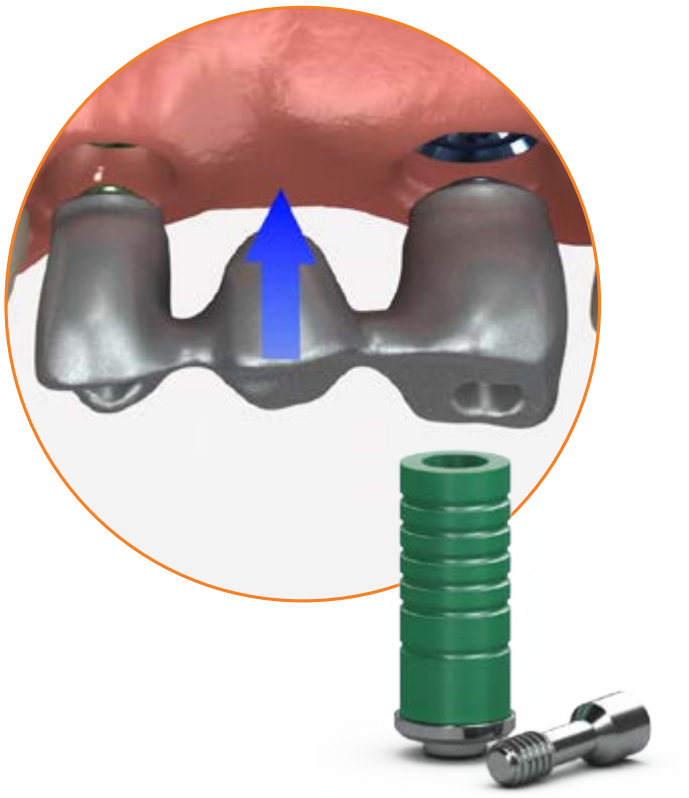
screw-retained bridge using custom-cast abutments



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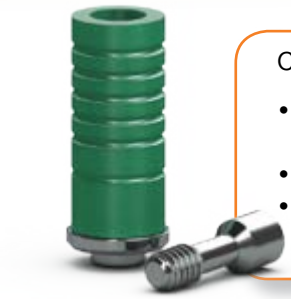
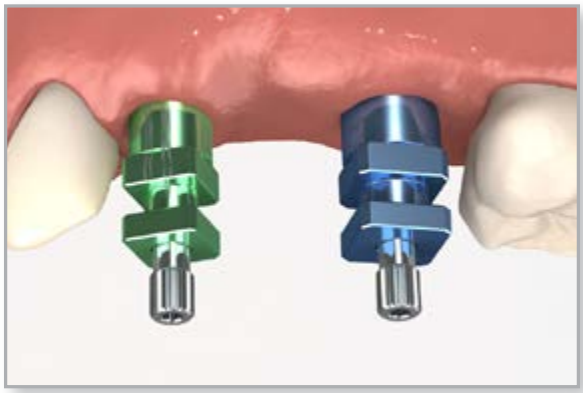
screw-retained bridge using custom-cast abutments

The custom castable abutment, non-hexed (UCLA) offers the clinician the option of making a custom bridge that is screw-retained onto implants. Use this technique for a lab-fabricated, custom, screw-retained bridge. The custom bridge can complement soft tissue contour and height and can also correct angulation.



component options

- custom castable (UCLA) abutment, non-hexed
- .050" (1.25mm) hex driver
- Ncm torque wrench



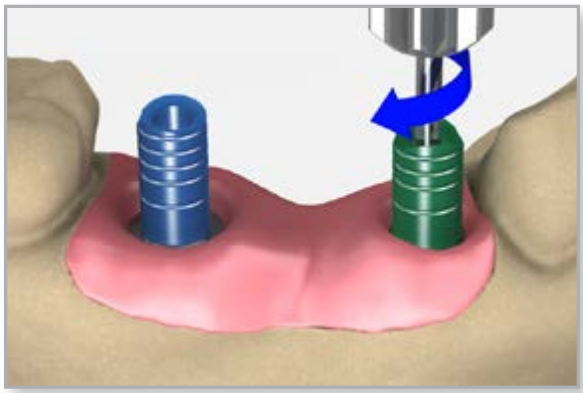
1 Make an impression

Follow the steps for creating an implant-level impression using either the open tray technique using the direct pick-up coping module or the closed tray technique using the indirect transfer coping module.

2 Lab step - Pour the working model

Fabricate a working model following conventional laboratory procedures. A soft tissue model is recommended whenever the margins are subgingival. Follow the steps for creating an implant-level stone model using either the open tray technique using the direct pick-up coping module or the closed tray technique using the indirect transfer coping module.

3 Lab step - Seat, mark, and modify the abutments



Seat the selected non-hexed, custom castable abutments onto the implant analogs in the working cast. Hand tighten the abutment screws with an .050" (1.25mm) hex driver.

Determine modifications needed to provide adequate room for the fabrication of bridge. Modify the plastic sleeves of the abutments with a cutting disk or an acrylic bur for correct vertical and interproximal clearances. Modify height leaving the sleeve out of occlusion 1-2 mm.

⚠ Important:
For screw-retained restorations, maintain at least 3mm from the abutment platform to avoid damaging the abutment screw.

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4 Lab step - Wax the custom framework

Use wax and/or acrylic burnout resin to incorporate the modified custom castable abutments into the pattern. The final contours of the pattern may be built up with crown & bridge wax.

5 Lab step - Sprue, invest and cast the framework

Sprue, invest and cast the wax frame in noble or high noble alloy according to manufacturer's instructions. When investing, pour the investment into the ring very slowly to insure the investment flows up through the screw access holes.

Note:
custom castable gold alloy specifications*

- Melting range: 1400-1490 °C
- Coefficient of thermal expansion: $12.2x10^{-6}K^{-1}$
- Hardness HV5: >215
- Tensile Strength: >750 MPa
- Composition: 60% Gold, 20% Platinum, 19% Palladium, 1% Iridium

** Material Data Sheet for Ceramicor® from Centres+Métaux*

6 Lab step - Divest, fit, and finish the framework

Divest, fit, and finish the casting following conventional laboratory techniques.

Important:
When divesting the casting, it is important not to sandblast the implant/abutment interface. Doing so may result in a poor fit between the abutments and the implants. Use of a chemical investment remover is recommended to preserve the precision fit.

Note:
A metal try-in is recommended for 3 or more units to confirm a passive fit of the framework prior to porcelain application.

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888.246.8338

screw-retained bridge using custom-cast abutments

send to clinician

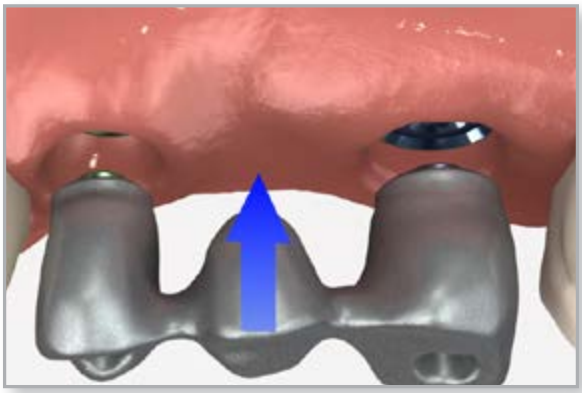
- metal framework
- abutment screws
- working model

7 Try-in the metal framework

Sanitize the bridge framework using standard clinical procedure. Remove the healing abutments or temporary restoration from the implants with an .050" (1.25mm) hex driver.

Make sure the implant prosthetic platforms are free of bone and soft tissue. Irrigate the internally-threaded connection of the implants and dry.

Secure the custom bridge framework onto the implants using the abutment screws and an .050" (1.25mm) hex driver. Hand tighten.



8 Take an X-ray and confirm fit

Take a radiograph along the long axis of the implants to ensure the framework is seated completely on the implants.

Note:
The X-ray tube must be positioned perpendicular to the implant prosthetic platform.

Confirm a passive fit of the framework. If the framework is not passive, section and relate in the mouth using resin material. Send to the lab for soldering/laser welding.

Remove framework, replace the healing abutments or temporary restoration, and return to the lab for porcelain application.

send to lab

- metal framework
- abutment screws
- working model
- prescription with lab instructions

screw-retained bridge using custom-cast abutments

9 Lab step - Apply the porcelain

Apply opaque and porcelain to the metal framework and complete according to routine laboratory procedures.

Note:
When applying porcelain, use caution not to get any porcelain into the screw-access holes. Polish any metal margins as is routine. Implant analogs may be used to protect the connection during polishing.

Secure the finished bridge onto the analogs on the working model and send to clinician for patient delivery.

send to clinician

- finished bridge
- abutment screws
- working model

10 Seat the final restoration

Sanitize the finished bridge using standard clinical procedure. Remove the healing abutments or temporary restoration from the implants using an .050" (1.25mm) hex driver.

Make sure the implant prosthetic platforms are free of bone and soft tissue. Irrigate the internally-threaded connection of the implants and dry.

Secure the bridge onto the implants using the abutment screws and an .050" (1.25mm) hex driver.
Hand tighten.

11 Check and modify the restoration

Check the occlusion and contacts. There should only be light contact in centric occlusion and no contact in lateral excursions. Modify as necessary and polish after making adjustments.

Take a radiograph along the long axis of the implants to ensure that the bridge is seated completely onto the implants.

Note:
The X-ray tube must be positioned perpendicular to the implant prosthetic platform.

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12 Tighten the abutment screws

Tighten the abutment screws to 30 Ncm using an .050" (1.25mm) hex driver and a calibrated torque wrench.

13 Fill the screw access channels

Place a resilient material of choice (gutta-percha, silicone or temporary filling material) into screw access channels. This allows for easy access to the abutment screws in the future. Fill the remainder of the channels with a composite resin material of choice.

Take an x-ray for final prosthesis delivery records.

notes

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