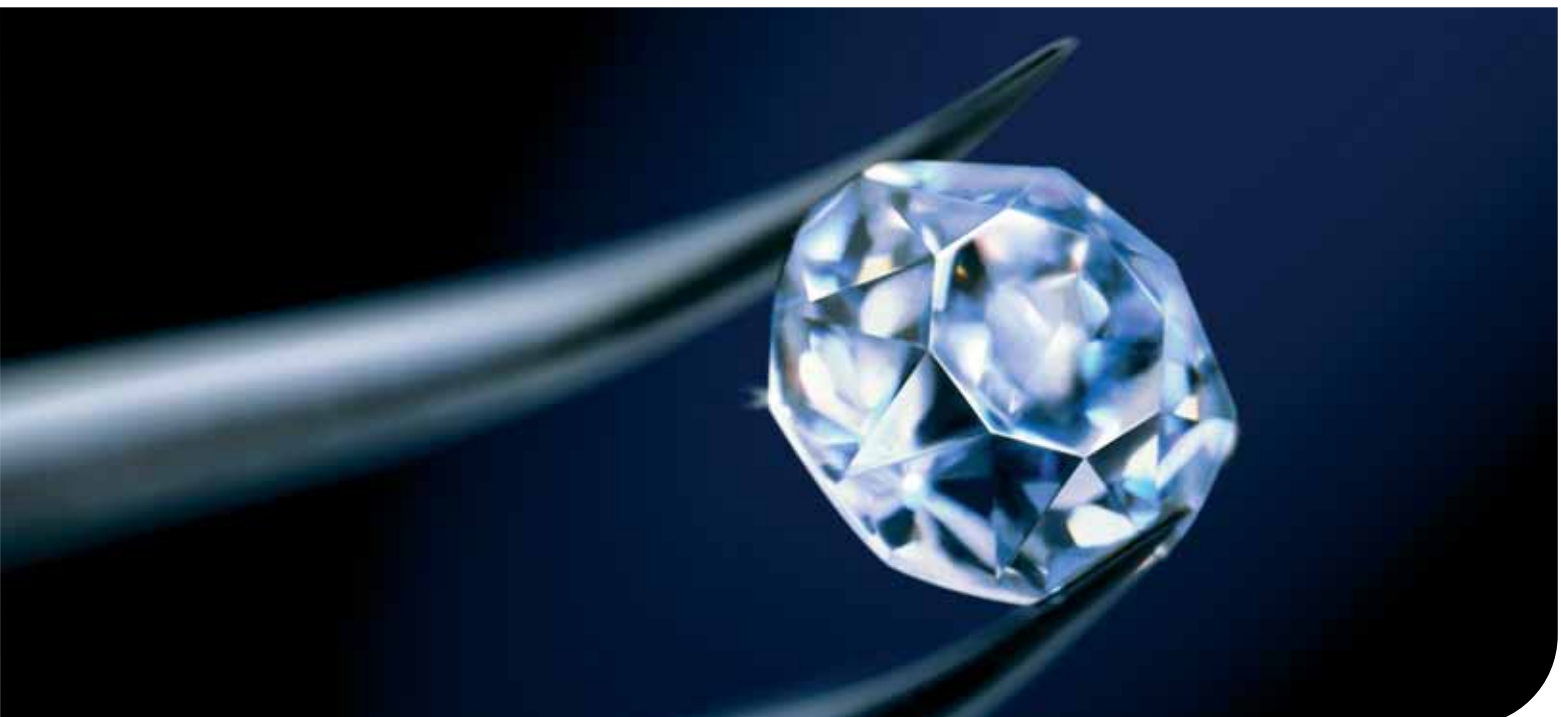


**ANKYLOS**<sup>®</sup> | **DENTSPLY**  
FRIADENT

Implanting Brilliancy





**ANKYLOS®** | DENTSPLY  
FRIADENT



### ANKYLOS® – certainly a brilliant choice

The true value of an implant system first becomes apparent when it establishes permanent relationships. ANKYLOS® has been confirmed to retain the stability of hard tissue and soft tissue – and ensures naturally beautiful red-white esthetics for many years after implant placement.

The key to success is the unique tapered ANKYLOS® TissueCare Connection: The sum total of all the details that makes ANKYLOS® so valuable. It's your choice: Position the abutments freely as required by the prosthetic conditions or use the index for simplified and accurate placement. Whatever prosthetic solution you ultimately select, the tapered ANKYLOS® TissueCare Connection will always give you optimum stability and rotation-locking. Find out for yourself the advantages of this implant system.

**Perfect connection – permanent stability**

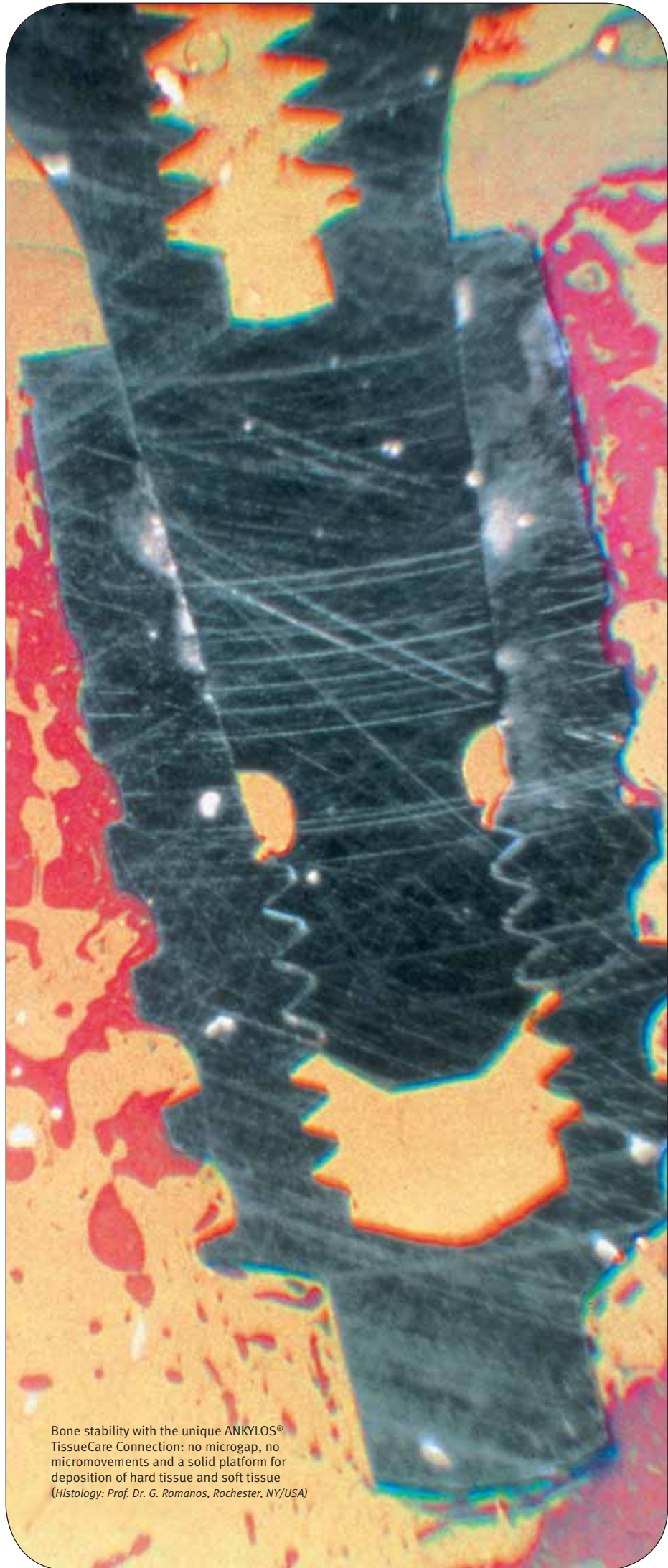
Long-term tissue retention and excellent esthetics with the unique ANKYLOS® TissueCare Connection

**Precise preparation – excellent result**

Safe and stable healing with structure-retaining procedure

**Permanent values – brilliant successes**

Naturally beautiful teeth even after many years with the esthetic advantages of ANKYLOS® prosthetics – now with the option of indexing.



Bone stability with the unique ANKYLOS® TissueCare Connection: no microgap, no micromovements and a solid platform for deposition of hard tissue and soft tissue  
(Histology: Prof. Dr. G. Romanos, Rochester, NY/USA)

### Long-term tissue retention and excellent esthetics with the ANKYLOS® TissueCare Connection

Nothing is more permanent than a diamond. The secret of its stability is its ideal atomic structure. The success of ANKYLOS® also comes from the design of the system. The clinically tested, tapered TissueCare Connection combines significant success factors for tissue stability to give the brilliant result: outstanding esthetic conditions, even years after implant placement.

The reliability of ANKYLOS® is confirmed with virtually no bone resorption and outstanding tissue retention in the first year after loading.

*Döring K, Eisenmann E, Stiller M: Functional and esthetic considerations for single-tooth ANKYLOS implant-crowns: 8 years of clinical performance. J Oral Implantol 2004; 30(3):198-209*

# ANKYLOS® | Implanting Brilliancy

## Perfect connection – permanent stability

### Superior stability – no micromovement

The complete positive and friction-lock ANKYLOS® TissueCare Connection offers unmatched stability between implant and abutment, equal in all aspects to a single-component implant system. The index only acts as a positioning aid for the prosthetic restoration. The tapered connection bears the load and eliminates micromovement between implant and abutment and thus mechanical irritation.

#### [Conclusion]

Practically no bone resorption and outstanding long-term tissue stability with the ANKYLOS® TissueCare Connection.

### Extremely tight – no microgap

The precision-manufactured ANKYLOS® TissueCare Connection is designed for absolute tightness. This means that it is not detected as a gap by the peri-implant bone and gingival structures. This reduces bacterial colonization and the risk of inflammation below the implant-abutment connection. The result is a virtual single-component implant whereby the hard and soft tissue remains healthy and free of irritation.

#### [Conclusion]

Long-term healthy tissue and esthetically perfect conditions with the ANKYLOS® TissueCare Connection.

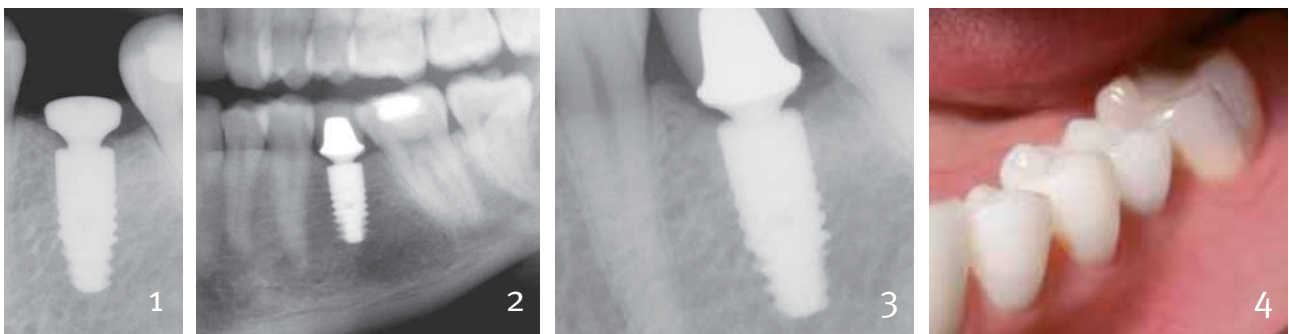
### Part of the system – Platform-Shifting

The geometry of the ANKYLOS® TissueCare Connection moves the transition between the implant and abutment to a central position. This is referred to as Platform-Shifting, and part of the system with ANKYLOS®. It establishes a broad horizontal basis for stable deposition of hard tissue and soft tissue on the implant shoulder. But it is only in combination with a general lack of micromovement and the prevention of bacterial ingress that Platform-Shifting guarantees long-term tissue retention. This is another area in which ANKYLOS® is superior to other implant systems.

#### [Conclusion]

Basis for ideal hard-tissue and soft-tissue conditions over the long term with the ANKYLOS® TissueCare Connection.

### Long-term tissue stability with TissueCare Connection



1 | Stable peri-implant hard tissue and soft tissue after uncovering. 2 | 24 months after prosthetic restoration. 3 | 48 months after prosthetic restoration. 4 | Clinical situation. (Photos: Dr. Nigel Saynor, Cheshire/UK)

## ANKYLOS® | Implanting Brilliancy

Precise preparation – excellent result

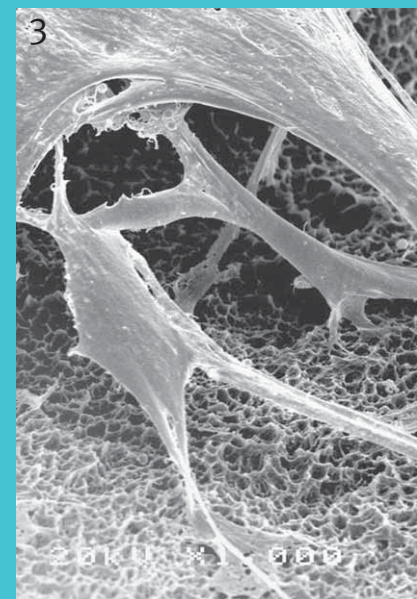
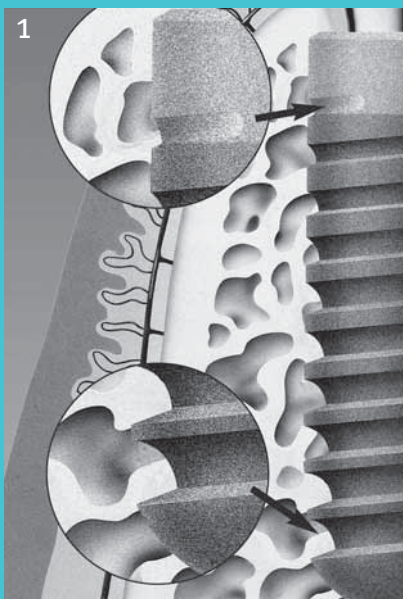
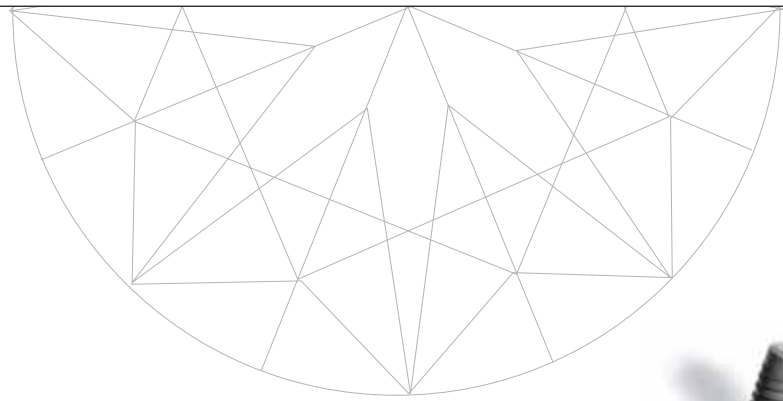
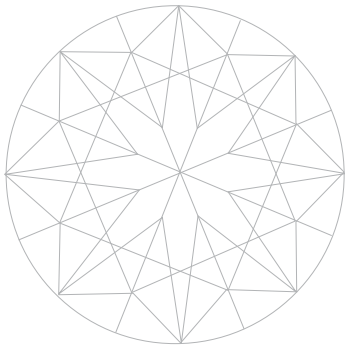


### Safe and stable healing with structure-retaining procedure

The beauty of a brilliant gem only appears after perfect cutting. The atraumatic surgical treatment protocol of ANKYLOS® also provides a perfect demonstration of the outstanding tissue-stabilizing properties of the ANKYLOS® TissueCare Connection by retaining surrounding structures and enhancing the deposition of additional bone substance. The stress on your patients is significantly reduced.

Long-term success rates of 95.8 – 98.7 % without continuing tissue loss have been documented for ANKYLOS® over 11 years, depending on the indications.

*Nentwig G-H: The ANKYLOS® implant system: Concept and clinical application. J Oral Implantol 2004; 30(3): 171-177*



**1** | The design of the thread is decisive for the load distribution in the bone crest. Cervically increasing thread depth transfers load to cancellous bone.

**2** | The subcrestal placement of the implants allows apposition of bone tissue even on the face. Sulcus former in ANKYLOS® implant, situation three months post-OP. (Histology: Dr. Dietmar Weng, Starnberg/D)

**3** | Cell bridges with long spans in the FRIADENT® plus surface provide good conditions for accelerated bone formation.

### Structure-retaining – the thread

The progressive ANKYLOS® implant thread can be screwed in easily. This protects the tissue. The patented thread is ideally matched to the structure of the bone. After the implant has healed it reduces the load distribution in the region of the cortical bone and transfers it to the spongiosa. This provides optimum load reduction in the regions that are significant for retention of crestal bone. The structure of the bone is maintained.

#### [Conclusion]

Maximum possible tissue stability with crestal bone retention and maximum bone-to-implant contact with the thread in final position.

### Flexible – implant position and healing mode

The special friction-locked and keyed tapered connection allows subcrestal placement and also transgingival healing. In both cases the bone does not detect the tapered connection as a gap and it grows around the implant as if it were a single component. The unique microstructured face with the patent pending supports bone formation on the implant shoulder. This establishes the best conditions for a natural emergence profile.

#### [Conclusion]

Permanent natural soft-tissue contour supported by a crestal bone plateau on the implants.

### Bone-forming – the implant surface

All ANKYLOS® implants have the innovative, growth-activating FRIADENT® plus surface. DENTSPLY Friadent, as the pioneer of modern grit-blasted and etched surfaces, has set the standard with this three-dimensional microstructure. The FRIADENT® plus surface favors the apposition of bone-inducing cells on the implant and forms a homogenous bond with the surrounding bone in a very short time.

#### [Conclusion]

Stable bone attachment in a very short time and rapid osseointegration of the implants with the FRIADENT® plus surface.



**ANKYLOS®** | Implanting Brilliancy

Permanent values – brilliant successes

**99.4 % of ANKYLOS® patients were satisfied with their new implant-borne prosthesis, 98.0 % would have more implant treatment if necessary.**

*Morris HF, Ochi S, Rodriguez A, Lambert PM: Patient satisfaction reported for ANKYLOS® implant prostheses. J Oral Implantol 2004; 30(3): 152-161*



## Naturally beautiful teeth even after many years with the esthetic advantages of ANKYLOS® prosthetics

Brilliant gems establish permanent values and long-term relationships. The prosthetic restoration with ANKYLOS® implants crowns a successful treatment with a naturally beautiful result over the long term. ANKYLOS® also has outstanding prosthetic features and provides long-term satisfaction of your patients.



### Minimally invasive – the uncover

The start of the prosthetic restoration shows another advantage of the special tapered connection for the surrounding soft tissue. It is only necessary to open the gingiva to a minimum degree without extended flap debridement. The retention of the tissue greatly reduces the trauma.

In many cases the second surgical procedure is not required, because the atraumatic surgical protocol combined with the extremely tight implant-abutment connection allows the option of transgingival healing of the implants. Your patient sees a result immediately and you take optimum advantage of the regeneration potential of the soft tissue.

#### [Conclusion]

Best conditions for naturally beautiful soft tissue with minimally invasive second procedure or the option of transgingival healing.



### From two to one – the tapered connection

With the tapered TissueCare Connection prosthetic abutments can be freely placed in any position in the implant. Once the prosthetic restoration has been fixed in place, the implant and prosthetic abutment are combined to form an extremely tight and rotation-free unit. ANKYLOS® then acts as a single-component system. It's your choice: Position the abutments freely as required by the prosthetic conditions using a transfer key or use the index as a positioning aid.

#### [Conclusion]

The ANKYLOS® TissueCare Connection combines the advantages of single-component implant systems with those of a two-component system – with and without index.



Healthy, irritation-free soft tissue...

### Freely combinable – the prosthetics

Every indication requires a customized solution. With the ANKYLOS® Balance, Standard and SynCone® prosthetic concepts you make the decision on what system is best suited for your planning and the expectations of your patient: chair-side or lab-side, immediate or late loading. The identical dimensions of the tapered connection through all diameters fit every abutment in every implant. This greatly reduces the number of prosthetic components required. You select the ideal abutment design and attain the best prosthetic result without compromise independently of the implant selected with reference to surgical factors.

#### [Conclusion]

Always an outstanding prosthetic result with three prosthetic concepts and the ability to combine the implant and prosthetic abutment as desired.



...and natural soft tissue contours with TissueCare Connection.

(Photos: Dr. Eduard Eisenmann, Berlin/D)

# ANKYLOS® | Implanting Brilliancy

Best outlook for a good future

You should always check before making the connection. Do it.

ANKYLOS® will convince you: The concept of the TissueCare Connection and its influence on maintaining the structure of the hard tissue and soft tissue has been thoroughly clinically confirmed. The comprehensive documentation of the long-term success rate in function and esthetics over decades is the proof. Patient satisfaction with their ANKYLOS® restoration is well known.

ANKYLOS® – certainly a brilliant choice.



## Application

### Prosthetic concept

- Single-tooth replacement
- Fixing bridges and prostheses

### Type of prosthetic restoration

- Two-stage procedure
- Immediate loading (SynCone®, min. four implants interforaminally in the mandible)

### Time of implant placement

- Immediate implant placement
- Delayed immediate implant placement
- Late implant placement

### Healing mode

- Submerged
- Transgingival with sulcus former

## Implants

### Implant geometry

- Cylinder screws



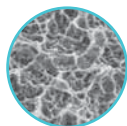
### Implant diameters and lengths

Diameters	3.5 mm (A)	4.5 mm (B)	5.5 mm (C)	7.0 mm (D)
Lengths	8 mm <sup>1</sup>	8 mm	8 mm	8 mm
	9.5 mm	9.5 mm	9.5 mm	9.5 mm
	11 mm	11 mm	11 mm	11 mm
	14 mm	14 mm	14 mm	14 mm
	17 mm	17 mm	17 mm	–

<sup>1</sup> Supporting implant

### Implant material

- Pure titanium grade 2 (ISO 5832-2)



### Implant surface

- FRIADENT® plus microstructure (grit-blasted and high-temperature etched)



### Implant-abutment connection

- Positive and friction-lock tapered connection (TissueCare Connection)

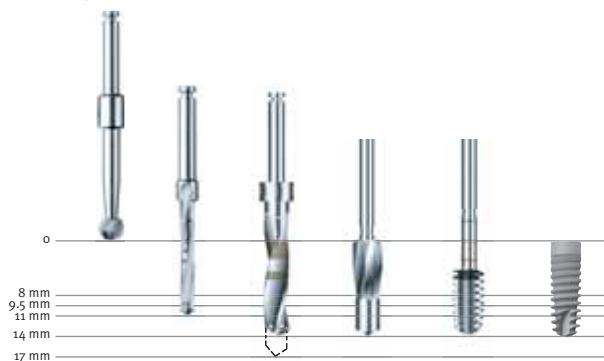
## Surgical instrument set

The ANKYLOS® surgical kits of plastic with modular structure include all instruments required for the standardized surgical protocol in future. Three types of surgical kits are available for ANKYLOS®: one for the machine-assisted protocol and one for the manual protocol (machine-assisted for A and B implants only), as well as for guided surgery with ExpertEase™.



## Drill preparation

Internally irrigated drills with diameter and length markers



**Conical reamer** for expanding drilled implant hole for the tapered core of the implants.

Conical reamers are available in all implant diameters and lengths and can also be used as try-in implants.



**Taps** with depth calibration in the implant diameters for pre-cutting the implant thread.



## Osteotomy

The BoneCondenser and BoneExpander instrument sets are available for preparation of implant sites with osteotomes.

## Temporary restoration/soft tissue management

### ANKYLOS® temporary abutments

- For esthetically demanding temporary crowns and bridges
- Anatomical fitting with two diameters, two sulcus heights and two angulations
- Easy to use with retention groove for temporary denture
- Stable and x-ray-opaque with zirconium oxide additives



## Prosthetic restoration

All copings can be combined with all implant diameters with the identical ANKYLOS® tapered geometry.

Three basic prosthetic concepts with prefabricated components are available for prosthetic restoration of ANKYLOS® implants:

**ANKYLOS® Balance System** for esthetically demanding reconstructions; coping is selected in the laboratory

**ANKYLOS® Standard System** for easy handling; coping is selected chairside, the abutment remains in the patients mouth once placed

**ANKYLOS® SynCone®** for immediate restoration of the edentulous mandible and for restorations on osseointegrated implants

	Single-tooth crowns	Fixed bridges	Removable dentures
ANKYLOS® Balance Anterior C/	x	x	–
ANKYLOS® CERCON® Balance C/	x <sup>1</sup>	–	–
ANKYLOS® Regular C/ or /X	x	x	–
ANKYLOS® Balance Base Abutment C/	–	x	x
ANKYLOS® Standard C/ Abutment	x	x	x
ANKYLOS® SynCone® C/	–	–	x
ANKYLOS® Snap Attachment C/	–	–	x

<sup>1</sup> Single-tooth restoration in front-tooth region only (region 13–23 and 33–43)

#### ANKYLOS® Balance Anterior C/Abutment

- For esthetically demanding single-tooth crowns and bridges in the anterior region
- Anatomical fitting with two diameters, two sulcus heights and two angulations
- Customizable by grinding
- Cementable or laterally screw-retained



#### ANKYLOS® CERCON® Balance C/Abutment

- For full-ceramic restorations with best possible tooth analogy in the anterior region
- Extremely stable, manufactured of zirconium oxide ceramic
- Anatomical fitting with two diameters, two sulcus heights and two angulations
- Customizable by grinding
- Two shades of white, neutral and dentine
- Outstanding esthetics with brilliant light dynamics



#### ANKYLOS® Regular C/ or /X Abutment

- With indexing or freely positionable
- For fixed prosthetics with many indications
- Anatomical fitting with two diameters, four sulcus heights and up to six angulations
- Customizable by grinding
- Cementable or laterally screw-retained



C/



/X

#### ANKYLOS® Balance Base Abutment C/ narrow

- For fixing overdentures by bar construction
- For easy and rational fabrication of screw-retained bridges
- As the basis for bar and bridge constructions fabricated by CAD/CAM



#### ANKYLOS® Standard C/ Abutment

- For easy and economical fabrication of single-tooth crowns and bridges
- High degree of flexibility with various sizes and two angulations
- Coping selection chairside, copings remain in the patient's mouth
- Simplified supragingival impressions and scaffold try-in
- Cementable or screw-retained



#### ANKYLOS® SynCone® C/Abutment

- For fast and economical restoration of the edentulous mandible with an immediately loaded prosthesis on four prefabricated telescopic crowns interforaminally
- For late restoration of the mandible and maxilla as prefabricated retaining element for prostheses
- Surgical procedure and prosthetic restoration in about two hours
- Atraumatic, minimally invasive procedure
- Standardized procedure – less laboratory work



#### ANKYLOS® Snap Attachment C/

- For fixing overdentures in the edentulous mandible
- Simple protocol with option of chairside restoration

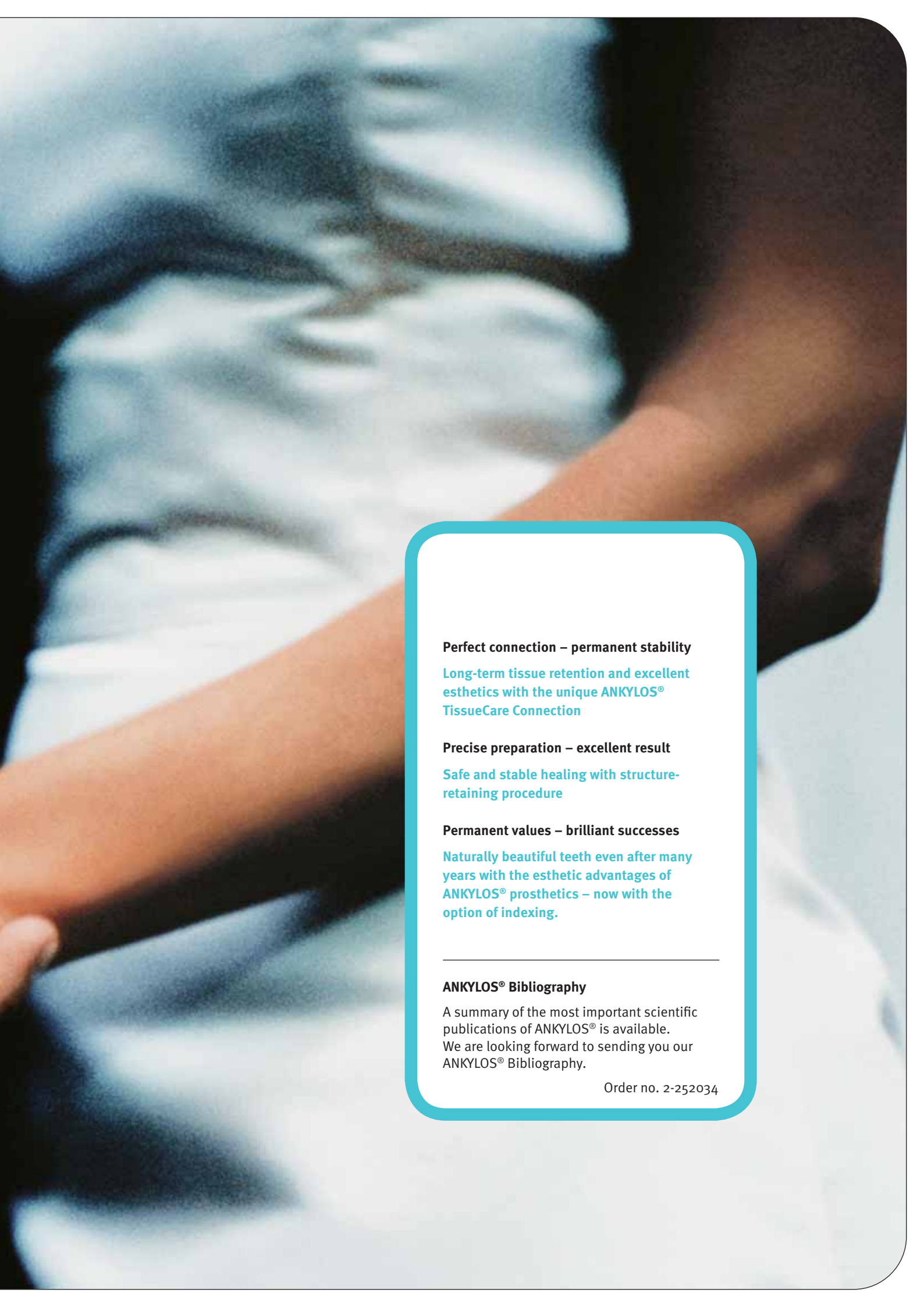


#### ANKYLOS® Custom Abutments by Compartis®

- Patient-individual CAD/CAM abutments
- Designed by the dental laboratory, central production, available via DeguDent, [www.degudent.de](http://www.degudent.de)



Follow the instructions for use when using DENTSPLY Friadent systems. Not all products are available in all countries. For information please contact your national DENTSPLY Friadent representative.



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Long-term tissue retention and excellent esthetics with the unique ANKYLOS® TissueCare Connection

**Precise preparation – excellent result**

Safe and stable healing with structure-retaining procedure

**Permanent values – brilliant successes**

Naturally beautiful teeth even after many years with the esthetic advantages of ANKYLOS® prosthetics – now with the option of indexing.

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**ANKYLOS® Bibliography**

A summary of the most important scientific publications of ANKYLOS® is available. We are looking forward to sending you our ANKYLOS® Bibliography.

Order no. 2-252034

Order no. 6-252047/007

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