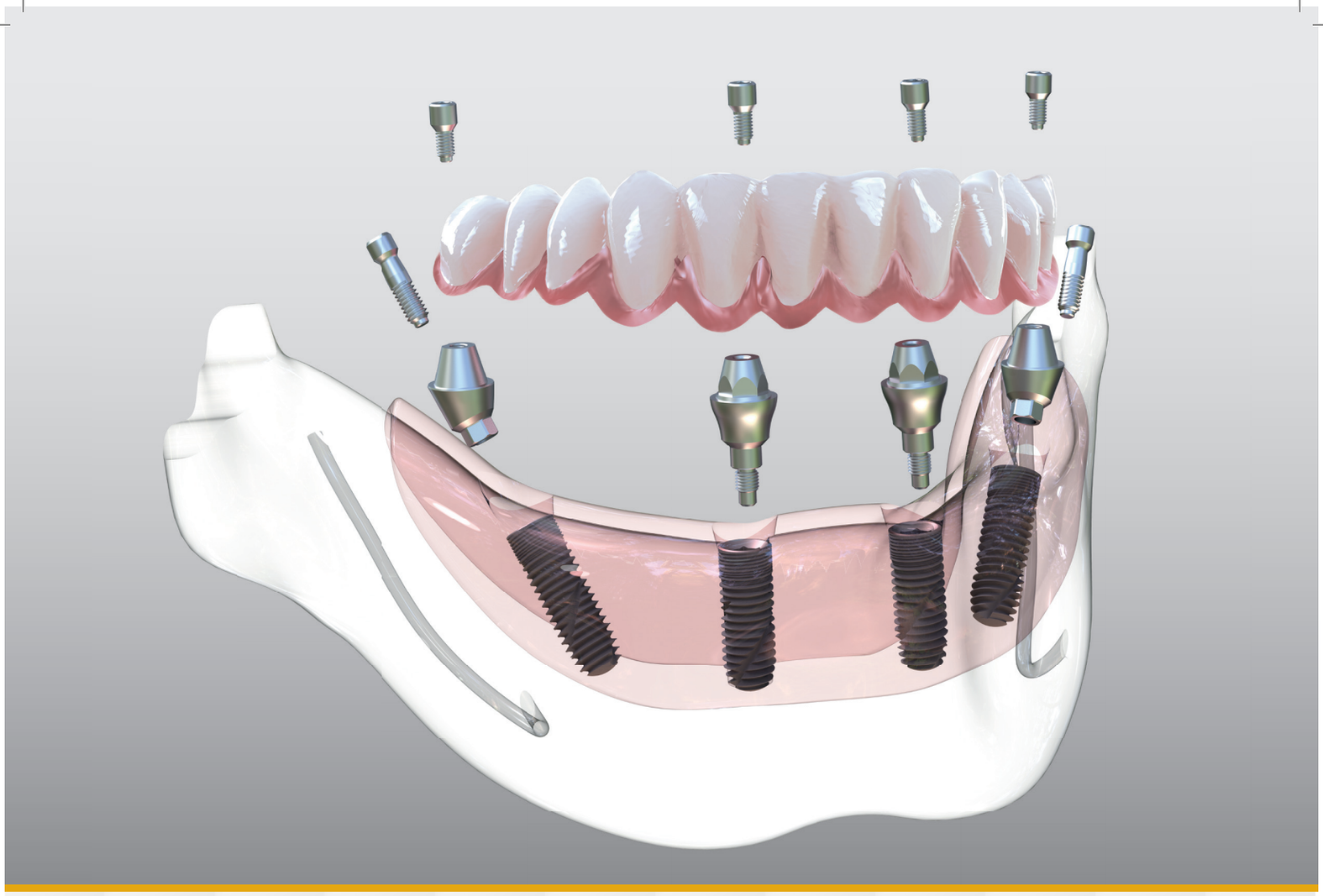


MANUAL
MULTI^{PLUS} SYSTEM

Occlusal screw-retained bridge and bar restorations in the edentulous jaw on 4 implants – New generation system abutments

Partners in Progress

BEGO

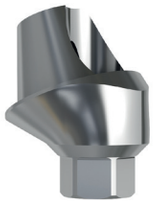
All Multi^{Plus} abutments have exactly the same connection geometry as the Multi^{Plus} prosthetics.

Implant dentistry is an irreplaceable part of modern dentistry. With the Multi^{Plus} range of prosthetics for BEGO Semados® implants, we offer you a screw-retained treatment concept for edentulous jaws. It is often the case that small differences turn out to be the decisive factor when choosing a system. The high quality of the system is crucial for prosthetics. A wide range of prosthetics forms the basis of high-quality, aesthetic and functional patient care. Implant dentistry that is 'Made by BEGO' epitomises German cutting-edge technology at a reasonable price, perfectly combining durability, aesthetics and reliability.

* New version of the BEGO Semados® RI implants, with Platform Switch design

1.1 Multi^{Plus} abutments

PS Multi^{Plus} abutments



PS Multi^{Plus} abutments 20°

PS Multi^{Plus} abutments 30°

he Multi^{Plus} system offers another attractive prosthetic solution on at least four BEGO Semados® S/RI - RS/RSX implants in the edentulous lower or upper jaw. The quality of the Multi^{Plus} abutments is very precise and the practical application is reliable as always. The internal hex makes it easy to determine the position of the Multi^{Plus} abutment in the implant. Sterile Multi^{Plus} abutments and system components enable immediate insertion of implants.

Systematic design

- Threaded connection for limited removal of the prosthesis
- Internal hex prevents rotation of abutments
- Optimum application for BEGO Guide
- Shorter duration of treatment thanks to an efficient treatment process
- The temporary restoration can be produced in advance

Systematic concept

- Tray impressions at the Multi^{Plus} level
- System-dependent components for open and closed tray impressions
- Wide variety of prosthetic options based on a wide range of abutments for either provisional or permanent restoration
- The 3Shape Scanner from BEGO Medical GmbH ensures stress-free implant prosthetics using CAD/CAM

Systematic solutions

- Treatment concept to avoid elaborate augmentation procedures
- Major implant divergences accommodated using various angled abutments
- The anatomical structure is preserved by offsetting the distal implants
- Occlusal screw-retained bridge and bar restorations

1.2 Details and information

Bridge produced using CAD/CAM on 4 BEGO Semados® implants

Occlusal screw-retained restorations

The occlusal screw-retained Multi^{Plus} prosthetic components extend the spectrum of indications and thus the treatment options for the limited removal of restorations on BEGO Semados® S/RI - RS/RSX implants.

Warnings

Multi^{Plus} system components are not suitable for creating single-tooth restorations. Do not use Multi^{Plus} abutments for BEGO Semados® S/RI - RS/RSX implants with Ø 5.5. Do not use PS Multi^{Plus} (Multi^{Plus} Abutment Platform Switch) for S/RI implants without the Platform Switch Design. he gingival height should first be determined so that the appropriately angled Multi^{Plus} abutment can be selected. None of the Multi^{Plus} abutments are suitable for direct bonding of ceramics or for casting / soldering. The connecting surface to the implant, the Multi^{Plus} abutment and the entire Multi^{Plus} abutment should not be blasted or finished. The fit is predetermined according to industrial specifications. Multi^{Plus} positioning aids are designed for single use only and should be used exclusively for positioning the Multi^{Plus} abutments. Never insert an instrument into the secondary thread of the Multi^{Plus} abutment.

Warranty

Whether provided verbally, in writing or in the form of practical instructions, our recommendations for use are based upon our own experience and trials and can therefore only be considered guidelines. Our products are subject to continuous further development. We therefore reserve the right to make changes.

Multi^{Plus} animation

2.1 PS Multi^{Plus} abutments

Description	REF	Colour code	Size	Compatibility	Units	
PS Multi^{Plus} comprising: • PS abutment 0° • Multi^{Plus} positioning aid 0° Material: Titanium alloy (packaged sterile) Tool: Insertion instrument Multi^{Plus} abutment 0°	58100		0° GH 1	SC/SCX/RS/RSX/RI*3.25–3.75	1	
	58101		0° GH 3	SC/SCX/RS/RSX/RI*3.25–3.75	1	
	58102		0° GH 1	SC/SCX/RS/RSX/RI* 4.1	1	
	58103		0° GH 3	SC/SCX/RS/RSX/RI* 4.1	1	
	58104		0° GH 1	SC/SCX/RS/RSX/RI* 4.5	1	
	58105		0° GH 3	SC/SCX/RS/RSX/RI* 4.5	1	
PS Multi^{Plus} comprising: • PS Multi^{Plus} abutment 20° • Multi^{Plus} positioning aid 20° • Prosthesis screw Multi^{Plus} Material: Titanium alloy (packaged sterile) Tool: Hexagon screwdriver 1.25 mm	58108		20° GH 2.3-0.6	SC/SCX/RS/RSX/RI*3.25–3.75	1	
	58109		20° GH 4.0-2.3	SC/SCX/RS/RSX/RI*3.25–3.75	1	
	58110		20° GH 2.3-0.6	SC/SCX/RS/RSX/RI* 4.1	1	
	58111		20° GH 4.0-2.3	SC/SCX/RS/RSX/RI* 4.1	1	
	58112		20° GH 2.3-0.6	SC/SCX/RS/RSX/RI* 4.5	1	
	58113		20° GH 4.0-2.3	SC/SCX/RS/RSX/RI* 4.5	1	
PS Multi^{Plus} comprising: • PS Multi^{Plus} abutment 30° • Multi^{Plus} positioning aid 30° • Prosthesis screw Multi^{Plus} Material: Titanium alloy (packaged sterile) Tool: Hexagon screwdriver 1.25 mm	58116		30° GH 4.0-1.5	SC/SCX/RS/RSX/RI*3.25–3.75	1	
	58117		30° GH 4.0-1.5	SC/SCX/RS/RSX/RI* 4.1	1	
	58118		30° GH 4.0-1.5	SC/SCX/RS/RSX/RI* 4.5	1	

*New version of the BEGO Semados® RI implants with Platform Switch Design

2.2 Multi^{Plus} system components

Multi ^{Plus} impression sets / analogs

57522	Multi^{Plus} closed tray impressions L8	
57554	Multi^{Plus} closed tray impressions L12	
57523	Multi^{Plus} open tray impressions L8 (including screws)	
57524	Multi^{Plus} analog (1 unit)	
57525	Multi^{Plus} analog (4 units)	

Multi^{Plus} healing post

57520	Multi^{Plus} healing post L5	
57521	Multi^{Plus} healing post mushroom L5	

Multi^{Plus} prosthetic components

57526	Multi^{Plus} titanium abutment (including technician screw and secondary screw)	
57538	Multi^{Plus} universal abutment (including technician screw and secondary screw)	
58240	Multi^{Plus} MC (2 units)	
58255	CADP Multi^{Plus} (dental restoration produced for CAD/CAM)*	

Multi^{Plus} prosthetic components

57532	Multi^{Plus} insertion splint	
57530	Multi^{Plus} adjustment supporter 20°	
57531	Multi^{Plus} adjustment supporter 30°	
57540	Multi^{Plus} internal reamer (screw) including reamer handle	
57539	Multi^{Plus} external reamer (cone) including reamer handle	
57535	Multi^{Plus} prosthesis screw (M1.8; internal hex)	
57534	Multi^{Plus} secondary screw (M1.4; internal hex)	
57533	Insertion tool Multi^{Plus} abutment 0° with ratchet connection	
57551	Multi^{Plus} bone shaper S/SC/SCX 3.25	
57541	Multi^{Plus} bone shaper S/SC/SCX 3.75	
57542	Multi^{Plus} bone shaper S/SC/SCX 4.1	
57543	Multi^{Plus} bone shaper S/SC/SCX 4.5	

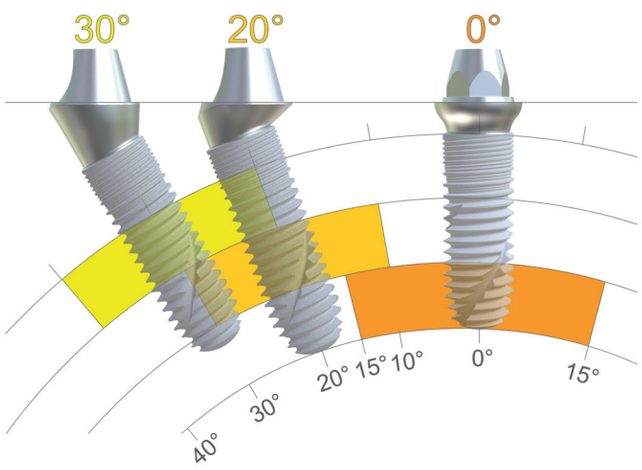
*Only in combination with the associated material data library

3.1 Implant divergences, lengths and diameters

Please note the following points when planning your implants

- The implant length and the corresponding depth drill that is to be used depending on the desired angle of the implants is shown in the following diagram.
- Ensure that the diameter of the implants is appropriate. In region 4 the diameter is at least 3.75 and in region 5 at least Ø 4.1. For the approved indications, please refer to the instructions for use enclosed with the implant.
- The maximum angle of the abutments is 30°. Implant divergences can be compensated up to a maximum of 40°.
- The minimum distance of the implant beds must be selected such that each implant apex is at least 3 mm away from the next apex.
- Each prosthetic restoration must be planned on at least 4 implants.

∠ L	10	11.5	13	15
0°	short	short	short	short
20°	short	short	short	long
30°	short	short	long	long



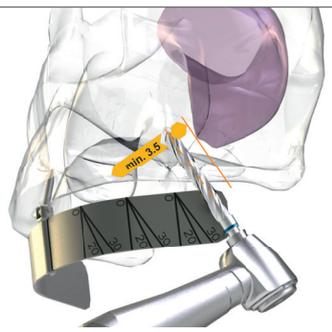
The mounted cone always has a height of 3 mm and a cone angle of 30°.

Angulation diagram: Multi^{Plus} abutments on BEGO Semados® implants

3.2 Preparing the (posterior) implant bed

Edentulous mandible with inferior alveolar nerve

Before starting the treatment in the mandible, you should locate the mental foramen and the inferior alveolar nerve on both sides.



Cranium with visible maxillary sinuses

For implantation in the maxilla, first locate the position of the maxillary sinus. When preparing the implant bed, ensure that you maintain a distance of at least 3.5 mm from the wall of the maxillary sinus and the position of the preparation is as posterior as possible. Mark the implant position.

Warnings

Multi ^{plus} abutments for Ø 5.5 are not available.

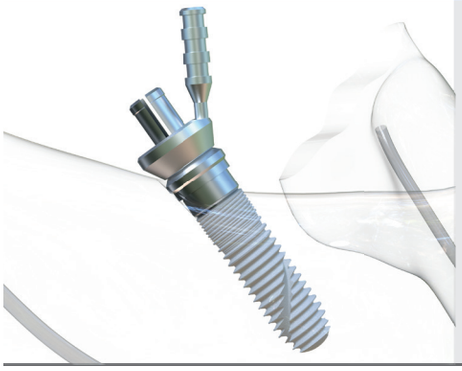
3.3 Working with the Multi^{Plus} insertion splint

After exposing the bone bed, drill a hole of approximately 8 mm depth in the centre of the alveolar ridge. For this purpose, use a drill with a 1.6 mm diameter (e.g. the pilot drill short/long).

Place the guide pin of the Multi^{Plus} insertion splint into the drill channel and note the desired angulation for the preparation from the insertion splint. Prepare the implant bed as usual in accordance with the drilling protocol for the BEGO Semados® S/RI - RS/RSX implant up to a maximum angle of 30°. It is essential that you use only the depth drills that are appropriate for the planned implant lengths and the desired divergence (see page 8). Complete the preparation of the cavity, if required, using the help of a countersink or a similar bone shaper (e.g. Multi^{Plus} bone shaper). Use all the processing tools intermittently. In general, appropriately sized implants should always be used in the posterior region (min. Ø 4.1 mm).

Warnings Multi^{Plus} abutments for Ø 5.5 are not available.

3.4 Aligning the internal hex for angled implants



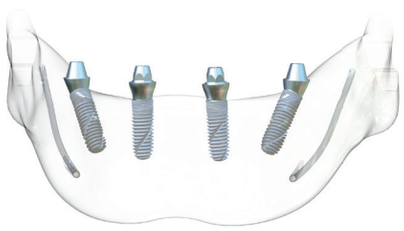
Mount the Multi^{Plus} adjustment supporter onto the implant insertion post and check
(1.) the alignment of the implant internal hex (the adjustment supporter is always aligned towards the surface of the internal hex) and
(2.) the divergence to be accommodated to ensure that the Multi^{Plus} abutments chosen are correct (20° or 30°).

Adjust
(1.) the implant position / implant internal hex position, if necessary, by minimal insertion or removal of the implant (Multi^{Plus} abutments 20°/30° are always angled using the hexagonal faces) and select the
(2.) correctly angled abutment using the adjustment supporter 20° or 30°.

3.5 Placing the angled Multi^{Plus} abutments

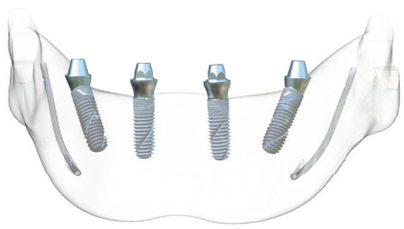
Remove the required angled Multi^{Plus} abutment from the packaging and position it in the appropriate implant with the help of the Multi^{Plus} positioning aid, which is supplied in the secondary thread of the angled abutment. Using the Multi^{Plus} prosthesis screw, screw the selected angled Multi^{Plus} abutment into the implant (torque: 30 Ncm; tool: hexagon screwdriver 1.25 mm).
Unscrew the positioning aid from the secondary thread of the angled Multi ^{plus} abutment by turning it anticlockwise until the prosthesis screw can be introduced unimpeded into the abutment through the screw channel.
The impression should in principle be taken on the Multi^{Plus} abutments (Multi^{Plus} level). The Multi^{Plus} abutments remain in the patient's mouth after taking the impression. Direct impression taking in the implant (implant level) should be avoided because this may lead to inaccuracies in the impression because of the angled position of the implant, which will compromise the secure fit of the finished prosthesis.

3.6 Preparing the (anterior) implant bed and placing the straight Multi^{Plus} abutments



Prepare the implant site as usual in accordance with the drilling protocol for the BEGO Semados® implant. Complete the preparation of the cavity, if required, using a countersink or a similar bone shaper (e.g. Multi ^{Plus} bone shaper). Use all the processing tools intermittently.
Remove the required straight Multi^{Plus} abutment from the packaging and position it in the appropriate implant with the help of the Multi^{Plus} positioning aid, which is supplied on the cone of the abutment. Using the positioning aid, screw the selected straight Multi^{Plus} abutment temporarily into the implant (hand-tight). Remove (pull out) the positioning aid from the abutment and screw the abutment in permanently (torque: 30 Ncm; tool: insertion instrument Multi^{Plus} abutment 0°).

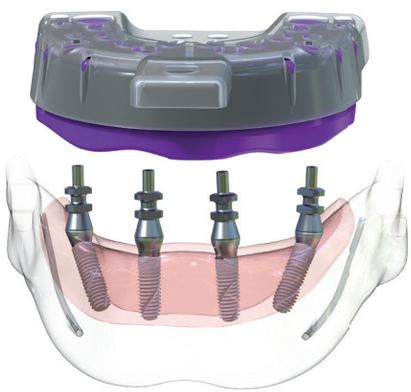
4.1 Multi^{Plus} open/closed tray impressions



The impression is taken over the permanently positioned Multi ^{plus} abutment. Please use a silicone or polyether impression material with high elastic recovery. Hydrocolloids are not suitable for this purpose. Select the Multi^{Plus} open or closed tray impression depending on the situation. When taking impressions for emergency restorations, the palate and the tuberosities are included depending on the basic form selected subsequently.

By inserting the Multi^{Plus} abutment the working plane is shifted from the implant interface to the gingival level. The Multi^{Plus} abutments act as a distance sleeve enabling you to work above the mucosa.
After completing the surgical preparation and wound closure, screw in either the Multi^{Plus} closed tray impression L8 (type no. 57522), closed tray impression L12 (type no. 57554) or the Multi^{Plus} open tray impression (type no. 57523). If necessary,
the existing prosthesis can be used for taking the impression. Grind out the position of the impression posts in the prosthesis and ensure that there is adequate room and no contact with the prosthesis. We recommend using a wax sheet to seal the holes drilled for the impression in the prosthesis or the individual tray in case of open tray impressions. This prevents the impression compound from oozing out.

4.2 Tray impressions at the Multi^{Plus} level



Multi^{Plus} open tray impressions

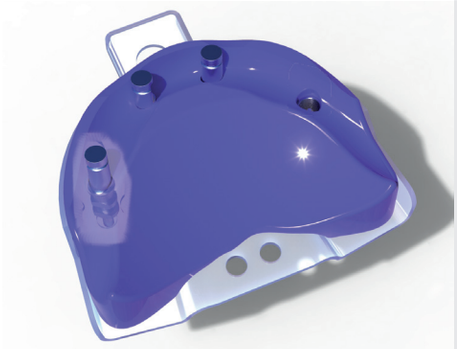
Mount the Multi^{Plus} impression post for open tray impressions on the Multi^{Plus} abutment and screw with the retaining screw tighten in the clockwise sense (hand-tight / 10 Ncm) (tool: hexagon screwdriver 1.25 mm). Check that the Multi^{Plus} impression post is seated without a gap (radiographic check if necessary). Use a custom or pre-fabricated tray to take the impression. Try out the tray and check that it fits. After the impression material has cured (follow the manufacturer's specifications), turn the retaining screw anticlockwise and remove it (tool: hexagon screwdriver 1.25 mm). Remove the impression tray / prosthesis from the patient's mouth. The Multi^{Plus} impression post for open tray impressions remains in the impression.
The impression should in principle be taken on the Multi^{Plus} abutments (Multi^{Plus} level). The Multi^{Plus} abutments remain in the patient's mouth after taking the impression. Direct impression taking in the implant (implant level) should be avoided because this may cause inaccuracies in the impression because of the angled position of the implant, which will compromise the secure fit of the finished prosthesis.

Multi^{Plus} closed tray impressions L8 / L12

Screw the Multi^{Plus} impression post for closed tray impressions clockwise onto the Multi^{Plus} abutment (hand-tight / 10 Ncm) (tool: hexagon screwdriver 1.25 mm). Check that the Multi^{Plus} impression post is seated without a gap (radiographic check if necessary). Use a custom or pre-fabricated tray to take the impression. Try out the tray and check that it fits. Once the impression material has cured (follow the manufacturer's specifications), remove the impression tray from the patient's mouth. The Multi^{Plus} impression post for closed tray impressions remains in the patient's mouth. Turn the Multi^{Plus} impression post anticlockwise to unscrew it from the Multi^{Plus} abutment and remove it from the patient's mouth.
The impression should in principle be taken on the Multi^{Plus} abutments (Multi^{Plus} level). The Multi^{Plus} abutments remain in the patient's mouth after taking the impression. Direct impression taking in the implant (implant level) should be avoided because this may cause inaccuracies in the impression because of the angled position of the implant, which will compromise the secure fit of the finished prosthesis.

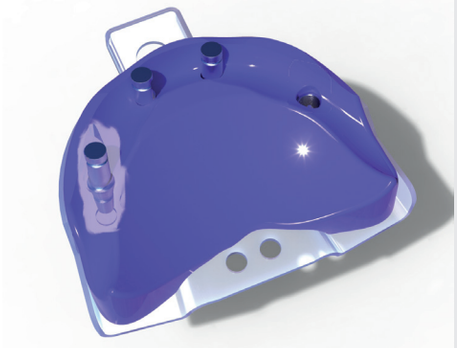
4.3 Fabricating models using Multi^{Plus} open/closed tray impressions

Note the elastic recovery of the impression material in the information provided by the manufacturer. Prepare a gingival mask according to the manufacturer's instructions. Use a suitable class 3 modelling plaster and follow the manufacturer's instructions.



Multi^{Plus} open tray impressions

Assemble the Multi^{Plus} analog and Multi^{Plus} impression posts for open tray impressions L8 / L12 and screw together by turning the retaining screw clockwise (10 Ncm) (tool: hexagon screwdriver 1.25 mm). Check for seating without gaps. Warning: Hold the Multi^{Plus} analog firmly with forceps when screwing in to prevent the Multi^{Plus} impression post from rotating in the impression. Once the plaster cures (note the manufacturer's instructions), turn the retaining screw anticlockwise. Remove the screws and the impression (Tool: Hexagon screwdriver 1.25 mm) The Multi^{Plus} impression post for open tray impressions remains in the impression.



Multi^{Plus} closed tray impressions L8 / L12

Assemble the Multi^{Plus} analog and the Multi^{Plus} impression post for closed tray impressions together and screw clockwise (10 Ncm; tool: hexagon screwdriver 1.25 mm). Reposition the Multi^{Plus} impression post in the impression. After the plaster cures (note the manufacturer's instructions), remove the impression. The Multi^{Plus} impression post for closed tray impressions remains on the model. Turn the Multi^{Plus} impression post anticlockwise and remove it (tool: hexagon screwdriver 1.25 mm).

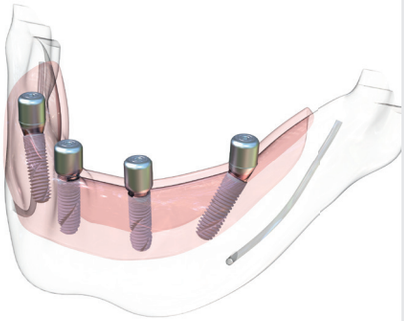
5. HEALING POSTS AND TEMPORARY RESTORATIONS

5.1 Safety instructions

Please closely observe the following points

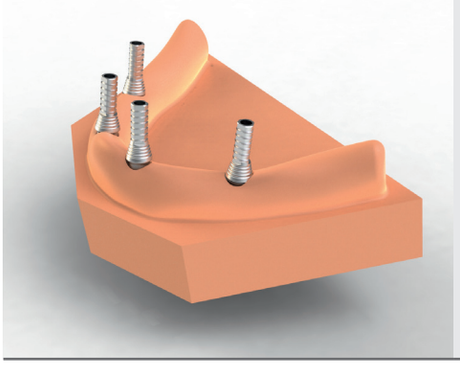
Multi^{Plus} system components are not suitable for the creating single-tooth restorations. Do not use Multi^{Plus} abutments for BEGO Semados® implants with Ø 5.5. Do not use PS Multi^{Plus} (Multi^{Plus} Abutment Platform Switch) for S/RI implants without the Platform Switch Design. First determine the gingival height to select the correct Multi^{Plus} abutment. None of the Multi^{Plus} abutments are suitable for direct bonding of ceramics or for casting / soldering. The connecting surface to the implant, to the Multi^{Plus} abutment and the entire Multi^{Plus} abutment should not be blasted or finished. The fit is predetermined according to industrial specifications. Multi^{Plus} positioning aids are designed for single use only and should be used exclusively for positioning the Multi^{Plus} abutments. Never insert an instrument into the secondary thread of the Multi^{Plus} abutment. When using the Multi^{Plus} healing posts, the (temporary) prosthesis used must never be allowed to rest on the healing posts and thus transmit chewing forces. The restoration must be generously hollowed out in this area. To avoid overloading the terminal implants, temporary bridge restorations using Multi^{Plus} titanium abutments for immediate loading must be fabricated without any extensions. The patient must be instructed to visit the dental surgery immediately if the restoration (temporary bridge) is damaged to avoid overloading the implants. Multi^{Plus} titanium abutments can be shortened extraorally only as far as the first groove above the cone.

5.2 Multi^{Plus} healing post / healing post mushroom



Turn the Multi^{Plus} healing post / healing post mushroom clockwise to screw it into the permanently fixed Multi^{Plus} abutment (10 Ncm; tool: hexagon screwdriver 1.25 mm). This prevents the mucosa growing into the Multi^{Plus} abutment. When using the Multi^{Plus} healing posts, the (temporary) prosthesis used must never be allowed to rest on the healing posts and thus transmit chewing forces. The restoration must be generously hollowed out in this area.

5.3 Multi^{Plus} titanium abutments for temporary restorations



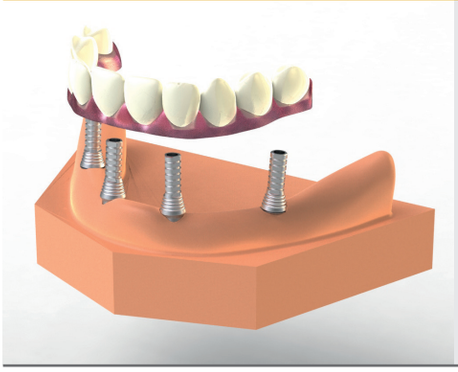
Using the Multi^{Plus} technician screw, screw the Multi^{Plus} titanium abutment onto the Multi^{Plus} analog. Fabricate a temporary restoration using the generally accepted procedures. When producing the temporary restoration you have the option to permanently polymerise only one Multi^{Plus} titanium abutment. The remaining abutments can then be polymerised free of stresses in the patient's mouth. The final design and polishing can be completed in the laboratory. After completed, the entire construction is transferred onto the Multi^{Plus} abutments 0° / 20° / 30° and tightened using the Multi^{Plus} secondary screw only (torque: 20 Ncm) (tool: hexagon screwdriver 1.25 mm).

6. PERMANENT RESTORATIONS

6.1 Safety instructions

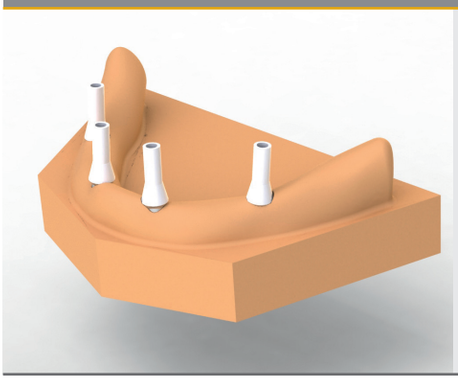
A wide variety of system components are available for producing permanent restorations with Multi^{Plus} abutments 0° / 20° / 30°. Depending on the situation, select the abutment to be used. After completion, the entire construction is transferred to the Multi^{Plus} abutments 0° / 20° / 30° within the mouth of the patient and tightened using the Multi^{Plus} secondary screw only (torque: 20 Ncm; tool: hexagon screwdriver 1.25 mm).
Bar or bridge extensions should not exceed the width of a premolar.

6.2 Multi^{Plus} titanium abutments



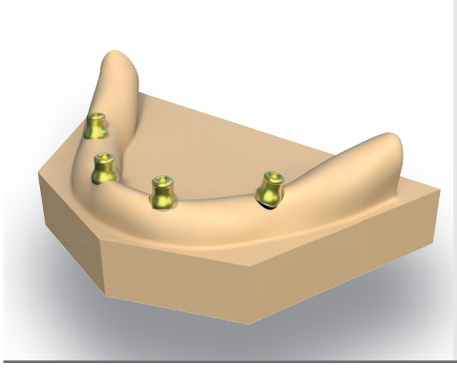
Using the Multi^{Plus} technician screw, screw the Multi^{Plus} titanium abutment onto the Multi^{Plus} analog. Shorten the Multi^{Plus} titanium abutment as required so that the it ends approximately 2–3 mm below the occlusion level (to the first groove above the cone at most). Prepare a plastic bridge using the generally accepted procedures. When producing the restoration you have the option to permanently polymerise only one Multi^{Plus} titanium abutment. The remaining abutments can then be polymerised free of stresses in the patient's mouth. The final design and polishing can be completed in the laboratory.

6.3 Multi^{Plus} universal



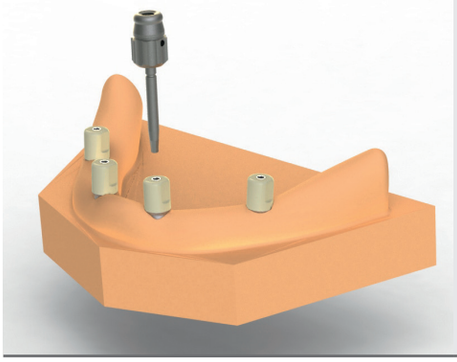
Using the Multi^{Plus} technician screw, screw the Multi^{Plus} universal abutment hand-tight onto the Multi^{Plus} analog. It can then be customised with the help of the prosthesis set-up.
Invest the Multi^{Plus} universal and cast with the alloy of your choice (note the manufacturer's instructions). For optimal fit of the Multi^{Plus} secondary screw, use the Multi^{Plus} internal reamer (screw). To fit perfectly with the Multi^{Plus} abutment use the Multi^{Plus} external reamer (cone). Turn the reamers clockwise only.

6.4 Multi^{Plus} MC



Screw the Multi^{Plus} MC hand tight onto the Multi^{Plus} implant analog (tool: Locator® insertion tool). Prepare a prosthetic restoration using a generally valid procedure with the aid of the Easy-Con laboratory set (REF 57752). When doing so, it is essential to follow the instructions for use included with the product. Optionally, the restoration can also be produced chairside. We recommend occlusal fenestration of the (existing) prosthesis to polymerise the Easy-Con female parts.

6.5 CADP Multi^{Plus}



Screw the CADP Multi^{Plus} with the secondary screw Multi^{Plus} with a torque of 15 Ncm onto the Multi^{Plus} implant analog.
To obtain a good scanning result, ensure that a flat surface of the Multi^{Plus} CAD positioner is facing the vestibular direction.
Scan the Multi^{Plus} CADP as usual. Follow the manufacturer's instructions for your dental scanner and if possible and/or necessary, also scan the opposing jaw or the bite registration.*

*Only in combination with the associated BEGO material data library

www.bego.com

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