

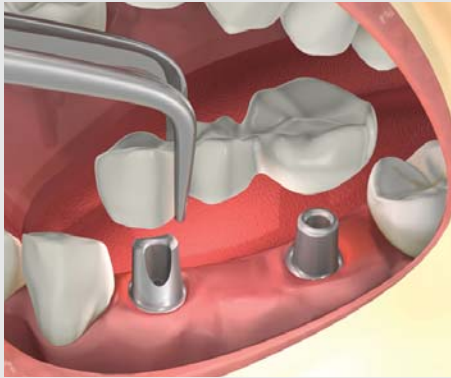
3.

Step-by-Step

Cemented Bridge

Using Esthetic Abutments

Internal Hex. Implant System



mis
Make It Simple



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Is proud to present this multiple-unit cemented bridge internal hex. implant reconstruction procedure.

This manual explains the procedure step by step using MIS components. MIS scientists and engineers are committed to the research and development of new products and technologies. Our commitment extends to passing on procedural and product information through training and instruction.

Questions, comments or requests will be addressed promptly by contacting MIS specialists directly through our e-mailing address: service@mis-implants.com. MIS' Internet website can be accessed at www.mis-implants.com. This on line site highlights current products and reflects all new discoveries and developments.

Using a Cemented Bridge on Multiple Implants

Cementation of an implant-retained bridge is a staged process. There are two ways to secure a bridge: with screws and using cementation. This manual will present the cementation method, specifying the stages of the closed tray impression technique. The impression method and choice of materials should be considered as recommendations only. The cemented bridge method has advantages and disadvantages:

Advantages

A prefabricated abutment (straight or angled) can be used. ■ A perfect esthetic occlusal surface is achieved - in the case of cemented bridge procedure, the screws are invisible. ■ The laboratory work is simple for technicians and reduces costs. ■ A passive fit is achieved between the bridge and the abutments.

Disadvantages

The method is not suitable for limited interocclusal dimensions. ■ Cement excess must be totally removed. ■ The bridge is difficult to remove after cementing. ■ The use of fabricated abutments is not suitable for all clinical cases, particularly those requiring custom-made abutments.



















General Information

1. Initial planning is of utmost importance. Along with the surgeon, the dentist performing the prosthetic stage of the treatment should be an active participant in the decisions affecting the choice of implant, the type of prosthesis (cemented or screw retained) and the three dimensional positioning of the implant. It is a prosthetic driven procedure.
2. Bridge reconstruction is considered in cases where a number of teeth are missing. For proper and easy bridge reconstruction, it is essential to pay attention to parallel insertion and accurate spacing between the implant, in accord with the teeth needing replacement.

Restorative components table

Indications for Using MIS Restorative Components

* For recommendation purpose

Location ▶	Anterior Maxilla	Anterior Mandible	Incisors to Premolars	Canine, Premolars & Molars	Premolars and Molars				
Crown Implant Inclination Ratio	Crown/implant angulation between 15-25 degrees	Crown axis Parallel to implant axis	Crown/implant angulation up to 4 degrees	Crown/implant angulation between 15-25 degrees	Crown/implant angulation between 15-25 degrees	Crown axis Parallel to implant axis	Crown/implant angulation up to 4 degrees	Crown/implant angulation up to 4 degrees	Crown/implant angulation up to 4 degrees
Gingival Profile	Buccal-low level Palatal-high level	Horizontal gingival level	Buccal-low level Palatal-high level	Buccal-low level Lingual-high level	Buccal-low level Lingual-high level	Grinding the abutment shoulder to meet the gingival contour	Buccal-low level Palatal-high level	Horizontal gingiva level	Horizontal gingiva level
Gingival Height	Up to 2mm buccal Up to 4mm lingual/palatal	Very low gingival height	Up to 4mm buccal Up to 6mm lingual/palatal	Up to 2 mm buccal Up to 4 mm lingual	Up to 4mm buccal Up to 6mm lingual/palatal	Grinding the abutment to meet the gingival height	Up to 4mm buccal Up to 6mm lingual/palatal	According to gingival height available in heights of 1,2,3,4mm	According to gingival height available in heights of 1,2,3,4mm
Catalog Number	MD-A1510 MD-A2510	MD-CTP10	MD-CR010	MD-AN151 MD-AN251	MD-P1530 MD-P2530	MD-MAC10 MD-WMAC1	MD-A0010 MD-P0030	MD-CPS01 MD-CPS02 MD-CPS03 MD-CPS04	MD-TAD10 MD-TAD20 MD-TAD30 MD-TAD40
Abutment ▶ description	Esthetic angulated abutment	Direct conical titanium post	Zircon - Zro2 abutment	Angulated abutment	Esthetic angulated abutment	Cementing abutment	Esthetic abutment	Anatomic transgingival abutment	Direct cementing transgingival post
									
									

The MIS Esthetic Abutments

MIS offers a wide variety of esthetic abutments for cases of cemented restoration. This variety provides many options, with an emphasis on simplicity and convenience of restoration work. A simple procedure allows the adjustment of abutments as appropriate to the restored tooth.

The series of MIS esthetic abutments includes two types of abutments:

1. Direct abutment, with longitudinal axis aligned to the implant.
2. Angulated abutment, with longitudinal axis placed at an angle to the implant.

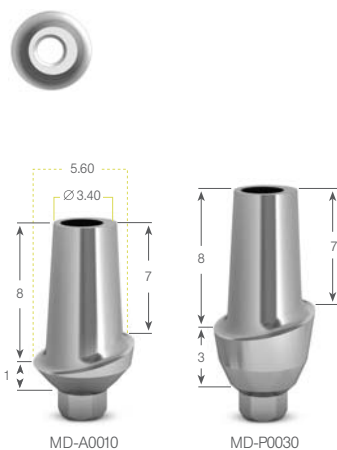
The esthetic titanium abutments are designed with a **sloping shoulder** end, which enables esthetic results in the buccal area by concealing the crown margins under the gingival. The sloping shoulder is contiguous with the abutment body; its purpose is to provide a total fit between the abutment and the metal coping.

On the lingual or palatal side, the crown margins allow for control over the removal of excess cement. The abutment body is eccentric, and therefore the width of the shoulder is

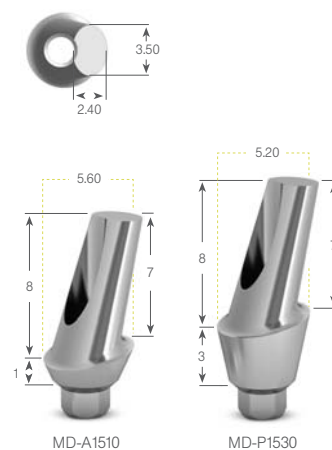
greater in the buccal area and will better accept the ceramic thickness. These abutments are available in either standard or wide platforms and are offered in two heights: 1mm (shoulder height) and 3mm (height on the anterior portion of the abutment).

Under proper anatomical conditions, the abutment may be used in six different positions for cemented restorations.

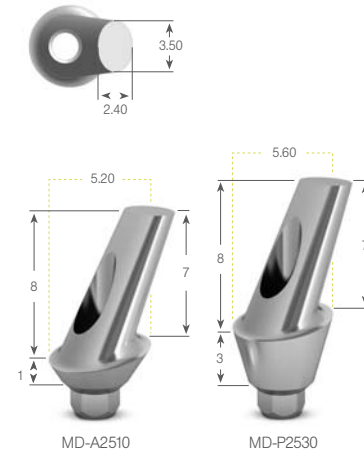
Esthetic abutment 0°

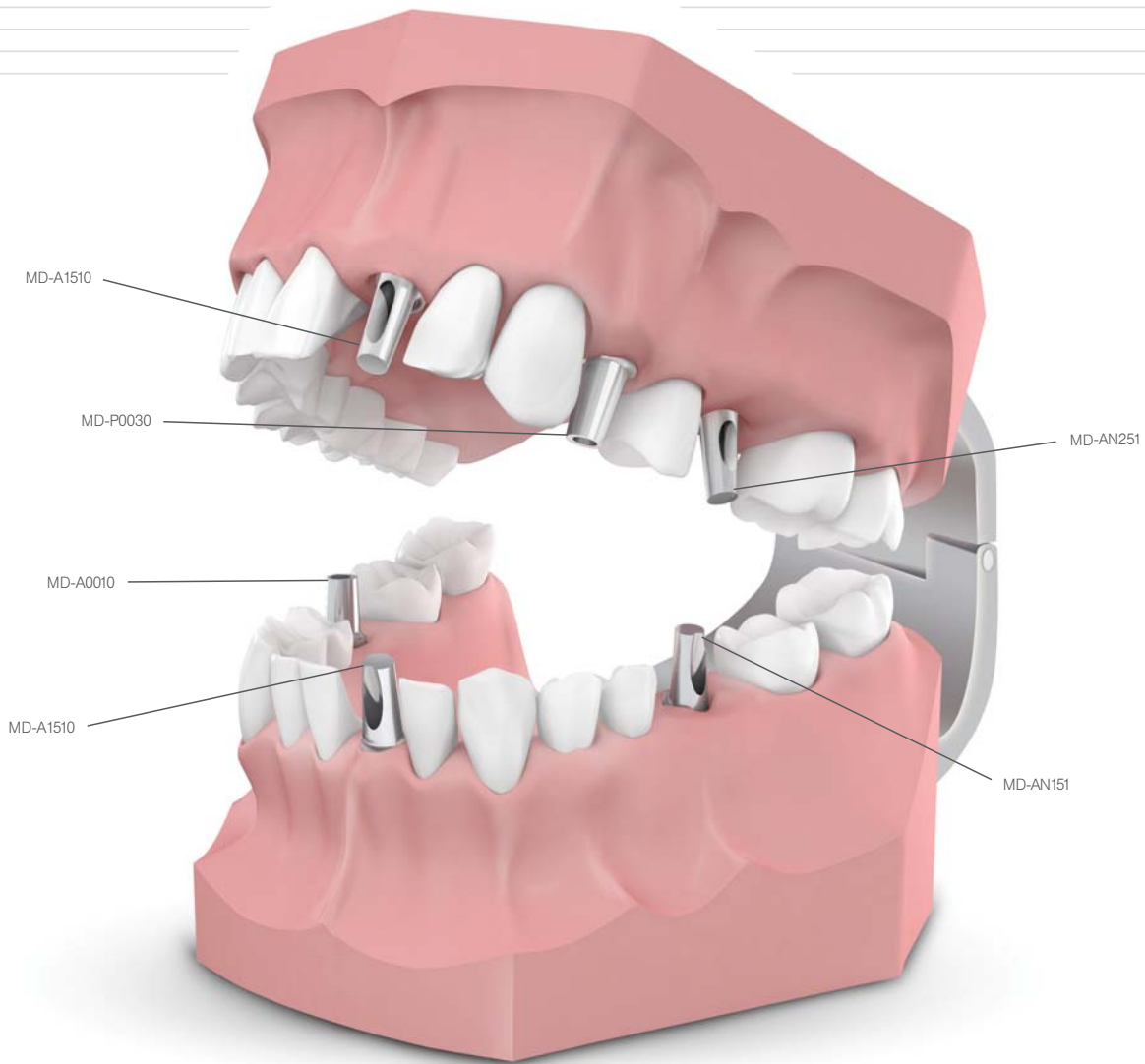


Esthetic angulated abutment 15°



Esthetic angulated abutment 25°





step 1.

Components:



Implant
MF7-13375



Closed tray
impression coping
MD-IT200



Prosthetic Screw
MD-S0220



Prosthetic Instrument
MT-HHR13

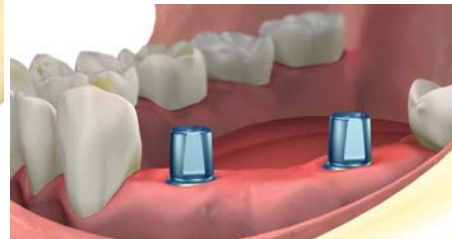
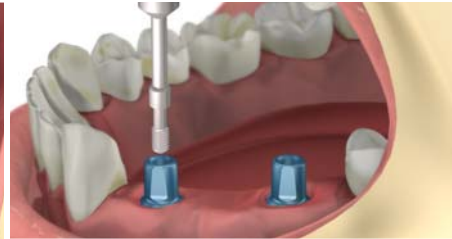
A. Implant exposure



Implants exposure

After the healing period, the restoration phase is started.

B. Using closed tray MD-IT200 impression abutments



Placing the closed tray impression abutments

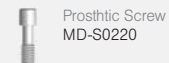
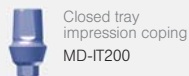
Place the closed tray impression coping abutments (MD-IT200) on the implants.

The MD-IT200 is attached by tightening an MD-S0220 screw using the MT-HHR13 hex. driver.

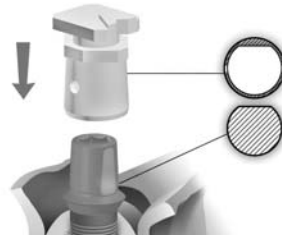
step 1

step 2.

Components:



A. Placing impression coping plastic caps

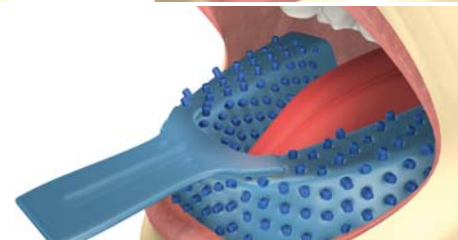
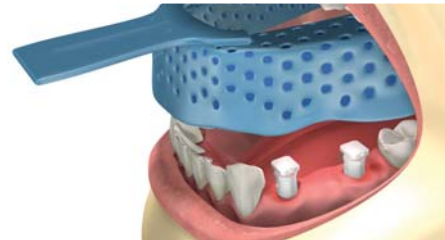


Placing impression coping plastic caps

Insert the impression coping plastic caps MM-MTP53 on the closed tray impression coping abutments MD-IT200.

The impression coping plastic caps MM-MTP53 should be placed on the MD-IT200, assuring that the arrow on the plastic coping corresponds to the flat facet of the abutment.

B. Taking the impression



Closed tray impression technique

For optimal impression the plastic coping must be fully seated and completely covered by impression material.

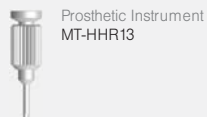
Recommendation:

The use of silicone impression material with high shore hardness (the hardness of a wide variety of rubber and soft plastics, as determined by the shore test) is recommended to ensure retention and stability of the impression transfer coping plastic caps in the impression material.

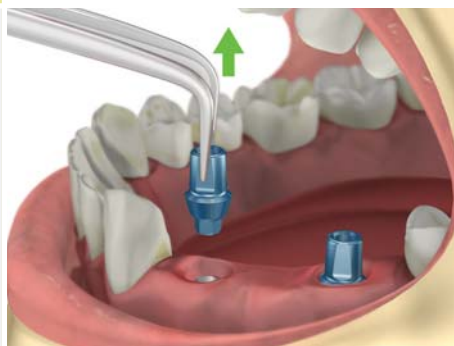
step 2

step 3.

Components:



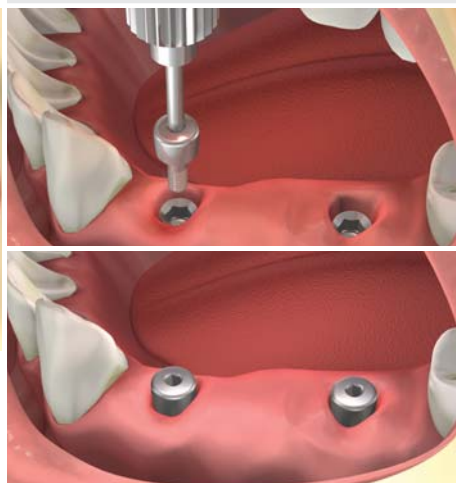
A. Removing the closed tray impression coping abutments



Removing the closed tray impression coping abutments

It is necessary to remove the closed tray impression abutments (MD-IT200) from the implants, in order to connect the titanium healing caps.

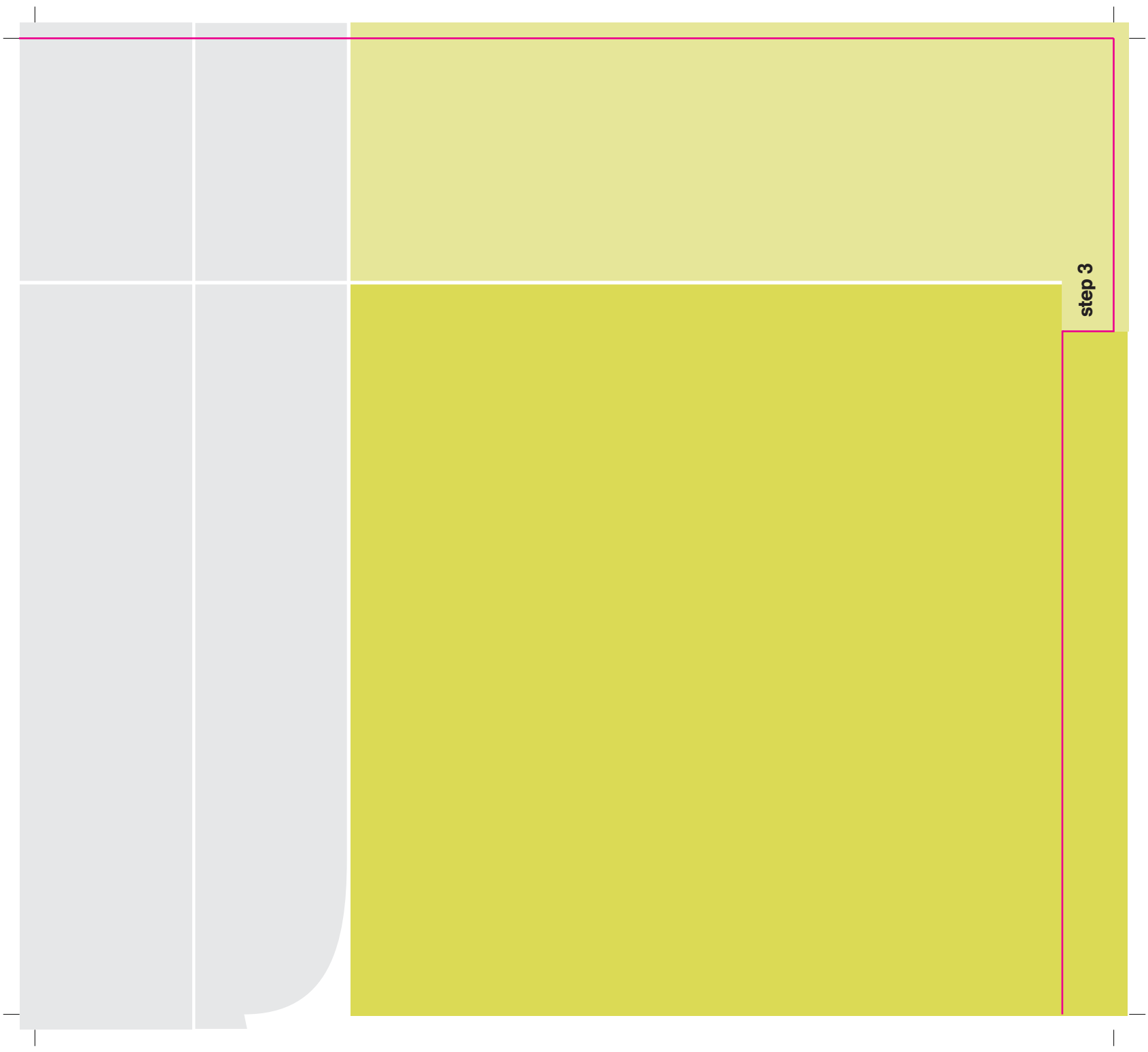
B. Placing standard or anatomic healing caps



Connecting standard or anatomic healing caps

Healing caps of appropriate heights and diameters are selected according to tissue thickness and placed on the implants.

The titanium healing caps are available in heights of 3mm to 6mm, in standard diameter (4mm) and anatomic diameter (5.5mm).



step 4.

Components:



Closed tray impression coping
MD-IT200



Prosthetic Screw
MD-SO220



Analog
MD-RSM10



Impression coping plastic cap
MM-MTP53



Prosthetic Instrument
MT-HHR13

A. Preparing the closed tray impression



Impression coping plastic caps

On the inverted closed tray impression, it is very important to confirm the accuracy and stability of the impression plastic caps.

B. Connecting implant analogs and impression abutments

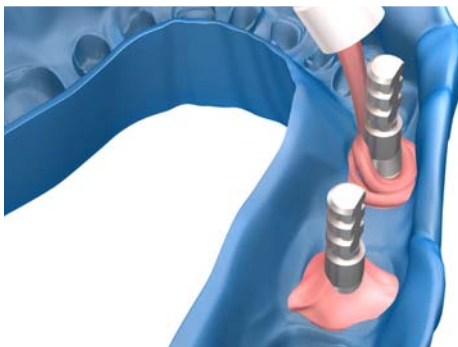


The implant analogs with the impression abutments placed in impression coping plastic caps

The implant analogs (MD-RSM10) are attached with the MD-SO220 screw to the closed tray impression abutments (MD-IT200), using the MT-HHR13 hex driver.

The whole is now placed in the impression coping plastic caps (MM-MTP53). A proper alignment free of gaps should be verified.

C.
Simulation of gingiva

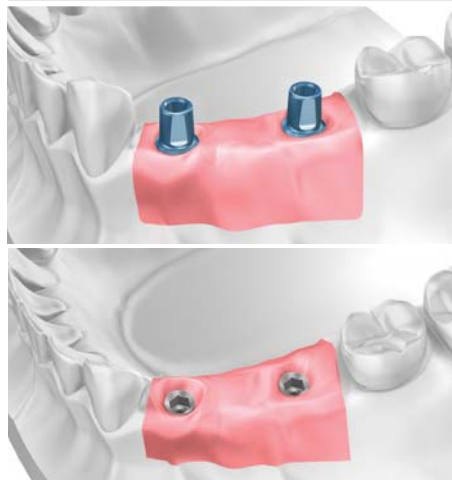


Injecting impression material around analogs and impression abutments

At this stage, injecting silicone material around the neck of the analogs and impression abutments simulates the gingiva and facilitates access to the implant analogs for laboratory work.

Note:
Isolating the impression material from the simulated gingiva with special isolation material is recommended in order to avoid connection between the two materials.

D.
Preparing the stone model



Stone model

Use the final impression to create a master cast model.
After the stone model has hardened, the closed tray is removed, leaving the impression coping plastic caps inside the tray.

The closed tray impression coping abutments (MD-IT200) on the master model should be removed from the implant analogs (MD-RSM10) with the MT-HHR13 hex. driver.

step 5.

Components:



Analog
MD-RSM10

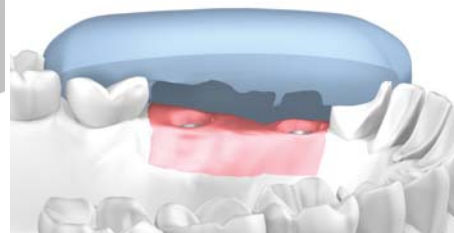
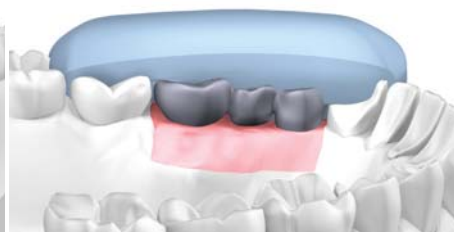
A.
**Preparing diagnostic
wax-up for silicone index**



A wax-up on the stone model

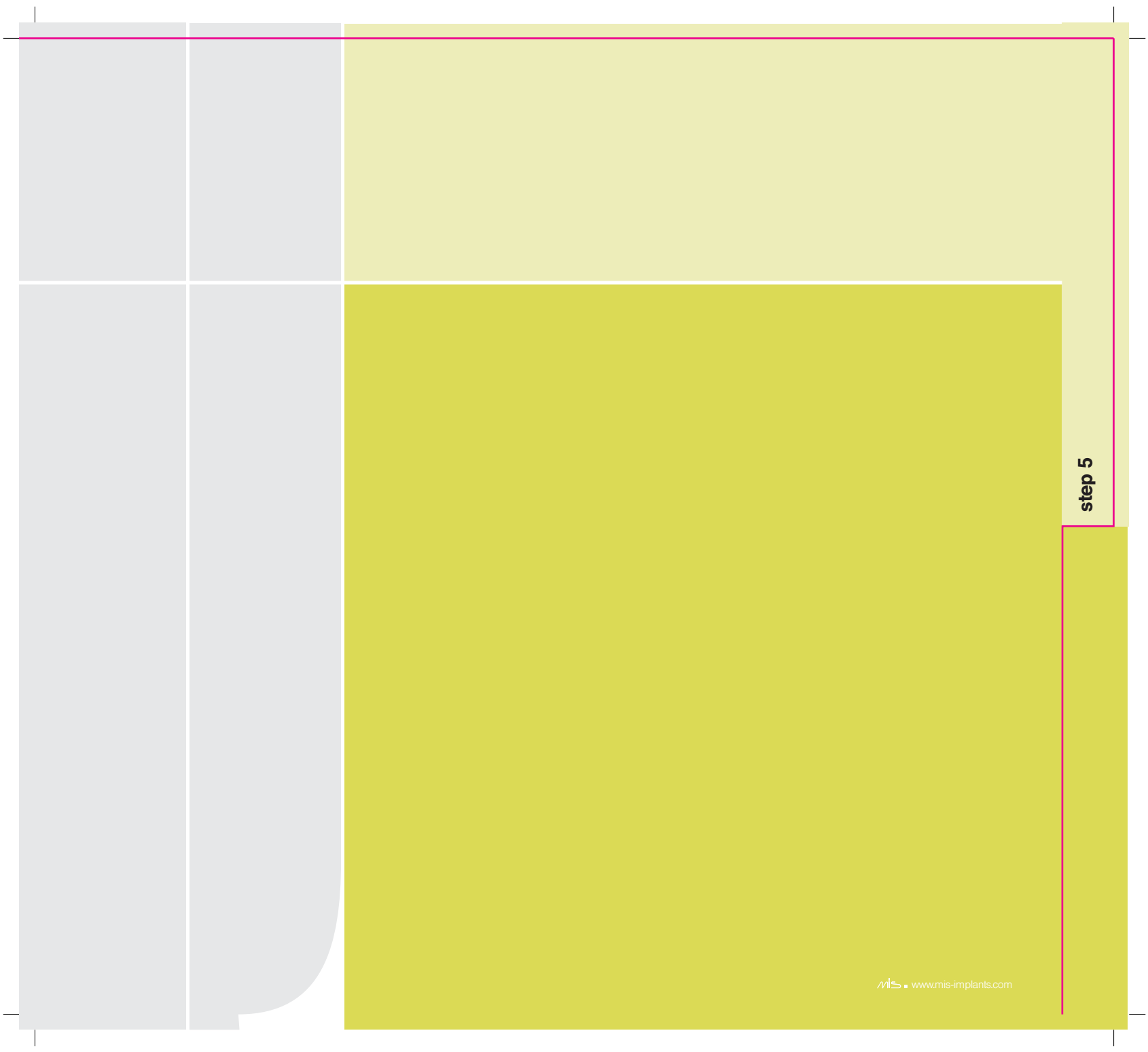
A wax-up of the missing teeth is prepared on the master model, filling the space between adjacent and opposite teeth.

B.
Silicone index



Silicone index

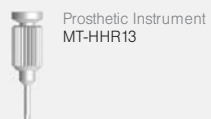
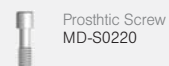
A silicone index is prepared, serving as a negative replica of the wax-up.



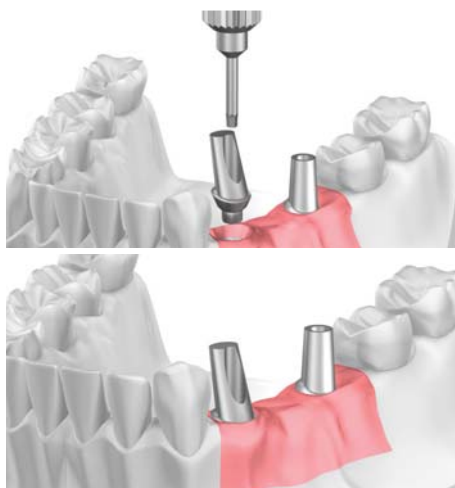
step 5

step 6.

Components:



A. Placing the esthetic abutments

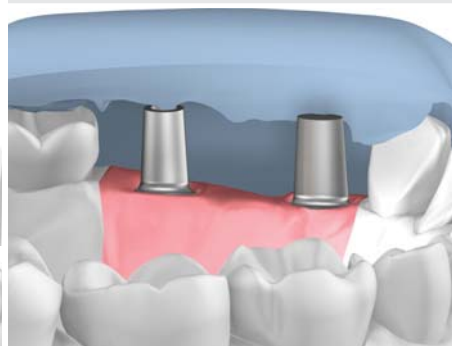


The esthetic abutments on the stone model

Using the silicone index, esthetic abutments with appropriate angulations and gingival highest are selected.

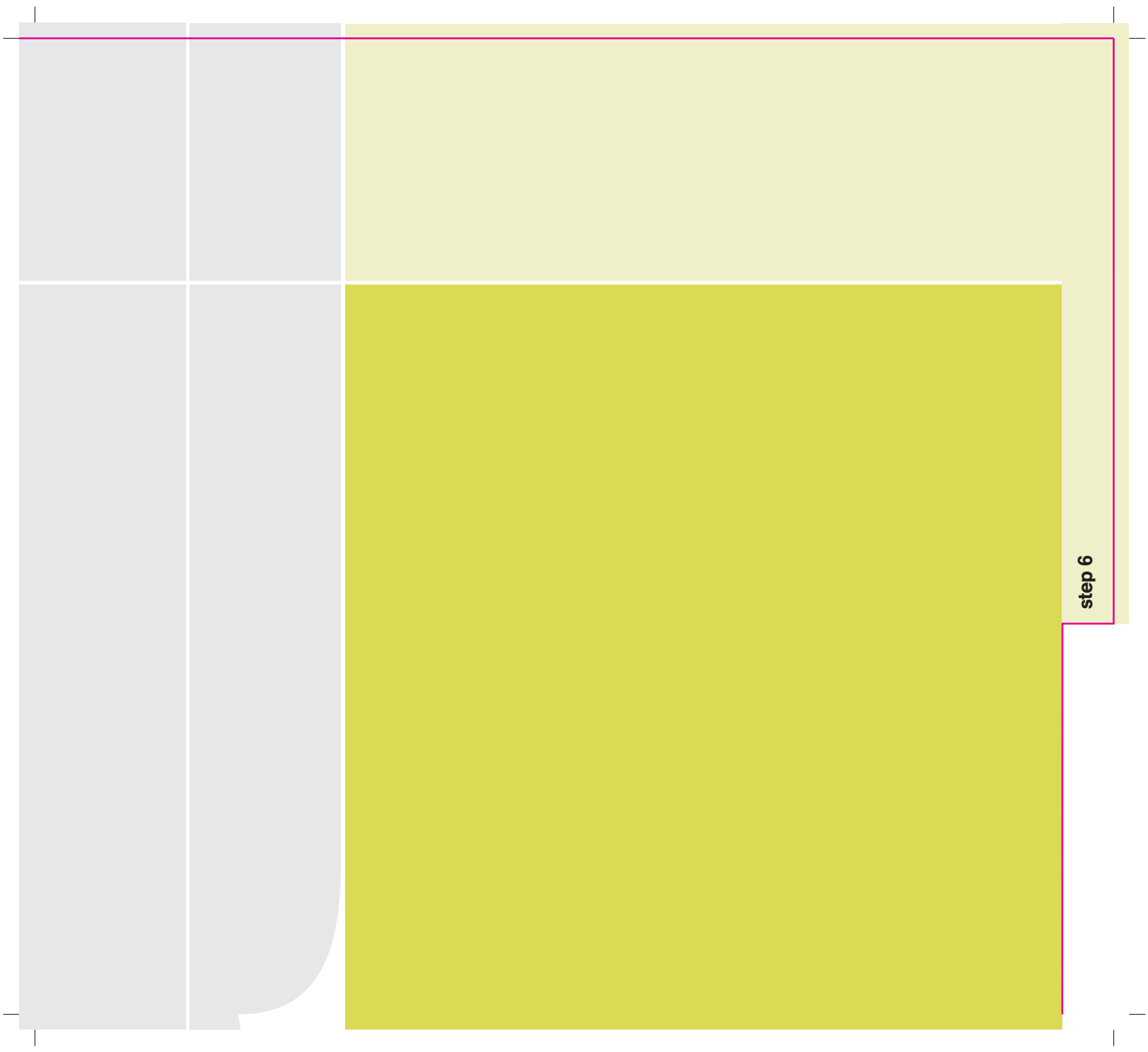
Place the selected abutments on the implant analogs (that are inside the stone model), by tightening an MD-S0220 screw using the MT-HHR13 hex. driver. The directions of the abutments slope fit the straight facet of the implants. The sloping shoulder is contiguous with the abutment body in order to provide a perfect fit between the abutments and the metal cast.

B. Adjusting the abutments



Silicone index on the esthetic abutments

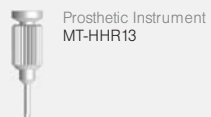
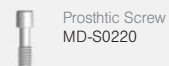
The silicone index is used to select and adjust the esthetic abutments.



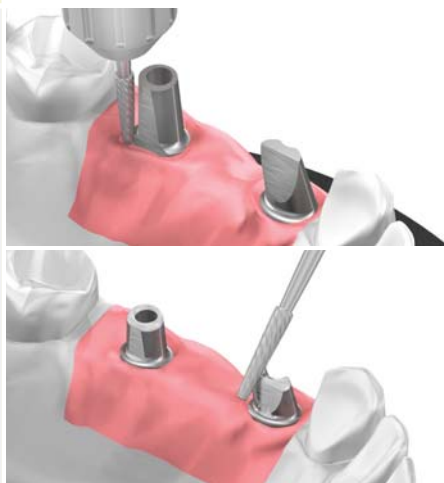
step 6

step 7.

Components:



A. Adapting the esthetic abutments



Parallelism correct height and margin processing

The esthetic abutments are adapted in height according to the silicone index.

The parallelometer is used for the periphery adjustment. The desired margin contour and height are achieved by grinding the abutments.

B. Measuring the grounded abutments



Measuring the grounded abutments

The silicone index is used to measure the grounded abutments.

step 7

step 8.

Components:



Analog
MD-RSM10



Esthetic abutment
MD-P0030



Esthetic angulated
abutment
MD-A1510



Prosthetic Screw
MD-S0220

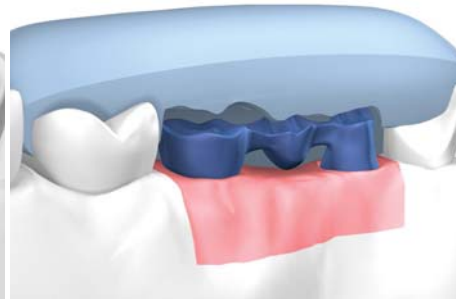
A. Wax carving



Wax carving

After adjustment and polishing of the abutments, wax carving takes place, leaving approximately 2mm of space for the porcelain, according to the silicone index.

B. Silicone index with wax-up



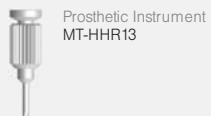
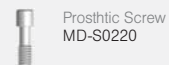
Silicone index with wax-up

The silicone index is used to verify that the remaining space is correct for the porcelain.

step 8

step 9.

Components:



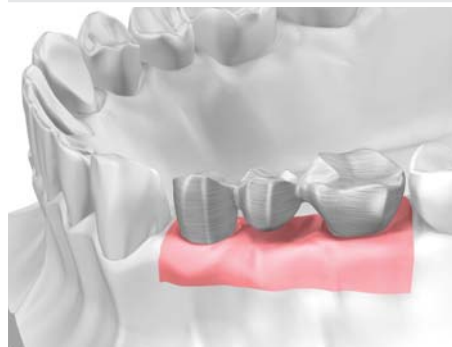
A. Metal Casting



Metal Casting

Conventional metal casting techniques are followed. Metal framework is realized.

B. Metal framework on the stone model



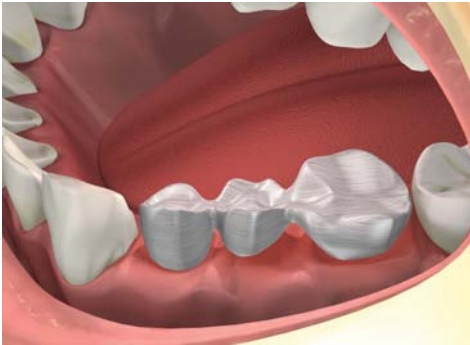
Metal framework on the stone model

The metal framework is verified and adapted on the abutments according to conventional laboratory techniques.

Note:

The laboratory technician must assure that perfect adaptation and passive fit have been achieved in this stage. The cast bridge on the stone model must be checked to ensure that it fits the abutments' exterior.

C.
**Metal framework in
the patient's mouth**

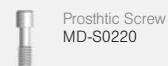


Metal framework in the patient's mouth

Accuracy of metal framework is verified in the patient's mouth. Special attention must be given to the passive fit of the metal framework on the prosthetic abutments, using an x-ray for confirmation.

step 10.

Components:



A. Porcelain on the plaster model



Porcelain on plaster model

Following the selection of the appropriate shade, the porcelain is fired onto the metal cast and the porcelain bridge is placed on the plaster model. The process is performed according to routine laboratory procedures.

B. Porcelain in mouth














Porcelain in mouth



























Prior to placing the bridge, the healing caps are removed from the patient's mouth. The esthetic abutments are connected, and proximal contacts and occlusion of the porcelain bridge in the mouth are checked and adapted as required.

After the laboratory work is completed, the bridge is cemented on the esthetic abutments using the MIS cement crown set.

Restorative procedure
Standard Platform

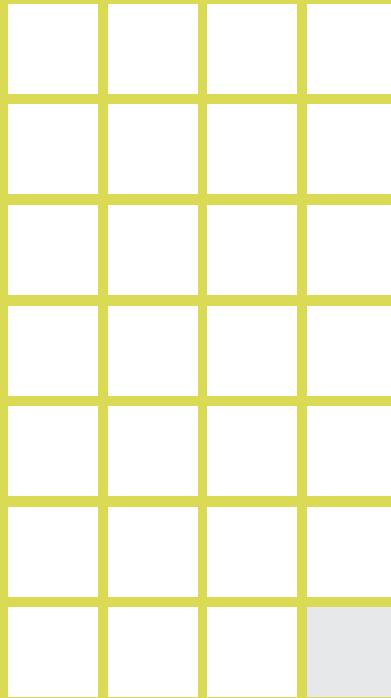
		Prosthetic options								
Healing caps		Impression coping	Analog	Anatomic transgingival abutments		Angulated abutment	Esthetic angulated abutment	Cementing post	Esthetic abutment	
Standard	Anatomic									
 BioCom Ø 3.30mm Ø 3.75mm Ø 4.20mm	 Ø 4mm H-3,4,5,6 MH-03375 MH-04375 MH-05375 MH-06375	 Ø 5.5mm H-3,4,5,6 MH-53375 MH-54375 MH-55375 MH-56375	 MD-I0375  MM-MTP53  MD-IT200	 MD-RSM10	 MD-CPS01 MD-CPS02 MD-CPS03 MD-CPS04	 MD-TAD10 MD-TAD20 MD-TAD30 MD-TAD40	 MD-AN151 MD-AN251	 MD-A1510 MD-P1530 MD-A2510 MD-P2530	 MD-CTP10 MD-MAC10 MD-WMAC1	 MD-A0010 MD-P0030
	 Seven Ø 3.75mm Ø 4.20mm				 MM-APC49 (Anti rotation)	 ED-CPH80				 MD-CR010
				 MD-CPC49	 ED-CP080					
				 Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	 Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	 Screws MD-S0200 MD-S0220	 Screws MD-S0200 MD-S0220	 Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	 Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	
				 MD-G0220	 MD-G0220	 MD-G0220	 MD-G0220	 MD-G0220	 MD-G0220	

Restorative procedure
Wide Platform

		Prosthetic options									
		Healing caps		Impression coping	Analog	Anatomic transgingival abutments		Angulated abutment	Esthetic angulated abutment	Cementing post	Esthetic abutment
		Standard	Anatomic			MW-CPS01	MW-TAD10	MW-AN151	MW-P1510	MW-CTP10	MW-P0010
 BioCom Ø 5mm	 MH-W3500 MH-W4500 MH-W5500	 MH-W3630 MH-W4630 MH-W5630	 MW-I0470	 MW-RSM10	 MW-CPS02 MW-CPS03 MW-CPS04	 MW-TAD20 MW-TAD30 MW-TAD40			 MW-MAC10		
	 Seven Ø 5mm			 MM-MTP53	 MW-APC49 (Anti rotation)		 MW-CPC49				
	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220	Screws MD-S0200 MD-S0220	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	Screws MD-S0200 MD-S0220 MD-S0222 MD-S0224	
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ISO 13485:2003
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