**PROSTHETIC FIXTURES FOR DENTAL IMPLANTS**

**English**: Instructions for use

**READ CAREFULLY**

**Warning**: Products for DESS® implant prosthetics should only be used by dental specialists with experience in maxillary implantology and other specialties, such as dental diagnosis, planning, dental surgery or prosthetic techniques. The complete product range is designed to facilitate prosthetics work, both in the clinic and in the laboratory, providing the best quality possible. If in doubt regarding the product's use, please contact the manufacturer.

DESS products are designed by accredited professionals and some are for single-use only and should never be reused again.

**Allergies**: The titanium and gold alloy used are biocompatible; however, some patients may present allergies to it or one of its components.

**Castable abutments.**

- Manufactured in Polyoxymethylene (POM).
- For greater connection precision, we recommend using metal abutments which have been previously mechanised. However, if you decide to use the casting method, bear in mind the following precautions:
  - Use a flash of wax that will create sufficient gap around the abutment to compensate for the greater dilatation coefficient between the castable material and its surroundings.
  - Gentle torque to prevent deformation.
  - Perform castings of a size and form that favour filling of the cavities and prevents the appearance of air bubbles.
  - Use materials with high fluidity for castings in conflictive models.

**Analogs (Replicas).**

- Manufactured in surgical stainless steel AISI-303. For use as a conventional analog, you must ensure that its anti-rotation and anti-removal parts are securely affixed. Check that the analog and the prosthetic element connections match in size and type before tightening. Reuse is not recommended.

**Healing abutment, (Gingival former).**

- Manufactured in titanium. Gentle manual torque is recommended. The height of this element is that to ensure its correct function and to prevent the transmission of chewing forces. Reuse is not recommended.

**Clinical abutments.**

- Check compatibility with the implant model to which it will be connected. Avoid damaging its connection area with the implant when cutting or mechanising. We recommend you perform a radiography once tightened, from the height of the junction with the implant and the perpendicular axle to this connection, in order to check correct coupling.

**MultiUnit and Uniaabutment abutments.**

- A premanufactured dental implant abutment directly connected to the dental implant intended for use as an aid in prosthetic rehabilitation for multiple screw-retained or fixed-removable prostheses.

**Straight**

- Place appropriate abutment. Use plastic holder to facilitate the insertion, it is recommended to verify the final abutment seating using radiographic imaging.
- Tighten the abutment to 30Ncm using screwdriver MultiUnit and manual torque wrench.

**Angled**

- Place appropriate abutment. Use holder to facilitate the proper position, as there are several positions available. It is recommended to verify the final abutment seating using radiographic imaging.
- Unscrew holder and tighten the abutment to 15Ncm using the right DESS screwdriver and manual torque wrench.
Impression copings. (Copings)- They are supplied to be used in closed or open tray, with or without specific screws. Before being used, ensure that the connection seat for the implant is clean. Any traces of dirt could affect subsequent alignment of the prosthesis.

Check compatibility with the implant model to which it will be connected.

Interfaces.- Their main use is to support bridge or single Zirconium elements cemented together. It can also be used as a narrow abutment.

We recommend that it be thoroughly cleaned before being used in the laboratory, and before fitting, especially in the connection area with the implant. Check compatibility with the implant model to which it will be connected.

Gold UCLA.- The gold-plastic abutment is an implant abutment that consists of a cast-on gold alloy and a fully burn-out plastic sleeve. The laboratory processing of the gold-plastic abutment utilizes the cast-on technique. During casting, the gold portion is suffused on the proposed contact areas by melting of the cast-on alloy. Metallic joint is obtained through diffusion.

Processing

The abutment must be carefully hand-tightened into the lab analog with a lab screw. The lab screw is designed exclusively for laboratory processing of the abutment. The existing abutment screw should be used only for the final integration of the restoration after being sterilized.

Before placing casting sprues the metal base should be cleaned with a cotton swab and alcohol. Casting sprues should be placed possibly in the long axis of the crown to avoid the bubble concentration inside the construction. The investment should freely pass through the screw channel. The elements need to be placed away from casting ring heating center.

While setting the sprue, ensure correct positioning of the wax-up casting object in the casting ring. The metal tube of the abutment should not be placed too close to the wall or floor of the ring to prevent heat removal (cooling vents). Too rapid cooling of the metal tube can lead to defective casts. The use of speed investment is not recommended. The investment expansion should be adjusted to zero expansion. Make sure that the investment is free of air bubbles. Observe the instructions of the investment material manufacturer.

Since the abutment can be exposed to very high loading in the patient’s mouth, only high-strength, precious metal alloys should be used (casting, universal, or metal ceramic alloys). To ensure full casting, the final temperature during preheating of the casting muffle must be at least 750 °C for casting and universal alloys and at least 900 °C for metal ceramic alloys. The final temperature should be held between 30 and 60 minutes according to the size of the casting ring. The casting temperature of high precious metal alloys must be at least 150 °C below the solidus temperature of the gold-plastic abutment (1400 °C). This prevents melting of the gold-plastic abutment. Observe the instructions of the alloy manufacturer.

To prevent stresses in the cast structure resulting from too rapid cooling, cool the casting muffle at room temperature. It is better to deflask the casting mould using an acid bath in ultra sound cleaner. Sandblasting can damage the settlement. During neck polishing the connection surface needs to be covered with analog. It prevents any damage of the settlement part.

If working with cemented restorations, you should develop crown and bridge frameworks on the abutments in the same way as for periodontic restorations.

Cobalt-Chrome base: The Co-Cr abutment is an implant abutment that consists of a cast-on Co-Cr alloy base and a fully burn-out plastic sleeve. The laboratory processing of the Co-Cr base abutment utilizes the cast-on technique. During casting, the Co-Cr portion is suffused on the proposed contact areas by melting of the cast-on alloy.

The mechanical retention joint is obtained thanks to the retention of the grooves of the Co-Cr base and the burnished metal.

Processing

The abutment must be carefully hand-tightened into the lab analog with a lab screw. The lab screw is designed exclusively for laboratory processing of the abutment. The existing abutment screw should be used only for the final integration of the restoration after being sterilized.

Create a collar of at least 0.3 mm thickness above the metal indexing feature of the UCLA. It prevent cracks in ceramic layer. Before placing casting sprues the metal base should be cleaned.
with a cotton swab and alcohol. Casting sprues should be placed possibly in the long axis of the crown to avoid the bubble concentration inside the construction. The investment should freely pass through the screw channel. While setting the sprue, ensure correct positioning of the wax-up casting object in the casting ring. The metal tube of the abutment should not be placed too close to the wall or floor of the ring to prevent heat removal (cooling vents). The use of speed investment is not recommended. The investment expansion should be adjusted to zero expansion. Make sure that the investment is free of air bubbles. Heat parameters need to be tuned as for conventional CoCr casting to avoid any imperfections in the construction. Too rapid cooling of the metal tube can lead to defective casts. Observe the instructions of the investment material manufacturer.

To ensure full casting, the final temperature during preheating of the casting muffle must be at least 900 °C. The final temperature should be held for between 30 and 60 minutes according to the size of the casting ring. To prevent stresses in the cast structure resulting from too rapid cooling, cool the casting muffle at room temperature. It is better to deflash the casting mould using an acid bath in ultra sound cleaner. Sandblasting can damage the settlement. During neck polishing the connection surface needs to be covered with analog. It prevents any damage of the settlement part.

If working with cemented restorations, you should develop crown and bridge frameworks on the abutments in the same way as for periodontic restorations.

**Screws.**
Manufactured in titanium. Designed to affix any prosthetic element to the implant. For best results, the following conditions must meticulously met:

- Use the suitable model key and size for tightening and unscrewing. If in doubt, check that the next size key does not fit into the seat. The driver should be placed in the longitudinal axe of the prosthesis/implant assembly.
- Do not use screws from the prosthetic laboratory in clinical use. Make sure the right model is used for each case.

The minimum number of turns to ensure correct connection is five or six. If less, a longer screw should be used (consult the manufacturer).

The torque recommended for permanent prostheses, if not indicated otherwise on the product label, is for information purposes:

- For thread (M.2,5-30cN/m; M.2-30cN/m; M.1,8-20cN/m; M.1,6-20cN/m; UNF.1-72, 20cN/m).
- The patient should be positioned so that, if the screw falls during screwing/unscrewing, it falls on an area where it can be recovered. Check compatibility with the implant model to which it will be connected.

**Drivers.**
For clinical use, all drivers must be thoroughly sterilised before use. Where using removable heads, make sure that it cannot come loose from the driver. The driver should always be fastened with a safety pin and cord attacked the groove designed for this purpose. It should be handled with care, taking the necessary precautions not to hurt the patient. Before using the driver, check that it is the correct size and shape for the screw head that will be used. Only use drivers that are in perfect conditions. A worn driver can make subsequent removal of the prosthesis impossible, so they should be regularly replaced.

**Sterilisation.**
All products are supplied as NON STERILE. For sterilisation, we recommend autoclaving the product at 134ºC for 5 minutes, or 30 minutes at 121ºC (see standard UNE-EN ISO 17665-1:2007). The photographs of the products are merely for information purposes only. The type, reference and connection of each element should be checked.

**Explanation of the symbols that appear on the labels.**
**For single use only**

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<td>0051</td>
<td>Medical product compliance marking controlled by the notified body number 0051 (class IIa)</td>
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**Manufacturer information**

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**Instructions for use DI-MUL-03-DSS**