Ball attachment Manual

combining the successful features in implantology

your comfort is our goal!

Introduction

The Dyna ball attachment system consists of a ball abutment and a matrix (female part).

Indications

Dyna ball attachments realize retention of (partial) overdentures, supported on implants.

Contraindications

All contraindications associated with elective prosthetic rehabilitation on implants should be noticed. The use of Dyna ball attachments is additionally contraindicated in situations where:

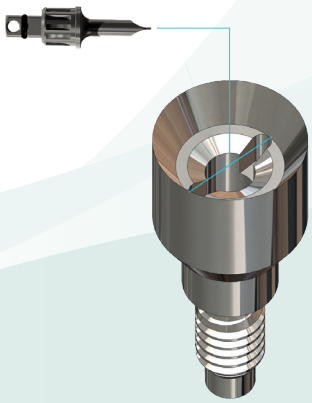
- proper articulation cannot be restored
- proper alignment of the male and female parts cannot be guaranteed
- patients are known to be allergic to one or several of the elements contained in the attachment materials. In case of doubt perform preliminary allergological testing

Ball abutments (closed ball)

Ball abutments (closed ball) need to be tightened with the Dyna square driver with 35Ncm (art.no. 10ST1)

Closed Ball abutment with octa								
Art. no	82EB0C*	82BL0C	82BL1C	82BL2C	82BL3C	82BL4C	82BL5C	82BL6C
								
Height on platform Ø4.0	0	0	1	2	3	4	5	6

* Special ball abutments are available for use on extension level abutments (82EB0C). These can be used in combination with extension level abutments (you need to use single slot driver 5081S), available in heights 2 up to 6mm (82EL2, 82EL3, 82EL4, 82EL5 and 82EL6). When replacing the ball part the dental professional will be able to keep the Extension Level abutments in position while the final abutment or construction will be placed, therefore enabling operating at mucosa level.

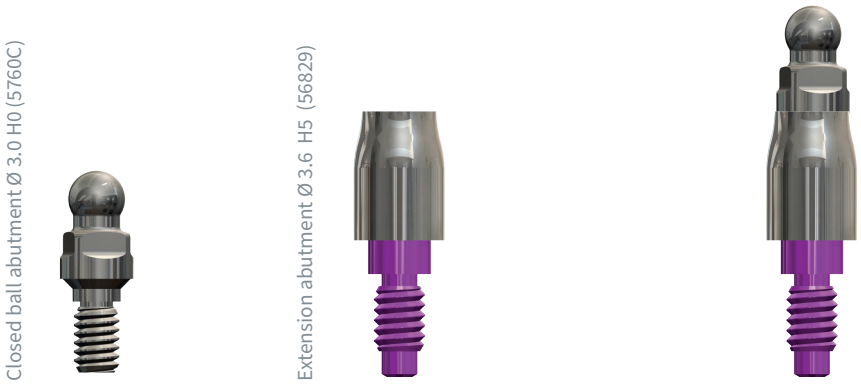


Ball abutments (closed ball) push-in conventional

Closed Ball abutment push-in conventional Ø 3.0 mm					
Art. no	5760C	5762C	5763C	5764C	5765C
					
Height	1	2	3	4	5

Closed Ball abutment push-in conventional Ø 3.6 mm				
Art. no	5792C	5793C	5794C	5795C
				
Height	2	3	4	5

6mm height can be achieved by using extension abutment H5mm (art.no. 56829, use single slot driver 5081S to tighten this) in combination with closed ball abutment 1mm Ø 3.0 (art.no. 5760C)



Closed Ball abutment push-in conventional Ø 4.0 mm			
Art. no	5783C	5784C	5785C
			
Height	3	4	5

Ball abutments (with internal hexagon)

Ball abutments (with internal hexagon) are delivered together with an impression spacer (5766).

These ball abutment have an internal hexagon in the ball itself that needs to be tightened with the Dyna hex driver (art.no. 5181S)

These type ball abutments are available untill they run out of stock and will not be newly produced:

Ball abutment with internal hexagon octa						
Art. no	82EB0*	82BL2	82BL3	82BL4	82BL5	82BL6
						
Height on platform Ø4.0	0	2	3	4	5	6

* Special ball abutments are available for use on extension level abutments (82EB0C). These can be used in combination with extension level abutments, available in heights 2 up to 6mm (82EL2, 82EL3, 82EL4, 82EL5 and 82EL6). When replacing the ball part the dental professional will be able to keep the Extension Level abutments in position while the final abutment or construction will be placed, therefore enabling operating at mucosa level.

Ball abutment with internal hexagon push-in conventional Ø 3.6 mm					
Art. no	5792	5793	5794	5795	5796
					
Height	2	3	4	5	6

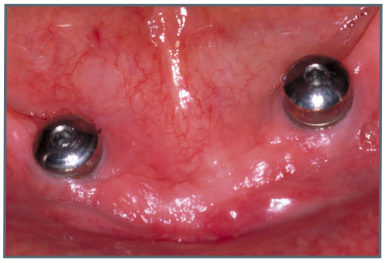
Components

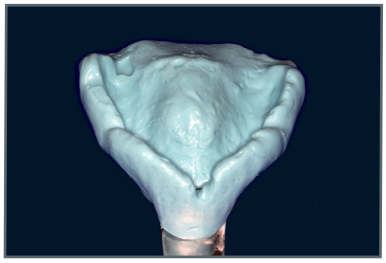
Laboratory patrices							
Art. no	5767C	5767C-2	5730C	5730C-2		02LP0	02LP02
		2x		2x			2x
For	closed	closed	Ø3.0	Ø3.0		int.hex	int.hex

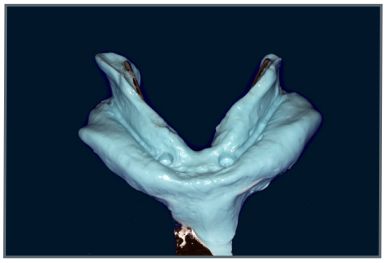
Instructions

CLINIC

It is recommended to determine the height of the ball abutment by using the markings on the healing abutment. This should be done after the healing period. Choose the lowest abutment possible (0,5mm to max. 1,5mm above mucosa level, taking the horizontal plane in consideration). Subsequently order the chosen ball abutments.
Make a full arch alginate impression of the maxilla and mandible. Send it to the lab to realize a working cast and impression tray.

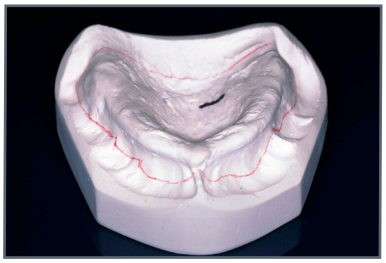


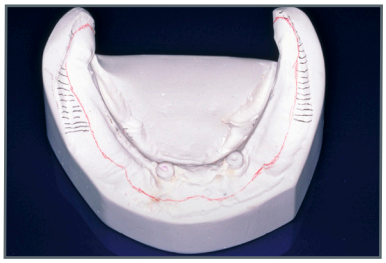


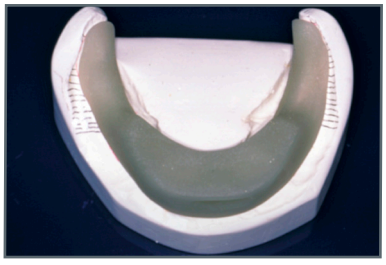


LABORATORY

Pour out the impressions and make the outlines for the individual impression tray.
Make the individual impression trays (closed tray technique). Realize sufficient space around the abutments and send the trays to the dentist.

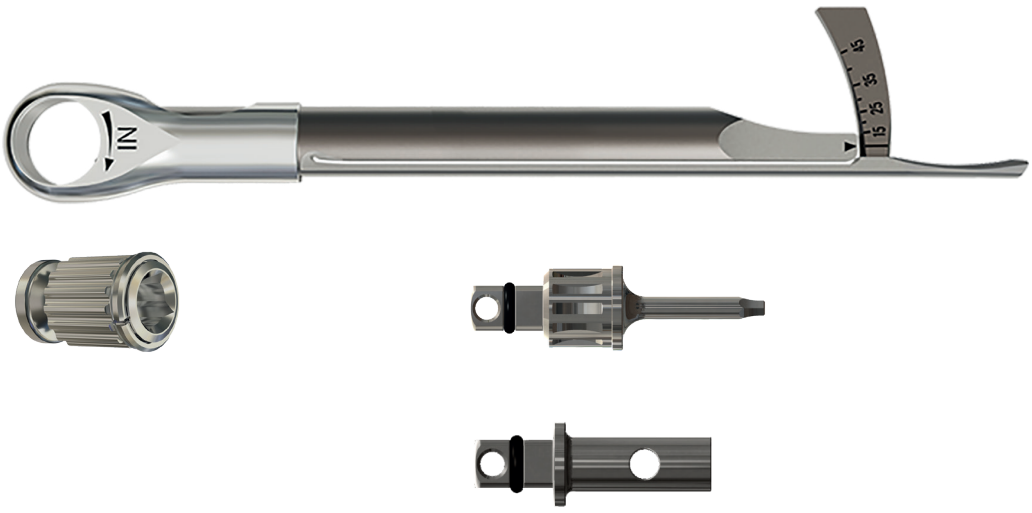


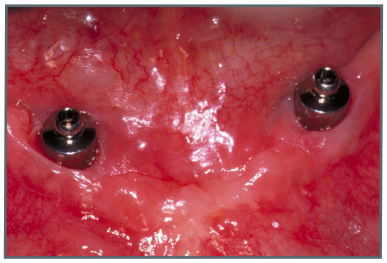


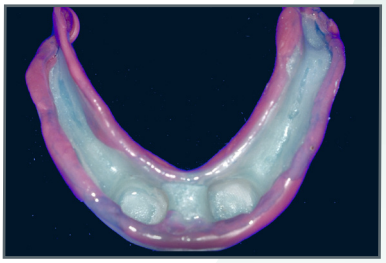


CLINIC

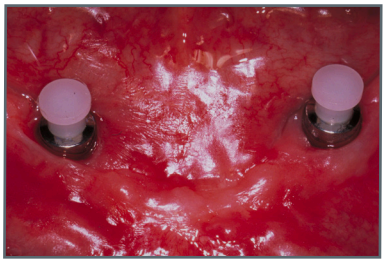
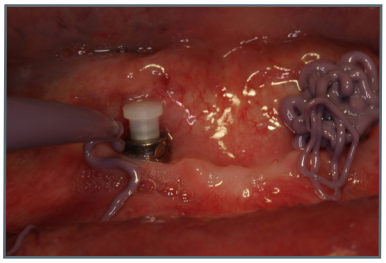
Remove the healing abutments with the Dyna Hex driver. Tighten the ball abutments with hex driver (art.no. 5181S for abutments with internal hexagon) or square driver (art.no. 10ST1 for abutments with a closed ball) and with the torque wrench (art.no. 5084) to 35Ncm. In case the extension level abutments are used, tighten the extension level abutment with 35Ncm and the ball abutment on abutment level to 30Ncm. Verify the connection with e.g. X-ray photo. Verify the custom tray intra-orally. There should be enough space around and above the abutments.



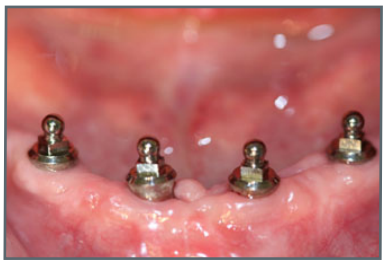




Place the ball impression spacers on the ball abutments (only possible for abutments with internal hexagon). Inject the light body material around the ball abutments and fill the tray with heavier body material. Use laboratory analogues with an opening in the ball area (art.no. 02LP0).

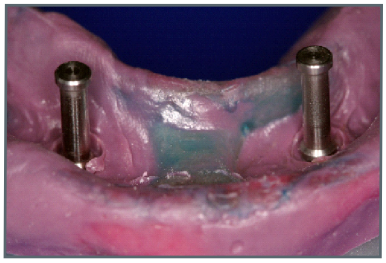
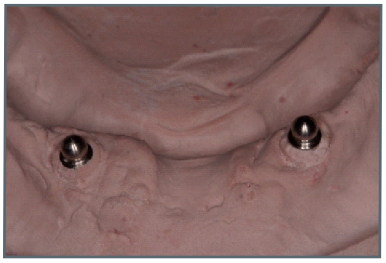




Note: It is also possible to make the impression without impression spacers on abutments with internal hexagon. In this case use the laboratory analogues with an opening in the ball area (art.no. 02LP0) or laboratory analogues with a square part (for abutments with a closed ball, art.no. 5767C for Dyna Helix / Octalock and Dyna push-in conventional Ø3.6 and 4.0 and 5730C for Ø3.0mm).
For abutments with a closed ball always make an impression directly on the abutments!

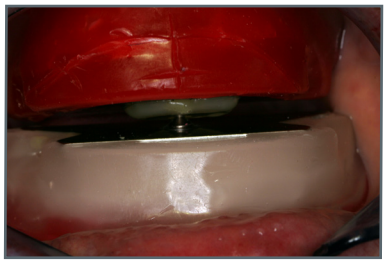
LABORATORY

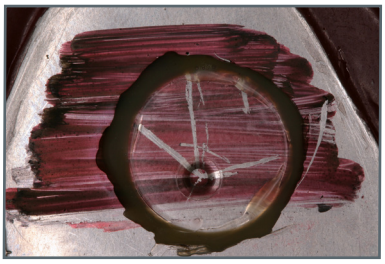
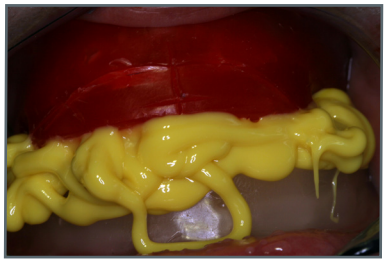
Verify the position of the impression spacers in the impression. Press the ball laboratory analogues into the impression spacers. Pour the impressions in die stone. The laboratory patrices are incorporated within the working cast. Fabricate the base plate and create an occlusal registration rim.

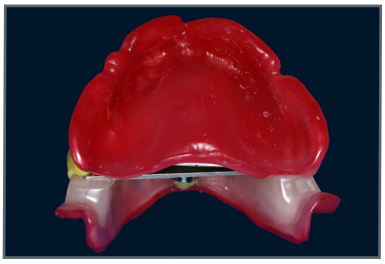




CLINIC

Insert the base plate with the wax occlusal rim and make an intra-oral seagull bite registration. Remove it from the patient's mouth and reassemble everything on the working cast. Select the teeth and send the materials to the lab for fabrication of the wax try-in.



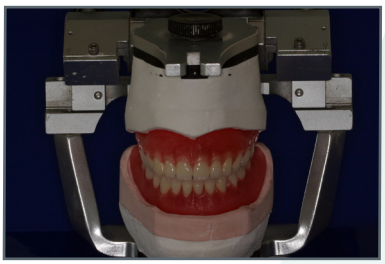





LABORATORY

Mount the working cast and opposing model in the articulator. Produce wax try-in with or without matrices and send the denture to the dentist.



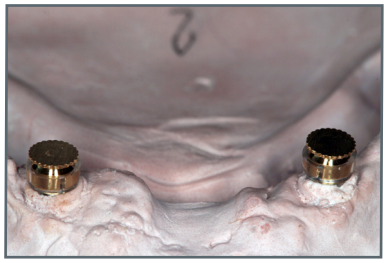


CLINIC

Place the try-in in the mouth. Make necessary adjustments. Evaluate aesthetics and phonetics. Ask for patient's approval. Remove the denture from the mouth and return the denture to the lab.

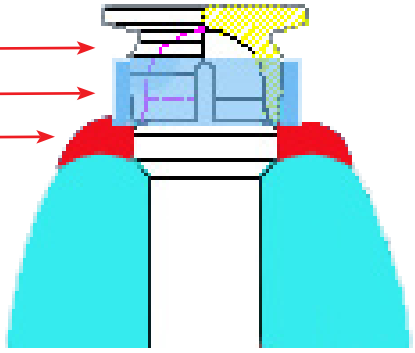

LABORATORY

Choose the right path of insertion for the denture in the surveyor. Snap the matrices onto the laboratory patrices, verify the parallel position and block out undercuts with the rubber ring or for example wax, plaster or a silicone material (e.g. Flexistone®). Position of the matrices during pressing must be unchanged.

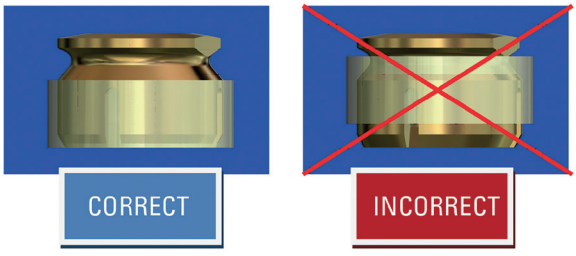


LABORATORY

Free space
PVC ring
Blocking material

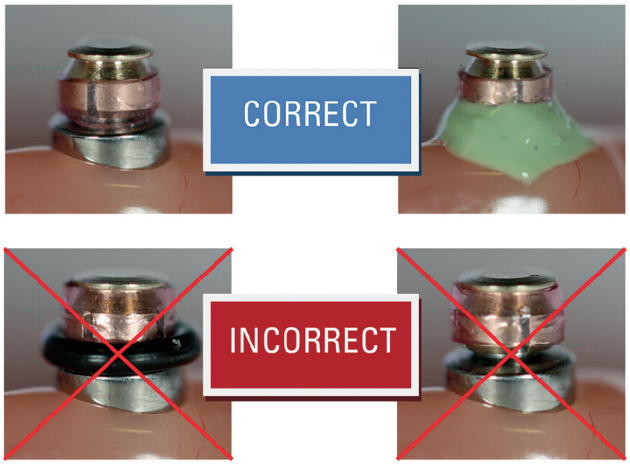


Check the position of the transparent ring. The lamellae need to be covered entirely. The retention part needs to be uncovered.
Matrices are delivered with PVC rings placed around the matrix lamellae. It protects lamellae and enables activation and deactivation after finishing the prosthesis. In cases where the PVC ring is missing it has to be placed before fixing the matrix.

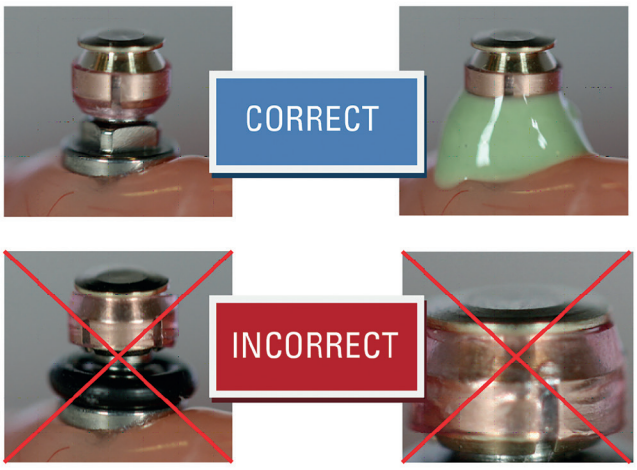


Note:
To minimize the instability of the denture (wobble effect) it is recommended to use the so called resilient matrix fixation method. Create space between the matrix and the patrix, blocking out the undercuts as well (e.g. with Flexistone®)

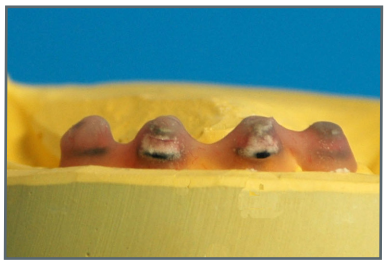
Ball abutments (with internal hexagon)

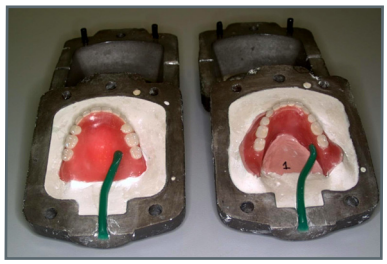


Ball abutments (closed ball)

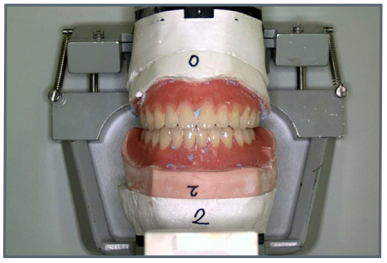


With 4 Meta cold cure resin the position of the matrices can be secured. Because of the chemical bond, fracture and decolourisation around the matrices will be prevented.





Fabricate the denture following standard laboratory procedures. After finishing the denture, remove the PVC rings. Finish and carefully polish the overdenture.



Note: The retention of the matrices can easily be checked by means of a laboratory patrix. Fix a laboratory patrix in a handle and just push it into the matrix. When you take it out you can easily verify the retention. Adjust when necessary with the ball (de-) activator.

CLINIC

During the first weeks the torque force can change. Check the torque of the ball abutments (35 Ncm). Insert the finished denture into the patient's mouth and snap it onto the abutments. Make final adjustments if necessary. Instruct the patient in the use and care of the prosthesis. Furthermore provide adequate hygiene information and training.

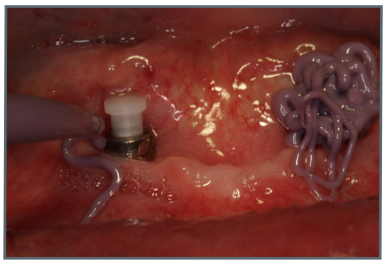
Note:
Matrices are delivered with set pull out force. When activating or deactivating only use original instruments and always do it carefully. Deactivating with too much force may push lamellae too far outside which makes activation impossible.

It is possible to fix matrices chairside with 4 Meta cold cure resin. In this situation the laboratory has to produce the prosthesis with sufficient space over and around abutments. In this case the dentist has to place matrices on patrices himself block it out and fix with 4 Meta cold cure resin. Beware of undercuts!

Rebase procedure

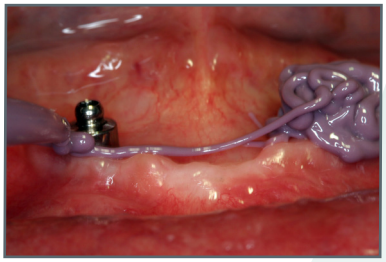
LABORATORY

Remove matrices from the denture by using a little burr. Take care not to damage it.
Another possibility is to heat the matrix with a laboratory analogue. With the heated analogue the matrix can easily be removed. If overheated, the gold matrix has to harden again in the oven before fixation in the denture. For ball abutments with internal hexagon, place the impression spacers on the patrix.

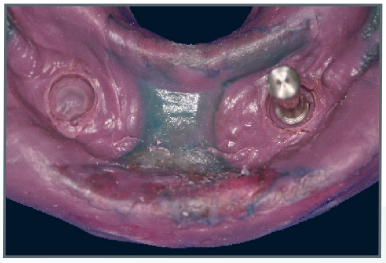


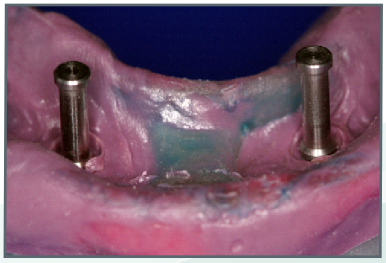
Impression can also be taken without Impression spacers in this case. Special Laboratory patrices must be ordered.

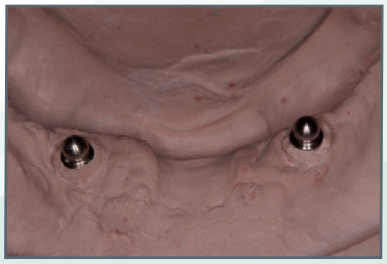
Impression on Ball abutments with closed ball is always done without Impression spacers. The necessary Laboratory patrices must be ordered.



Take the impression (pick up technique with existing denture).
Check the impression. Place the ball laboratory patrices in impression spacers and check whether they fit well.
Cast the working model and follow the instructions as described in this manual.



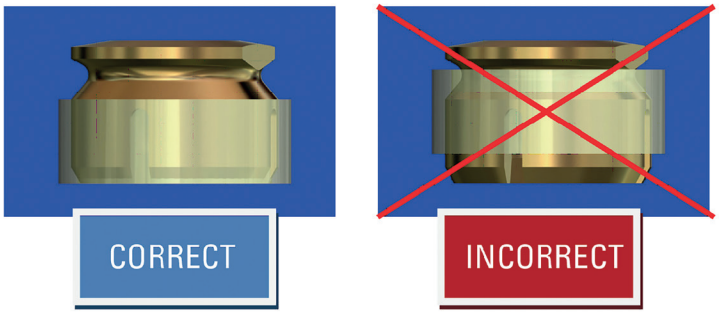




Place the PVC rings around matrix lamellae (matrix ring positioning instrument, C+M art.no. 070 205 for Dalbo Classic and Dalbo B).

- separate the handle and the core
- put two pvc rings on the core (they can be inserted only from one side)
- put the handle back on the core
- place the instrument inside the matrix
- gently push on the handle sliding the ring around lamellae

Note:
The PVC should be placed around the lamellae not covering the retention ridge.



Continue the procedure as described in this manual and realize the rebase as usual.

Insert the overdenture and check for fit, function and aesthetics. Make necessary adjustments.

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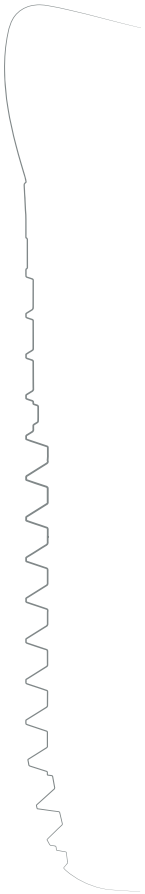

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