



All components are non-sterilised!

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INSTRUCTIONS FOR USE

Translation of the original instructions for use

CERAMILL TI-CONNECT FOR INDIVIDUAL ABUTMENTS, CERAMILL TI-FORMS AND SCAN BODY RANGE ONE, TWO, THREE, FOUR, FIVE, SIX, SEVEN, EIGHT, NINE, TEN, TWELVE

The prefabricated millable-/adjustable Ceramill Ti-Forms milling cylinders made from Grade 5 titanium for customised abutments (Ceramill Ti-Forms) and Ceramill Ti-Connect (Titanium bases and accessories) were developed for the Range one, two, three, four, five, six, seven, eight, nine, ten and twelve implant systems. The customised abutments can be fabricated in combination with crowns and superstructures for the reconstruction of aesthetics and function. The Ceramill Ti-Form blank is oversized in order to create an abutment by customised milling that corresponds to the requirements of an anatomical, aesthetic design in relation to the respective patient situation.

INDICATION

For manufacturing individual abutments on implants. The Ceramill Ti-Connect components and the Ceramill Ti-Forms components of the corresponding Ranges are compatible with the respective given implant systems and can be combined, e.g. Range one in combination with the implant system OsseoSpeed®.

IMPLANT SYSTEM DENTSPLY Implants® Astra Tech Implant System OsseoSpeed® TX	Kit a	Kit b
Titanium base Range one screw included	3,5 / 4,0 mm	4,5 / 5,0 mm
Screw	792111 792141 792101	792112 792142 792102

IMPLANT SYSTEM Blomet 3i® Osseotite® Certain®	Kit a	Kit b	Kit c
Titanium base Range two screw included	3,4 mm	4,1 mm	5,0 mm
Screw	792211 792241 7922101	792212 792241 7922102	792213 792241 7922103

IMPLANT SYSTEM Straumann® BoneLevel®	Kit a	Kit b
Titanium base Range three screw included	3,3 mm	4,1 / 4,8 mm
Screw	792311 792341 7923101	792312 792341 7923102

IMPLANT SYSTEM Nobel Biocare® Nobel Active®	Kit a	Kit b
Titanium base Range four screw included	3,5 mm (NP)	4,3 / 5,0 mm (RP)
Screw	792411 792441 7924101	792412 792442 7924102

IMPLANT SYSTEM Straumann® SynOcta®	Kit a	Kit b	Kit c
Titanium base Range five screw included	3,5 mm	4,8 mm	6,5 mm
Screw	792511 792541 7925101	792512 792542 7925102S	792513 792542 7925103S

IMPLANT SYSTEM Nobel Biocare® Replace Select®	Kit a	Kit b	Kit c	Kit d
Titanium base Range six screw included	3,5 mm	4,3 mm	5,0 mm	6,0 mm
Screw	792611 792641 7926101	792612 792642 7926102	792613 792642 7926103	792614 792642 -

IMPLANT SYSTEM Biomet 3i® Osseotite® External Hex®	Kit a	Kit b	Kit c
Titanium base Range seven screw included	3,4 mm	4,1 mm	5 mm
Screw	792711 792741 -	792712 792741 7927102	792713 792741 -

IMPLANT SYSTEM Nobel Biocare® Brånemark®	Kit a	Kit b	Kit c
Titanium base Range eight screw included	3,5 mm	4,1 mm	5,1 mm
Screw	792811 792841 7928101	792812 792842 7928102	792813 792843 7928103

IMPLANT SYSTEM Zimmer Tapered Screw-Vent®	Kit a	Kit b	Kit c
Titanium base Range nine screw included	3,5 mm	4,5 mm	5,7 mm
Screw	792911 792941 7929101	792912 792941 7929102	792913 792941 7929103

IMPLANT SYSTEM DENTSPLY Implants® Xive®	Kit a	Kit b	Kit c	Kit d
Titanium base Range ten screw included	3,4 mm	3,8 mm	4,5 mm	5,5 mm
Screw	7921011 7921041 79210101	7921012 7921041 79210102	7921013 7921041 79210103	7921014 7921041 79210104

IMPLANT SYSTEM Altatec® Conelog®	Kit a	Kit b	Kit c
Range twelve screw	3,3 mm	3,8 / 4,3 mm	5 mm
Range twelve screw	7921241 7921201	7921241 7921202	7921242 7921203



Mechanical treatment of the connection part will damage the correct fitting of the products on the implant. For fixation of the products on the implant, the correct torque force, recommended by the implant manufacturer, has to be considered carefully to avoid the damage of the implant-bone connection.

All original implants can be obtained from the respective manufacturers. For certain systems the titanium bases / interfaces should also be ordered directly from the corresponding manufacturer. The Ti bases are provided with screw included. The screws are also available separately. The appropriate screwdrivers are available from the manufacturers of the respective implant systems. **Important:** The screw supplied with the Ti bases must not be damaged under any circumstances. We recommend ordering an extra system screw for completing the working stages described in the following using this screw (working screw).



Titanium bases are supplied including the respective abutment fixation screw. New abutment screws, which have not been used as working screws, should be used for permanent fixation of the respective abutments. The abutment screws should be tightened after approx. 15 minutes using the same torque to achieve the maximum screw pre-tension.

The article number corresponds to the order number.

Materials: Ti base, Ti-Form blank and screw: Ti6Al4V, medical grade 5, ASTM FF136 / Dummy abutment: Polyether ether ketone, PEEK

Torques:

Ncm	Abutment						
20	Range two	Range twelve					
25	Range one	Range four NP					
30	Range nine						
35	Range three	Range four RP	Range five	Range six	Range seven	Range eight	

CONTRAINDICATION

The titanium bases and Ti-Forms blanks of the respective Range can only be used with the corresponding compatible implant system, e.g. Range four only in combination with the implant system Nobel Active®. They cannot be combined with implants of other types or of other implant manufacturers. No abutments of mismatched diameter may be used as this may lead to irritation of the soft tissue around the implants. The Ti-Bases are indicated for single use only. If they are used multiple times, they might damage the implants.

DESIGNING OF THE INDIVIDUAL ABUTMENT ON THE TI BASE

The Ceramill M-Plant CAD software enables the design of customised zirconia abutments on the Ti base. The general rules should be observed.

- _ The design of the emergence profile should be minimally invasive and completed according to biological aspects, taking the soft tissue into account. The gingiva should only be extended wider than that formed by the healing cap after consultation with the attending dentist. The gingiva can be successively extended by using custom-fabricated temporary acrylic abutments (e.g. Ceramill TEMP).
- _ In general the following applies: Place the circumferential shoulder in the labial region slightly subgingivally and follow the gingival contour in the oral region. This allows the cement between the copings and abutment to be easily removed and the junction is not visible from the labial aspect.
- _ The abutment thickness should not be less than 0.5mm (screw hole to outer abutment surface).
- _ The abutments should be rounded occlusally and not tapered to a point. Sharp edges should be avoided.
- _ The Ceramill Ti-connect Ti bases are not to be processed (changed, modified e.g.) within the CAD / CAM-System.

PROCESSING CERAMILL TI-CONNECT

Ceramics abutment: When an individual ceramics abutment is manufactured, its outer form may be adapted to the anatomic situation. The ceramics abutment may be produced manually, e.g. with the copy milling system Ceramill Multi-x (I78500), or digitally with the abutment module Ceramill M-Plant (I79152) for the Ceramill Mind CAD software (I79150). For processing of ceramics abutments use diamond tools in flawless condition under water cooling and low pressure. The minimum wall thickness of 0.5mm must not be undercut. Burs and ridges are to be avoided. Attention: Observe the manufacturer's instructions relating to the material used (e.g. Ceramill ZII)! Before sintering, we recommend cleaning any residual zirconia dust from the inside of the abutment using a brush.
Ti base: Don't modify either the angle nor the wall thickness and height of the abutment to avoid malfunctioning. The subgingival section of the custom abutment must be manually adapted to the available soft tissue to ensure harmonious integration. This working stage should be completed after adhesive bonding of the abutment to the titanium base to facilitate handling.
Veneering: If an abutment is to be veneered directly, this must be done before bonding to the titanium base. The veneering is produced using suitable veneering materials (e.g. Creation Zi-F) in accordance with the relevant manufacturer's instructions.
Bonding: For bonding the abutment to the titanium base, RelyX™ Unicem® (3M Espe) or Panavia® F2.0 (Kuraray) or another comparable bonding material, also in combination with the proper metal primer, is recommended. The manufacturer's instructions are to be observed. For protection, the connective geometry of the titanium base is wetted with an insulant and fixed upon the lab analogue using the abutment screw. The bonding surface of the base and the completed abutment are blasted with Al2O3 blasting agent 50µm and a pressure of no more than 2 bar, then cleaned thoroughly (free of oil and dust). The screw head is covered with wax or the like. The blend-ed bonding agent is applied to the bonding surface of the titanium base. The abutment is pushed over the titanium base until resistance is felt. By rotation, the definitive position is sought. The abutment must fit tightly with the basal portion of the titanium base. Major carry-overs of bonding agent are to be removed immediately.
Polishing: After the curing of the bonding agent, the excess is carefully removed with suitable rotating instruments. Excess bonding agent in the screw channel must likewise be removed carefully.

PROCESSING TI-FORMS

The Ceramill Ti-Forms blanks are secured in the holder via the front of the blank. The rotational security operates using a separate connection geometry on the machine, which ensures correct placement of the Ti-Form blank, regardless of the implant system used.

The Ti-Form blank should be processed under continuous cooling using a tungsten carbide cutter with a suitable diameter and blades. It is absolutely essential to follow the instructions of the respective manufacturer to attain optimal surface results during processing. Thereby, neither the angle to the vertical axis nor the thickness of the wall (min. 0.4mm) nor the height (min. 3mm) of Ceramill Ti-Form abutments should be changed in a way, which can lead to defects and consequently exclude use. The rotation-indexed functional surfaces, which interlock the abutment with the implant, are generally excluded from processing.

It should always be ensured that a holder is used for fixation, which is suitable for the intended purpose. If a dental CAD/CAM system and scan data from a patient working document are used for prosthetic fabrication, the CAD/CAM system should be coordinated with the Ceramill Ti-Form blank. The fabrication of prosthetic products and the use of dental CAD/CAM systems may only be undertaken by qualified personnel such as dental technicians.

ATTENTION

Safety advice: Metal dust and zirconia dust are harmful. During finalization and blasting, use a fine particulate air filter as usual in the practice and wear protective goggles and a mask.

INSTRUCTIONS FOR USE

Translation of the original instructions for use

DUMMY ABUTMENT (SCANBODY) - INDICATION

For detection of the precise implant position during scanning, use the dummy abutment. This must be selected compatible with the original implant system and implant diameter according to the titanium base Range and Ti-Form Range to be used, e.g. Range four titanium base Article No. 792412, scanbody Article No. 792422. The position of the slanted area of the dummy abutment subsequently conforms to the position of the rotating protection at the titanium base and should be placed so that during scanning there is no shadowing by neighbouring teeth. Generally it is recommendable to work with a detachable gingiva mask to guarantee proper relative positioning of the lab implant and the dummy abutment. Upon proper positioning, no chink remains and no rotation is possible. The dummy abutment is fixed using the integrated screw. **Caution:** The screw must not be tightened using the prescribed torque. It is sufficient to tighten the screw lightly, as it only has to be fixed in position. Please check that the dummy abutment fits onto the lab implant without gaps or rocking. If this is not the case, use a new dummy abutment. A dummy abutment can be used up to 10 times, provided the correct procedure is used.

ACCESSORIES: SCANBODY AND LABORATORY IMPLANTS

compatible with titanium bases / Ti-Forms of Range one, two, three, four, five, six, seven, eight, nine, ten, twelve

Range one	Kit a	Kit b
Scanbody	792121	792122
Lab implant	792131	792132

Range two	Kit a	Kit b	Kit c
Scanbody	792221	792222	792222
Lab implant	792231	792232	792233

Range three	Kit a	Kit b
Scanbody	792321	792322
Lab implant	792331	792332

Range four	Kit a	Kit b
Scanbody	792421	792422
Lab implant	792431	792432

Range five	Kit a	Kit b	Kit c
Scanbody	792521	792522	792523
Lab implant	792531	792532	792533

Range six	Kit a	Kit b	Kit c	Kit d
Scanbody	792621	792622	792623	792624
Lab implant	792631	792632	792633	792634

Range seven	Kit a	Kit b	Kit c
Scanbody	792721	792722	792722
Lab implant	792731	792732	792733

Range eight	Kit a	Kit b	Kit c
Scanbody	792821	792822	792823
Lab implant	792831	792832	792833

Range nine	Kit a	Kit b	Kit c
Scanbody	792921	792922	792923
Lab implant	792931	792932	792933

Range ten	Kit a	Kit b	Kit c	Kit d
Scanbody	7921021	7921022	7921023	7921023
Lab implant	7921031	7921032	7921033	7921034

Range twelve	Kit a	Kit b	Kit c
Scanbody	7921221	7921222	7921223
Lab implant	7921231	7921232	7921233

SIDE EFFECTS / INTERFERENCES

In very rare, individual cases, allergies or sensitivities associated with the alloy cannot be excluded. Use of different alloys in the same oral cavity may lead to galvanic reactions upon occlusal or approximal contact.

CLEANING, DESINFECTION AND STERILIZATION

The products of Range one, two, three, four, five, six, seven, eight, nine, ten and twelve listed in these instructions for use are supplied non-sterile in suitable packaging. Before use and after they have been delivered from the dental laboratory, the abutments and abutment screws must be cleaned, disinfected and, in special clinical procedures, sterilised (no guarantee will be accepted if ignored). Thorough cleaning and disinfection is an indispensable requirement for effective sterilisation of medical products. Medical products and screws should be kept clean during handling in the laboratory or surgery room. In addition to the hygiene guidelines, statutory regulations should be observed, which apply locally. This relates in particular to the different guidelines regarding the inactivation of prions.

1. Pre-disinfection (avoidance of cross contamination)

The products should be placed in a germicide solution* immediately after use. All residues should be removed and removable parts disassembled.

2. Cleaning

Only demineralised water and neutral cleaning agents* should be used. The screw channel must be cleaned and rinsed using demineralised water at the beginning and end of exposure time with the aid of a disposable syringe (min. 10ml). The products must be cleaned using a plastic cleaning brush and then rinsed with demineralised water. All products should be checked after cleaning to exclude damage or corrosion. Damaged products must be replaced.

3. Rinsing and drying

After the products have been removed from the germicide solution, all components must be rinsed three times with demineralised water. All components should be thoroughly cleaned using a lint-free disposable cloth. It is essential to use oil-free compressed air for cleaning the screw channel. All parts should then be checked for damage and corrosion.

4. Disinfection

We recommend a high-grade disinfectant for disinfection of the products (the RKI hygiene regulations should be consulted in this case and approved agents for surface disinfection should be used).

- _ Place the products in the disinfectant solution for the prescribed time (adhere to the disinfectant manufacturer's instructions).
- _ Remove the products from the solution.
- _ Rinse the components with prepared water a minimum of three times.
- _ Dry the products immediately using a dry-air drier and pack them.

5. Sterilisation

If no sterilisation equipment is available in the laboratory, this information should be passed on to the dentist to ensure adequate sterilisation. Only validated sterilisation methods should be used for sterilisation of the medical products. Other sterilisation methods are not permitted. Reusability: The medical products may only be sterilised once. In case of inadvertent contamination re-sterilisation can be carried out once following cleaning and disinfection.

6. Steam sterilisation

Fractionated vacuum method or gravitation method (with adequate drying of the product)
Steam steriliser according to ISO 17665:2006 or EN 13060 and EN 285 or respective country-specific regulations validated according to EN ISO 1 ANSI AAMI 17665 (previously: EN 554 1 ANSI AAMI ISO 11134) (valid IQ 1 00) (acceptance test and product-specific performance qualification) sterilisation time mind. 15 minutes at 121°C (250°F) - listed reaction time at sterilisation temperature.

7. Storage

The sterilised components should be stored dry and dust-free at room temperature (18°-25° C/64-77° F).

* The manufacturer's guidelines for disinfection and cleaning agents should be followed with particular attention to the concentration, reaction time and temperature. Only pH-neutral disinfectant solution without chlorine, ammonia, aldehyde and with proven effectiveness against HBV, HCV and HIV may be used. The products must meet the respective national guidelines for disinfectant agents. Use of disinfectant agents containing aldehyde can result in possible fixation of proteins. Only freshly prepared solutions should be used.



Application only by qualified personnel!

GUARANTEE

10 years on the mechanical stability of the abutments, provided they are processed properly while heading our instructions for use. Independently, any information communicated orally, in writing or in practical courses is based on trials and experience and can therefore be considered as standard values only. Our products are subject to continuously ongoing development. In this context we reserve the right to modify our products with regard to structure and composition.

Exclusion of warranty: Recommendations relating to use, whether communicated orally, in writing or in the course of practical instructions, are to be considered as guidelines. Our products are subject to continuously ongoing development. Therefore we reserve the right to changes in handling and composition.



Not for reuse



Batch description



Order number



Manufacturer



Adhere to the instructions for use



Non-sterile



Usable up to



CE mark and identification of the notified body



