

Surgical procedure manual

ZV2[®]

Conical connection implants





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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All instruments (surgical and prosthetic), surgical boxes and components are supplied WITHOUT STERILIZING. They must be removed from their original package for sterilisation prior to first clinical use. Consult the general cleaning, disinfection and sterilisation recommendations on our website www.ziacom.es or in this manual.

Important information

Please read carefully before using ZIACOM® products

General information

This document contains basic information on the use of original ZIACOM® dental implant systems, hereafter referred to as ZIACOM® dental implants or simply ZIACOM® products. This document has been created as quick guide for clinicians responsible for treatment, hereafter the "user", and, therefore, is neither an alternative nor a substitute for specialized training or professional clinical experience.

ZIACOM® products must be used according to a suitable treatment plan and adhering strictly to the surgical and prosthetic protocols established by the manufacturer. Read the product-specific surgical and prosthetic protocols as well as the instructions for use and maintenance before using each ZIACOM® product. You can find this information on our website, www.ziacom.es, or request it from your nearest authorised ZIACOM® distributor.

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Prosthetic procedure

Prosthetic abutments classification according to restoration type

- **Provisional restoration direct to implant**
- **Provisional restoration on transepithelial**
- **Definitive restoration direct to implant**
 - Cemented restoration
 - Screwed restoration
- **Restoration on transepithelial**
 - Basic®
 - XDrive®
- **Overdentures**
 - Kirator®

Abutments

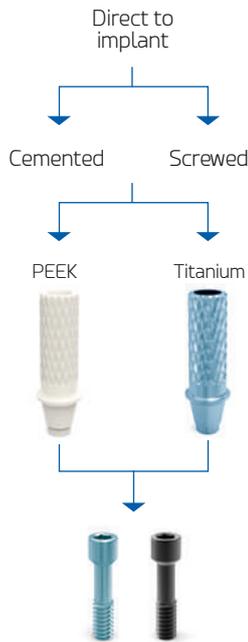
Direct-to-implant
restorations



Prosthetic abutments classification

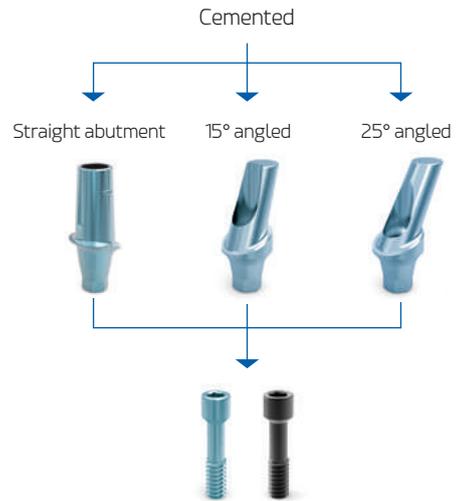
Provisional restoration

Direct to implant



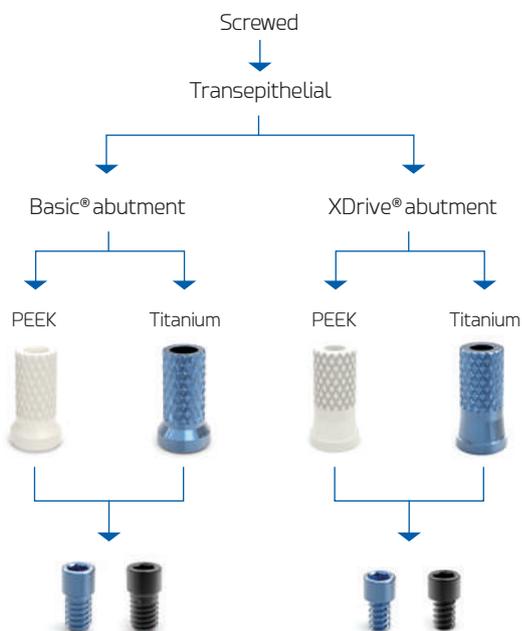
Definitive restoration

Cemented



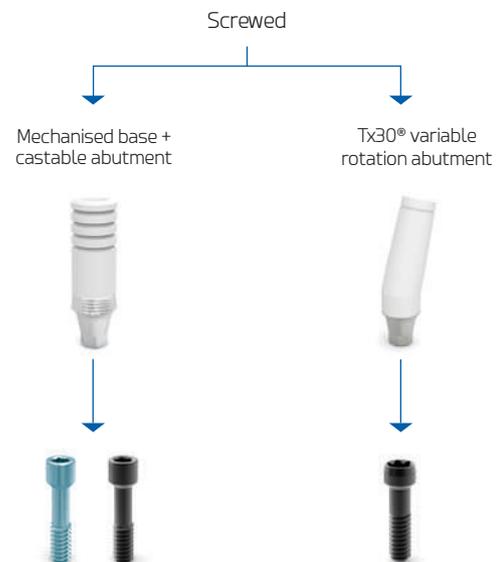
Provisional restoration

Screwed



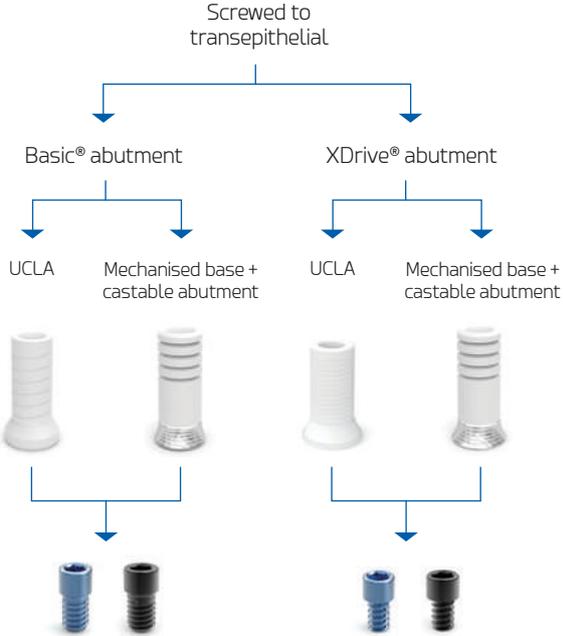
Definitive restoration

Screwed



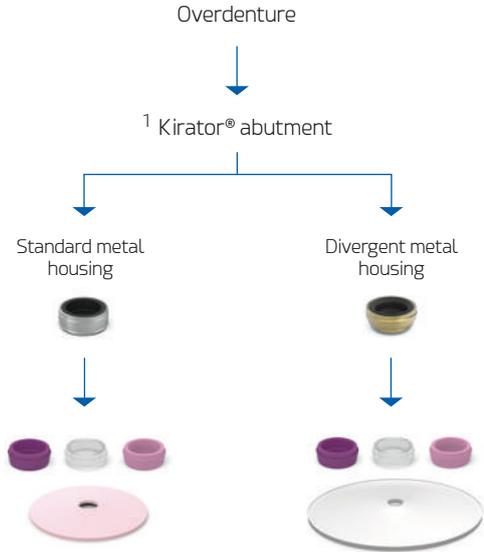
Definitive restoration

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.



Zv2[®]

Prosthetic procedure

Impression techniques

- **Open tray direct to implant**
Short or long impression transfer
- **Closed tray**
Z2Plus[®] (single)
Pick-Up (multiple)
Kirator[®]
- **Open tray using transepithelials**
Basic[®]
XDrive[®]

Abutments

Direct-to-implant
restorations



Impression

Open tray direct to implant using impression abutment



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.

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)

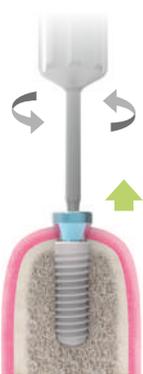


Procedure: The following illustrations are an example of a single open tray impression with long impression abutment on RP platform.

Step 01

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 02

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 52). Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



Step 03

Clinical

Impression

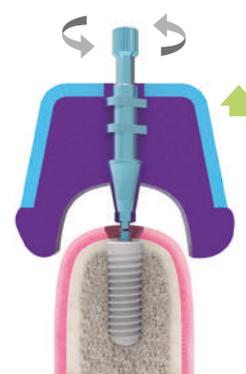


Select the customisable impression tray. Customise the tray by drilling a hole in the area corresponding to the implant and select a screw that protrudes from the tray. Place the elastomeric impression material around the impression abutment and then fill the tray. Take the impression according to the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

Step 04

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 05

Clinical

Place the healing abutment



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

Step 08

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 06

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 09

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.

Step 07

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.



Impression

Closed tray with Z2Plus® impression abutment



Z2Plus®

• **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.

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)

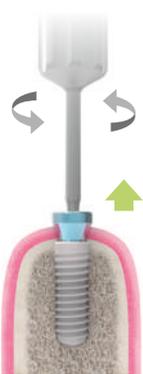


Procedure: The following illustrations are an example of a single closed tray impression with Z2Plus® abutment on RP platform.

Step 01

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 02

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 52). Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



Step 03

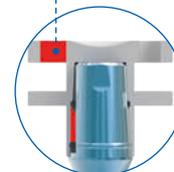
Clinical

Place the Snap-On impression transfer

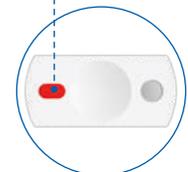


Identify the oval-shaped hole in the upper flap of the transfer, this coincides with the internal plane of the transfer. Orient the oval towards the buccal side and insert it over the Z2Plus® abutment and press until perceiving the final seating with a "click".

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



Marking of the anti-rotational plane of the abutment



Step 04

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 05

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 08

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 06

Clinical

Place the healing abutment



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

Step 09

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 07

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 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.

Impression

Closed tray using Pick-Up



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.

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)

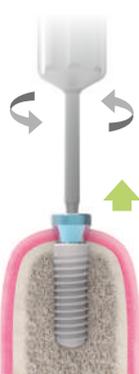


Procedure: The following illustrations are an example of a multiple closed tray impression on Pick-Up abutments on RP platform with Pick-Up transfer.

Step 01

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 02

Clinical

Place Pick-Up impression abutment into the implant



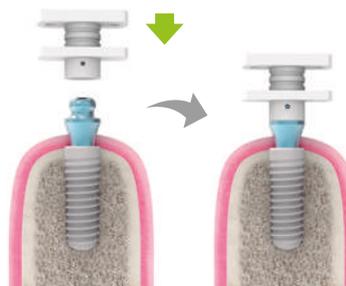
Screw the abutment onto the implant using a surgical screwdriver, applying manual torque. Check the proper fit of the impression abutment on the implant by performing a periapical radiography.



Step 03

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 04

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 05

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.

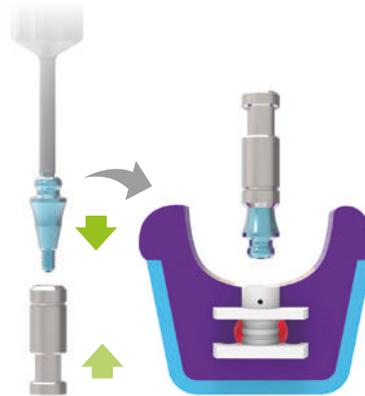


Step 08

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 06

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 09

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 07

Clinical

Place the healing abutment

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



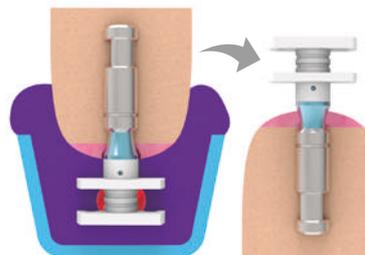
Step 10

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.



Impression

Closed tray using Kirator® abutment



Kirator®

• **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.

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 01

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 02

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.

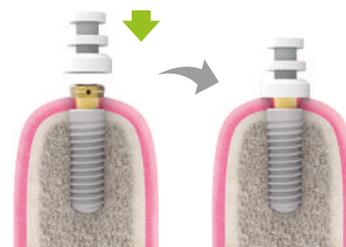


Step 03

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 04

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.

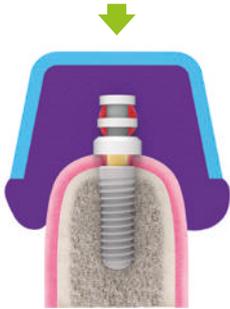


Step 05

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 08

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 06

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 09

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.

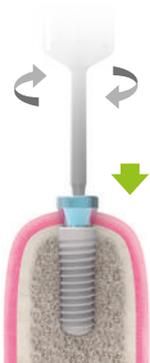


Step 07

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.



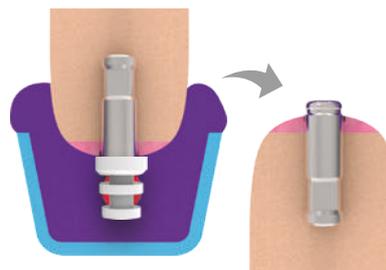
Step 10

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.



Impression

Open tray to Basic® transepithelial



Basic®

• 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.

Introduction | Required Materials

1. Basic® abutment (Ref. BASICG425N) NO ROT
2. Basic® impression abutment + impression screw (Ref. BATNEX34) NO ROT
3. Healing abutment (Ref. BAHAEX34)
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 01

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 02

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 03

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 04

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 05

Clinical

Place Basic® healing abutments

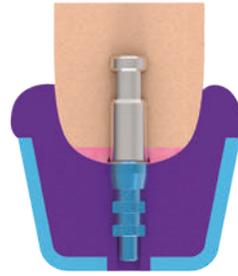


Relocate Basic® healing abutment immediately onto the implant to prevent soft tissue collapse.

Step 08

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 06

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 09

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.

Step 07

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.

ZV2®



Impression

Open tray to XDrive® transepithelial



XDrive®

• 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.

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.

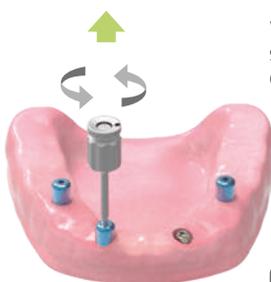
Step 01

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 02

Clinical

Place the impression abutments

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



Step 03

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.

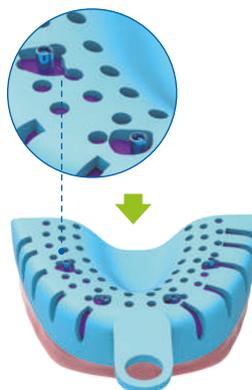


Step 04

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.



Prosthetic abutments classification

Impression

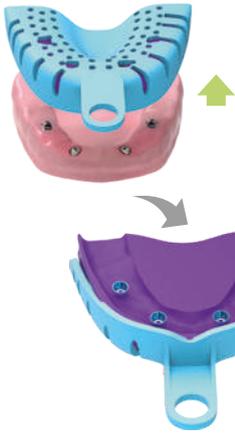
Provisional restorations

Definitive restorations

Step 05

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 08

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 06

Laboratory

Place XDrive® healing abutments

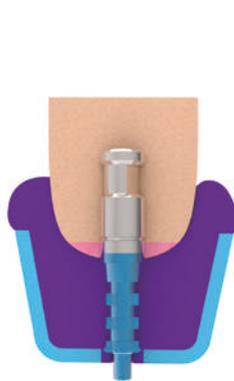


Relocate the healing abutments immediately in the implants to prevent soft tissue collapse.

Step 09

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 07

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 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.





Zv2[®]

Prosthetic procedure

Provisional restorations

- **Cemented with Peek abutment or Titanium direct to implant**
- **Screwed with Peek or Titanium abutment direct to implant**
 - a) Intraoral cementation
 - b) Extraoral cementation
- **Screwed with PEEK or Titanium abutment on transepithelial**
 - Basic[®]
 - XDrive[®]

Abutments

Direct-to-implant
restorations



Provisional restorations

Cemented using provisional abutments



Provisionals

• 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.

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 01

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 02

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.

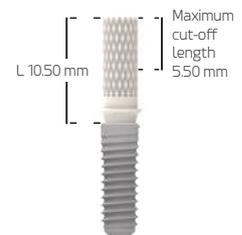


Step 03

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 04

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 05

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 06

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 07

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.



Provisional restorations

Screwed using provisional abutments



Provisionals

a) Intraoral cementation procedure

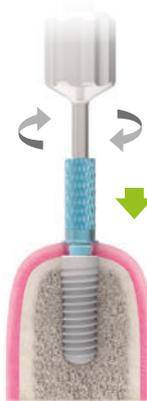
• Purpose:

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.

Step 02

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.



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 03

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 01

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 04

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.

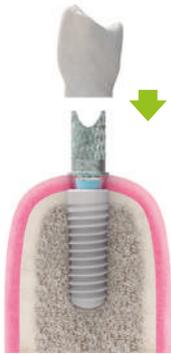


Step 05

Clinical

Fabrication and adjustment of the crown

Confeccionar corona provisional con el método de su preferencia y modificarla según las necesidades del paciente.



Step 08

Clinical

Remove excesses, ajustar y cementar

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 06

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 09

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 52).



Caution: Do not exceed the set torque.

Step 07

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.



Provisional restorations

Screwed using provisional abutments



Provisionals

b) Extraoral cementation procedure

• 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.

Step 02

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.



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 03

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 01

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 04

Clinical

Fabrication and adjustment of the crown



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

Prosthetic abutments classification	Impression	Provisional restorations	Definitive restorations
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Step 05 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 08 Clinical

Screw restoration to implant



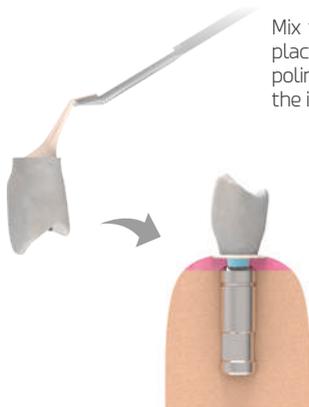
Insert the clinical screw by hand or using a surgical screwdriver and apply 30 Ncm of torque using a screwdriver tip (see torque table on page 52).



Caution: Do not exceed the set torque.

Step 06 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 07 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.



Provisional restorations

Screwed on Basic® transepithelials



Basic®

• 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.

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 provisionals restoration using a PEEK abutment on Basic® transepithelial abutment on RP platform.

Step 01

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.

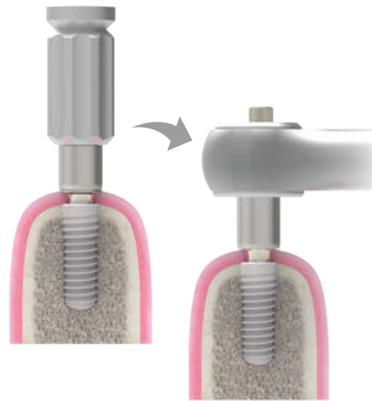
Position the straight abutment on the insertion key and tighten using the posterior screw.



Step 02

Clinical

Place Basic® abutments on implant



Screw the driver-straight abutment assembly into the implant by hand using the adapter socket. Attach the torque wrench to the insertion key and apply 30 Ncm of torque (see torque table on page 52).



Caution:
Do not exceed the set torque.

Step 03

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 04

Clinical

Transfer abutments position to the prosthesis



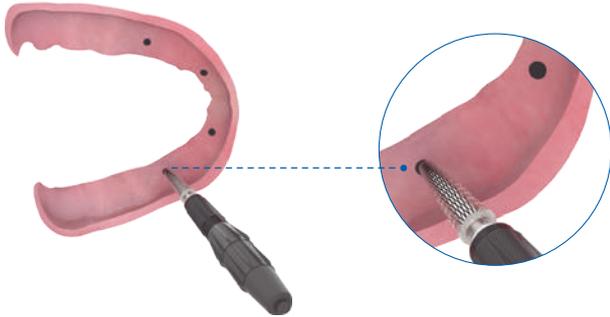
Mark on top of the provisional abutments using the technique of your choice (suitable marker, articulating paper, among others). Place the prosthesis in the oral cavity and press on the cylinders to transfer the marks. Remove the prosthesis. Check the visibility of the marks. Repeat the procedure if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

Step 05

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 08

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 re-line 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.

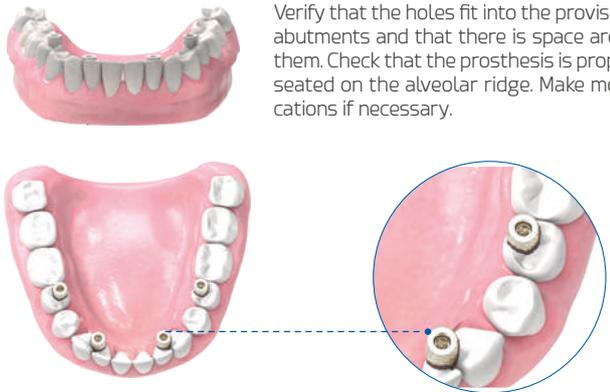


Step 06

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 09

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 52).



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

Step 07

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.



Provisional restorations

Screwed on XDrive® transepithelials



XDrive®

• **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.

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. XSP3410)
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 01

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.

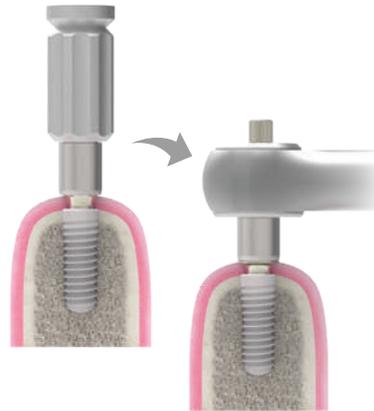
Position the straight abutment on the insertion key and fit with the screw.



Step 02-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 52).



Caution:
Do not exceed the set torque.

Step 02-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 03

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 04

Clinical

Transfer abutments position to the prosthesis

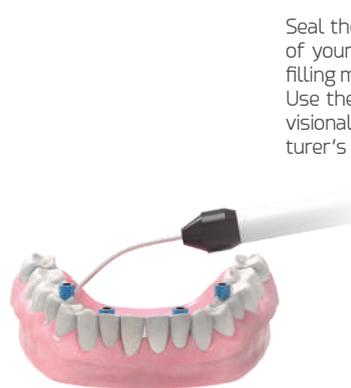


Mark on top of the abutments using the chosen technique (suitable marker, articulating paper, among others). Place the prosthesis in the oral cavity and press on the cylinders to transfer the marks. Remove the prosthesis. Check the visibility of the marks. Repeat the procedure if necessary.

Step 07

Clinical

Attach the provisional abutments to the prosthesis

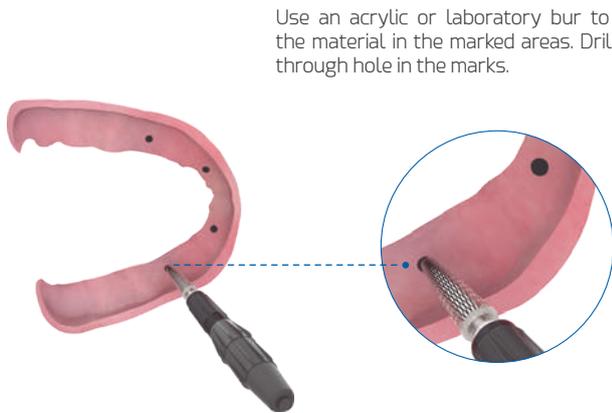


Seal the screw channel using the material of your choice to prevent the flow of the filling material to enter into the abutments. Use the filling material to attach the provisional abutments, following the manufacturer's recommendations.

Step 05

Clinical

Drill holes in the prosthesis

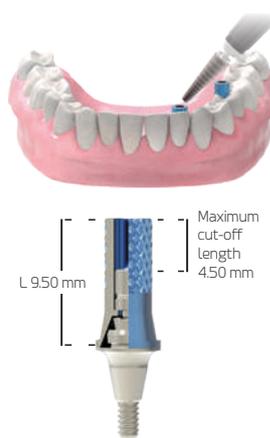


Use an acrylic or laboratory bur to drill the material in the marked areas. Drill the through hole in the marks.

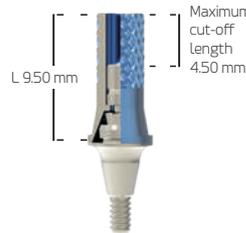
Step 08

Clinical

Remove prosthesis and make final try-in



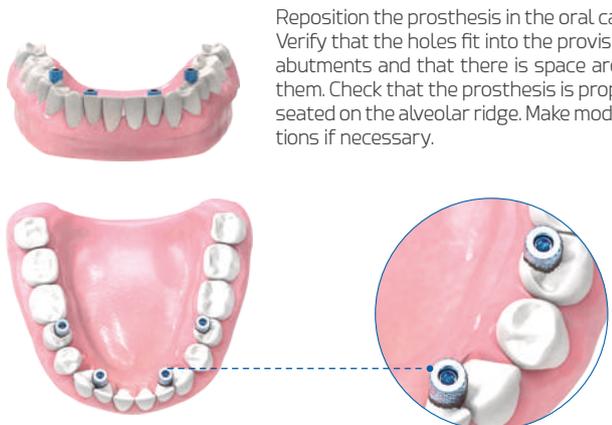
Remove laboratory screws using a surgical screwdriver. Remove the prosthesis. Verify that the abutments are correctly attached to the prosthesis. Perform soft tissue re-line if necessary. Cut off the height of the provisional abutments until they are flush using the occlusal side of the prosthesis, avoiding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



Step 06

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 09

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 52).



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



Zv2[®]

Prosthetic procedure

Definitive restorations

- **Cemented on abutments**
(Straight abutment, 15° angled and 25° angled)
- **Screwed on abutments**
Mechanised base + castable
Tx30[®]
- **Screwed to transepithelial**
Basic[®]
XDrive[®]
- **Overdentures**
Kirator[®]

Abutments

Restorations
using transepithelials



Cemented restorations

On abutments direct to implant



Straight abutments

• Purpose:

Los pilares para cementado sirven para realizar restauraciones unitarias o múltiples con cementado intraoral. Se fabrica la restauración en el Laboratorio por el método seleccionado por el profesional, posteriormente se fija el pilar al implante mediante el tornillo Clínical y finalmente se cementa la restauración en la cavidad bucal.

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)

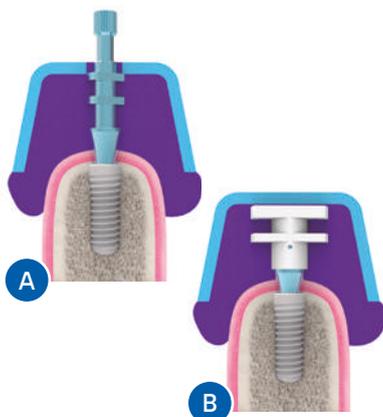


Procedure: The following illustrations represent the example of a final cemented single restoration using a straight abutment direct to implant on RP platform.

Step 01

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 02

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 03

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.



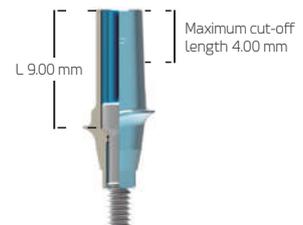
Step 04

Laboratory

Abutment preparation



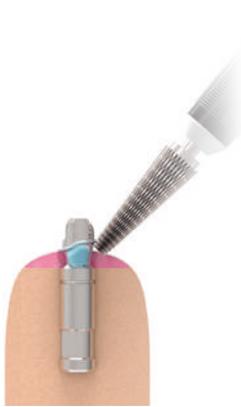
Remove the abutment from the analogue and secure it to a universal handle with the proper tip. Prepare the abutment according to the references of the marks made in the previous step. Define the preparation margins. Make a mark on the buccal side of the abutment to facilitate the abutment positioning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



Step 05

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 08

Clinical

Clean and place abutment in mouth



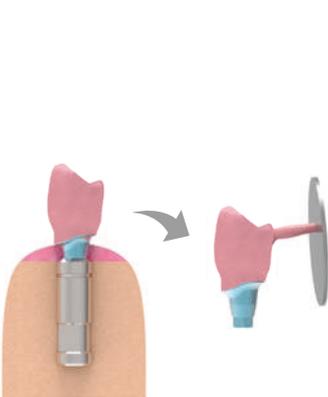
Disinfect the prepared abutment and crown. Remove the healing abutment or provisional prosthesis with the surgical screwdriver. Verify that there is no interference from surrounding tissues over the implant connection. Position the abutment on the implant, making sure that the fit is correct between 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 06

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 09

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 52).

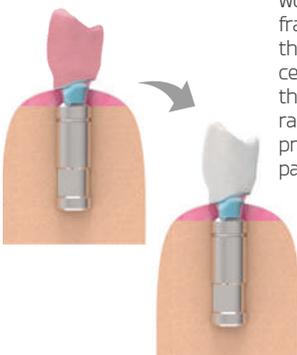


Caution: Do not exceed the set torque.

Step 07

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 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.

Definitive restorations

Screwed direct to implant



UCLA/Mechanised base abutments

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.

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)

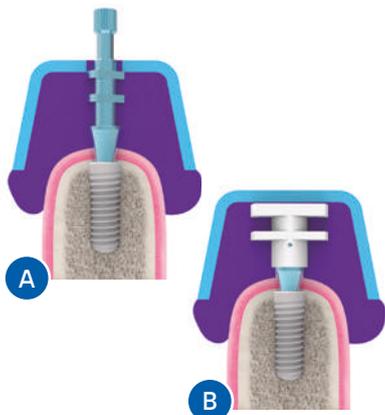


Procedure: The following illustrations are an example of a definitive single screwed restoration using a castable abutment with mechanised base on RP platform.

Step 01

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 02

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 03

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 04

Laboratory

Abutment preparation

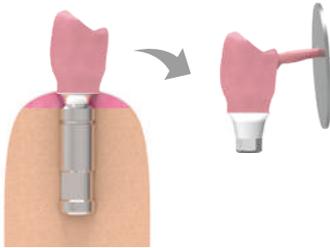
Prepare the abutment and make the modifications if necessary, considering the interocclusal space.



Step 05

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 08

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 06

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 09

Clinical

Apply final screw torque



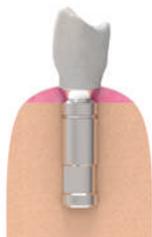
Tighten the clinical screw to 30 Ncm using a screwdriver tip and torque wrench. The tip is coupled to the ratchet via the 4x4 mm square connection (see torque table on page 52).

Caution: Do not exceed the set torque.

Step 07

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 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.

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) NOROT
- 2 Tx30® mechanised base abutment + 2 castable abutment (20° and 25°) (Ref. BNUG36TX1) NOROT
- 3 Kiran® Tx30® clinical screw (Ref. DSG4010)
- 4 Tx30® screwdriver tip ratchet/manual (Ref. LMSD1TX)
- 5 Tx30® screwdriver tip CA (Ref. MESDTX)
- 6 Tx30® prosthetic screwdriver manual (Ref. LMSDXTX)
- 7 Torque wrench (Ref. TORK50)

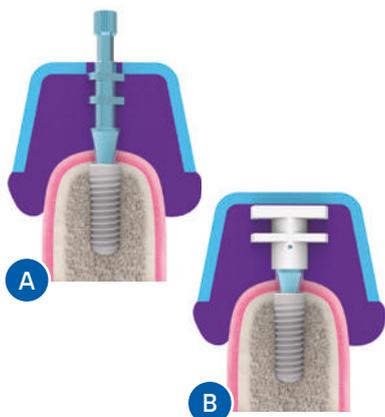


Procedure: The following illustrations are an example of a definitive screwed single restoration with Tx30® abutment variable rotation on RP platform.

Step 01

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 02

Laboratory

Working model obtaining

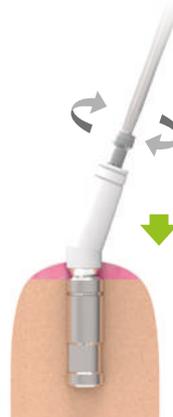
Make the working models in plaster type IV (American Dental Association (ADA) No. 25 Classification with a minimum degree of expansion, high level of hardness) following the manufacturer's recommendations. Model soft tissue and articulate with bite registration according to the usual laboratory procedures.



Step 03

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® clinical 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 04

Laboratory

Abutment preparation



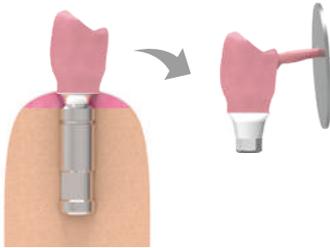
Evaluate the interocclusal space. Prepare the abutment and make the modifications if necessary, considering the interocclusal space.



Step 05

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 08

Clinical

Clean and place abutment in mouth



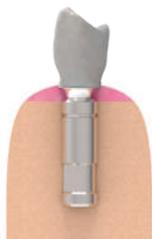
Disinfect the restoration. Remove the healing abutment or provisional prosthesis with the surgical Tx30® screwdriver. Verify that there is no interference from surrounding tissues over the implant connection. Position the restoration on the implant and attach it manually with Tx30® clinical screw using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



Step 06

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 09

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 52).



Caution: Do not exceed the set torque.

Step 07

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 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.

Definitive restorations

Screwed to Basic® transepithelial abutment



Basic®

• 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.

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. BAIAX34)
9. Surgical screwdriver (Ref. LMSD)
10. Basic® insertion key (Ref. MABA100)
11. Screwdriver handle (Ref. MADW10)
12. Torque wrench (Ref. TORK50)



12



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

Step 01

Clinical

Select Basic® abutments



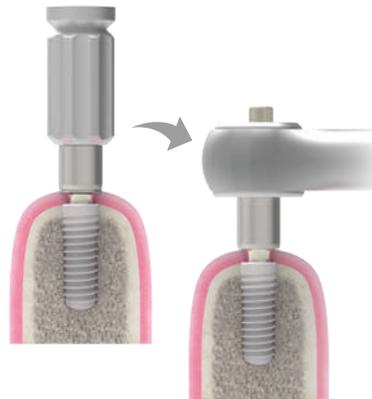
Determine the gingival height of the Basic® abutments required. Select the type of abutment to be used: non-rotating or rotating.



Step 02

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 52).



Caution:
Do not exceed the set torque.

Step 03

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 04

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.

Prosthetic abutments classification

Impression

Provisional restorations

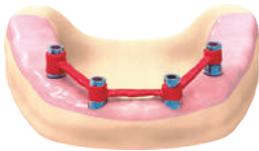
Definitive restorations

Step 05

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 08

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 06

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 09

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 07

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 10

Laboratory

Teeth set up registration

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



Step 11 Laboratory

Place and modify Basic® abutments

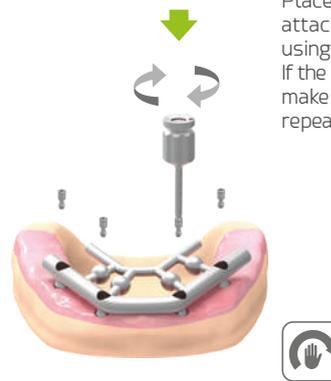
Position the castable or castable with mechanised base abutments on the Basic® in the working model and attach them manually using a surgical screwdriver. Use the silicone key as a guide to modify the castable abutments..



Step 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 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 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 13 Laboratory

Framework casting

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



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 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.

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 52).



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

ZV2®



Definitive restorations

Screwed to XDrive® transepithelial abutment



XDrive®

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.

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) RO*
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 01

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 02-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 52).



Caution:
Do not exceed the set torque.

Step 02-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.

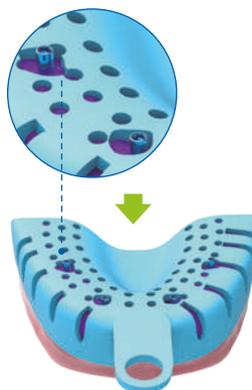


Caution:
Do not exceed the set torque.

Step 03

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 04

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.

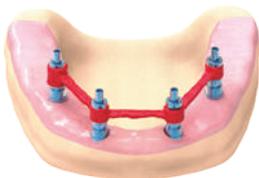


Step 05

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 06

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 07

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 08

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 09

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.



Step 10 Laboratory

Teeth set up registration

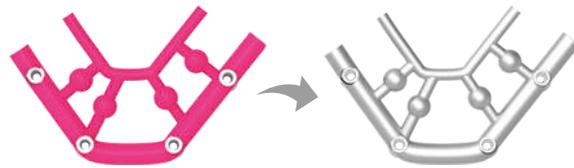
Make a silicone key in the vestibular area of the prosthesis teeth.



Step 13 Laboratory

Framework casting

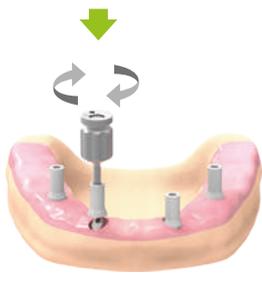
Prepare the waxed framework for casting following standard laboratory procedures. Cast the framework, revise and polish as necessary.



Step 11 Laboratory

Place and modify XDrive® abutments

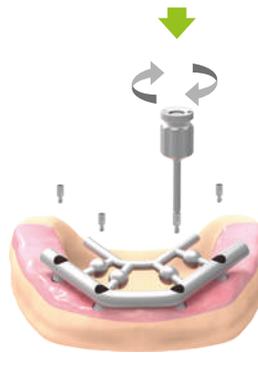
Position the castable or castable with mechanised base abutments on the XDrive® in the working model checking the correct fit on the connection and attach them manually with a surgical screwdriver. Use the silicone key as a guide to modify the castable abutments.



Step 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 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 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 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 52).



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

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 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.



Step 18

Laboratory

Acrylic of the prosthesis

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



Definitive restorations

Kirator® overdenture



Kirator®

• 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.

Introduction | Required Materials

1. Kirator® abutment (Ref. LOG4020)
2. Kirator® processing pack (Ref. TP8520)
3. Kirator® divergent processing pack (Ref. TP8520D)
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 01

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 02

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 52).



Caution: Do not exceed the set torque.

Step 03

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 04

Insert the plastic caps into the metal housing

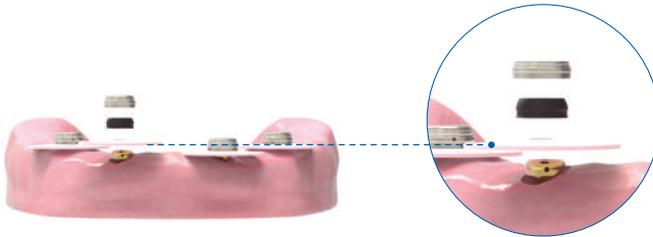


Couple the Kirator® retainer inserter to the inserter handle. Use the inserter handle to place the plastic cap inside the metal housing, it is recommended to use the black laboratory plastic cap.

Step 05

Place retainers onto Kirator® abutments

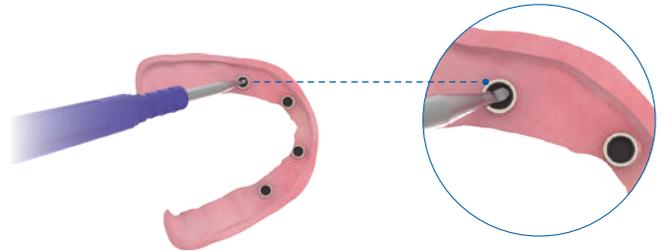
Colocar el espaciador gingival sobre el pilar para proteger los tejidos blandos del material de rebase. Conectar las retenciones sobre los pilares.



Step 08

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 06

Apply acrylic resin

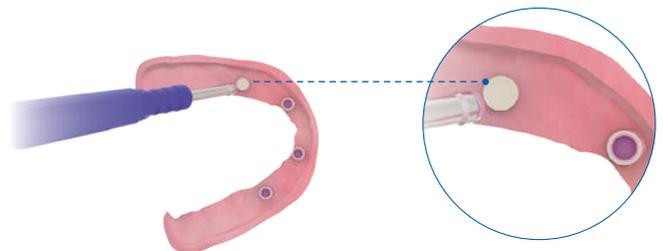
Apply a small amount of acrylic resin to the holes made in the prosthesis following the manufacturer's recommendations of the filling material.



Step 09

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 07

Position prosthesis

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



Step 10

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.



How to interpret the symbology of this catalog

Symbology

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
	Rotatory element		Metric in millimetres		Made from cobalt chromium
	Non-rotatory element		45° screw support		Made from PEEK
	Use with manual torque (consult table below)		90° screw support		Made from castable plastic
	Maximum operating torque		Use in rotation with a CA		Made from plastic
	Ratchet torque range		Maximum rotation speed		Recommended sterilisation temperature
	Screw connection		Maximum number of uses		Non-sterile 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		
	Tx30® connection		Made from cobalt chromium + castable plastic		

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

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.

ATTENTION

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

ZV2[®]

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 herein.

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.es/en/download-eng

** 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 autoclaves

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 15 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.

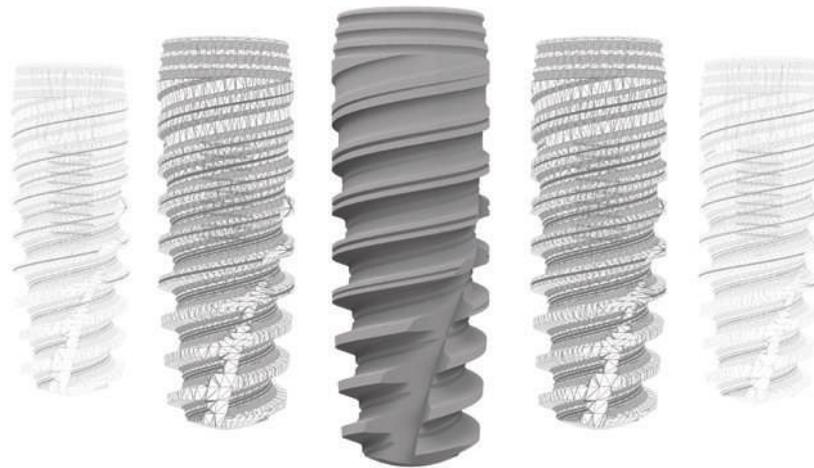
Storage of ZIACOM® products

- 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 SLU 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 the latest version of the general conditions of sale on our website www.ziacom.es

Check the availability of each product in your country.

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