



Prosthetic Procedures
Conical Connection

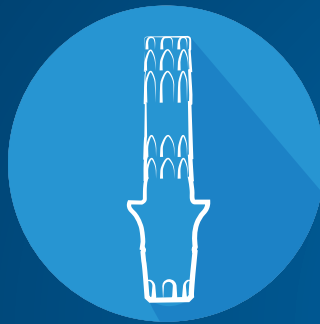
Established in 1995, MIS Implants Technologies Ltd. is at the forefront of development and production of advanced products and innovative solutions aimed to simplify implant dentistry. Through our state-of-the-art production facilities, MIS offers a comprehensive range of premium quality dental implants, superstructures, tools and kits, regenerative solutions and digital dentistry. The MIS Quality System complies with international quality standards: ISO 13485:2003 – Quality Management System for Medical Devices, ISO 9001: 2008 – Quality Management System and Medical Device Directive 93/42/EEC. MIS products are CE marked. Please note, not all products are registered or available in every country/region.







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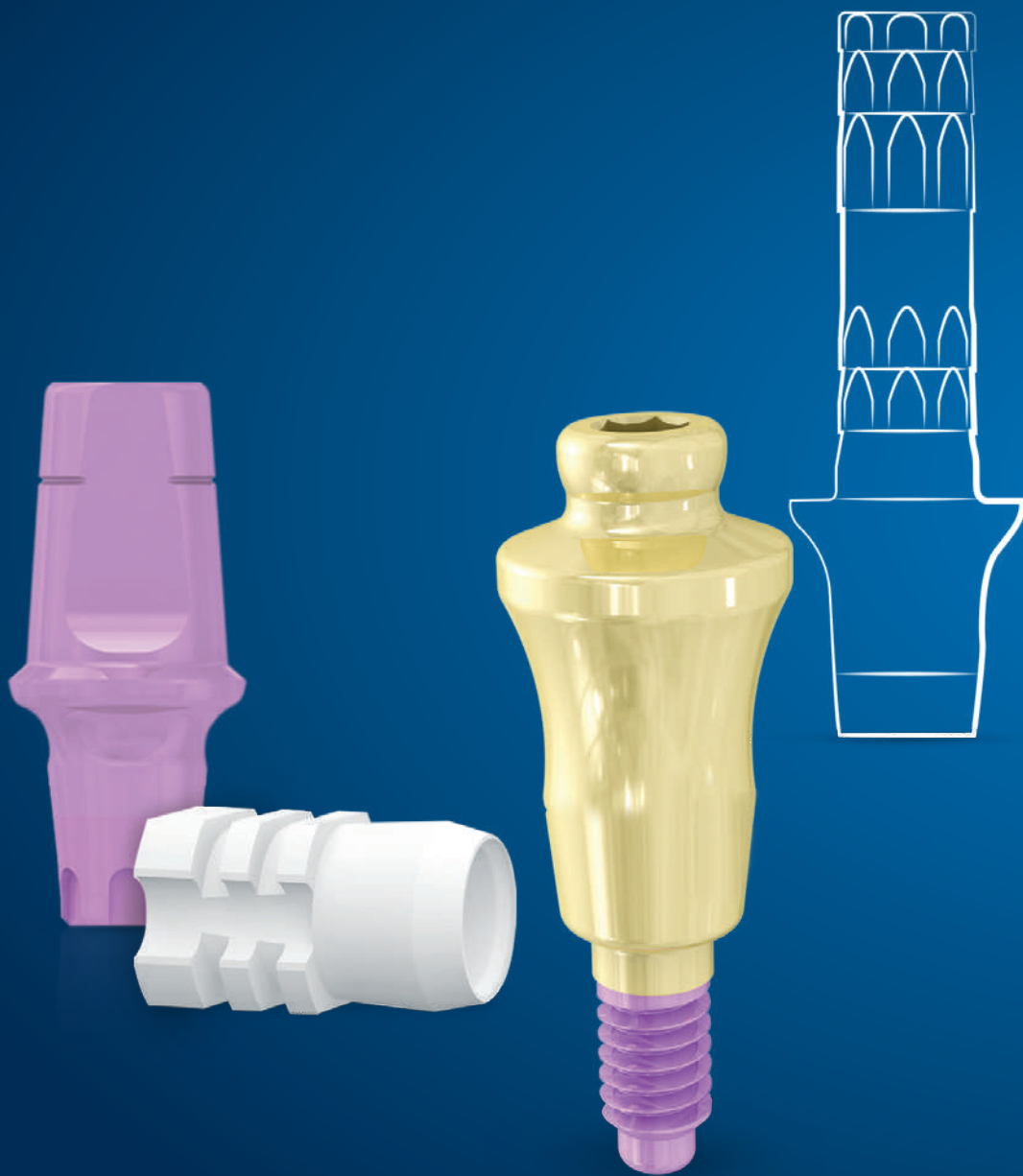
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PROSTHETIC OPTIONS.

MIS offers a wide range of prosthetic components and realizes the importance of the restoration process, in conjunction with the surgical aspect, as a central factor in the success of the treatment plan.

Our conical components include color coding, a golden shade and a continuous concave emergence profile for optimal functional and esthetic results.

This step-by-step guide is intended as an aide for the dentist, in order to maximize correct usage of the components. These step-by-step instructions, guide the user on key restoration procedures by indication.



Implant level

Temporary
Restoration

Temporary Restoration



Benefits

- Place holders to prevent migration of neighboring teeth and extrusion of opposing teeth.
- Aims to determine the optimal restorative design for the given scenario and provide a template for soft-tissue contouring and maturing.



Things to consider

- Provisional titanium abutments provide high strength and durability for a longer period of time, yet aren't recommended to be adjusted in the patient's mouth due to high heat production.
- Provisional PEEK abutments may be easily adjusted in the patient's mouth, yet provide lower strength and durability.
- Temporary restorations are to be used for a maximum period of 6 months.



Types

- Single crown
- Bridge

Components:



Direct temporary free rotation
cylinder, SP
CS-TC023



Implant analog, SP
CS-RSM10



Long driver for 0.05 inch hex.
MT-RDL30



Torque ratchet for
prosthetic screws
MT-RI040

Surgical adapter driver
MT-MSD20



Step-by-Step



Preparation

Attach temporary, free-rotation abutments (CS-T023) to the implants. Mark the desired height, making sure the abutments are 2mm below the occlusal plane and the post height is at least 4mm. Remove the abutments from the implants and shorten them accordingly. The surgical adapter driver (MT-MSD20) may be used.

The recommended tightening torque is 15Ncm.



1.



Occlusal examination

Retrieve the shortened temporary abutments and connect them to the implants. Place the temporary bridge on the abutments and prepare holes to allow access for the screw. Attach the temporary bridge over the temporary abutments, using light-curing acrylic material to define bite position.

The recommended tightening torque is 15Ncm.



2.



Temporary restoration preparation

Unscrew the abutments. Remove the restoration (with the abutments) gently from the mouth and attach to implant analogs (CS-RSM10). Fill all gaps with light-curing acrylic resin and make final adjustments, followed by polishing.



3.

Temporary Restoration



Temporary restoration placement

Clean and disinfect the temporary restoration.
Examine the temporary restoration's compatibility in the patient's mouth. Make adjustments if necessary.



Single crown

Bridge

Overdenture

4.



Screw in the temporary restoration

Use a screwdriver to secure the temporary restoration to the implants. The recommended tightening torque is 15-20Ncm. Seal and secure the screw channel openings.

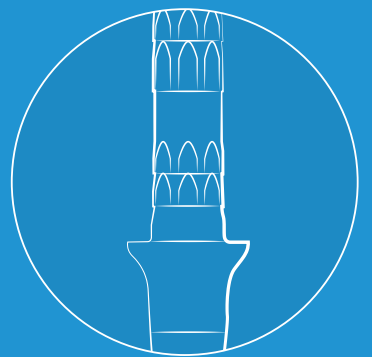


Single crown

Bridge

Overdenture

5.



Implant level



Impression
coping

Open tray



Benefits

- The individual tray and impression coping design enable highly accurate results, presenting an added value in anterior cases.
- Useful in cases of multiple divergent implants, when high accuracy is required.
- Color coding by platform.



Things to consider

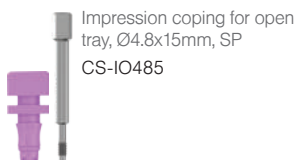
- Requires sufficient inter-arch distance. In case of occlusal space limitation, use the shorter screw.
- Additional chair time.
- Hard stock trays may also be used for this method; In this case, the tray should be prepared to allow access for screwing and unscrewing the guiding pin by perforating it in the right places.



Types

- Single crown
- Bridge
- Overdentures

Components:



Impression coping for open
tray, Ø4.8x15mm, SP
CS-IO485



Implant
analog, SP
CS-RSM10



Long driver for 0.05 inch hex.
MT-RDL30



Torque ratchet for
prosthetic screws
MT-RI040

Open tray

Step-by-Step

1.



Expose implant

Remove the healing cap.



Single crown Bridge Overdenture

2.



Attach open tray impression coping

The impression coping (CS-IO485) is attached using a screwdriver (MT-RDL30) or manually. Make sure you are able to unscrew the guide pin prior to proceeding. A periapical or bitewing radiograph of the implant may be used to confirm that the impression coping is correctly seated, and to eliminate the possibility of a gap between the coping and the implant.

The recommended tightening torque is 15-20Ncm.



Single crown Bridge Overdenture

3.



Use a custom-made tray

Use a custom-made tray or perforate a hard stock tray in the relevant implant position. The guide pin will extend through the opening in the tray. Ensure you are familiar with the tray's path of insertion before proceeding.



Single crown Bridge Overdenture

Open tray



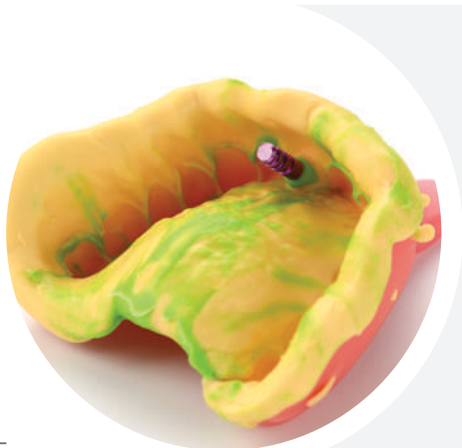
4.

Impression taking

Apply impression material around the impression coping and then fill up the tray. Follow the impression material's Instructions for Use (IFU). Place the tray in the mouth and wait for setting. It is recommended to secure the impression coping to the tray with a resin material (such as Duralay or Pattern-Resin), in order to reduce the risk of micro-movements within the impression tray. Unscrew the guide pin and remove the tray from the mouth. In multiple implant cases, it's recommended to connect adjacent transfer copings to each other with a resin material to ensure their stability within the impression before applying the impression material.



Single crown Bridge Overdenture



5.

Analog fixing

Attach the implant analog (CS-RSM10) to the impression coping and screw the guide pin back, to tighten and fix this assembly. Confirm that the coping is firmly attached to the analog, with no misalignment and free of gaps. Soft, gingiva-simulating materials should be used around the impression coping and analog to enable easy access to the analog while adjusting and fabricating the abutment and crown over the stone model. The recommended tightening torque is 15-20Ncm.



Single crown Bridge Overdenture



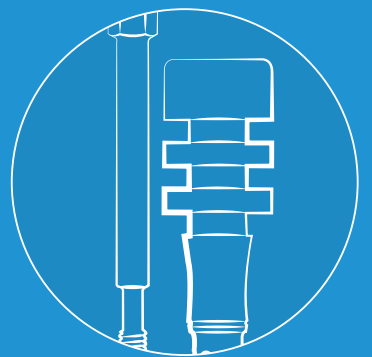
6.

Stone model with simulated gingiva

The final impression is poured in stone. When the stone sets and the analog is fixed in the plaster, the impression coping may be released by removing the guide pin.



Single crown Bridge Overdenture



Implant level



Impression coping

Closed tray



Benefits

- Useful in cases of limited inter-arch distance.
- Color coding by platform.



Things to consider

- Highly accurate results require doctor's skills (technique-sensitive).
- Not recommended in cases of multiple divergent implants, when high accuracy is required.



Types

- Single crown
- Bridge
- Overdentures

Components:



Impression coping for closed tray, Ø4.8x15mm, SP
CS-IC485



Implant analog, SP
CS-RSM10



Long driver for 0.05 inch hex.
MT-RDL30

Torque ratchet for prosthetic screws
MT-RI040



Closed tray

Step-by-Step

1.



Expose implant

Remove the healing cap.



Single crown Bridge Overdenture

2.



Attach closed tray impression coping

The impression coping (CS-IC485) is attached by screwing the guide pin. A periapical or bitewing radiograph of the implant can be used to confirm that the impression coping is correctly seated, and to eliminate the possibility of a gap between the coping and the implant.

The recommended tightening torque is 15-20Ncm.



Single crown Bridge Overdenture

3.



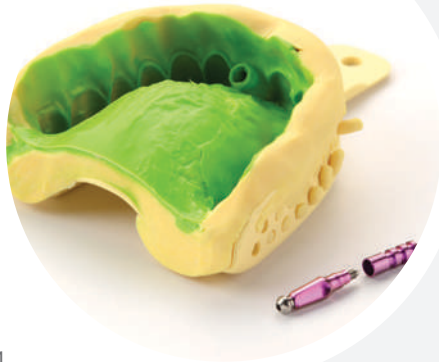
Impression taking

Use a hard, stock tray. Apply impression material around the impression coping and then fill up the tray. Follow the impression material's Instructions for Use (IFU). Place the tray in the mouth and wait for setting.



Single crown Bridge Overdenture

Closed tray



4.

Analog fixing

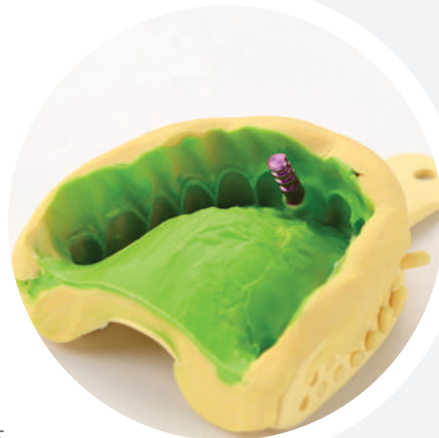
After setting of the impression material, remove the tray from the mouth. Unscrew the guide pin and remove the impression coping. Attach the impression coping to the implant analog (CS-RSM10) and tighten the assembly with the guide pin. The recommended tightening torque is 15-20Ncm.



Single crown

Bridge

Overdenture



5.

Analog positioning

Position the coping-analog assembly, into the depression formed in the impression material inside the tray, in the exact orientation dictated by the unique design of the impression coping. A click will sound when the impression is seated properly. Soft, gingiva-simulating materials may be used around the impression coping and analog to enable easy access to the analog while adjusting and fabricating the abutment and crown over the stone model.



Single crown

Bridge

Overdenture



6.

Stone model with simulated gingiva

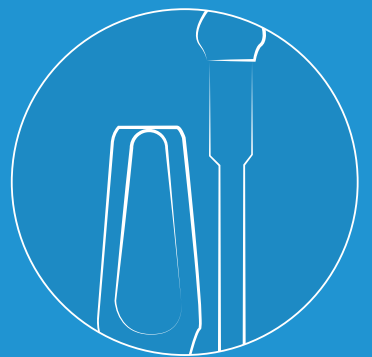
The final impression is poured in stone. When the stone sets, and the analog is fixed in the plaster. The impression coping may be released by removing the guide pin.



Single crown

Bridge

Overdenture



Implant level



Screw
Retained
Restoration

Gold base
plastic cylinder



Benefits

- No risk of excess cement.
- Retrievability.
- Direct implant to crown connection.
- High retention even with low profile restorations.
- Accurate connection, which isn't sensitive to the lost wax technique.



Things to consider

- Accessibility to the screw channel.
- Implant needs to be in "ideal" orientation for screw-channel positioning and an optimal esthetic result.



Types

- Single crown (anti-rotation cylinder)
- Bridge (free-rotation cylinders)

Components:



Direct gold plastic
cylinder, SP
CS-GP010



Long driver for 0.05 inch hex.
MT-RDL30

Torque ratchet for
prosthetic screws
MT-RI040



Gold base
plastic cylinder

Step-by-Step

1.



Stone model with simulated gingiva

Stone model is prepared, including gingival simulation.



2.



Diagnostic wax-up

A diagnostic wax-up is performed as a reference for optimal aesthetic and functional planning.



3.



Abutment adjustments

The gold-plastic cylinders are screwed to the implant analog and shortened to approx. 2mm below occlusion. The minimal post height is 4mm. The bite position should be verified using an articulator.

The recommended tightening torque is 15Ncm.



Gold base plastic cylinder



Wax carving

A wax carving is prepared on the plastic cylinders according to the relevant tooth morphology and the individual anatomical emergence profile. The cylinder's opening will constitute as the screw channels of the restoration, and must remain exposed during this step.



Single crown Bridge Overdenture



Casting

The wax-up is prepared for the lost wax technique procedure to cast the metal framework of the final restoration.



Single crown Bridge Overdenture



Metal framework

The metal framework cast is adjusted on the model and then sent for try-in in the patient's mouth.



Single crown Bridge Overdenture

Gold base
plastic cylinder



Metal try-in

The metal framework is tried in the patient's mouth and adjustments are made if necessary.



7.



Porcelain and finalization

Porcelain firing is performed over the metal framework and after a last try-in and final adjustments (if necessary) in the patient's mouth, the bridge is finished and glazed.



8.



Final restoration

The final restoration is screwed into the implant. The screw-channels may then be sealed and filled with composite material. The recommended tightening torque is 30Ncm.



9.

Tissue level

Screw
Retained
Restoration

Multi-Unit



Benefits

- Allow extreme angulation correction prior to taking the impression.
- Working above tissue which takes trauma away from the bone.
- Good distribution of forces between implants.
- Dolder bar options (removable solutions).



Things to consider

- Vertical dimension of final restoration emergence profile might be significantly higher than implant level solution.
- Multiple component system.



Types

- Bridge
- Removable dentures

Components:



Straight Multi-Unit
abutment,
h. 4mm, SP
CM-S4480



Straight Multi-Unit
long ratchet key
MT-MURL2



Direct gold for
Multi-Unit
MU-MG480



Titanium
temporary cylinder
for Multi-Unit
MU-TO480



Long driver for
0.05 inch hex.
MT-RDL30



Solid angulated
Multi-Unit
abutment, 17°,
h. 1mm, SP
CM-SO171



Torque ratchet for
prosthetic screws
MT-RI040



Impression
coping, closed
tray, for Multi-Unit
MU-IT480



Analog for
Multi-Unit
MU-RSM48



Surgical adapter driver
MT-MSD20

Multi-Unit

Step-by-Step

1.



Fitting the Multi-Units

After implant exposure, the Multi-Units (CM-S4480 and CM-SO171) are screwed in the patient's mouth. The recommended tightening torque is 30Ncm.



2.



Multi-Unit impression coping

The Multi-Unit impression copings are connected to the Multi-Units.



3.



Impression taking

Apply impression material around the impression coping and then fill up the tray. Follow the impression material's Instructions for Use (IFU). Place the tray in the mouth and wait for setting. Remove the tray and then remove the impression copings.



Multi-Unit



4.

Abutment analogs

The impression coping is removed from the Multi-Units and connected to the abutment analogs by tightening the guide pin. This is then placed in the correct position in the impression and a stone model is prepared.



5.

Temporary cylinders

Attach temporary cylinders (MU-TO480) to the Multi-Units. Mark the desired height, making sure the abutments are 2mm below the occlusal plane and the post height is at least 4mm. Remove the cylinders from the multi-units and shorten them accordingly. The surgical adapter driver (MT-MSD20) may be used.

The recommended tightening torque is 15Ncm.



6.

Provisional bridge

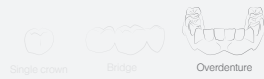
Attach the temporary bridge over the temporary abutments, using light-curing acrylic material to define bite position. The recommended tightening torque is 15Ncm. Unscrew and remove the restoration, and adjust as necessary. Use light-curing acrylic resin, followed by polishing and disinfection. Deliver to the patient.





Infrastructure try-in

The gold-plastic cylinders are screwed to the implant analog and shortened to about 2mm below occlusion. The minimal post height is 4mm. The bite position should be verified using an articulator. A wax carving is prepared on the plastic cylinders. The cylinders' opening must remain exposed during this step.



7.



Metal framework

After casting using the lost-wax technique, the metal framework is tried in the patient's mouth and adjustments are made if necessary.



8.



Final restoration

The final restoration is screwed into the Multi-Units. A maximum torque of 30Ncm is recommended. The screw-channels may then be sealed and filled with composite material. Verify that the Multi-Units are tightening at 30Ncm. Pink acrylic resin is carefully added to fill gaps and irregularities and excess resin is removed. The overdenture may now be given to the patient.



9.

Implant level

Cimented
Restoration

CPK



Benefits

- Enables a full and safe prosthetic procedure, without removing the abutment from the implant.
- Can be used with divergent implants.
- Saves lab preparation time.
- The kit includes all the necessary components for a full prosthetic procedure.
- The plastic sleeves enable a full and accurate lost wax technique.
- The kit is available in various gingival and pillar heights.



Things to consider

- No angulated units - not recommended for divergent implants.
- Abutment analog - no adjustments may be made over the abutment.



Types

- Single crown
- Multiple parallel units

Components:



Direct impression coping for closed tray, SP
CS-IT300



Transgingival abutment, 2x6mm, SP
CS-CPK62



Implant analog, SP
CS-RSM10



Long driver for 0.05 inch hex.
MT-RDL30

Torque ratchet for prosthetic screws
MT-RI040



Step-by-Step



1.

Expose implants

Remove healing caps.



2.

Attach the CPK abutments

It's recommended to position the flat wall of the abutments towards the buccal.

The recommended tightening torque is 30Ncm.



3.

Impression taking

Connect the plastic, impression-transfer caps to the CPK abutments. Make sure the flat wall of the cap corresponds to the flat wall of the abutment. A "click" should be felt when the plastic, impression-transfer cap is in place. Use a hard, stock tray. Apply impression material around the impression coping and then fill up the tray. Follow the impression material's Instructions for Use (IFU).

Place the tray in the mouth and wait for setting.



CPK



4.

After impression

After setting of the impression material, remove the tray from the mouth. The plastic caps will stay in the tray. Place comfort caps or temporary crowns over the abutments.



5.

Analog fixing

Position the abutment-analog into the plastic transfer caps. Make sure the flat wall of the cap corresponds to the flat wall of the abutment. A “click” should be felt when the abutment-analog is seated correctly. Place in the impression material. Soft, gingiva-simulating materials should be used around the impression coping and abutment analog to enable easy access to the analog while adjusting and fabricating the abutment and crown over the stone model.



6.

Stone model with simulated gingiva and analog

The final impression is poured in stone. When the stone sets, the abutment-analogs will protrude to indicate the exact positioning as the abutments that are in the patient's mouth.



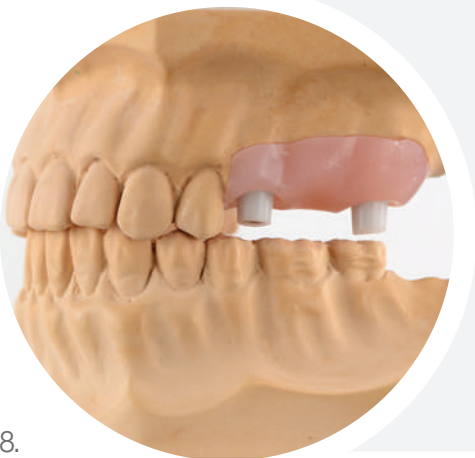


Burnout caps

The prefabricated free rotation burnout caps are fitted onto the abutment analogs. A "click" will indicate the caps are secured.



7.



Burnout caps adjustment

The burnout caps are shortened to leave approximately 2mm under the occlusion and above the post height.



8.



Wax carving

A wax-up is prepared according to the relevant tooth morphology, and the individual anatomical emergence profile.



9.

CPK



10.

Casting

The wax-up is prepared for the lost wax technique procedure, to cast the metal framework of the final restoration.



Single crown Bridge Overdenture



11.

Metal framework

The metal framework cast is tried on the abutment analogs and adjustments are made if necessary.



Single crown Bridge Overdenture



12.

Metal try-in

The metal framework is tried in the patient's mouth and adjustments are made if necessary.



Single crown Bridge Overdenture



13.

Occlusal examination

An occlusal registration is taken and transferred to the lab to ensure the right occlusal relations.



14.

Porcelain firing

After metal frame work approval, porcelain firing is performed, and the final restoration is examined over the model. Adjustments are made if necessary.



15.

Final restoration

Verify that the screw is tightened at 30Ncm. Clean and disinfect the temporary restoration. Cleaning and degreasing by steamer gun is recommended. The final restoration is cemented to the CPK abutments in the patient's mouth.



Implant level

Cemented
RestorationSingle implant
anterior tooth

Benefits

- Optimal aesthetic solution.
- Implants may be restored even when not in "ideal" position.



Things to consider

- Restoration cannot be easily removed (not retrievable).
- Excess cement might result in soft tissue inflammation and bone resorption.



Types

- Single implant
- Bridge

Components:



Angulated abutment, 15°,
h. 1mm, SP
CS-A1510



Implant
analog, SP
CS-RSM10



Long driver for 0.05 inch hex.
MT-RDL30



Torque ratchet for
prosthetic screws
MT-RI040

Single implant anterior tooth

Step-by-Step

1.



Diagnostic wax-up

A diagnostic wax-up is performed as a reference for optimal aesthetic and functional planning.



2.



Abutment preparation

The chosen abutment (CS-A1510) should present optimal angulation and gingival height for desired aesthetic and functional results. The abutment is connected to the analog (CS-RSM10) in the stone model. Next, the abutment is adjusted to allow a smooth path of insertion.



3.

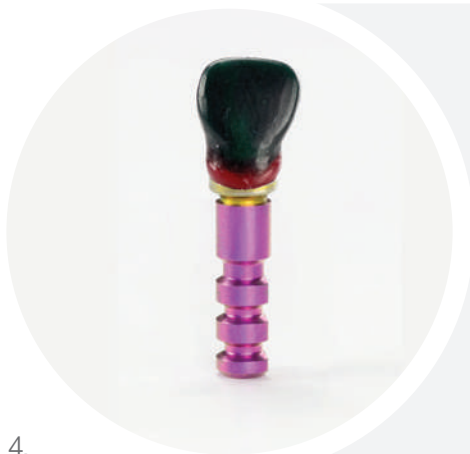


Wax carving

A wax carving is prepared by the technician on the abutment for casting the metal framework of the final PFM crown.



Single implant anterior tooth



4.

Margins – wax

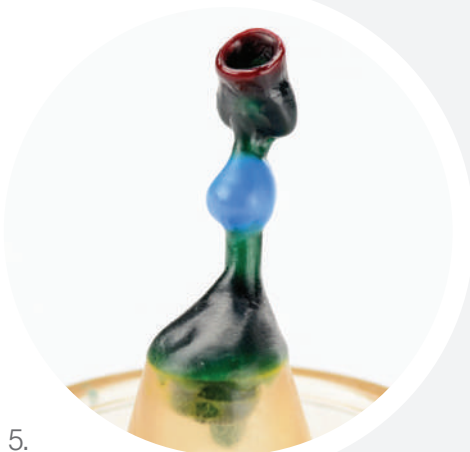
The abutment is released from the cast and screwed onto an implant analog. The wax carving is checked for fit, within the margins of the abutment. Wax is added if necessary.



Single crown

Bridge

Overdenture



5.

Casting

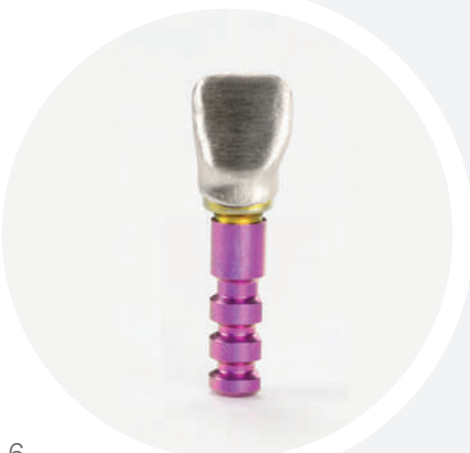
The wax-up is prepared for the lost wax technique procedure, to cast the metal framework of the final restoration.



Single crown

Bridge

Overdenture



6.

Metal framework

The metal framework is cleaned and checked for fit with the abutment. Adjustments are made if necessary.



Single crown

Bridge

Overdenture

Single implant anterior tooth



Metal try-in

The metal framework is then checked for fit with the final crown design on the stone cast. It is then sent to the clinic for examination and adjustments in the patient's mouth. An occlusal registration is taken.



Single crown

Bridge

Overdenture

7.



Porcelain firing

Porcelain firing is performed over the metal framework until the correct crown design is achieved according to the initial diagnostic wax-up.



Single crown

Bridge

Overdenture

8.



Porcelain try-in - Lab and Final restoration

The crown is examined on the model to ensure that it is the optimal shape, contour and emergence profile. After approval, it is sent to the clinic for a final try-in in the patient's mouth.

For final restoration clean and disinfect the restoration. Cleaning and degreasing by steamer gun is recommended. The abutment is screwed to the implant. The final crown is cemented to the abutment. Excess cement should be removed.

The recommended tightening torque is 30Ncm.



Single crown

Bridge

Overdenture

9.

Tissue level



Overdenture

OT-Equator



Benefits

- Low profile - useful in cases of space limitations.
- Titanium nitride (TiN) coating for maximum resistance to wear.



Things to consider

- Denture should be prepared beforehand and fitted in the patient's mouth.
- Maximum divergence between implants may be up to 40 degrees.



Types

- Overdentures

Components:



OT-Equator kit, h. 4mm, SP
CK-SOE4



Plastic disc for ball
attachment
MB-DB235



OT-Equator retentive cap
OE-RCW01
OE-RCY01
OE-MH001
OE-RCB01
OE-RCP01
OE-RCV01

OT-Equator handling tools
ET-IT001





1.

Installation

Expose the implants to connect the OT-Equators (CK-SOE4). Use the hex. driver (MT-RDL30) to install each attachment. The recommended tightening torque is 30Ncm.



2.

Plastic discs

Place the plastic disc over the attachment. Connect the housing with the black laboratory cap to the attachment. This will prevent excess acrylic resin from locking against the attachment.



3.

Denture preparation

Create cavities within the denture base, above the implant sites. Cavities should create a space of 2mm around the attachment housing. Try in the denture, to ensure proper seating.



OT-Equator



Denture relines

Cover housings and fill prepared cavities within the denture base with self-curing acrylic resin. Place the denture over the attachments and ask the patient to apply occlusal pressure. Wait until resin is completely cured.



4.



Inspection and corrections

Inspect for voids, and if necessary, add material to ensure that housings are completely embedded in resin. Adjust and remove excess resin if present around the housings.



5.



Try-in and delivery

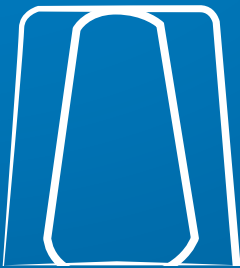
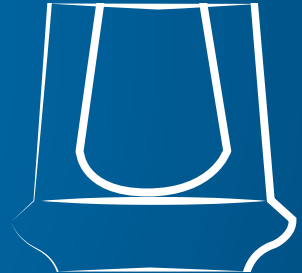
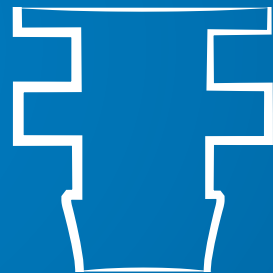
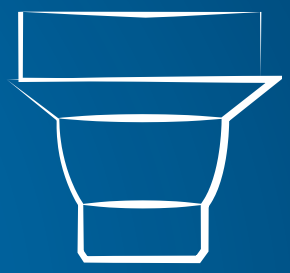
It is recommended to start by using the softest caps, replacing them with firmer caps only in cases where retention levels are insufficient.



6.







MAKE IT SIMPLE

