ANKYLOS®
Regular C/X Prosthetics

Prosthetics
ANKYLOS® C/X Prosthetics

For more than 20 years, the ANKYLOS® system developed by Prof. Dr. G.-H. Nentwig and Dr. Dipl.-Ing. Walter Moser with its TissueCare Connection using the taper principal has stood for successful long-term hard and soft-tissue stability and long-term red-white esthetics. The option of using indexed prosthetic components is new with ANKYLOS® C/X. The index makes it easy to position the prosthetic abutments accurately.

The prosthetic procedure is selected after the implants have healed or at the time of uncovering depending on the indication. ANKYLOS® C/X offers different methods depending on the type of planned prosthetic restoration. ANKYLOS® C/X implants have only one prosthetic connection diameter (TissueCare Connection). This significantly reduces the number of prosthetic components. Regardless of the implant diameter selected using surgical criteria, you can select the ideal abutment design and achieve the desired prosthetic result.

ANKYLOS® C/X with the 5 guarantees for success in true TissueCare:

1. No micromovement between implant and abutment
2. Bacteria-proof connection
3. Platform Switching
4. Subcrestal implant placement
5. Implant microroughened to the interface
ANKYLOS® Regular C/X Prosthetics

Crows and bridges on ANKYLOS® Regular C/X

The new ANKYLOS® Regular C/X range of prosthetic components enables functionally and esthetically demanding reconstruction of edentulous spans and free-end edentulism with single-tooth crowns or an implant-supported bridge.

With their convex sulcus design ANKYLOS® Regular C/X prosthetic abutments are optimized for the posterior tooth region.

ANKYLOS® Regular C/X prosthetic components allow you to select one of the two options: a tapered connection geometry that allows the abutment components to be positioned as desired or components with tapered connection and an index to aid positioning. Anatomically shaped ANKYLOS® prosthetic abutments with index are in preparation.

Please note:
ANKYLOS® C/X implants must only be used with components that are laser-marked with “C/X" “C/” or “/X”, or that belong to the following product groups. ANKYLOS® Balance Anterior and Posterior abutments, CERCON® Balance, Balance temporary abutments, Balance Anterior sulcus formers and SynCone® abutments.

All prosthetic ANKYLOS® C/X components are laser-marked to indicate their use:

- Components with the C/ mark use only the “C”one for the connection and are not indexed. This means that the abutment components can be positioned as desired and are completely locked by the taper to prevent rotation.
- Components with the /X mark are indexed. The index is used to position the abutment components in one of six possible positions. In this case also the taper guarantees optimum stability and rotation locking.
- Components with the C/X mark are used for indexed or non-indexed prosthetics.
ANKYLOS® Regular C/X Prosthetic components

Regardless of whether you are planning a prosthetic restoration on indexed ANKYLOS® Regular /X abutments or on the freely positionable ANKYLOS® Regular C/ abutments identical components with the C/X marked are used for contouring the soft tissue and impressions.

Uncovery and soft-tissue management

ANKYLOS® Regular C/X Gingiva Former
- For simple contouring of the peri-implant soft tissue
- Selection depends on the gingival margin
- One-component with integrated screw

Impressions

ANKYLOS® Regular C/X Transfer Post PickUp
- For transferring the implant position to the master cast with the PickUp technique (open tray)
- Available in two lengths – one-component with integrated straining screw, screw extension enclosed

ANKYLOS® Regular C/X Transfer Post Repositioning Technique
- For transferring the implant position to the master cast with the PickUp technique (closed tray) – one-component with integrated straining screw

A 3-in-1 cap (snap connection) for impression making at abutment level and fabrication of provisional components with snap connection at chairside is in preparation.

Delivering the prosthetic restoration

ANKYLOS® Regular /X or Regular C/ Abutment
- With indexing (/X) or freely positionable (C/) – one-component with integrated straining screw
- Easily adaptable to the clinical situation with four gingival margins and up to six angulations
- Can be customized by grinding
- Cementable or laterally screw-retained
Step-by-step: Uncovery and soft-tissue management

Where submerged healing of implants is used, they are generally uncovered after three to four months in a minimally invasive procedure and then the soft tissue is contoured as described here.

The following steps are not required with transgingival healing of the implants or with immediate restoration with a short-term temporary denture. Please proceed with the impression (page 8 ff).

ANKYLOS® Regular /X Abutment

ANKYLOS® Regular C/ Abutment

Incision
After location of the implant and local anesthesia immediately above the implant (e.g. intraligamentary system), make a limited crestal incision on the implant surface. It may be easier to find the implants with the surgical template.

Uncovery
Then the edges of the wound are spread slightly with an angled raspatory (1) without uncovering the complete surface of the implant. The central thread of the cover screw is located with the probe (2). Connective tissue or bone above the cover screw must be removed with the sharp curette (3).

Removing ANKYLOS® C/X Cover Screw
Insert the unscrew instrument for cover screw into the large handle for screwdriver, Ø 12 mm, and screw counterclockwise with light pressure into the internal thread of the cover screw. The unscrew instrument grips the internal thread of the cover screw and screws it out. This prepares the implant for the gingiva-forming components. The cover screw is clamped in the back of tweezers or gripped with pliers to remove it from the unscrew instrument. Then the unscrew instrument is rotated clockwise until it is released from the cover screw.
Screwing in ANKYLOS® Regular C/X Gingiva Former

The ANKYLOS® Regular C/X gingiva former is a single component. Select the Regular C/X gingiva former to match the thickness of the mucosa and screw it hand-tight into the internal thread of the implant with the 1.0 mm hexagonal screwdriver. Sterilize the Regular C/X gingiva former before use (see instrument care instructions). The same Regular C/X gingiva former is used for straight and angled abutments and it remains in place for approx. 14 days.

Please note: If the mucosa is stiff, the tissue must be gradually stretched to the desired diameter. In this case start with a smaller gingiva former (standard). Switch to a larger diameter after 5–7 days.

Short-term temporary denture

The ANKYLOS® Balance temporary abutment can be used in the anterior and the posterior region to fabricate a short-term temporary denture. The large ANKYLOS® Balance temporary abutment should be reduced in size no less than to the size of the small ANKYLOS® Balance temporary abutment. Crosscut hard-metal milling tools are used for grinding at up to 25,000 rpm. Grinding must be done outside the mouth. The small Balance temporary abutment must not be ground.

Clean and dry the connection taper of the implant with air/water spray before delivery. The abutment is screwed in place with 15 Ncm torque with the prosthetic ratchet and the hexagonal 1.0 mm torque insert or with a torque-controlled contra-angle handpiece with a hexagonal 1.0 mm screwdriver insert. Cement the superstructure with temporary cement. Remove all excess cement at the crown margin.

Please note: Short-term temporary dentures must be replaced after no longer than six months.
**Step-by-step: Impressions**

The impressions for prosthetic restorations on ANKYLOS® Regular /X or Regular C/ abutments are generally taken by the PickUp technique (open tray). A transfer impression (closed tray) can also be used. The following step-by-step instructions describe both methods.

**Note:** The Balance C/ transfer post can also be used with non-indexed superstructures. This ensures the fit in the connection taper, but the position of the index is not transferred. The components are therefore rotationally symmetrical.

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**ANKYLOS® Regular /X Abutment**

**ANKYLOS® Regular C/ Abutment**

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**Removing ANKYLOS® Regular C/X Gingiva Former**

Remove ANKYLOS® Regular C/X gingiva former for the impression. The connection taper and the index of the implant must be cleared of any tissue residue.

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**Impression PickUp technique (open tray)**

Depending on the position of the implant use the short or long ANKYLOS® Regular C/X transfer post. Position Regular C/X transfer post in the connection taper and index of the implant and fix with the integrated transfer screw. Hand-tighten the transfer screw. The internal hex in the screw head is intended to assist with removing the screw, block it out with wax first.

The transfer post must be correctly fitted in the connection taper and the index of the implant. If necessary, the transfer screw can be fitted with a screw extension to allow access for the screw.

The impression is taken with an open tray. After the impression material has cured, release the transfer screw and remove the impression. The transfer post remains in the impression. The laboratory receives the impression for fabrication of the master cast. A mucosa mask must also be fabricated.

The laboratory selects the prosthetic abutment in consultation with the dentist and adjusts it for the specific situation. The prefabricated taper surfaces and the index must not be processed.

**Note:** If the impression is taken with the C/ transfer coping the transfer screw must also be sent to the laboratory.
Alternative: Impression reposi-
tioning technique (closed tray)

Position the C/X transfer post reposi-
tioning technique in the connection
taper and index of the implant and
fix with the integrated transfer screw.
Hand-tighten the transfer screw. The internal hex is design to aid in
releasing the screw, block it out with
wax first. Make sure that the transfer
coping fits into the connection taper
and index of the implant.

The impression is taken with a
closed tray. After the impression
material has cured, remove the
impression and the transfer post
remains in place.

Remove the transfer post from the
implant and transfer to the impres-
sion. Make sure that the flattened
parts of the C/X transfer post are
transferred exactly. The laboratory
receives the impression with the
transfer post for fabrication of the
cast. A mucosa mask must also
be fabricated.

The laboratory selects the prosthetic
abutment in consultation with the
dentist and adjusts it for the specific
situation. The prefabricated taper
surfaces and the index must not be
processed.

Replacement of the Regular C/X
Gingiva Former

After taking the impression, transfer
the ANKYLOS® Regular C/X gingiva
former to prevent collapse of the es-
tablished gingival emergence profile
and to protect the implant lumen.
Step-by-step: Delivering the prosthetic restoration

The prosthetic abutments are positioned depending on whether the superstructure was fabricated on indexed ANKYLOS® Regular /X abutments or on the freely positionable ANKYLOS® Regular C/ abutments.

Remove the prosthetic restoration supplied by the laboratory from the master cast and unscrew the ANKYLOS® Regular /X or C/ abutment from the laboratory analog in the master cast. Clean and disinfect the abutment.

Unscrew the ANKYLOS® Regular C/X gingiva former from the implant and clean the connection taper and index in the implant with air-water spray and blow-dry thoroughly.

Using the index to find the position or with a laboratory-fabricated transfer key. The following step-by-step instructions describe both methods.

**Please note:**
Have a short and long 15 Ncm torque wrench ready for different sizes of transfer keys.

**Inserting ANKYLOS® Regular /X Abutments**
Screw the ANKYLOS® Regular /X abutment into the implant in the same index position as defined in the master cast. Use the torque wrench with 1.0 mm hex insert or a torque-controlled contra-angle handpiece. The recommended torque for the straining screw is 15 Ncm.

**Alternative: Inserting ANKYLOS® Regular C/ Abutments**
Position the ANKYLOS® Regular /C abutment in the implant with the aid of the laboratory-fabricated transfer key and screw it in place. Use the torque wrench with 1.0 mm hex insert or a torque-controlled contra-angle handpiece. The recommended torque for the straining screw is 15 Ncm.
Placing superstructure on ANKYLOS® Regular /X or C/

Check the fit of the superstructure on the positioned ANKYLOS® Regular /X or Regular C/ abutment. Clean and disinfect the superstructure. The superstructure can be cemented-in or laterally screw-retained. Porcelain crowns or crowns with ceramic shoulders should always be cemented-in. Remove excess cement thoroughly after cementing.

Screw the crown to the abutment with the red lateral M 1.4 ANKYLOS® fixation screw supplied by the laboratory at a torque of 10 Ncm.
Some products may not be available in all countries. Please contact your DENTSPLY Implants representative to obtain up to date information on the product range and on availability.