Ankylos®

Acuris™ – conometric concept

Manual and product catalogue

Dentsply Sirona

Ankylos®
Implanting TissueCare

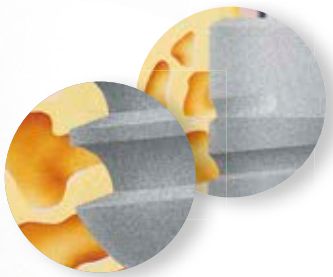
The true value of an implant system becomes apparent with time. For over 30 years, the Ankylos implant system has stood for stable, long-term aesthetics. The results from numerous publications and long-term clinical experience demonstrate that Ankylos maintains hard and soft tissue stability, ensuring natural and lasting aesthetics.

The core to this success is the unique Ankylos TissueCare Concept, which is the sum of all the key features of the Ankylos system design.

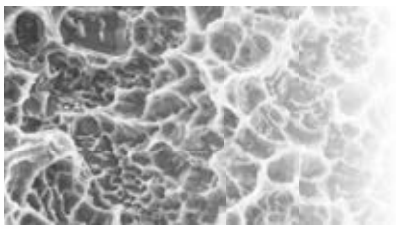
SoftTissue Chamber™

One-fits-all TissueCare connection

Progressive Thread



Friadent® plus surface



Courtesy of Dr. Nigel Saynor, Stockport, UK

Ankylos®

CONTENTS

This manual is designed for use by clinicians who have undergone appropriate education and training in surgical and prosthetic implant treatment. Staying current on the latest trends and treatment techniques in implant dentistry through continued education is the responsibility of the clinician.

This manual only addresses the additional information needed to work with the Conometric concept. For all other instructions and/or a full description of implant placement and restorative procedures for the Ankylos implant system, as well as all the instruments and components needed, please refer to the appropriate manual and catalogue.

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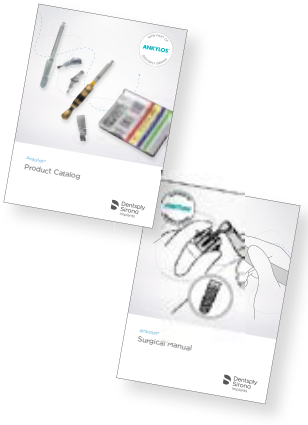
Product illustrations are not to scale.



Acuris™ – conometric concept

Acuris is a paradigm shift in prosthetic retention of single crowns that are fixed yet retrievable by the clinician. The friction-based retention offers a fixation mode providing the aesthetics of a cement-retained crown, maintaining retrievability and excluding the risk of submucosal residual cement.

The ease of using Acuris™

- A time-saving and easy-to-use solution for single crowns
- Fixed retention, yet retrievable by the clinician
- Cement-free mode of retention
- No screw access holes/fillings
- Provides a simplified restorative concept to reduce chair time

Pre-operative considerations

Acuris is an implant-prosthetic procedure for the cementless restoration of single-tooth implants.

- In case of immediate loading, bone quality and quantity, primary implant stability, design of restoration and loading conditions should always be carefully examined and assessed by the clinician when deciding the appropriate time to load the implant in the individual case.
- If possible, posterior implants should be placed using maximum diameter and length within the limitations of available bone.
- One-piece Ankylos conometric abutments need to be tightened with 25 Ncm torque to secure a stable screw joint and pre-load. Ankylos conometric abutments with central straining screw require a torque of 15 Ncm. Thus implants need to be stable enough to withstand this tightening torque if you consider immediate temporisation. If in doubt, healing abutments or even a two stage surgical approach can be an alternative.
- In order to facilitate the seating of the final crown, it is important to avoid interference from the mucosa surrounding the abutment. Ensure sufficient space for the final restoration by designing the temporary crown in a way that allows the mucosa to heal in a suitable shape.

No screw access holes

- Easier handling
- Enhanced aesthetics
- Angulation of implant less critical, allowing for better use of available bone.

No cement

- Easier handling
- Faster delivery of crown – no excess cement to handle
- Safeguarding/protecting implant-supporting tissues

Easier, quicker and reduced maintenance

- Retrievable crown for corrections/ repairs/periimplantitis treatment
- All corrections/repairs easily done extra-orally
- No need to replace screw access hole fillings

Abutments in two diameters, in different gingival heights, available as straight and with 15° angulation.

Implant assortment for conometric concept

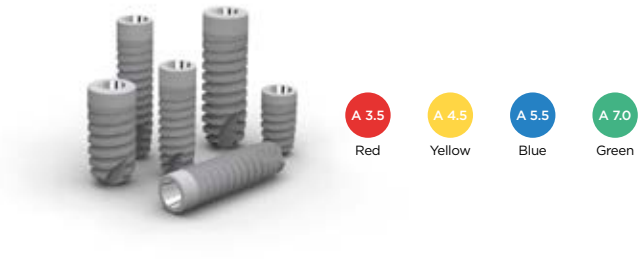
Ankylos C/X implant diameters and lengths

Ankylos C/X implants are available in four diameters and various lengths. The practical size classification makes them suitable for all indications in dental implantology with a manageable number of implants.

Diameters	3.5 mm (A)	4.5 mm (B)	5.5 mm (C)	7.0 mm (D)
Lengths	6.6 mm	6.6 mm	6.6 mm	–
	8 mm	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	–

Individual implants are identified by a capital letter that indicates the diameter and a number. The number shows the length of the implant in millimeters.

The colour-coding on the implant package identifies the implant diameter. The instruments used to prepare the implant site are also colour-coded.



Conometric abutments for Ankylos are available in the following dimensions

Conometric Abutment

Axis: straight or 15° angled

Diameter at the abutments equator: 3.3 mm or 4.5 mm

Gingival height: 1.5 mm, 3.0 mm or 4.5 mm

For optimal positioning all Ankylos Conometric Abutments are available with conical connection only

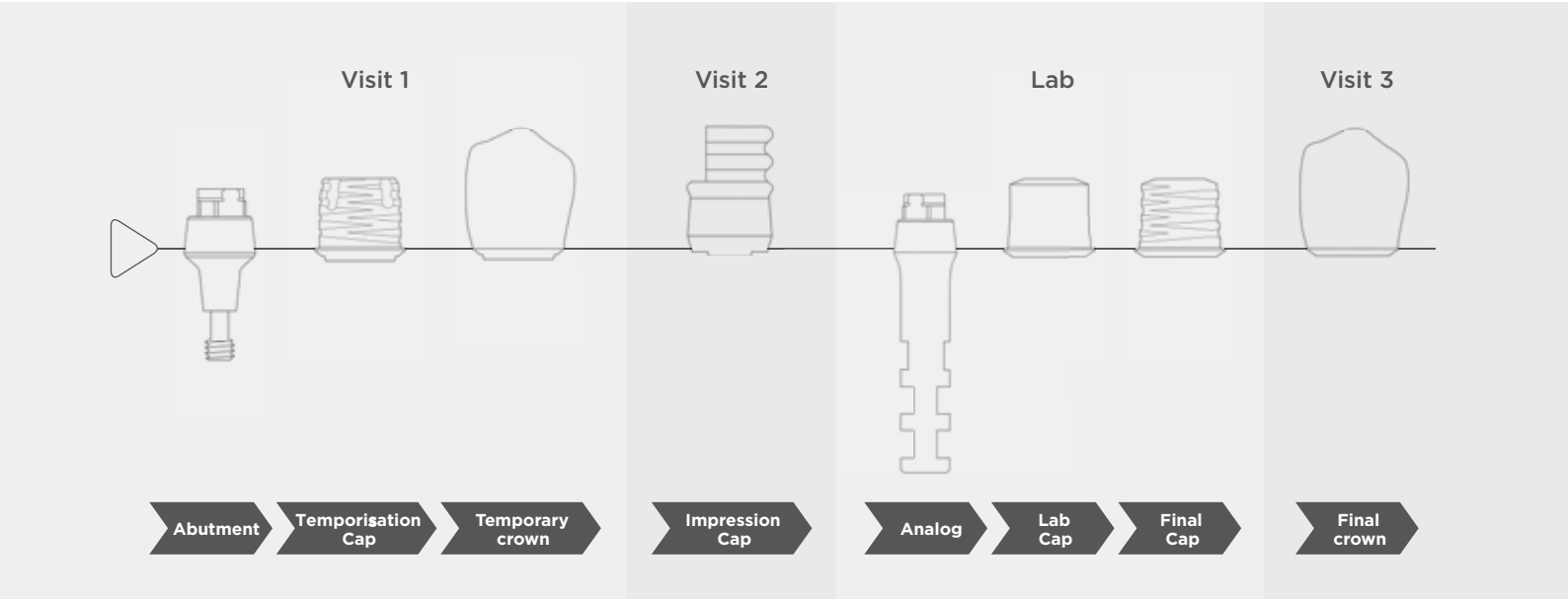
(C/). The term “index” is referring to the tri-angular lock between abutment and the Conometric Final Cap.

Note: The Ankylos Conometric Abutment with diameter 3.3 in its straight version is a one-piece abutment with a special abutment driver, tightening torque 25 Ncm. All other Ankylos Conometric abutments come with an integrated laser-welded screw to be tigthtened with the 1.0 mm hex driver and 15 Ncm tightening torque.

Step-by-step conometric concept

The following describes a chairside technique where a Conometric Temporisation Cap is used as the base for a temporary restoration.

When a provisional crown is not needed, an alternative is to use a Conometric Healing Cap which can be snapped on to the abutment.



Implant placement and abutment connection

Below is a procedure for implant placement and abutment connection in the mandible using an Ankylos C/X implant and connection of Conometric Abutment C/.

Clinical procedure – implant placement and abutment connection

Implant placement Abutment selection

- Prepare the implant site and install the implant.
- Measure the soft tissue height.
- It is preferable to place the abutment margin 1 mm below the soft tissue margin.
- Select the appropriate abutment with regard to height and angulation.

Note: See Ankylos surgical manual for detailed surgical drilling protocol and options.

Abutment connection – Two-piece straight abutment 4.5

- Connect the Conometric Abutment C/ and perform manual initial tightening with the 1.0 mm hexagonal Insert for Prosthetic Ratchet.

Finalising abutment connection

- Use the prosthetic ratchet and the 1.0 mm hexagonal Insert for Prosthetic Ratchet to tighten the abutment to the recommended torque (15 Ncm). This applies for all abutments with an integrated straining screw.

Step-by-step procedure – Immediate temporisation

The following procedure is a chairside technique where a Temporisation Cap is used as the base for a temporary restoration. When a temporary crown is not needed, an alternative is to use a Healing Cap which can be snapped on to the abutment.

Note: A lab technique option is also available.

Conometric Temporisation Cap

The cap is used to build a temporary crown. Can be used up to six months.

Conometric Healing Cap

The cap is a protection for the abutment when a temporary crown is not used. Can be used up to six months.

Clinical procedure – immediate temporisation

Conometric Temporisation Cap

- Pick up the appropriate Temporisation Cap using the Temporisation Cap Insertion Tool (1a).
- Align the temporisation cap with the indexing part on the abutment, snap into place (1b).

Conometric Temporisation Cap Insertion Tool

Used for carrying the cap to the abutment and snapping the cap into place.

Temporary crown

- Build up the crown on the temporisation cap according to your preferred procedure (2a).
- Remove the temporary crown (2b).
- Make corrections and polish extraorally (2c).

Note: In order to facilitate the seating of the final crown, it is important to avoid interference from the mucosa surrounding the abutment. Ensure sufficient space for the final restoration by designing the temporary crown in a way that allows the mucosa to heal in a suitable shape.

Delivery of temporary crown

- Seat the crown and snap it into place (3a).
- Check contact with adjacent teeth and make corrections to the occlusal relation as needed (3b).

Step-by-step procedure – Prosthetic and laboratory procedures

Conometric Impression Cap

The cap is used to capture the abutment position.

Clinical procedure – closed tray on abutment level

Impression Cap

- Remove the temporary crown (1a).
- Align the appropriate Impression Cap with the indexing part of the abutment and seat it firmly, allowing it to snap into place (1b).

Impression

- Use a closed tray impression technique.
- Apply an elastomeric impression material around the cap separately (2a).
- Place the tray, filled with the impression material, and take the impression (2b).
- Once the impression material has set, remove the impression from the mouth.

Impression

- Check the impression for correct and stable retention of the cap (3a).
- Reinstall the temporary crown (3b).
- Send the impression to the laboratory.

Conometric Analog

Corresponds to the abutment and is used in the master model.

Conometric Lab Cap

The lab cap is used by the dental technician when fabricating the crown.

Laboratory procedure – closed tray on abutment level

Conometric Impression Cap/ Conometric Analog

- Place the appropriate Conometric Analog in the correct position in the impression cap until it snaps into place.

Note: Conometric Analog is for single use.

Master model

- Pour high quality stone into the impression and fabricate the master model with a removable soft tissue mask.

Conometric Lab Cap

- Seat the Lab Cap on the abutment analog.

Conometric Final Cap

The crown is cemented onto the cap.

Laboratory procedure

1a

1b

Build up

- Fabricate a ceramic crown using the preferred technique.

Preparation for cementation

- Clean the cap and prepare the crown according to the cement manufacturer´s instruction.

Finalise the restoration

- Place the final cap on the abutment analog, aligned with the indexing part of the analog (1a).
- Engage the retention by light tapping.
- Cement the crown onto the final cap.
- Choice of cement is based on the material in the restoration in combination with the final cap in titanium with titanium nitride surface.
- Remove excess cement and polish.
- The crown is sent to the dental clinic (1b).

Conometric Fixation Tool Tip Convex

Single-use PEEK tip applied on the tip of Conometric Fixation Tool. Also available in concave and U-shaped design.

Clinical procedure

Removal of temporary crown

- Remove the temporary crown (1a).
- Depending on crown form, select a suitable single-use tip and attach to the Conometric Fixation Tool (1b).

Delivery of final crown

- Seat the final crown aligned with the indexing on the abutment (2a).
- Place the fixation tool on the crown and align it with the path of insertion (2b).
- Press the fixation tool towards the crown until the spring releases with an audible click and activates the retention.

Check final crown

- Check contact with adjacent teeth and make corrections to the occlusal relation as needed.
- Check colour and characterisation.
- If applicable, remove the crown for corrections and polishing followed by reinsertion with the help of the fixation tool.

Conometric Fixation Tool

Activates the friction retention between Final Cap/final crown and abutment by a combination of pressure and impulse.

Product catalogue
Acuris™ – conometric concept

Components specifically designed for use with the conometric concept for Ankylos implants are presented in this manual/product catalogue. If you need drills and other instruments, please refer to the Product catalogue for Ankylos.

Conometric abutments

Conometric Abutment C/0°
Ø3.3



Ø mm	3.3	3.3	3.3
A – height mm	1.5	3	4.5
Order No.	310 2 3410	310 2 3420	310 2 3430

Conometric Abutment C/0°
Ø3.3



Ø mm	3.3	3.3	3.3
A – height mm	1.5	3	4.5
B – height mm	2.3	3.8	5.3
Order No.	31 02 341 2	310 2 3422	310 2 3432

Conometric Abutment C/0°
Ø4.5

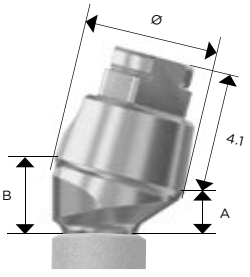


Ø mm	4.5	4.5	4.5
A – height mm	1.5	3	4.5
Order No.	310 2 3450	310 2 3460	310 2 3470

Conometric Abutment C/15°
Ø4.5



Ø mm	4.5	4.5	4.5
A – height mm	1.5	3	4.5
B – height mm	2.6	4.1	5.6
Order No.	310 2 3452	310 2 3462	310 2 3472



Conometric Abutment C/, straight and angled

Titanium Alloy-ELI, non-sterile

- Supporting single tooth, fixed restorations only
- Two diameters, same prosthetic interface and components for all abutments of the same diameter
- Straight Ø 3.3 mm abutments are one-piece

Restorative instruments and components

Conometric Abutment Driver
Stainless steel, non-sterile
- For one-piece abutments

Conometric Abutment Driver


Ø mm	3.3	3.3
Height mm	25	20
Order No.	310 7 2909	310 7 2910

Torque Wrench EV
Stainless steel, non-sterile
- Use together with a restorative driver handle and the conometric driver for tightening of one-piece abutments

Torque Wrench EV

Order No.	25774

Torque Wrench EV Restorative Handles
Stainless steel, non-sterile

Torque Wrench EV Restorative Driver Handle **Low**


Order No.	25776	25777

Conometric Temporisation Cap Insertion Tool
Stainless steel, non-sterile
- Used for carrying the cap to the abutment and to snap the cap into place

Conometric Temporisation Cap Insertion Tool


Ø mm	3.3	4.5
Height mm	24.5	24.5
Order No.	310 3 3636	310 3 3637

Conometric Fixation Tool
Stainless steel, non-sterile
- Activates the friction retention between Final Cap/final crown and abutment by a combination of pressure and impulse

Conometric Fixation Tool

Order No.	310 7 291 1

Restorative instruments and components

Conometric Fixation Tool Tips

	Tip Convex (5 pcs)	Tip U-shape (5 pcs)	Tip Concave (5 pcs)
Height mm	11	9.5	10.5
Order No.	3107 2906	31 07 2907	3107 2908

Conometric Fixation Tool Tip

PEEK plastic, non-sterile, single-use

- Should be applied on the tip of Conometric Fixation Tool.

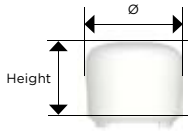
Conometric Healing Cap

Conometric abutment size Ø mm	3.3	3.3	4.5
Ø mm	4.8	6.0	6.0
Height mm	5.3	5.3	5.3
Order No.	3107 2101	3107 2102	3107 2103

Conometric Healing Cap

PEEK plastic, one-piece, non-sterile, single-use

- The cap is a protection for the abutment when a temporary crown is not used.
- Can be used up to six months.



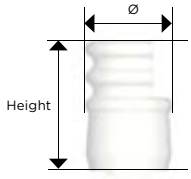
Conometric Impression Cap

Conometric abutment size Ø mm	3.3	4.5
Ø mm	5.4	5.4
Height mm	8.3	8.3
Order No.	3107 2001	3107 2002

Conometric Impression Cap

PEEK plastic, non-sterile, single-use

- The cap is used to capture the abutment position.



Conometric Temporisation Cap

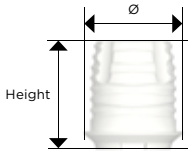
Conometric abutment size Ø mm	3.3	4.5
Ø mm	4.6	5.8
Height mm	5	5.3
Order No.	3107 2112	3107 2114

Conometric Temporisation Cap

Cap Ø 3.3/4.6: Titanium Alloy-ELI/PEEK plastic, non-sterile, single-use

Cap Ø 4.5/5.8: PEEK plastic, non-sterile, single-use

- The cap is used to build a temporary crown.
- Can be used up to six months.



Laboratory components

Conometric Analog
Stainless steel, non-sterile, single-use

- Corresponds to the abutment and is used in the master model.

Conometric Analog


Conometric abutment size Ø mm	3.3	4.5
Height mm	20	20
Order No.	310 4 7210	310 7 2020

Conometric Lab Cap
Titanium Alloy-ELI, non-sterile, single-use

- The lab cap is used by the dental technician when fabricating the crown.

Conometric Lab Cap


Conometric abutment size Ø mm	3.3	4.5
Ø mm	4.6	5.8
Height mm	5	5
Order No.	310 7 21 21	310 7 21 23

Conometric Final Cap
Titanium grade 4, TiN-coated, non-sterile, single-use

- The crown is cemented onto the cap.

Conometric Final Cap


Conometric abutment size Ø mm	3.3	4.5
Ø mm	4.6	5.8
Height mm	5	5
Order No.	310 7 2301	310 7 2303

Torque Wrench EV – handling for straight Ø 3.3 mm one-piece abutments

For straight Ø 3.3 mm one-piece abutments, use the Restorative Driver Handle EV and Torque Wrench EV together with the Conometric Abutment Driver for tightening.

Assemble

- Assemble the head of the wrench and the body by pushing the components together and turn until there is an audible click.

Attach

- Attach the Conometric Abutment Driver into the Restorative Driver Handle and then into the wrench until there is an audible click.

Handling

- Use a finger on the top of the driver handle to keep it steady and in place. Then gently pull the arm of the torque wrench in the direction of the arrow until the desired torque is achieved.

Note: The arm of the torque wrench must not go beyond the end of the scale, as this could result in inaccurate torque readings.

The arrow on the head of the wrench shows the direction in which the wrench is functioning.

Torque guide for conometric abutments

There are two different construction principles of conometric abutments:

Straight Ø 3.3 mm abutments are one-piece abutments. They are inserted with special instruments engaging to the abutment head. For straight one-piece Ø 3.3 mm abutments, use the Restorative Driver Handle EV together with the Conometric Abutment Driver and Torque Wrench EV to tighten to the recommended torque (25 Ncm).

Straight Ø 4.5 mm and angled abutments are two-piece abutments and come with an integrated abutment screw.

This abutment screw is mobile but not removable. For abutments with integrated abutment screw, use the Prosthetic Ratchet and the 1.0 mm hexagonal Insert for prosthetic ratchet to tighten the abutment to the recommended torque (15 Ncm).

Explanation of the symbols on labels and instructions for use

Date of manufacture	Date of manufacture.
	Legal manufacturer.
Use by	Expiry date.
STERILE R	Sterilised using irradiation.
Rx Only	**Caution:** Federal (USA law restricts this product to sale by or on a order of a dentist.
NON STERILE	The product is not sterile.
Single use	Do not re-use, Single use only.
Do not re-sterilize	Do not re-sterilise.
	GOST is the valid quality certification system in Russian Federation.
CE	Products carrying the CE mark fulfill the requirements of the Medical Device Directive or Medical Device Regulation.
0123	Identification of Notified Body.
Do not use if package is damaged	Do not use if package is damaged.
Consult instructions for use ifu.dentsplysirona.com	Consult instructions for use.*
LOT	LOT/BATCH number.
REF	Article number.
	Contains article number (GTIN number), lot number and quantity.

* To read PDF files you will need Adobe Reader. Download free of charge at get.adobe.com/reader.

Conometric Fixation tool

The Conometric Fixation Tool must be disassembled for cleaning and may be assembled again for sterilisation only in a dry condition.

Important: The parts must be assembled according to the image below. The smaller spring is bent, which is intended.

Torque Wrench EV

Disassemble

- Remove the driver handle from the wrench.
- Remove the head by pressing a finger into the recess (1) and gently pulling the head (2).

Cleaning and drying

- The three separated parts are now ready for cleaning using water and a brush. Let the parts dry.

Sterilisation

- Follow the manufacturer's instructions for use.

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Order by reference number

Alphabetical order

About Dentsply Sirona Implants

Dentsply Sirona Implants offers comprehensive solutions for all phases of implant therapy, including Ankylos®, Astra Tech Implant System® and Xive® implant lines, digital technologies, such as Atlantis® patient-specific solutions and Simplant® guided surgery, Symbios® regenerative solutions, and professional and business development programs, such as STEPPS™. Dentsply Sirona Implants creates value for dental professionals and allows for predictable and lasting implant treatment outcomes, resulting in enhanced quality of life for patients.

About Dentsply Sirona

Dentsply Sirona is the world's largest manufacturer of professional dental products and technologies, with a 130-year history of innovation and service to the dental industry and patients worldwide. Dentsply Sirona develops, manufactures, and markets a comprehensive solutions offering including dental and oral health products as well as other consumable medical devices under a strong portfolio of world class brands. As The Dental Solutions Company™, Dentsply Sirona's products provide innovative, high-quality and effective solutions to advance patient care and deliver better, safer and faster dentistry. Dentsply Sirona's global headquarters is located in York, Pennsylvania, and the international headquarters is based in Salzburg, Austria. The company's shares are listed in the United States on NASDAQ under the symbol XRAY.

Visit www.dentsplysirona.com for more information about Dentsply Sirona and its products.

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