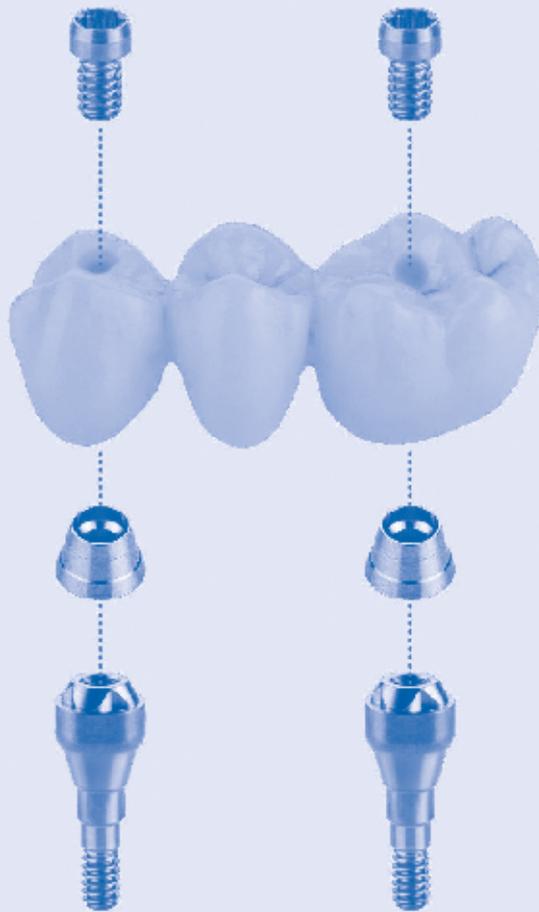


 **ceramill[®] ti-connect sr**



Instructions for multi-unit screw-retained restorations



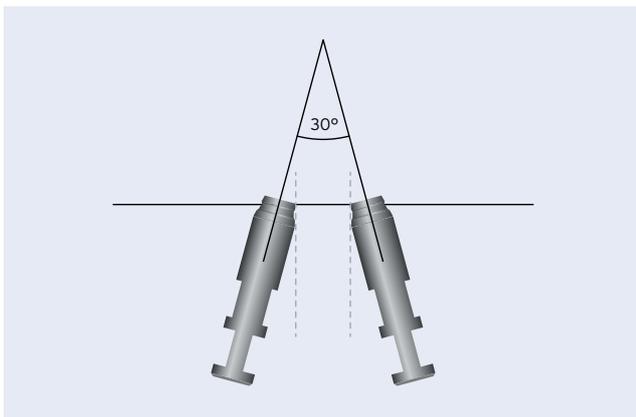
**ONLY POSSIBLE WITH CERAMILL
MOTION 2 OR IN THE M-CENTER**



AMANNGIRRBACH

GENERAL INFORMATION

- _ Working with SR titanium bases (SR = screw retained) is possible only when the Ceramill M-Plant module is activated.
- _ The multi-unit, screw-retained restorations are to be manufactured only with the Ceramill Motion 2 (5-axes) or in the M-Center.
- _ Released for Ceramill Map300 and Ceramill Map400.
- _ Before working with the SR titanium bases, it is recommended to attend the Ceramill M-Plant course.
- _ A video tutorial on the M-Plant module is available on the M-Center homepage.
- _ The SR titanium bases are available in 3 different gingiva heights.
- _ For optimal support of the construction, the SR cemented caps are available in 3 mm and 4 mm.
- _ The conical form of the SR titanium bases allows for designs on diverging implants (max. 30°).

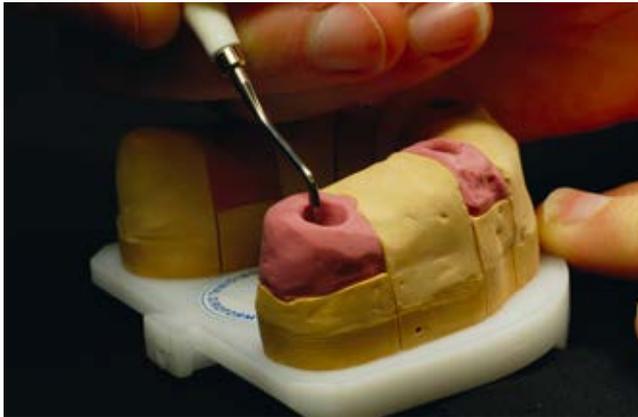


Construction on diverging implants

- _ The screw-head geometries of the SR screws comply with those of the original manufacturer. The implant manufacturer's screwdrivers are to be used.
- _ The cement gap between cemented cap and the individual construction is 60 µm.
- _ After the bonding, it is possible that the veneered construction requires grinding.

*SR = screw retained

MODEL ANALYSIS

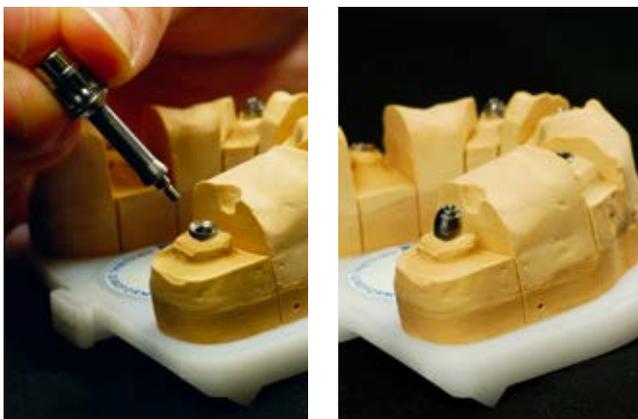
**Determining the gingiva height:**

Using a dental pick, determine the clearance of the implant to the upper area of the gingival mask.

Based on the determined gingiva height of the implant, screw on the SR titanium base;
_available heights of the SR titanium bases:
0.5 / 1.5 and 2.5 mm.



Observing the respective tightening torque, the base is screwed onto the implant using the SR insertion device (driver, 2-pce.).



Finally, check the compensation of the gingiva height through the SR titanium base again. This process must take place for all implants of the model.



On the one hand, the SR titanium base is used for height compensation of the gingiva, and on the other hand it serves as the adapter for screwing on the SR cemented cap.

CREATING A PATIENT CASE IN THE CERAMILL DATA BASE



_ In order to work with conical SR titanium bases, select "occlusally screw-retained" for the corresponding tooth (under implant type).

_ When using a gingival mask, it must be specified under "separate gingiva scan".

_ After creating a case, it must be stored.

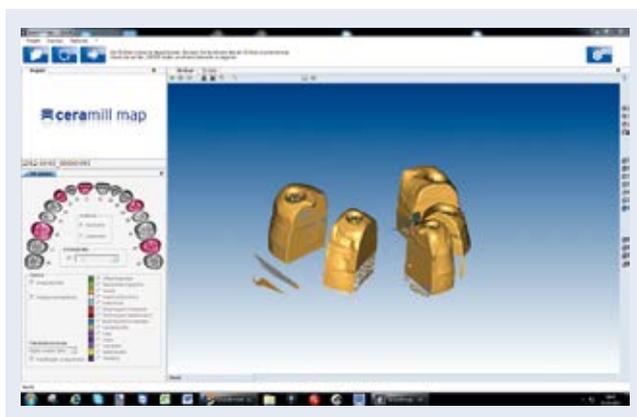
EN



Before scanning, it must be ensured that the implant position on the model corresponds accurately with the implant position in the mouth (overimpression).

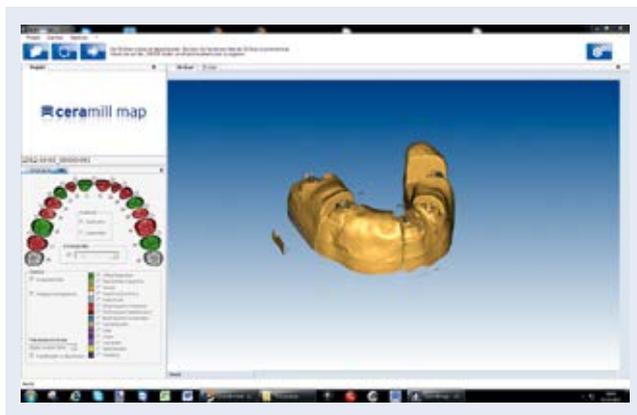
For large bridge constructions, the scanner should always be calibrated first.

SCANNING



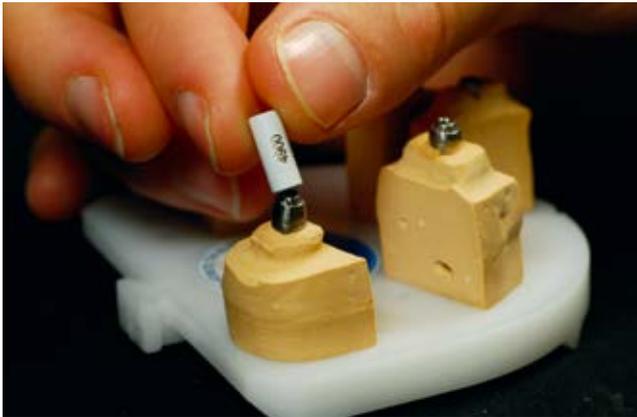
The model is digitalized in the usual manner:

_ The first step is scanning the gingival mask; here, only the segments with gingival mask are to be inserted in the scanner.



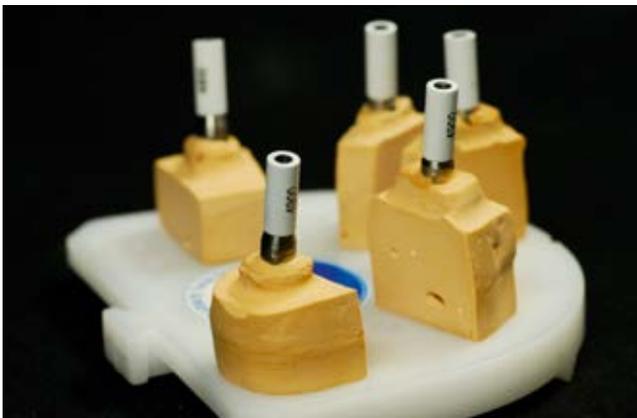
_ Afterwards, the jaw scan is performed:
Place the complete model into the scanner (all segments must be inserted). The gingival mask must be removed for this.





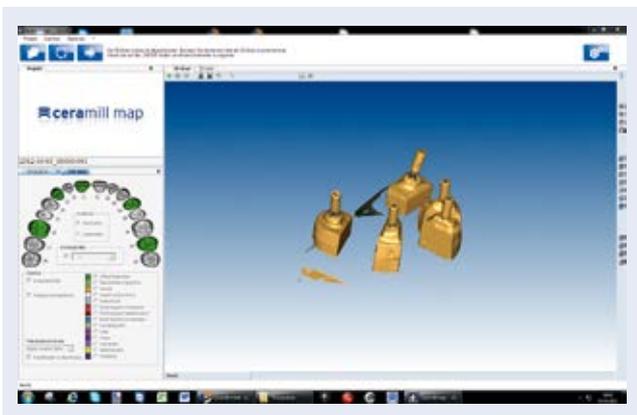
Finally, the SR scanbody is scanned:

- _Screw the SR titanium base onto the implant using the SR insertion device (driver).
- _Affix the SR scanbody to the SR titanium base using the SR screw (hand-tight).



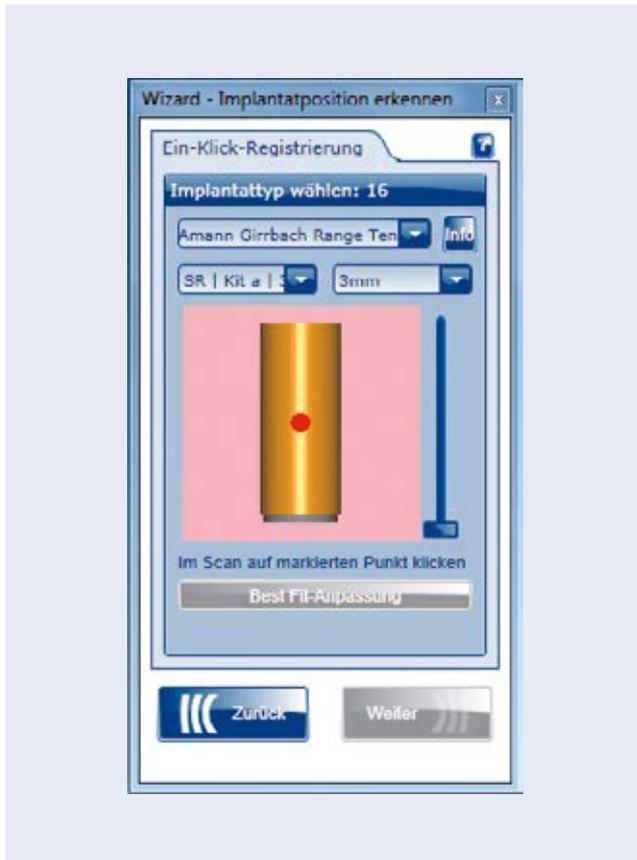
To achieve the maximal possible precision, it is necessary to screw an own scanbody onto each implant.

An own laboratory screw is to be used for each scanbody.



- _For the scan process, all implant segments (+ SR scanbody) must be inserted into the model base - the remaining dentition (neighbouring teeth, tooth stumps, etc.) must be removed.

CONSTRUCTION IN THE CERAMILL MIND



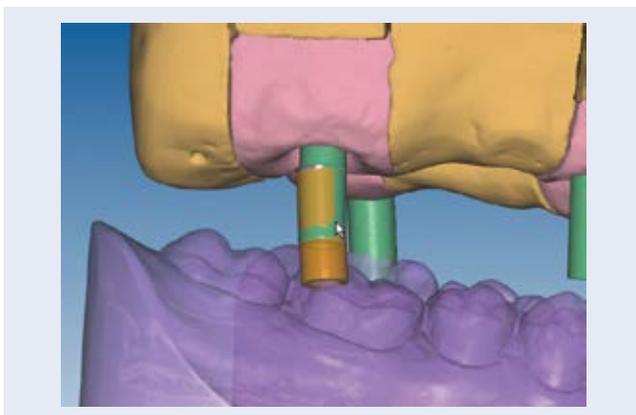
Implant-supported, occlusally screw-retained bridge constructions are only possible with SR titanium bases and can only be milled with the Ceramill Motion 2.

After completion of the scanning procedure, start the Ceramill Mind construction software.

Selection of the implant type for the respectively specified tooth position; selection of the height of the SR cemented cap.

Example:

- _ Amann Girrbach Range Ten**
(= Dentsply Friadent, Frialit / Xive)
- _ SR | Kit a | 3.4 mm**
- _ Height of cemented cap, 3 mm**



To pre-position the SR titanium base, click on the scanbody scan (green) of the implant:

_ Exact manual pre-positioning of the scanbody (orange) on the scanbody scan (green) is imperative.

_ Afterwards, start the automatic fine alignment via the Best-Fit-Adaptation.



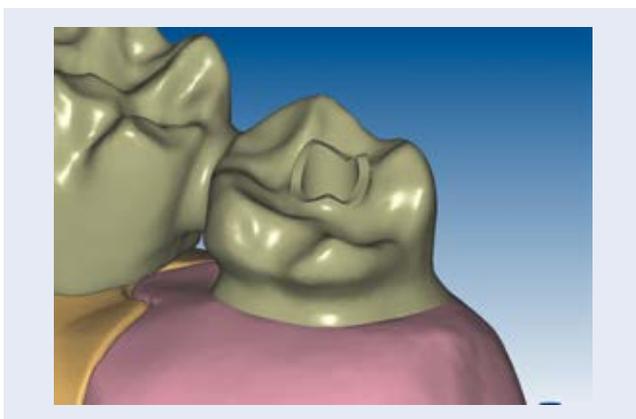
After the Best-Fit-Adaptation of the scanbody (orange), check the position on the scanbody scan (green). In case of large deviation, carry out the positioning once more.

_ Confirm the position by clicking on Next and follow the Wizard in the usual manner.

_ Repeat the process for each implant.



Afterwards, manufacture the construction in the usual manner.



To prevent the veneering material from entering the screw channel, it is recommended to extend the channel with the Wizard function "Screw-channel design".

MILLING-PATH CALCULATION & MILLING



Upon completion of the construction in the CAD, start the Ceramill Match 2.

The positioning and calculation of the construction in the blank takes place in the same manner.

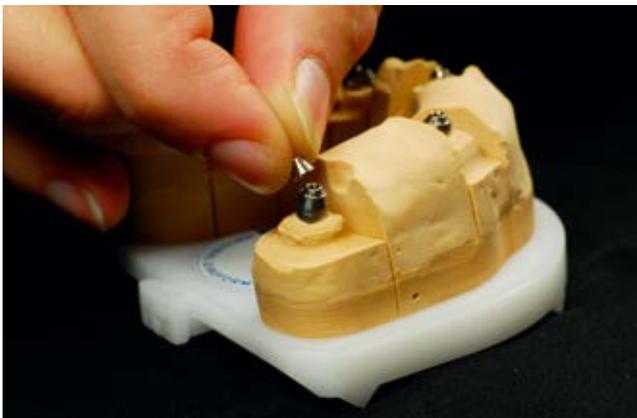
Transfer of the milling file to the Ceramill Motion 2 and insertion of the blank in the usual manner. After the milling, sinter materials must be sintered.

CHECKING THE FIT



After the milling procedure (and after the sintering process, where applicable), check the fit of the construction.

_Screw the SR titanium base onto the implant using the SR insertion device (driver).



_Screw the SR cemented cap with the SR screw to the SR titanium base.



_Check the fit of the construction - the construction should be positioned free of tension.



Pay attention to interfering contacts of the pontics!

Prior to further processing, the frame should be trial-fitted, in order to check the tension-free fit.



BONDING TIPS

- i** Do not bond the SR cemented caps until after the veneering with ceramic and the individualizing with tooth shade/colour, as the cement can be dissolved through the firing temperatures.

The bonding should be carried out in the mouth through the attending dentist.

_Changes of the bite position should be recorded with a new bite registration and passed on to the laboratory.

_Areas of the occlusion surface that are ground in through the attending dentist should be polished up again by the laboratory.

- i** Please observe the cement manufacturer's instructions for use.
Recommendation: Multilink Implant, Ivoclar Vivadent.

BONDING ON THE MODEL

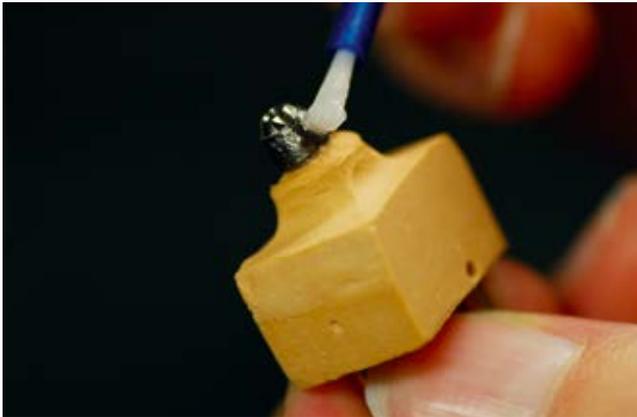


Sandblast the outer surfaces of the SR cemented caps (grain size 50 μm , 2 bar; tip: cover off inner surfaces with wax).



Sandblast the inner surfaces of the milled construction (grain size 50 μm , 2 bar).

Cleaning and drying the SR cemented cap and the frame.



Screw the SR titanium base onto the plaster model using the SR insertion device (driver); afterwards, apply petroleum jelly to prevent cement from adhering later.



Screw SR cemented cap onto SR titanium base and block the screw head out with soft wax.

Apply petroleum jelly to the screw channel of the construction.



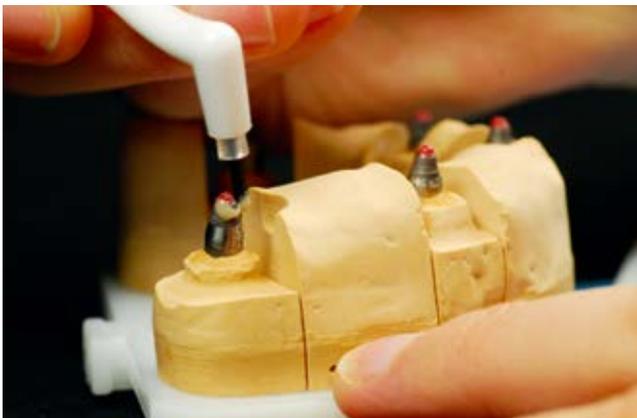
Ensure there is no petroleum jelly on the fitting surface to the cemented cap.



To protect against cement, fill screw channel with cotton wool. Use Teflon tape as required.



Condition the surfaces according to manufacturer's data.



Mix cement; apply cement to frame and SR cemented cap, and carefully place frame on SR cemented caps.



Remove excess cement with a fine brush.





After the cement has cured, remove the cotton wool from the screw and carefully loosen the wax from the SR screw using a dental pick.

Loosen all SR screws with the respective screw-driver and remove the work from the model (the screw channels must be free of cement remainders!).



After releasing the frame, remove excess cement using a silicone polisher and then finish the work appropriately.

Check and match the transitions of the edging area between cemented cap(s) and frame.





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