

PROSTHETIC PROCEDURE

GALAXY

Conical connection implants



GALAXY

Prosthetic procedure manual

About this manual

This manual is intended to provide users of Ziacom® products with an instruction guide for the use of their products. It is not intended to describe methods or procedures for diagnosis, treatment planning or implant placement, nor to substitute or replace regulated training or professional judgement on the needs of individual patients.

The procedures described and illustrated in this manual show an ideal clinical situation for implant rehabilitation and are limited to an example of procedures with a specific platform (Regular Platform RP). This manual is not intended to cover the wide range of clinical conditions that may occur during implant treatment. The experience and judgement of the professional will prevail over the recommendations made in this or any other Ziacom® manual.

This manual describes the use of conical connection abutment in prosthetic procedures. Consult availability of abutment by platform for each type of conical connection implant.

In this manual of prosthodontic procedures, the processes are separated into two distinct types:

- 1. Clinical:** corresponds to the procedures performed in the oral cavity by the clinician. These are all those clinical procedures that precede the prosthesis preparation in the laboratory or the required intermediate tests.
- 2. Laboratory:** corresponds to the procedures performed by the prosthetist in the laboratory for the prosthesis preparation. The aim of these processes is to obtain a final product for the masticatory function rehabilitation.

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Please read carefully before using Ziacom® products

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Abutments

Prosthetic abutments classification

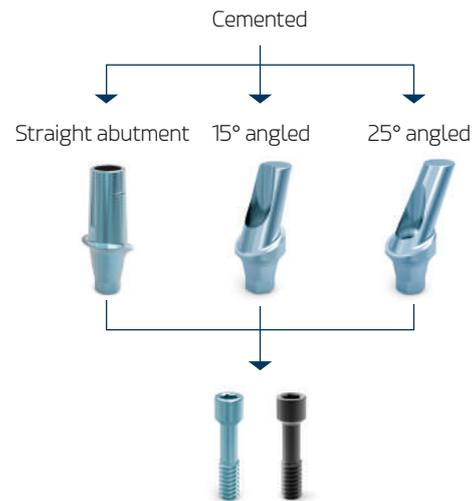
PROVISIONAL RESTORATION

- Direct to implant



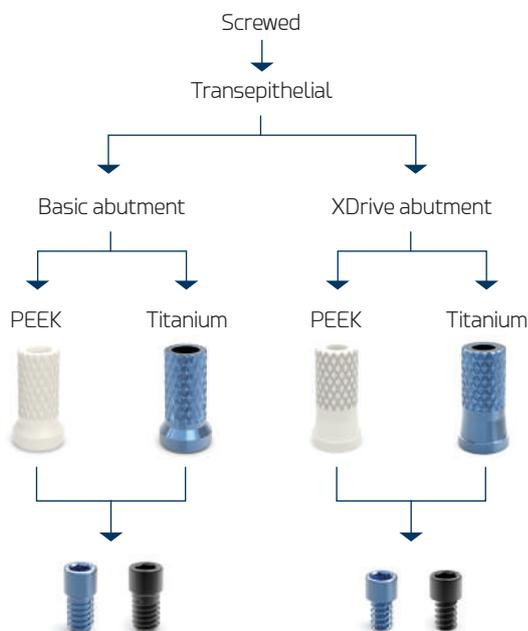
DEFINITIVE RESTORATION

- Cemented



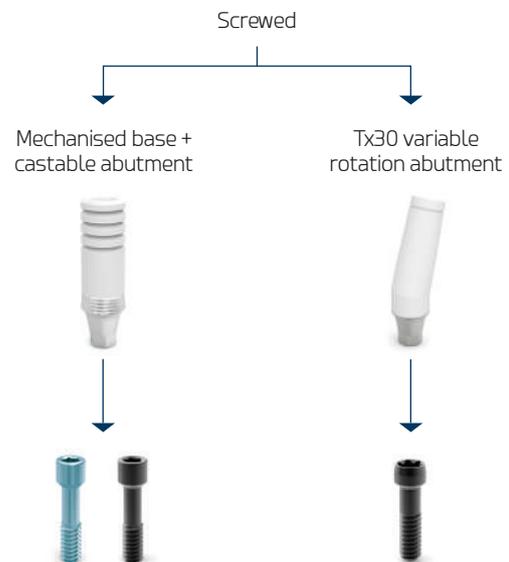
PROVISIONAL RESTORATION

- Screwed to transepithelial



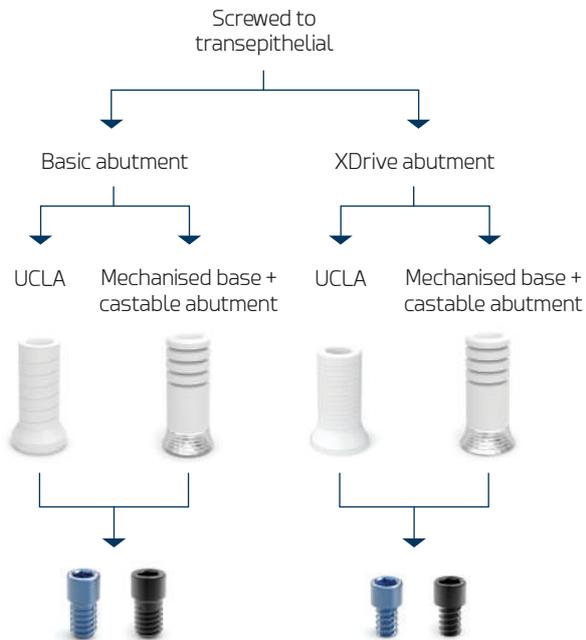
DEFINITIVE RESTORATION

- Screwed direct to implant



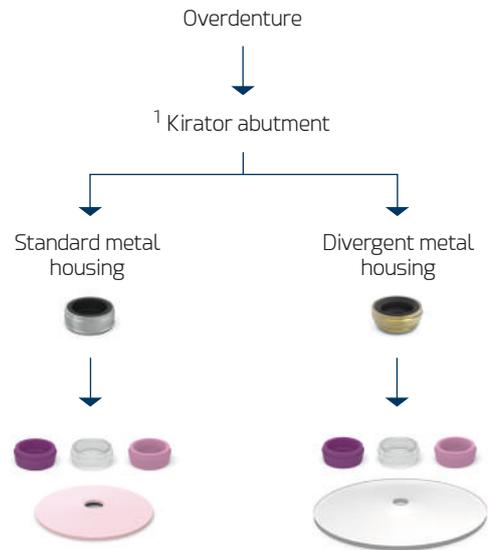
DEFINITIVE RESTORATION

- Screwed to transepithelial



DEFINITIVE RESTORATION

- Overdenture



DEMONSTRATIVE SEQUENCE

- ¹ Kirator abutment



IMPORTANT
Consult availability of abutment by platform for each type of conical connection implant.

Abutments: impression

Open tray direct to implant using impression abutment

■ Purpose

An impression is a negative representation or imprint of the oral cavity. Taking an open-tray impression involves transferring the position of implants from the oral cavity to the working model. This process uses the direct pick-up impression abutment technique. The abutment is locked inside the impression material once cured and a personalised tray is used for this purpose. This impression is then cast in plaster to obtain the positive reproduction or working model. This abutment can be used to make single-tooth or multiple-tooth impressions.

The professional can select the impression abutment that best matches the patient's oral cavity in each individual case. For this purpose there are two different abutments, the short abutment measuring 8.50 mm or the long abutment measuring 13.00 mm.



Impression abutment

INTRODUCTION | Required materials

1. Long impression screw (Ref. TCG4600)
2. Short impression screw (Ref. TCG4601)
3. Impression screw - Quickly screw (Ref. LTSS4001G)
4. Surgical screwdriver (Ref. LMSD)
5. Analogue (Ref. IAG3400)

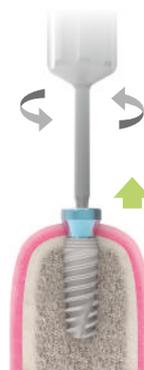


Procedure: The following illustrations are an example of a single open tray impression with long impression abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment

Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the implant connection.



STEP 2 - Clinical | Place the impression abutment

Insert the impression abutment into the implant, checking for proper fit in the connection, and place the impression screw either manually or using a surgical screwdriver by turning clock-wise. Apply manual torque (see torque table on page 46). Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



STEP 3 - Clinical | Impression

Select the customisable impression tray. Customise the tray by drilling a hole in the area corresponding to the implant and select a screw that protrudes from the tray. Place the elastomeric impression material around the impression abutment and then fill the tray. Take the impression according to the manufacturer's recommendations. Remove excess material from the screw heads.



STEP 4 - Clinical | Remove the tray



Manually unscrew the impression screw using the surgical screwdriver and remove the impression tray. Check that the impression quality is optimal for sending to the laboratory. The impression abutment must be retained in the impression material. Send the impression, impression screw, analogue and laboratory order to the laboratory.



STEP 5 - Clinical | Place the healing abutment



Relocate the healing abutment immediately in the implant to prevent soft tissue collapse.



STEP 6 - Laboratory | Analogue positioning



Position the implant analogue on the impression abutment, checking the correct fit on the hexagon, and secure it manually using the impression screw. Check that both components are seated correctly.

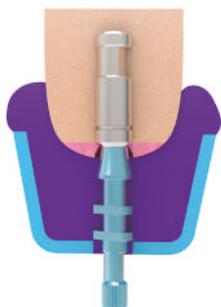


STEP 7 - Laboratory | Soft tissue representation on the working model



Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.

STEP 8 - Laboratory | Impression pouring



Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression according to the manufacturer's recommendations.

STEP 9 - Laboratory | Working model



After the plaster has set, remove the impression screw and tray. Relate the working model to the opposing model using the bite registration.

Abutments: impression

Closed tray with Z2Plus impression abutment

Purpose

The impression is considered the negative representation of the oral cavity. Closed tray impression consists in transferring the implant position from the oral cavity to the working model. This process is carried out using the pick-up impression technique, the transfer is retained inside the impression material after polymerisation and a conventional tray is used. Finally, this impression is cast to obtain the positive model or working model. This abutment may be used for single or multiple impression.

Z2Plus closed tray impression

The clinician will select this technique in cases of single restorations with a non-rotating impression abutment.



Z2Plus

INTRODUCTION | Required materials

1. Z2Plus Abutment (Ref. Z2RPG10)
2. Laboratory screw (Ref. LBG4000)
3. Snap-On impression transfer for Z2Plus (Ref. ZPU3400)
4. Analogue (Ref. IAG3400)
5. Surgical screwdriver (Ref. LMSD)



Procedure: the following illustrations are an example of a single closed tray impression with Z2Plus abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the implant connection.



STEP 2 - Clinical | Place the Z2Plus into the implant



Identify anti-rotational plane of the Z2Plus abutment and orient it to buccal side. Insert the abutment into the implant, checking for proper fit at the connection. Attach both using laboratory screw by tightening using surgical screwdriver, rotating clockwise and applying manual torque (see torque table on page 46). Check the proper fit of the impression abutment on the implant by performing a periapical radiography.

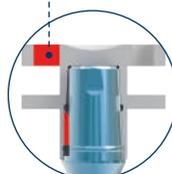


STEP 3 - Clinical | Place the Snap-On impression transfer

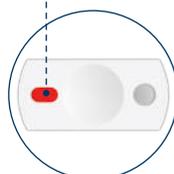


Identify the oval-shaped hole in the upper flap of the transfer, this coincides with the internal plane of the transfer. Orient the oval towards the buccal side and insert it over the Z2Plus abutment and press until perceiving the final seating with a "click".

Side view of the Snap-On transfer, align to the abutment plane



Marking of the anti-rotational plane of the abutment



STEP 4 - Clinical | Impression



Select the tray for the impression. Place the elastomeric impression material around the impression abutment and then fill the tray. Take the impression according to the manufacturer's recommendations.

STEP 5 - Clinical | Remove the tray



Remove the impression tray, the transfer must be retained in the impression material. Remove laboratory screw and abutment. Check that the impression quality is optimal. Send the impression, Z2Plus abutment, laboratory screw, analogue and laboratory order to the laboratory.



STEP 6 - Clinical | Place the healing abutment



Relocate the healing abutment immediately in the implant to prevent soft tissue collapse.



STEP 7 - Laboratory | Analogue positioning



Position the Z2Plus abutment over the analogue, checking that the connection is correctly adjusted, and place the laboratory screw manually using a surgical screwdriver. Insert the abutment-analogue assembly into the impression transfer retained in the impression material, orienting the anti-rotational plane towards the buccal side. Check that both components are seated correctly.

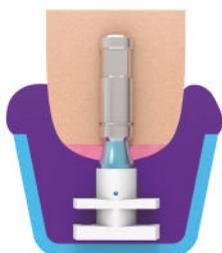


STEP 8 - Laboratory | Soft tissue representation on the working model



Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.

STEP 9 - Laboratory | Impression pouring



Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression according to the manufacturer's recommendations.

STEP 10 - Laboratory | Working model



After the plaster has set, remove laboratory screw, Z2Plus abutment and tray. Relate the working model to the opposing model using the bite registration.

Abutments: impression

Closed tray using Pick-Up

Purpose

The impression is considered the negative representation of the oral cavity. Closed tray impression consists in transferring the implant position from the oral cavity to the working model. This process is carried out using the pick-up impression technique, the transfer is retained inside the impression material after polymerisation and a conventional tray is used. Finally, this impression is cast to obtain the positive model or working model.

The clinician will select this technique in cases of multiple restorations as it is a rotating abutment.



Pick-Up

INTRODUCTION | Required materials

1. Pick-Up impression abutment (Ref. PUG3400)
2. Pick-Up impression transfer (Ref. CPU3410)
3. Analogue (Ref. IAG3400)
4. Surgical screwdriver (Ref. LMSD)



Procedure: the following illustrations are an example of a multiple closed tray impression on Pick-Up abutments on RP platform with Pick-Up transfer.

STEP 1 - Clinical | Remove the healing abutment



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the implant connection.



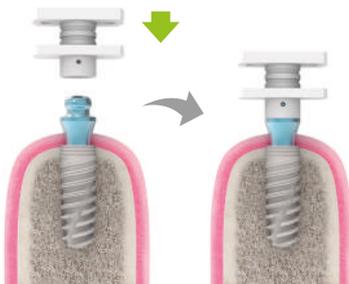
STEP 2 - Clinical | Place Pick-Up impression abutment into the implant



Screw the abutment onto the implant using a surgical screwdriver, applying manual torque. Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



STEP 3 - Clinical | Place the Pick-Up impression transfer



Position the impression transfer over the abutment and press until perceiving the final seating with a "click".

STEP 4 - Clinical | Pick-Up impression transfer splinting



Splint the impression abutments using the technique of your choice and following the manufacturer's instructions for the material selected for splinting.

STEP 5 - Clinical | Impression

Select the tray for the impression. Place the elastomeric impression material around the impression transfer and then fill the tray. Take the impression according to the manufacturer's recommendations.



STEP 6 - Clinical | Remove the tray

Remove the impression tray, the transfer must be retained in the impression material. Remove the abutment. Check that the impression quality is optimal. Send the impression, impression abutment, analogue and laboratory order to the laboratory.



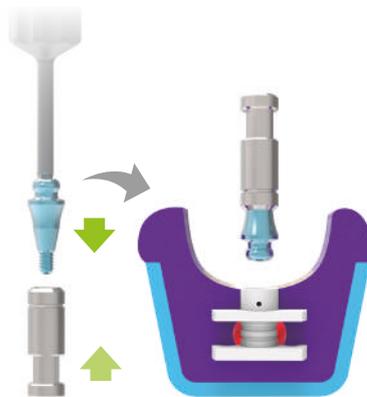
STEP 7 - Clinical | Place the healing abutment

Relocate the healing abutment immediately in the implant to prevent soft tissue collapse.



STEP 8 - Laboratory | Analogue positioning

Position the abutment over the analogue and check that the connection is correctly adjusted. Insert the abutment-analogue assembly into the impression transfer retained in the impression material. Check that both components are seated correctly.



STEP 9 - Laboratory | Soft tissue representation on the working model

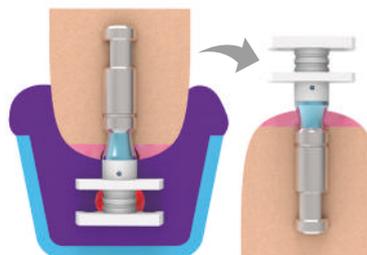
Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.



STEP 10 - Laboratory | Impression pouring and working model

Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression according to the manufacturer's recommendations.

After the plaster has set, remove the impression tray. Relate the working model to the opposing model using the bite registration.



Abutments: impression

Closed tray using Kirator abutment

Purpose

The impression is considered the negative representation of the oral cavity. Closed tray impression consists in transferring the implant position from the oral cavity to the working model. This process is carried out using the pick-up impression technique, the transfer is retained inside the impression material after polymerisation and a conventional tray is used. Finally, this impression is cast to obtain the positive model or working model.

The professional will select this technique if the metal housing is going to be incorporated in the laboratory.



Kirator

INTRODUCTION | Required materials

1. Kirator abutment (Ref. LOG4020)
2. Kirator impression transfer (Ref. TCRK3400)
3. Kirator analogue (Ref. IATORK01)
4. Surgical screwdriver (Ref. LMSD)
5. Kirator insertion key ratchet/manual (Ref. LOSD01)
6. Kirator insertion key CA (Ref. LOSD02)
7. Retainer inserter handle + Extractor (Ref. MBEI3610)
8. Retainer inserter (Ref. MBEI3602)
9. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a closed tray impression with Kirator abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the implant connection.



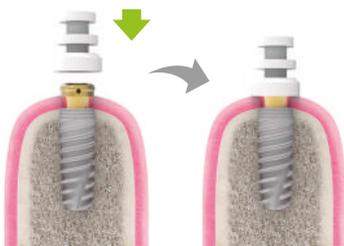
STEP 2 - Clinical | Insert Kirator abutment



Select the abutment considering the gingival height and the implant platform. Screw the abutments to the implants manually using Kirator insertion key. Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



STEP 3 - Clinical | Place Kirator impression transfer



Position the impression transfer on Kirator abutment and press until perceiving the final seating with a "click". Visually check that both components are seated correctly.

STEP 4 - Clinical | Kirator impression transfers splinting



Splint the impression abutments using the technique of your choice and following the manufacturer's instructions for the material selected for splinting.

STEP 5 - Clinical | Take the impression

Select the tray for the impression. Place the elastomeric impression material around the impression abutment and then fill the tray. Take the impression according to the manufacturer's recommendations.



STEP 6 - Clinical | Remove the tray

Remove the impression tray, the transfer must be retained in the impression material. Remove the abutment. Check that the impression quality is optimal. Send the impression, processing pack, analogue and laboratory order to the laboratory.



STEP 7 - Clinical | Place the healing abutment

Remove the Kirator abutment and place the healing abutment while waiting for the prosthesis to be fabricated in the laboratory.



STEP 8 - Laboratory | Analogue positioning

Insert the Kirator analogue into the impression transfer retained in the impression material by applying pressure. Visually check that both components are seated correctly.



STEP 9 - Laboratory | Soft tissue representation on the working model

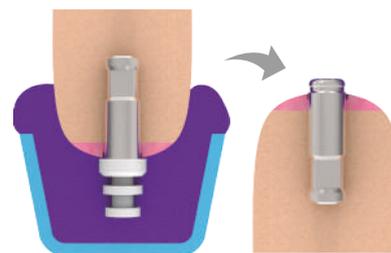
Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.



STEP 10 - Laboratory | Working model

Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression following the manufacturer's recommendations.

After the plaster has set, remove the impression tray. Relate the working model to the opposing model using the bite registration.



Abutments: impression

Open tray to Basic transepithelial

Purpose

Basic transepithelial abutments are indicated for single or multiple restorations, depending on the chosen abutment NO ROT or ROT, respectively. They allow implants rehabilitation with up to 36° of disparallelism. The impression technique is applied on either of the two types of abutments, rotating or non-rotating connection, and is independent of the abutment gingival height chosen by the clinician for the treatment.



Basic

INTRODUCTION | Required materials

1. Basic abutment (Ref. BASICG425N) NO ROT
2. Basic impression abutment + impression screw (Ref. BATNEX34) NO ROT
3. Healing abutment (Ref. BAHAX34)
4. Analogue (Ref. BAIANEX34)
5. Surgical screwdriver (Ref. LMSD)

Procedure: The following illustrations are an example of an open tray impression on Basic abutment on RP platform for single restoration.



STEP 1 - Clinical | Remove Basic healing abutments

Remove Basic healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the implant connection.



STEP 2 - Clinical | Place the impression abutments

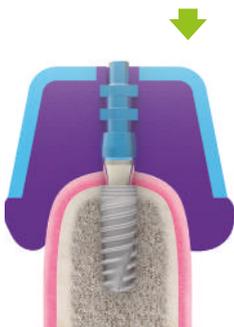
Insert the impression abutments onto the Basic abutment and place the impression screw using a surgical screwdriver, turning clockwise. Apply manual torque. Check the correct fit of the impression abutments on the Basic abutments by performing periapical radiographies.

Caution: In the case of multiple rehabilitation, splint the impression abutments using the technique of your choice and following the manufacturer's instructions for the material selected for splinting.



STEP 3 - Clinical | Impression

Select the customisable impression tray. Customise the tray by drilling a hole in the area corresponding to the implant and check that the screw protrudes from the tray. Place the elastomeric impression material around the impression abutment and then fill the tray. Take the impression according to the manufacturer's recommendations. Remove excess material from the screw heads.



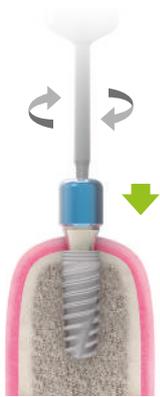
STEP 4 - Clinical | Remove the tray

Manually unscrew the impression screw using the surgical screwdriver and remove the impression tray. Check that the impression quality is optimal for sending to the laboratory. The impression abutments must be retained in the impression material. Send the impression, impression screws, analogues and order laboratory to the laboratory.



STEP 5 - Clinical | Place Basic healing abutments

Relocate Basic healing abutment immediately onto the implant to prevent soft tissue collapse.



STEP 6 - Laboratory | Basic analogues positioning

Position Basic analogue in the impression abutment, checking the correct fit, and secure it manually with the impression screw using a surgical screwdriver. Check that both components are seated correctly.



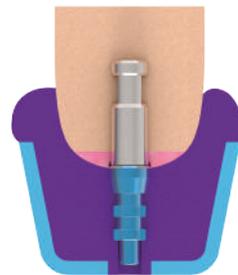
STEP 7 - Laboratory | Soft tissue representation on the working model

Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.



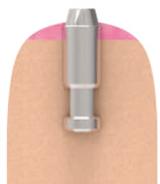
STEP 8 - Laboratory | Impression pouring

Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression following the manufacturer's recommendations.



STEP 9 - Laboratory | Working model

After the plaster has set, remove impression screws and impression tray. Relate the working model to the opposing model using the bite registration.



Abutments: impression

Open tray to XDrive transepithelial

■ Purpose

The impression is considered the negative representation of the oral cavity. Open tray impression consists in transferring the implant position from the oral cavity to the working model. This process is carried out using the pick-up impression technique, the abutment is retained within the impression material after polymerisation; a customised tray is used for this purpose. Finally, this impression is cast to obtain the positive model or working model.

Open tray impression for XDrive transepithelial

XDrive transepithelial abutments are indicated for multiple restorations. They allow the rehabilitation of angled implants. The impression technique can be applied to both straight and angled abutments and is independent of the abutment gingival height chosen by the clinician for the treatment.



XDrive

INTRODUCTION | Required materials

1. XDrive straight abutment (Ref. XST10G25)
2. XDrive angled abutment 17° (Ref. XA210G17)
3. XDrive angled abutment 30° (Ref. XA310G30)
4. XDrive impression abutment + impression screw (Ref. XT103400)
5. Healing abutment (Ref. XH103400)
6. Analogue (Ref. XIA103400)
7. Surgical screwdriver (Ref. LMSD)



Procedure: The following illustrations are an example of an open tray impression on XDrive abutments on RP platform for multiple rehabilitation.

STEP 1 - Clinical | Remove XDrive healing abutments

Remove XDrive healing abutment from the implants manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the abutment connection.



STEP 2 - Clinical | Place the impression abutments

Insert the impression abutments onto the XDrive abutments and place the impression screw using a surgical screwdriver, turning clockwise. Check the correct fit of the impression abutment on the XDrive abutments by performing a periapical radiography.



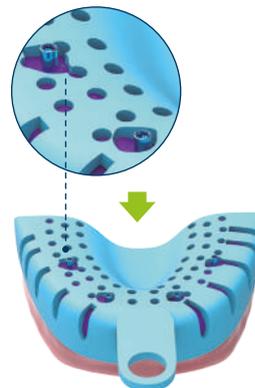
STEP 3 - Clinical | Abutments splinting

Splint the impression abutments using the technique of your choice and following the manufacturer's instructions for the material selected for splinting.



STEP 4 - Clinical | Impression

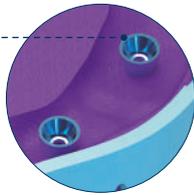
Select the customisable impression tray. Customise the tray by drilling a hole in the area corresponding to the implant and check that the screw protrudes from the tray. Place the elastomeric impression material around the impression abutments and then fill the tray. Take the impression according to the manufacturer's recommendations. Remove excess material from the screw heads.



STEP 5 - Clinical | Remove the tray



Manually unscrew the impression screws using the surgical screwdriver and remove the impression tray. Check that the impression quality is optimal for sending to the laboratory. The impression abutments must be retained in the impression material. Send the impression, impression screws, analogues and laboratory order to the laboratory.



STEP 6 - Laboratory | Place XDrive healing abutments

Relocate the healing abutments immediately in the implants to prevent soft tissue collapse.



STEP 7 - Laboratory | XDrive analogue positioning

Position XDrive analogues in the impression abutments, checking the correct fit, and secure it manually with the impression screws using a surgical screwdriver. Check that both components are seated correctly.



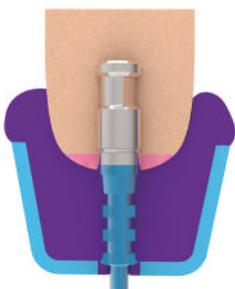
STEP 8 - Laboratory | Soft tissue representation on the working model

Inject material of your choice around the impression abutment, up to the appropriate level, to obtain a correct soft tissue simulation.



STEP 9 - Laboratory | Impression pouring

Weigh, mix and pour type IV plaster (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) into the impression following the manufacturer's recommendations.



STEP 10 - Laboratory | Working model

After the plaster has set, remove impression screws and impression tray. Relate the working model to the opposing model using the bite registration.



Abutments: provisional restorations

Cemented using provisional abutments

■ Purpose

Provisional abutments are used for the fabrication of single or multiple provisional restorations and are available in PEEK and Titanium. This option allows the professional to model the soft tissue and shape the emergence profile. PEEK abutments are indicated for aesthetic areas and immediate loading.



Provisionals

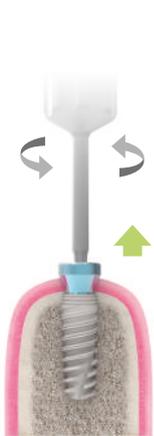
INTRODUCTION | Required materials

1. PEEK provisional abutment (Ref. RUGP3615) ROT
2. PEEK provisional abutment (Ref. NUGP3615) NO ROT
3. Titanium provisional abutment (Ref. RUGT3615) ROT
4. Titanium provisional abutment (Ref. NUGT3615) NO ROT
5. Clinical screw (Ref. DSG4010T)
6. Kiran clinical screw (Ref. DSG4010)
7. Laboratory screw (Ref. LBG4000)
8. Analogue (Ref. IAG3400)
9. Surgical screwdriver (Ref. LMSD)



Procedure: The following illustrations are an example of a single cemented provisional restoration with a PEEK abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the abutment connection.



STEP 2 - Clinical | Place the provisional abutment



Insert the provisional abutment into the implant, checking that the fit is correct between the two components. Insert the laboratory screw using a surgical screwdriver and turn it clockwise. Apply manual torque. Mark the abutment height according to the available interocclusal space and check the gingival contour.



STEP 3 - Clinical | Abutment preparation



Remove the abutment from the implant and replace the healing abutment to prevent soft tissue collapse. Attach the abutment to an analogue. Attach using a laboratory screw and the surgical screwdriver. Prepare the abutment according to the marks made in the previous step.



STEP 4 - Clinical | Place the modified provisional abutment



Insert the provisional abutment into the implant, checking that the fit is correct. Place the clinical screw using a surgical screwdriver and turn it clockwise. Place the clinical screw manually or using a surgical screwdriver and apply 30 Ncm of torque using a screwdriver tip.



Caution: Do not exceed the set torque.

STEP 5 - Clinical | Fill screw access canal



Place a resilient material on top of screw access canal, then block using filling material. This procedure will allow easy access to the screw in the future. Prior to making the restoration, apply a separator onto the abutment.

STEP 6 - Clinical | Make the crown and fill it



Make a provisional crown using the chosen method. Mix the filling material and place it in the crown, position the crown on the provisional abutment.

STEP 7 - Clinical | Excess removal, fit and cementing



Remove excess of the filling material from the crown and polish. Place the crown over the abutment to check the occlusion, fitting and gingival contour. Make the required modifications and polish again. Remove the separator waste from the abutment. Cement the crown according to the cement manufacturer's recommendations.



Abutments: provisional restorations

Screwed using provisional abutments

Purpose

a) Intraoral cementation procedure

Provisional abutments are used for the fabrication of single or multiple provisional restorations and are available in PEEK and Titanium. This option allows the professional to model the soft tissue and shape the emergence profile. PEEK abutments are indicated for aesthetic areas and immediate loading.



Provisionals

INTRODUCTION | Required materials

1. PEEK provisional abutment (Ref. RUGP3615) ROT
2. PEEK provisional abutment (Ref. NUGP3615) NO ROT
3. Titanium provisional abutment (Ref. RUGT3615) ROT
4. Titanium provisional abutment (Ref. NUGT3615) NO ROT
5. Clinical screw (Ref. DSG4010T)
6. Kiran clinical screw (Ref. DSG4010)
7. Laboratory screw (Ref. LBG4000)
8. Impression screw - Quickly screw (Ref. LTSS4001G)
9. Analogue (Ref. IAG3400)
10. Surgical screwdriver (Ref. LMSD)



Procedure: The following illustrations are an example of a single provisional restoration using a titanium abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the abutment connection.



STEP 2 - Clinical | Place the provisional abutment



Insert the provisional abutment into the implant, checking that the fit is correct between the two components. Insert the laboratory screw using a surgical screwdriver and turn it clockwise. Apply manual torque. Mark the abutment height according to the available interocclusal space and check the gingival contour.



STEP 3 - Clinical | Abutment preparation



Remove the abutment from the implant and relocate the healing abutment to prevent soft tissue collapse. Attach the abutment to an analogue using a laboratory screw and surgical screwdriver. Prepare the abutment according to the marks made in the previous step.



STEP 4 - Clinical | Place the modified provisional abutment



Insert the provisional abutment into the implant, checking that the fit is correct, and place the laboratory screw manually or using a surgical screwdriver. Apply manual torque.



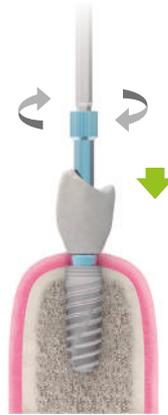
STEP 5 - Clinical | Fabrication and adjustment of the crown

Fabricate a provisional with the chosen method and modify it according to the patient's needs.



STEP 6 - Clinical | Place impression screw and drill the crown

Remove laboratory screw. Relocate using a impression screw and torque manually. Drill the crown at the top to allow the screw to pass through it.



STEP 7 - Clinical | Fill the crown and cement

Mix the filling material, fill the crown and place it on the provisional abutment. After polymerization of the filling material, remove the impression screw and crown.



STEP 8 - Clinical | Excess removal, fit and cementing

Remove excess material from the crown and polish. Place the crown on the abutment to check for occlusion, fit and gingival contour. Make any necessary adjustments and polish again. Cement the crown according to the manufacturer's recommendations.



Place the abutment-restoration assembly on the implant.

STEP 9 - Clinical | Screw restoration to implant

Insert the clinical screw using a surgical screwdriver and hand tighten. Apply 30 Ncm of torque using a contra-angle screwdriver tip or torque wrench (see torque table on page 46).



Caution: Do not exceed the set torque.

Abutments: provisional restorations

Screwed using provisional abutments

Purpose

b) Extraoral cementation procedure

Provisional abutments are used for the fabrication of single or multiple provisional restorations and are available in PEEK and Titanium. This option allows the professional to model the soft tissue and shape the emergence profile. PEEK abutments are indicated for aesthetic areas and immediate loading.



Provisionals

INTRODUCTION | Required materials

1. PEEK provisional abutment (Ref. RUGP3615) ROT
2. PEEK provisional abutment (Ref. NUGP3615) NO ROT
3. Titanium provisional abutment (Ref. RUGT3615) ROT
4. Titanium provisional abutment (Ref. NUGT3615) NO ROT
5. Clinical screw (Ref. DSG4010T)
6. Kiran clinical screw (Ref. DSG4010)
7. Laboratory screw (Ref. LBG4000)
8. Impression screw - Quickly screw (Ref. LTSS4001G)
9. Analogue (Ref. IAG3400)
10. Surgical screwdriver (Ref. LMSD)



Procedure: The following illustrations are an example of a single screwed provisional restoration using a titanium abutment on RP platform.

STEP 1 - Clinical | Remove the healing abutment

Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the abutment connection.



STEP 2 - Clinical | Place the provisional abutment

Insert the provisional abutment into the implant, checking that the fit is correct between the two components. Insert the laboratory screw using a surgical screwdriver and turn it clockwise. Apply manual torque. Mark the abutment height according to the available interocclusal space and check the gingival contour.



STEP 3 - Clinical | Abutment preparation

Remove the abutment from the implant and relocate the healing abutment to prevent soft tissue collapse. Attach the abutment to an analogue using a laboratory screw and surgical screwdriver. Prepare the abutment according to the marks made in the previous step.

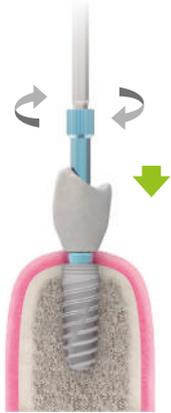


STEP 4 - Clinical | Fabrication and adjustment of the crown

Fabricate a provisional with the chosen method and modify it according to the patient's needs.



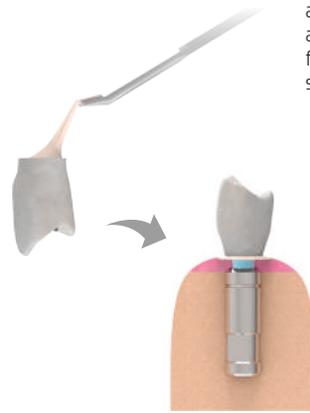
STEP 5 - Clinical | Place impression screw and drill the crown



Remove clinical screw. Relocate using a impression screw and torque manually. Drill the crown at the top to allow the screw to pass through it.



STEP 6 - Clinical | Fill the crown and cement



Mix the filling material, fill the crown and place it on the provisional abutment. After polymerization of the filling material, remove the impression screw and crown.

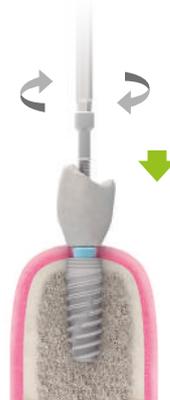
STEP 7 - Clinical | Excess removal, fit and cementing



Remove excess of the filling material from the crown and polish. Place the crown over the abutment to check the occlusion, fitting and gingival contour. Make the required modifications and polish again. Cement the crown according to the manufacturer's recommendations.

Place the abutment-restoration assembly on the implant.

STEP 8 - Clinical | Screw restoration to implant



Insert the clinical screw by hand or using a surgical screwdriver and apply 30 Ncm of torque using a screwdriver tip (see torque table on page 46).



Caution: Do not exceed the set torque.



Abutments: provisional restorations

Screwed on Basic transepithelials

Purpose

Basic transepithelial abutments are indicated for single or multiple restorations depending on the chosen abutment NO ROT or ROT, respectively. They allow implants rehabilitation with up to 36° of disparallelism. Provisional abutments made of PEEK or Titanium allow the fabrication of immediate or delayed loading screwed provisional prosthesis.



Basic

INTRODUCTION | Required materials

1. Basic abutment (Ref. BASICG425) ROT
2. Basic provisional abutment (Ref. BARUP34) ROT
3. Basic provisional abutment (Ref. BARUT10) ROT
4. Basic clinical screw (Ref. BDSEI3400)
5. Kiran Basic clinical screw (Ref. BDSEI3410)
6. Basic laboratory screw (Ref. BDSEI3401)
7. Surgical screwdriver (Ref. LMSD)
8. Basic insertion key (Ref. MABA100)
9. Screwdriver handle (Ref. MADW10)
10. Torque wrench (Ref. TORK50)



Procedure: The following illustrations represent the example of a multiple screwed provisional restoration using a PEEK abutment on Basic transepithelial abutment on RP platform.

STEP 1 - Clinical | Select Basic abutments

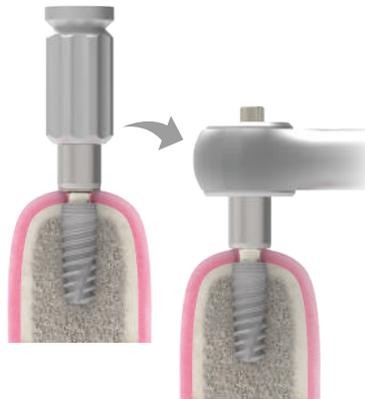


Identify the implant platform and determine the gingival height of the required Basic abutments. Select the abutment type to use: straight, 17° angled or 30° angled.

Position the straight abutment on the insertion key and fit with the screw.



STEP 2 - Clinical | Place Basic abutments on implant

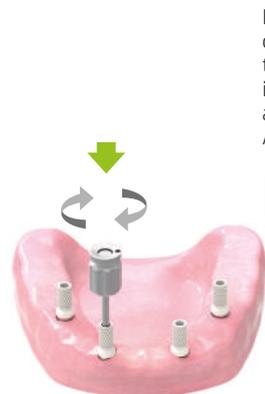


Screw the straight abutment-insertion key assembly to the implant manually using the adapter handle. Insert torque wrench over the insertion key and apply torque at 30 Ncm (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 3 - Clinical | Place Basic provisional abutments



Insert the provisional abutment to be used on the Basic abutment, making sure that the fit is correct between both and attach it with the Basic laboratory screw using a surgical screwdriver, turning clockwise. Apply manual torque.



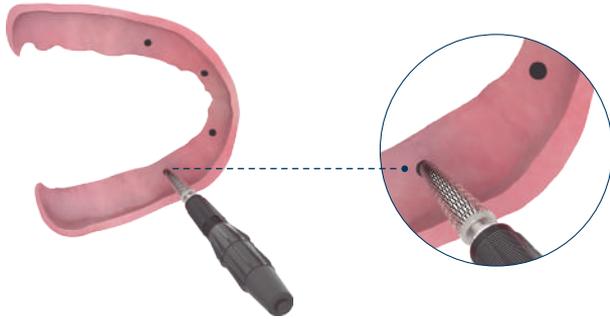
STEP 4 - Clinical | Transfer abutments position to the prosthesis



Mark on top of the provisional abutments using the technique of your choice (suitable marker, articulating paper, among others). Place the prosthesis in the oral cavity and press on the cylinders to transfer the marks. Remove the prosthesis. Check the visibility of the marks. Repeat the procedure if necessary.

STEP 5 - Clinical | Drill holes in the prosthesis

Use an acrylic or laboratory bur to drill the material in the marked areas. Drill the through hole in the marks.



STEP 7 - Clinical | Attach the provisional abutments to the prosthesis

Seal the screw channel using the material of your choice to prevent the flow of filling material into the abutments. Use the filling material to attach the provisional abutments, following the manufacturer's recommendations.



STEP 9 - Clinical | Reposition the prosthesis in the oral cavity



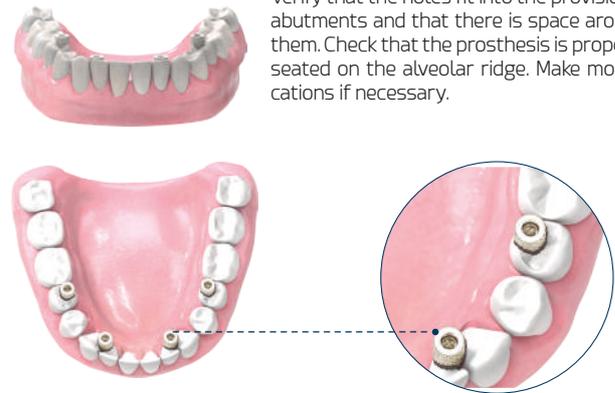
Reposition the prosthesis on the transepithelial abutments and check the fitting. Place the clinical screw using a surgical screwdriver and tighten manually. Apply 25Ncm of torque using a contra-angle screwdriver tip or a torque wrench (see torque table on page 46).



Important note: Do not exceed 25 Ncm to avoid screw fractures.

STEP 6 - Clinical | Check the prosthesis fitting

Reposition the prosthesis in the oral cavity. Verify that the holes fit into the provisional abutments and that there is space around them. Check that the prosthesis is properly seated on the alveolar ridge. Make modifications if necessary.



STEP 8 - Clinical | Remove prosthesis and make final try-in

Remove laboratory screws using a surgical screwdriver. Remove the prosthesis. Verify that the abutments are correctly attached to the prosthesis. Perform soft tissue reline if necessary. Cut off the height of the provisional abutments until they are flush with the occlusal side of the prosthesis, avoiding overheating. Make the final modifications, occlusion fit and polishing.



Abutments: provisional restorations

Screwed on XDrive transepithelials

■ Purpose

XDrive transepithelial abutments are intermediate abutments that are indicated for multiple implant and/or angled implant restorations. The rehabilitation techniques can be applied to both straight and angled abutments and is independent of the abutment gingival height chosen by the clinician for the treatment.

Provisional abutments made of PEEK or Titanium allow the fabrication of immediate or delayed loading screwed provisional prosthesis.



XDrive

INTRODUCTION | Required materials

1. XDrive straight abutment (Ref. XST10G25)
2. XDrive angled abutment 17° (Ref. XA210G17)
3. XDrive angled abutment 30° (Ref. XA310G30)
4. XDrive provisional abutment (Ref. XST3410)
5. XDrive provisional abutment (Ref. XSP3410)
6. XDrive clinical screw (Ref. XDS103410)
7. Kiran XDrive clinical screw (Ref. XDS103411)
8. Surgical screwdriver (Ref. LMSD)
9. Screwdriver tip CA (Ref. MESD)
10. Screwdriver tip (Ref. LMSD1)
11. XDrive insertion key (Ref. MABA200)
12. Screwdriver handle (Ref. MADW10)
13. Torque wrench (Ref. TORK50)



Procedure: The following illustrations represent the example of a multiple screwed provisional restoration using a titanium abutment on XDrive transepithelial abutment on RP platform.

STEP 1 - Clinical | Select and place XDrive abutments on implant

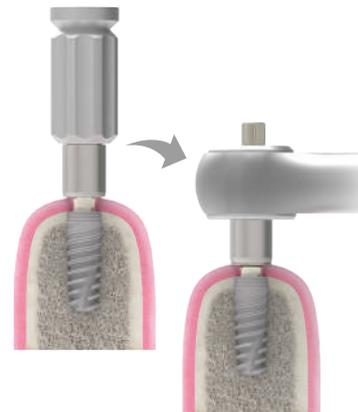


Identify the implant platform and determine the gingival height of the required XDrive abutments. Select the abutment type to use: straight, 17° angled or 30° angled.

Position the straight abutment on the insertion key and fit with the screw.



STEP 2-A - Clinical | Straight abutments



Screw the straight abutment-insertion key assembly to the implant manually using the adapter handle. Insert torque wrench over the insertion key and apply torque at 30 Ncm (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 2-B - Clinical | Angled abutments



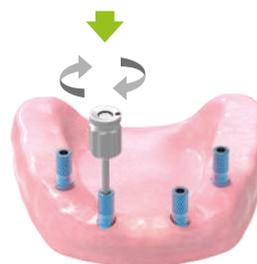
Insert the angled abutment into the implant and choose the position for angle correction. Screw manually using a surgical screwdriver.

Then, with a contra-angle or ratchet screwdriver tip, apply a torque of 30 Ncm with the contra-angle or torque wrench, as appropriate.



Caution: Do not exceed the set torque.

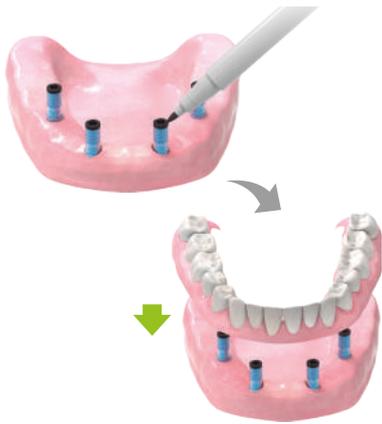
STEP 3 - Clinical | Place XDrive abutments



Insert the provisional abutment to be used on the XDrive abutment, making sure that the fit is correct between both and attach it with XDrive laboratory screw using a surgical screwdriver, turning clockwise. Apply manual torque.

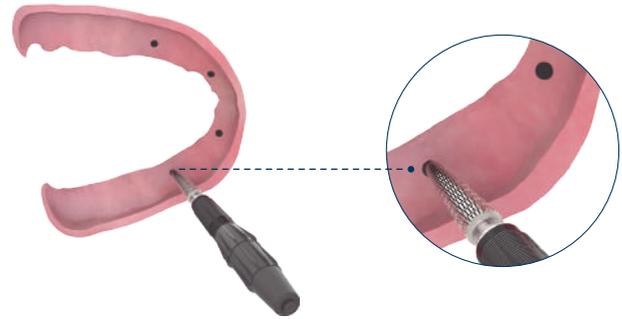


STEP 4 - Clinical | Transfer abutments position to the prosthesis



Mark on top of the abutments using the chosen technique (suitable marker, articulating paper, among others). Place the prosthesis in the oral cavity and press on the cylinders to transfer the marks. Remove the prosthesis. Check the visibility of the marks. Repeat the procedure if necessary.

STEP 5 - Clinical | Drill holes in the prosthesis

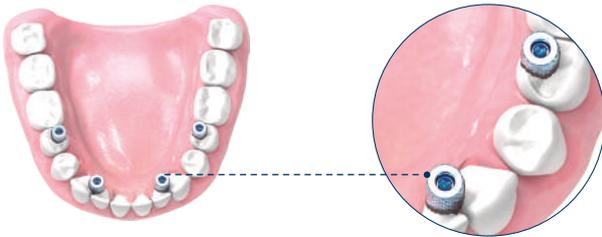


Use an acrylic or laboratory bur to drill the material in the marked areas. Drill the through hole in the marks.

STEP 6 - Clinical | Check the prosthesis fitting



Reposition the prosthesis in the oral cavity. Verify that the holes fit into the provisional abutments and that there is space around them. Check that the prosthesis is properly seated on the alveolar ridge. Make modifications if necessary.

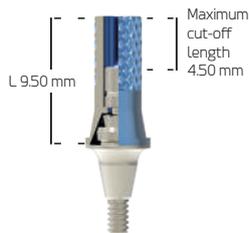


STEP 7 - Clinical | Attach the provisional abutments to the prosthesis



Seal the screw channel using the material of your choice to prevent the flow of the filling material to enter into the abutments. Use the filling material to attach the provisional abutments, following the manufacturer's recommendations.

STEP 8 - Clinical | Remove prosthesis and make final try-in



Remove laboratory screws using a surgical screwdriver. Remove the prosthesis. Verify that the abutments are correctly attached to the prosthesis. Perform soft tissue reline if necessary. Cut off the height of the provisional abutments until they are flush using the occlusal side of the prosthesis, avoiding overheating. Make the final modifications, occlusion fit and polishing.

STEP 9 - Clinical | Reposition the prosthesis in the oral cavity



Reposition the prosthesis on the transepithelial abutments and check the fitting. Place the clinical screw using a surgical screwdriver and tighten manually. Apply 20Ncm of torque using a contra-angle screwdriver tip or a torque wrench (see torque table on page 46).



Important note: Do not exceed 20 Ncm to avoid screw fractures.

Abutments: definitive restorations

On abutments direct to implant

■ Purpose

Cemented abutments are used for single or multiple restorations with intraoral cementation. The restoration is fabricated in the laboratory using the method selected by the professional, the abutment is then fixed to the implant using the clinical screw and the restoration is finally cemented in the oral cavity.



Straight abutment

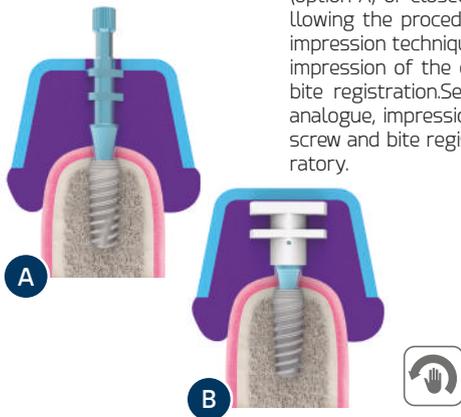
INTRODUCTION | Required materials

1. Straight abutment (Ref. STG3630)
2. 15° angled abutment (Ref. A2G3615)
3. 25° angled abutment (Ref. A2G3625)
4. Clinical screw (Ref. DSG4010T)
5. Kiran clinical screw (Ref. DSG4010)
6. Laboratory screw (Ref. LBG4000)
7. Surgical screwdriver (Ref. LMSD)
8. Screwdriver tip (Ref. LMSD1)
9. Torque wrench (Ref. TORK50)



Procedure: The following illustrations represent the example of a final cemented single restoration using a straight abutment direct to implant on RP platform.

STEP 1 - Clinical | Impression



Perform the implant impression using the method of your choice, open tray (option A) or closed tray (option B), following the procedure explained in the impression techniques section. Take the impression of the opposing arch. Make bite registration. Send the impressions, analogue, impression screw, laboratory screw and bite registration to the laboratory.

STEP 2 - Laboratory | Working model obtaining



Make the working models in plaster type IV (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) following the manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.

STEP 3 - Laboratory | Select and attach the abutment

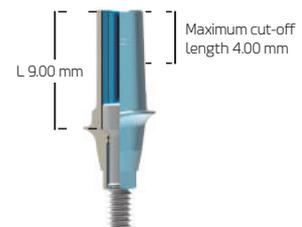


Select the abutment according to the implant platform, gingival height and angle required. Position the abutment on the analogue, checking the fit at the connection, and hand tighten the laboratory screw using a surgical screwdriver. Assess the interocclusal space, angle and soft tissue contour. Mark the abutment with any adjustments to be made, considering the minimum thickness of the restoration material.

STEP 4 - Laboratory | Abutment preparation



Remove the abutment from the analogue and secure it to a universal handle with the proper tip. Prepare the abutment according to the references of the marks made in the previous step. Define the preparation margins. Make a mark on the buccal side of the abutment to facilitate the abutment positioning in the oral cavity.

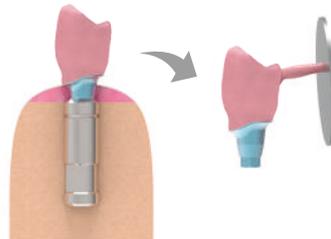


STEP 5 - Laboratory | Mount abutment into model



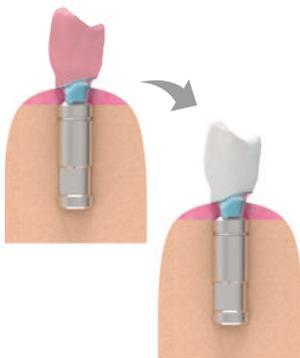
To make the final adjustments, position the abutment on the model and secure it with the laboratory screw using manual torque. Consider the preparation of margins, in aesthetic zone between 0.5 - 1 mm subgingival, in non-aesthetic areas preparation must be at the gingival or supragingival level.

STEP 6 - Laboratory | Wax and cast metal coping



Seal the screw access channel to prevent contamination with the waxing material and apply the isolation agent. Wax-up the coping, separate it from the abutment and add the casting sprue. Cast the framework with the lost wax casting technique, following the manufacturer's recommendations for the selected material.

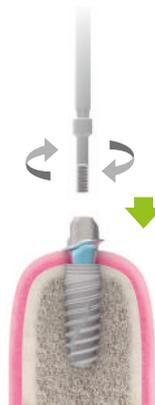
STEP 7 - Laboratory | Crown preparation and ceramic layering



Remove the casting sprue from the framework casting. Check the fit of the metal framework with the abutment. Carry out the final adjustments before applying the ceramic layers.

Apply the opaque layer over the metal framework and then apply the ceramic. Finish the restoration with the usual procedure. Send the finished crown and prepared abutment to the professional.

STEP 8 - Clinical | Clean and place abutment in mouth



Disinfect the prepared abutment and crown. Remove the healing abutment or provisional prosthesis with the surgical screwdriver. Verify that there is no interference from surrounding tissues over the implant connection. Position the abutment on the implant, making sure that the fit is correct between the two components, and attach with the clinical screw, manually, with the surgical screwdriver. Perform a periapical radiography to verify that the abutment is correctly seated on the implant.



STEP 9 - Clinical | Apply final torque to clinical screw



Tighten the clinical screw to 30 Ncm using a screwdriver tip and torque wrench. The tip is attached to the ratchet through the 4x4mm square connection (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 10 - Clinical | Crown cementation



Place a resilient material in the screw access channel at the top of the screw, then block with filling material. This procedure will allow easy access to the screw in the future. Place the crown over the abutment to check the occlusion, fitting and contour. Modify the framework if necessary to improve fit, contour or occlusion of the restoration and polish. Finally, cement the crown using the cement of your choice, following the manufacturer's recommendations. Remove excess cement. Check the correct fit of the crown on the abutment by performing a periapical radiography.

Abutments: definitive restorations

Screwed direct to implant

■ Purpose

UCLA-type with Co-Cr mechanised base abutments are used for single or multiple restorations. In the laboratory, procedures for obtaining crowns or bridges are performed, and the restorations are fixed directly to the implant using a clinical screw.



UCLA / Mechanised base abutments

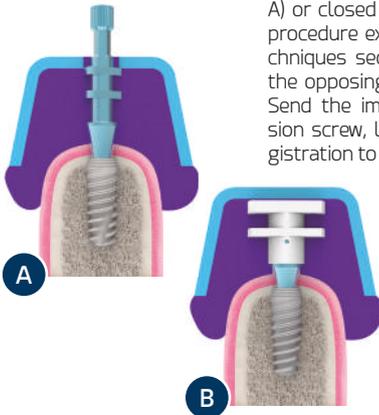
INTRODUCTION | Required materials

1. Mechanised base + castable abutment (Ref. BNUG36) NO ROT
2. Kiran clinical screw (Ref. DSG4010)
3. Laboratory screw (Ref. LBG4000)
4. Surgical screwdriver (Ref. LMSD)
5. Screwdriver tip (Ref. LMSD1)
6. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a definitive single screwed restoration using a castable abutment with mechanised base on RP platform.

STEP 1 - Clinical | Impression



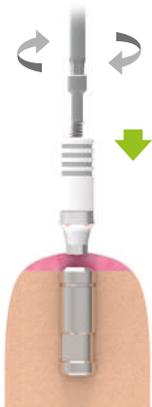
Perform the implant impression using the method of your choice, open tray (option A) or closed tray (option B), following the procedure explained in the impression techniques section. Take the impression of the opposing arch. Make bite registration. Send the impressions, analogue, impression screw, laboratory screw and bite registration to the laboratory.

STEP 2 - Laboratory | Working model obtaining



Make the working models in plaster type IV (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.

STEP 3 - Laboratory | Abutment selection



Position the abutment on the analogue, checking the fit at the connection, and hand tighten the laboratory screw using a surgical screwdriver. Assess the interocclusal space.



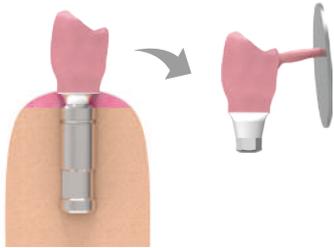
STEP 4 - Laboratory | Abutment preparation

Prepare the abutment and make the modifications if necessary, considering the interocclusal space.



STEP 5 - Laboratory | Wax and cast metal coping

Seal the screw access channel to prevent contamination with the waxing material. Wax-up the coping, separate it from the abutment and add the casting sprue. Cast the framework with the lost wax casting technique, following the manufacturer's recommendations.



STEP 6 - Laboratory | Crown preparation for ceramic

Remove the casting sprue from the framework casting. Check the metal framework fit with the abutment. Carry out the final adjustments before applying the ceramic layers.



STEP 7 - Laboratory | Ceramic layering

Apply the opaque layer over the metal framework and then apply the ceramic. Finish the crown with the usual procedure. Send the finished crown and prepared abutment to the professional.



STEP 8 - Clinical | Clean and place abutment in mouth

Disinfect the restoration. Remove the healing abutment or provisional prosthesis with the surgical screwdriver. Verify that there is no interference from surrounding tissues over the implant connection. Position the restoration on the implant and attach it manually with the clinical screw using a surgical screwdriver. Perform a periapical radiography to verify the correct seating of the restoration on the implant.



STEP 9 - Clinical | Apply final screw torque

Tighten the clinical screw to 30 Ncm using a screwdriver tip and torque wrench. The tip is coupled to the ratchet via the 4x4 mm square connection (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 10 - Clinical | Fill the screw access hole

Place a resilient material in the screw access channel at the top of the screw, then block with filling material. This procedure will allow easy access to the screw in the future. Check the proper fit of the abutment on the implant by performing a periapical radiography.



Abutments: definitive restorations

Screwed to implant with Tx30 Variable Rotation abutment

■ Purpose

Tx30 abutments consist of a Co-Cr mechanised base and castable plastics of different fixed angles, which can rotate 360° on the base. They are used for single or multiple restorations. In the laboratory, the procedures for obtaining a crown or bridge are performed. The restorations are attached directly to the implant with Tx30 clinical screw using the Tx30 screwdriver, these components are specially designed to allow the screw to be tightened in angled cases.



Tx30 abutment variable rotation

INTRODUCTION | Required materials

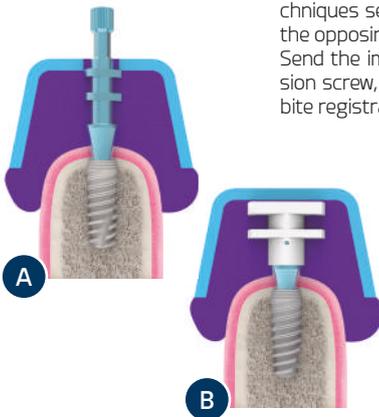
1. Tx30 mechanised base abutment + 2 castable abutment (15° and 20°) (Ref. BNUG36TX) NO ROT
2. Tx30 mechanised base abutment + 2 castable abutment (20° and 25°) (Ref. BNUG36TX1) NO ROT
3. Kiran Tx30 clinical screw (Ref. DSG4010)
4. Tx30 screwdriver tip ratchet/manual (Ref. LMSD1TX)
5. Tx30 screwdriver tip CA (Ref. MESDXTX)
6. Tx30 prosthetic screwdriver manual (Ref. LMSDXTX)
7. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a definitive screwed single restoration with Tx30 abutment variable rotation on RP platform.

STEP 1 - Clinical | Impression

Perform the implant impression with the method of your choice, open tray (option A) or closed tray (option B), following the procedure explained in the impression techniques section. Take the impression of the opposing arch. Make bite registration. Send the impressions, analogue, impression screw, Tx30 Kiran clinical screw and bite registration to the laboratory.



STEP 2 - Laboratory | Working model obtaining

Make the working models in plaster type IV (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) following the manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.



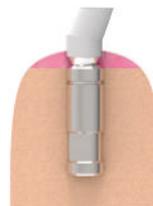
STEP 3 - Laboratory | Abutment selection

Select the abutment considering the implant platform. Position the mechanised base on the analogue by checking the correct fit on the connection. Secure the mechanised base manually with the Tx30 clinic screw using the Tx30 surgical screwdriver. Select the castable angled abutment (15°, 20° and 25°) according to the clinical case. Select the castable abutment based on the location and angle of the implant to determine the emergence of the screw channel. Press the castable abutment onto the mechanised base. Turn the castable abutment on the mechanised base until the desired position is achieved.



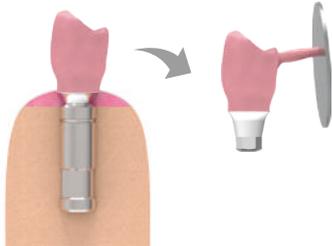
STEP 4 - Laboratory | Abutment preparation

Evaluate the interocclusal space. Prepare the abutment and make the modifications if necessary, considering the interocclusal space.



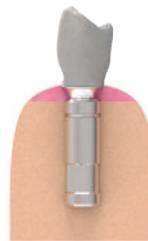
STEP 5 - Laboratory | Wax and cast metal coping

Seal the screw access channel to prevent contamination with the waxing material. Wax-up the coping, separate it from the abutment and add the casting sprue. Cast the framework with the lost wax casting technique, following the manufacturer's recommendations.



STEP 6 - Laboratory | Crown preparation for ceramic

Remove the casting sprue from the framework casting. Check abutment fit. Carry out the final adjustments before applying the ceramic layers.



STEP 7 - Laboratory | Ceramic layering

Apply the opaque layer over the metal framework and then apply the ceramic. Finish the crown with the usual procedure. Send the finished crown and prepared abutment to the professional.



STEP 8 - Clinical | Clean and place abutment in mouth

Disinfect the restoration. Remove the healing abutment or provisional prosthesis with the surgical Tx30 screwdriver. Verify that there is no interference from surrounding tissues over the implant connection. Position the restoration on the implant and attach it manually with Tx30 clinical screw using Tx30 surgical screwdriver. Perform a periapical radiography to verify the correct seating of the restoration on the implant.



STEP 9 - Clinical | Apply final screw torque

Tighten the clinical screw to 30 Ncm using the Tx30 contra-angle screwdriver tip or Tx30 ratchet screwdriver tip (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 10 - Clinical | Fill the screw access hole

Place a resilient material in the screw access channel at the top of the screw, then block with filling material. This procedure will allow easy access to the screw in the future. Check the proper fit of the abutment on the implant by performing a periapical radiography.



Abutments: definitive restorations

Screwed to Basic transepithelial abutment

■ Purpose

Basic transepithelial abutments are indicated for single or multiple restorations depending on the chosen abutment NO ROT or ROT, respectively. They allow implants rehabilitation with up to 36° of disparallelism. The final restoration will be fabricated in the laboratory with castable or Co-Cr mechanised base + castable abutments that are positioned over the transepithelial abutments.



Basic

INTRODUCTION | Required materials

1. Basic abutment (Ref. BASICG425) ROT
2. Basic UCLA (Ref. BARUEX34) ROT
3. Basic mechanised base abutment + castable abutment (Ref. BBRU34) ROT
4. Basic clinical screw (Ref. BDSEI3400)
5. Kiran Basic clinical screw (Ref. BDSEI3410)
6. XDrive laboratory screw (Ref. BDSEI3401)
7. Basic healing abutment (Ref. BAHAEX34)
8. Basic analogue (Ref. BAIAEX34)
9. Surgical screwdriver (Ref. LMSD)
10. Basic insertion key (Ref. MABA100)
11. Screwdriver handle (Ref. MADW10)
12. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a definitive screwed restorations with Basic abutment on RP platform.

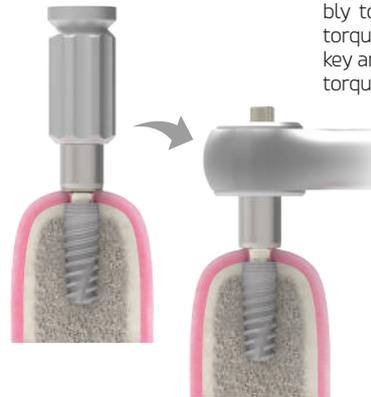
STEP 1 - Clinical | Select Basic abutments

Determine the gingival height of the Basic abutments required. Select the type of abutment to be used: non-rotating or rotating.



STEP 2 - Clinical | Place Basic abutments on implant

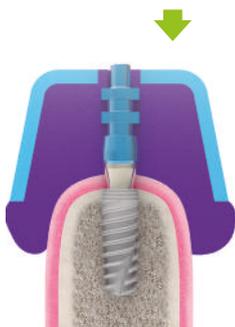
Position the abutment on the insertion key and fit with the screw. Screw the insertion key-abutment assembly to the implant manually. Insert torque wrench over the insertion key and apply torque at 30 Ncm (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 3 - Clinical | Impression into transepithelial abutments

Perform the implant impression, following the procedure explained in the impression techniques section. Take the impression of the opposing arch. Make bite registration. Send the impressions, analogue, impression screw, Basic laboratory screw and bite registration to the laboratory. Relocate Basic healing abutments.



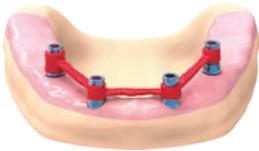
STEP 4 - Laboratory | Working model obtaining

Make the working models in plaster type IV (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) following the manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.



STEP 5 - Laboratory | Check passive fit

Position the impression abutments on Basic abutments in the working model and attach with impression screw manually using a surgical screwdriver. Splint the abutments with the usual technique. Send the passive fit to the clinician for intraoral verification. If the framework does not fit passively, make the necessary modifications, cut off and repeat the splinting.



STEP 6 - Laboratory | Record base wax-rims fabrication

Fabricate record base wax-rims, with fixing holes and send it to the clinician to determine the intermaxillary relationships and marking of reference lines.



STEP 7 - Clinical | Make intermaxillary relationship

Remove Basic healing abutments using a surgical screwdriver. Set wax-rims to Basic abutments using the laboratory screw. Determine facial fullness, reference planes, midline, smile line and commissures. Vertical dimension record. Relocate the healing abutments to prevent soft tissue collapse and send the records to the laboratory.



STEP 8 - Clinical | Setting up the teeth

Attach the denture base to the model and mount it on the articulator together with its opposing model and start setting up the teeth. Modify the teeth to allow the screws access.



STEP 9 - Clinical | Teeth try-in

Position the prosthesis and attach it to Basic abutments with a laboratory screw using a hand screwdriver. Verify occlusion, phonetics and aesthetics. Make modifications if necessary.



STEP 10 - Laboratory | Teeth set up registration

Make a silicone key in the vestibular area of the prosthesis teeth.



Abutments: definitive restorations

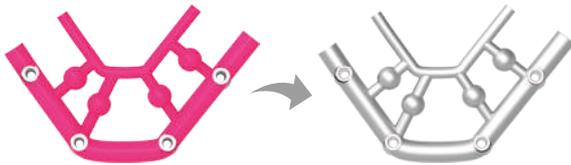
STEP 11 - Laboratory | Place and modify Basic abutments

Position the castable or castable with mechanised base abutments on the Basic in the working model and attach them manually using a surgical screwdriver. Use the silicone key as a guide to modify the castable abutments.



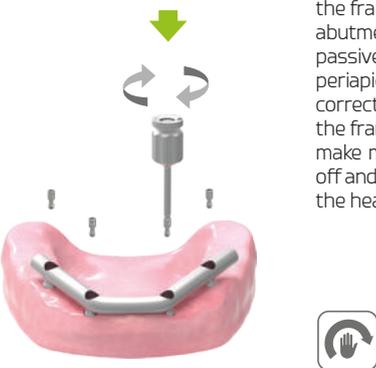
STEP 13 - Laboratory | Framework casting

Prepare the waxed framework for casting following standard laboratory procedures. Cast the framework, revise and polish as necessary.



STEP 15 - Clinical | Metal try-in

Remove Basic healing abutments using a surgical screwdriver. Place the framework on the transepithelial abutments and check that it seats passively on each abutment. Perform periapical radiographies to verify the correct seating of the framework. If the framework does not fit passively, make modifications if necessary, cut off and repeat the splinting. Relocate the healing abutments.



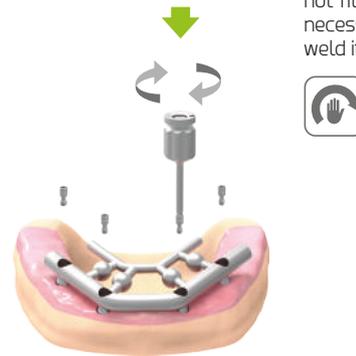
STEP 12 - Laboratory | Design and wax the framework

Design and wax the prosthesis framework according to the usual design criteria, which facilitate hygiene and acrylic retention in the framework.



STEP 14 - Laboratory | Verify the framework

Place the framework on the model and attach it with Basic laboratory screw using a hand screwdriver and check the fit. If the metal framework does not fit passively, make modifications if necessary, cut off, repeat splinting and weld it again.



STEP 16 - Laboratory | Prosthesis fabrication

Once the framework passivity has been checked, position the teeth in wax-rim following the conventional procedures for the prosthesis manufacture. Send the hybrid prosthesis to the clinician.



STEP 17 - Clinical | Prosthesis final check

Remove Basic healing abutments using a surgical screwdriver. Place the framework on the Basic transepithelial abutments and check for occlusion, phonetics and aesthetics. Make the modifications if necessary. Relocate Basic healing abutments.



STEP 18 - Laboratory | Acrylic of the prosthesis

Carry out the usual flasking and curing processes for the manufacture of the final prosthesis.



STEP 19 - Clinical | Apply final screw torque

Remove Basic healing abutments using a surgical screwdriver. Place the framework on the Basic transepithelial abutments and attach it with the clinical screw at 25 Ncm using a screwdriver tip and torque wrench (see torque table on page 46).



Important note: Do not exceed 25 Ncm to avoid screw fractures.

STEP 20 - Clinical | Fill the screw access hole

Place a resilient material in the screw access hole at the top of the screw channel, then block with filling material. This procedure will allow easy access to the screw in the future. Perform a periapical radiography to verify the correct seating of the framework.



Abutments: definitive restorations

Screwed to XDrive transepithelial abutment

■ Purpose

XDrive transepithelial abutments are intermediate abutments that are indicated for multiple implant and/or angled implant restorations. The rehabilitation techniques can be applied to both straight and angled abutments and is independent of the abutment gingival height chosen by the clinician for the treatment.

The final restoration will be fabricated in the laboratory with castable or Co-Cr mechanised base + castable abutments that are positioned over the transepithelial abutments.



XDrive

INTRODUCTION | Required materials

1. XDrive straight abutment (Ref. XST10G25) ROT
2. XDrive 17° angled abutment (Ref. XA210G17) NO ROT
3. XDrive 30° angled abutment (Ref. XA310G30) NO ROT
4. XDrive UCLA (Ref. XRU103400) NOT
5. XDrive mechanised base abutment + castable (Ref. XBRU34) ROT
6. XDrive clinical screw (Ref. XDS103410)
7. Kiran XDrive clinical screw (Ref. XDS103411)
8. XDrive laboratory screw (Ref. XLB103410)
9. XDrive healing abutment (Ref. XH103400)
10. XDrive analogue (Ref. XIA103400)
11. Surgical screwdriver (Ref. LMSD)
12. Screwdriver tip CA (Ref. MESD)
13. Screwdriver tip (Ref. LMSD1)
14. XDrive insertion key (Ref. MABA200)
15. Screwdriver handle (Ref. MADW10)
16. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a screwed definitive restoration with XDrive abutment on RP platform.

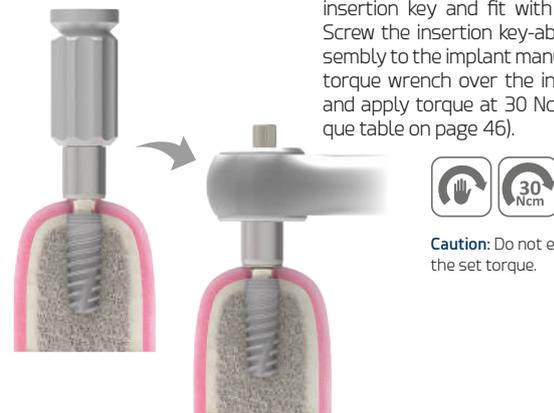
STEP 1 - Clinical | Select and place XDrive abutments on implant

Determine the gingival height of the XDrive abutments required. Select the type of abutment to be used: straight, 17° angled or 30° angled.



STEP 2-A - Clinical | Straight abutments

Position the straight abutment on the insertion key and fit with the screw. Screw the insertion key-abutment assembly to the implant manually. Insert torque wrench over the insertion key and apply torque at 30 Ncm (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 2-B - Clinical | Angled abutments

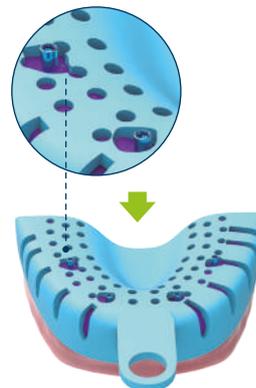
Insert the angled abutment into the implant and choose the position for angle correction. Screw manually using a surgical screwdriver. Then, with a contra-angle or ratchet screwdriver tip, apply a torque of 30 Ncm with the contra-angle or torque wrench, as appropriate.



Caution: Do not exceed the set torque.

STEP 3 - Clinical | Impression into transepithelial abutments

Perform the implant impression following the procedure explain in the impression technique section. Take the impression of the opposing arch. Make bite registration. Send the impressions, analogue, impression screw, XDrive laboratory crew and bite registration to the laboratory. Relocate XDrive healing abutments.



STEP 4 - Laboratory | Working model obtaining

Make the working models in plaster type IV (American Dental Association Classification (ADA) No. 25 with a minimum degree of expansion, high level of hardness) following the manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.



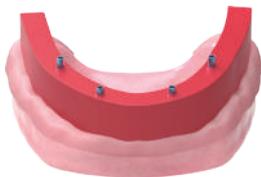
STEP 5 - Laboratory | Check passive fit

Position the impression abutments on XDrive abutments in the working model and attach with impression screw manually using a surgical screwdriver. Splint the abutments with the usual technique. Send the passive fit to the clinician for intraoral verification. If the framework does not fit passively, make the necessary modifications, cut off and repeat the splinting.



STEP 6 - Laboratory | Record base wax-rims fabrication

Fabricate record base wax-rims, with fixing holes and send it to the clinician to determine the intermaxillary relationship and marking of reference lines.



STEP 7 - Clinical | Make intermaxillary relationship

Remove XDrive healing abutments using a surgical screwdriver. Set wax-rims to XDrive abutments using the laboratory screw. Determine facial fullness, reference planes, midline, smile line and commissures. Vertical dimension record. Relocate the healing abutments to prevent soft tissue collapse and send the records to the laboratory.



STEP 8 - Laboratory | Setting up the teeth

Attach the denture base to the model and mount it on the articulator together with its opposing model and start setting up the teeth. Modify the teeth to allow the screws access.



STEP 9 - Clinical | Teeth try-in

Position the prosthesis and attach it to XDrive abutments with a laboratory screw using a hand screwdriver. Apply manual torque. Check occlusion, phonetics and aesthetics. Make modifications if necessary.



Abutments: definitive restorations

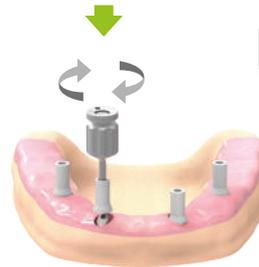
STEP 10 - Laboratory | Registro de enfilado

Make a silicone key in the vestibular area of the prosthesis teeth.



STEP 11 - Laboratory | Place and modify XDrive abutments

Position the castable or castable with mechanised base abutments on the XDrive in the working model checking the correct fit on the connection and attach them manually with a surgical screwdriver. Use the silicone key as a guide to modify the castable abutments.



STEP 12 - Laboratory | Design and wax the framework

Design and wax the prosthesis framework according to the usual design criteria, which facilitate hygiene and acrylic retention in the framework.



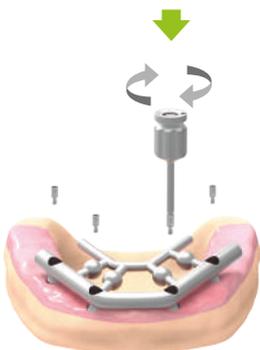
STEP 13 - Laboratory | Framework casting

Prepare the waxed framework for casting following standard laboratory procedures. Cast the framework, revise and polish as necessary.



STEP 14 - Laboratory | Verify the framework

Place the framework on the model and attach it using XDrive screws and check the fitting. If the fitting is not correct, section the framework, fit the sectioned parts on the abutments, splint the assembly and correct weld it again.



STEP 15 - Clinical | Metal try-in

Remove XDrive healing abutments using a surgical screwdriver. Place the framework on the XDrive transepithelial abutments and check that it seats passively on each abutment. Perform periapical radiographies to verify the correct seating of the framework. If the fitting is not correct, section the framework, fit the sectioned parts on the abutments and splint the assembly. Send it to the laboratory for welding. Relocate healing abutments.



STEP 16 - Laboratory | Prosthesis fabrication

Once the framework passivity has been checked, position the teeth in wax-rim following the conventional procedures for the prosthesis manufacture. Send the hybrid prosthesis to the clinician.



STEP 17 - Clinical | Prosthesis final check

Remove XDrive healing abutments using a surgical screwdriver. Place the framework on the XDrive transepithelial abutments and check for occlusion, phonetics and aesthetics. Make modifications if necessary. Relocate XDrive healing abutments.



STEP 18 - Laboratory | Acrylic of the prosthesis

Carry out the usual flasking and curing processes for the manufacture of the final prosthesis.



STEP 19 - Clinical | Apply final screw torque

Remove XDrive healing abutments using a surgical screwdriver. Place the framework on the XDrive transepithelial abutments and attach it with the clinical screw at 20 Ncm using a screwdriver tip and torque wrench. (see torque table on page 46).



Important note: Do not exceed 20 Ncm to avoid screw fractures.

STEP 20 - Clinical | Fill the screw access hole

Place a resilient material in the screw access hole at the top of the screw channel, then block with filling material. This procedure will allow easy access to the screw in the future. Perform a periapical radiography to verify the correct seating of the prosthesis.



Abutments: definitive restorations

Kirator overdenture

■ Purpose

Kirator abutments are prosthetic abutments that are used for the retention of pre-existing or newly fabricated full dentures. Prostheses that are retained by Kirator type prosthetic abutments are classified as implant-retained mucosupported overdentures.



Kirator

INTRODUCTION | Required materials

1. Kirator abutment (Ref. LOG4020)
2. Kirator processing pack (Ref. TP8460)
3. Kirator divergent processing pack (Ref. TP8460D)
4. Surgical screwdriver (Ref. LMSD)
5. Kirator insertion key ratchet/manual (Ref. LOSD01)
6. Kirator insertion key CA (Ref. LOSD02)
7. Retainer inserter (Ref. MBEI3602)
8. Retainer inserter handle + Extractor (Ref. MBEI3610)
9. Torque wrench (Ref. TORK50)



Procedure: The following illustrations are an example of a final restoration with overdenture using Kirator abutments on RP platform.

STEP 1 - Clinical | Remove the healing abutments



Remove the healing abutment from the implant manually using the surgical screwdriver by turning anti-clockwise.

Verify that there is no interference from surrounding tissues in the abutment connection.



STEP 2 - Clinical | Select and position Kirator abutments



Select the abutment according to the gingival height. Screw the abutments into the implants by hand using the insertion key and apply a final torque of 30 Ncm using the insertion key coupled to a torque wrench or a contra-angle insertion key. Check that the abutment fits the implant properly by taking a periapical X-ray (see torque table on page 46).



Caution: Do not exceed the set torque.

STEP 3 - Clinical | Mark and make holes for containers



Mark on top of the abutments using the technique of your choice (suitable marker, articulating paper, among others). Place the prosthesis in the oral cavity and press on the abutments to transfer the marks. Remove the prosthesis and check the visibility of the marks.

Use an acrylic or metal bur to remove the material in the marked areas, verify that there is space for the metal housing. Make small holes in the lingual or palatal area to allow the excess acrylic to flow.

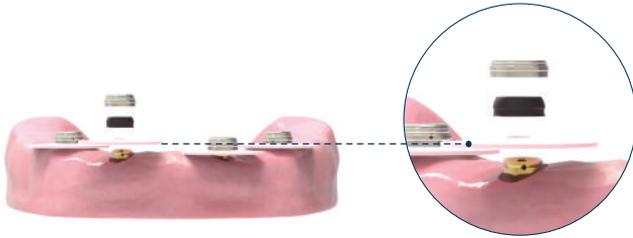
STEP 4 - Clinical | Insert the plastic caps into the metal housing



Couple the Kirator retainer inserter to the inserter handle. Use the inserter handle to place the plastic cap inside the metal housing, it is recommended to use the black laboratory plastic cap.

STEP 5 - Clinical | Place retainers onto Kirator abutments

Place the block-out spacer over the abutment to protect the soft tissue from the reline material. Place retainers onto abutments.



STEP 6 - Clinical | Apply acrylic resin

Apply a small amount of acrylic resin to the holes made in the prosthesis following the manufacturer's recommendations of the filling material.



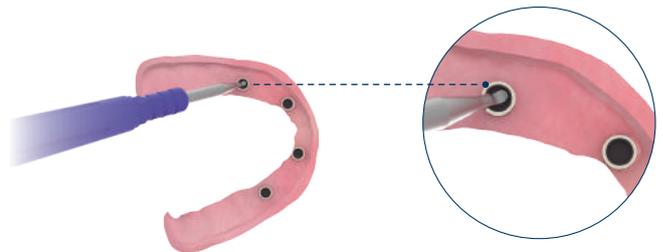
STEP 7 - Clinical | Position prosthesis

Relocate the prosthesis on the abutments and ask the patient to remain in occlusion while the material polymerises.



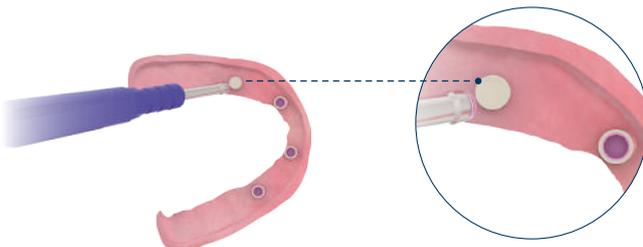
STEP 8 - Clinical | Remove the prosthesis, eliminate excess and polish

Once the acrylic resin has polymerised, remove the prosthesis and block-out spacers. Remove any acrylic excess around the metal housing and overflow holes. Carry out the final polishing.



STEP 9 - Clinical | Verify retention and fitting

Remove the black plastic cap from the metal housing with the cap extractor. Insert the plastic retainer extractor with the Kirator inserter and handle as required. Reuse the retainer cap extractor if you need to change the caps.



STEP 10 - Clinical | Denture insertion

Relocate the prosthesis in the patient's mouth. Check the occlusion and make modifications if necessary. Educate the patient for the prosthesis insertion and removal, hygiene and maintenance methods.



Abutments

Symbology

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Rotatory element		Tx30 connection		Made from cobalt chromium + castable plastic
	Non-rotatory element		Size in millimeters		Made from cobalt chromium
	Use with manual torque (consult table below)		45° screw support		Made from PEEK
	Maximum operating torque		90° screw support		Made from castable plastic
	Ratchet torque range		Use in rotation with a CA		Made from plastic
	Galaxy connection		Maximum rotation speed		Recommended sterilisation temperature
	Screw connection		Maximum number of uses		Unsterilised product
	Kirator connection		Single-use product		Use with abundant irrigation
	Basic connection		Made from grade 5 ELI (extra-low interstitial) titanium		Maximum angle
	XDrive connection		Made from stainless steel		

Table of abutment torques

Element/Abutment	Instrument/Tool	Torque
Cover screws/Healing abutments	Hex screwdriver 1.25 mm	Manual
Impression abutment screws	Hex screwdriver 1.25 mm	Manual
Laboratory screws	Hex screwdriver 1.25 mm	Manual
Direct-to-implant clinical screws	Hex screwdriver 1.25 mm	30 Ncm
Direct-to-implant Kiran clinical screws	Hex screwdriver 1.25 mm	30 Ncm
Basic/XDrive abutments	Insertion keys: MABA100/MABA110/MABA200/MABA210	30 Ncm
Clinical screws on Basic	Hex screwdriver 1.25 mm	25 Ncm
Kiran clinical screws on Basic	Hex screwdriver 1.25 mm	25 Ncm
Clinical screws on XDrive	Hex screwdriver 1.25 mm	20 Ncm
Kiran clinical screws on XDrive	Hex screwdriver 1.25 mm	20 Ncm
ZiaCam scanbody + screw	Hex screwdriver 1.25 mm	Manual
Kirator abutments	Insertion keys: LOSD01/LOSD02	30 Ncm
Tx30 abutment/screw (Variable Rotation)	Tx30 Torx screwdriver	30 Ncm

ATTENTION

Exceeding the recommended tightening torque for screws and abutments compromises the prosthetic restoration and could damage the implant structure.



For immediate loading: DO NOT tighten manually, attach with the final torque. When using a screwdriver or adaptor for a contra-angle handpiece (CA), do not exceed a maximum speed of 25 rpm.

Cleaning, disinfection and sterilisation



Cleaning, disinfection and sterilisation

The protocols described in this section must only be carried out by personnel qualified to clean, disinfect and sterilise the dental materials specified here in.

Cleaning and disinfection instructions

Applicable for instruments, surgical and prosthetic boxes and plastic retainer caps.

■ Disassembly

1. Dismount* the appropriate instruments, for example manual ratchets, drills or drill stops.
2. Remove the various components from the surgical or prosthetic box for correct cleaning.

■ Cleaning and disinfection

For disinfecting instruments and surgical boxes:

1. Submerge the instruments in a detergent/disinfectant solution** suitable for dental instruments to help eliminate any adhered biological residues. If an ultrasound bath is available***, confirm that the detergent/disinfectant solution is indicated for use with this type of equipment.
2. Manually remove any biological residues with a non-metallic brush and pH-neutral detergent.
3. Rinse with copious water.
4. When cleaning the surgical and prosthetic boxes, always use a pH-neutral detergent and non-abrasive utensils to avoid damaging the surface of the boxes.
5. Dry the materials with disposable cellulose, lint-free clothes or compressed air.

For disinfecting plastic caps and spacers:

1. Submerge in a neat benzalkonium chloride solution for 10 minutes.
2. Rinse with distilled water.
3. Dry the caps and spacer before use.

■ Inspection

1. Check that the instruments are perfectly clean; if not, repeat the cleaning and disinfection steps.
2. Discard any instruments with imperfections and replace them before the next procedure.
3. Check that the instruments and the surgical and prosthetic boxes are perfectly dry before reassembling the parts and proceeding to their sterilisation.

* See the assembly disassembly manuals at www.ziacom.com/biblioteca

** Follow the instructions from the disinfectant's manufacturer to determine the correct concentrations and times.

*** Follow the instructions from the ultrasound bath's manufacturer to determine the correct temperature, concentration and times.

Sterilisation instructions for steam autoclave

Applicable to orthodontic implants, abutments, and surgical and prosthetic instruments and boxes.

1. Introduce each material separately in individual sterilisation bags, then seal the bags. For joint sterilisation, place the instruments in their surgical box, introduce the box into a sterilisation bag and seal the bag.
2. Place the bags to be sterilised in the autoclave.
3. Sterilise in a steam autoclave at 134°C/273°F (max. 137°C/276°F) for 4 min (minimum) and at 2 atm. Torque wrenches must be sterilised in 3 vacuum cycles at 132°C/270°F for a minimum of 1.5 minutes and vacuum-dried for a minimum of 20 minutes.

For the United States only: The validated and recommended sterilisation cycle for the US must be performed in a steam autoclave at 132°C/270°F for at least 15 min and with the drying time of at least 15 - 30 min.

IMPORTANT

Make sure the drying stage is allowed to run to completion, otherwise the products may be damp.

Check the sterilisation equipment if the materials or sterilisation bags are damp at the end of the sterilisation cycle.

Perform the necessary maintenance actions on the autoclave according to the established periodicity and following the manufacturer's instructions.



Storage of Ziacom® products

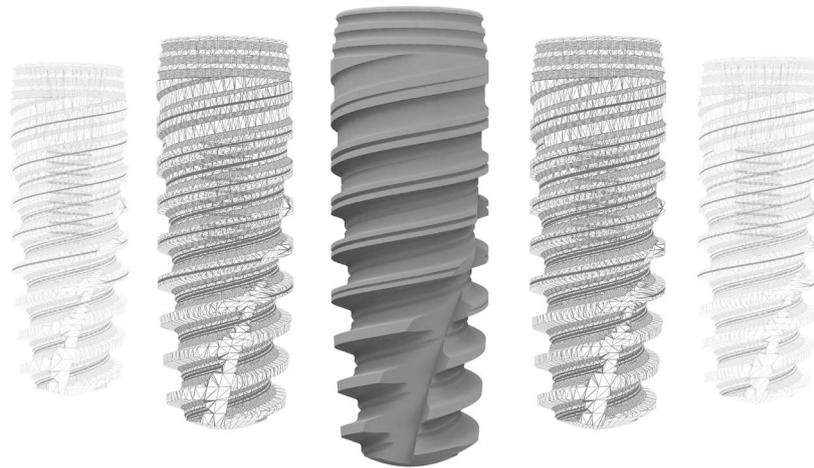
- Store the products in their original packaging and in a clean, dry location until they are used.
- After sterilisation, keep the products in the sealed sterilisation bags and in a clean, dry location.
- Never exceed the use by date indicated by the manufacturer of the sterilisation bags.
- Always follow the indications of the manufacturer of the sterilisation bags.

General recommendations

- Never use damaged or dirty material; never reuse single-use products. The user is responsible for following the instructions described in this document correctly.
- The attention to piercing or sharp elements. Gloves should be worn when cleaning the materials to avoid accidents during handling.
- Follow the safety instructions indicated by the manufacturer of the disinfectant agent.
- The product's sterility cannot be guaranteed if the sterilisation bag is open, damaged or damp.
- Respect all stages of the sterilisation process. If the materials or sterilisation bags contain traces of water or moisture, check the autoclave and repeat the sterilisation.
- Orthodontic abutments and implants are supplied UNSTERILISED and must always be sterilised before use.
- Instruments and surgical and prosthetic boxes are supplied UNSTERILISED and must always be sterilised before use and cleaned and disinfected after use.
- The sterilisation, cleaning and disinfection processes gradually deteriorate the instruments. Inspect the instruments thoroughly to detect any signs of deterioration.
- Avoid contact between products made from different materials (steel, titanium, etc.) during the cleaning, disinfection and sterilisation processes.
- Ziacom Medical SL recommends these instructions are implemented for the correct maintenance and safety of their products; accordingly, the company refuses any liability for any damage to the products that could arise if the user applies alternative cleaning, disinfection and sterilisation procedures.

See www.ziacom.com/biblioteca for the latest version of the cleaning, disinfection and sterilisation instructions.





See the latest version of the general conditions of sale on our website www.ziacom.com.

Check the availability of each product in your country.

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