

**artegral® ImCrown** is a prefabricated crown blank with colour layering inserted in the row of teeth with the CEREC software and has to be adapted apical to the stump with the CEREC milling unit. artegral® ImCrown is a prefabricated, anatomically formed, colour layered and characterized acrylic tooth made of PMMA for the treatment of upper anterior teeth.

### Intended indications:

- long-term temporaries for upper anterior tooth's
- semi-permanent treatment during healing phase of immediate implants
- immediate and interim dental treatment
- insufficiency of filling therapy
- as a permanent solution depending on the indication
- treatment of young patients to minimize the loss of substance
- treatment of prolonged healing processes anterior dental trauma, e.g. after sports and leisure accidents
- tooth discoloration, devitalized tooth
- tooth destruction due to tooth decay
- correction of form and displacement

### Contra-indications:

- tangential preparation
- inflamed teeth

### Please follow the preparation-guidelines for CEREC 3D

see [www.Sirona.com](http://www.Sirona.com) Home>products>CAD/CAM systems>CEREC for dentists>Downloads

### Material

Highly network interpenetrated polymer network (IPN) made of Polymethylmethacrylat (PMMA)

### Processing

The following instructions are addressed to experienced CEREC 3D and CEREC inLab users. You will find further detailed information in your CEREC 3D and/or CEREC inLab manual.



**artegral®**  
**ImCrown**  
for CEREC and inLab

**The working method with artegral® ImCrown in combination with the CEREC software is according to the standard and familiar procedure.**

**Only the following features have to be taken into consideration:**

- **Minimal material thickness of 1,0 mm**
- **If necessary, the form corrections of the artegral ImCrown, can be done in a subtractive way. Additional steps are only necessary, if too much material has been reduced during a previous working step.**
- **Please pay attention to exchange water before and after milling of different kind of materials**

### **Instruction of use for the artegral® ImCrown tooth library:**

go to menu **restoration**, choose **new** to reach the next menu "select patient for new restoration", choose **new to create a new patient and** choose **OK** after filling in the data's of the new patient to reach the next menu **new restoration for** .....(patient's name)". Under the upper column called **restoration** choose **crown**. Make sure that the button **dental database** in the lower column is active. Now you can select the required upper anterior tooth for artegral® ImCrown.



## 1. Construction

### Pre-process on the digital model

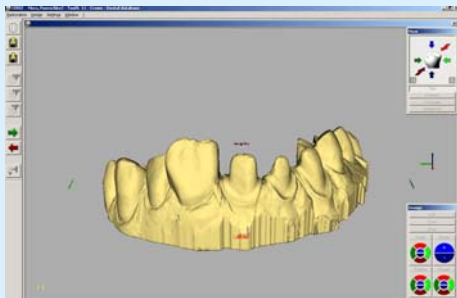


Fig. 1

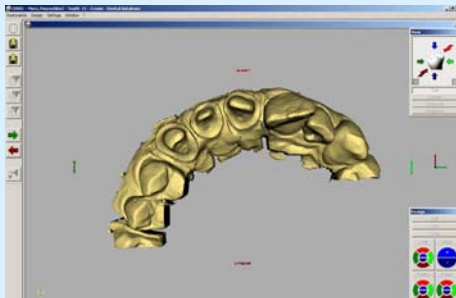


Fig. 2

After production of the virtual model (Fig. 1 + 2) please make sure that you find the correct insertion axis of the stump/model. Otherwise correct the insertion axis. (see manual CEREC inLab and/or CEREC 3D). This step must be given the greatest attention, as the internal fit of the crown can be influenced by it.

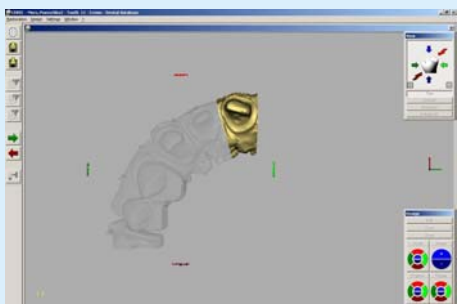


Fig. 3

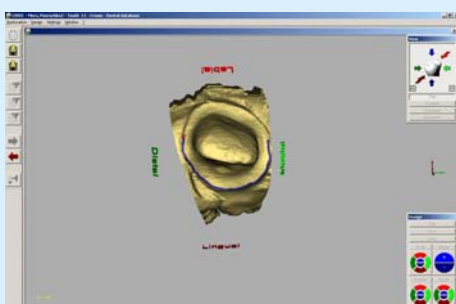


Fig. 4

After virtual trimming of the model segments determine the preparation lines as usual (Fig. 3 + 4)

Click on next icon **NEXT** (green arrow)

## 2. Construction

### Selection and virtual fitting of artegral® ImCrown

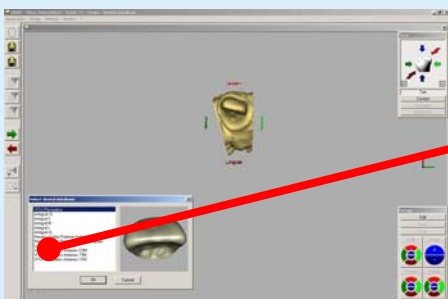


Fig. 5

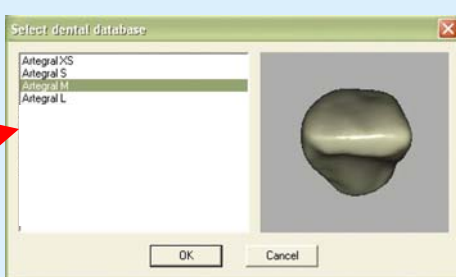


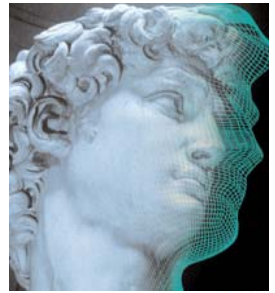
Fig. 6

Select the best possible artegral® ImCrown from the tooth library. Confirm with **OK** und click on **NEXT** (Fig. 5 + 6)



artegral®  
ImCrown  
for CEREC and inLab





**artegral**  
ImCrown  
for CEREC and inLab

### 3. Construction Placing and digital adaptation of artegral® ImCrown

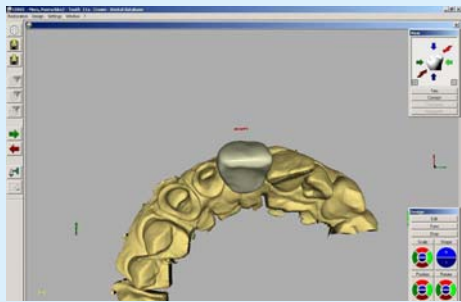


Fig. 7

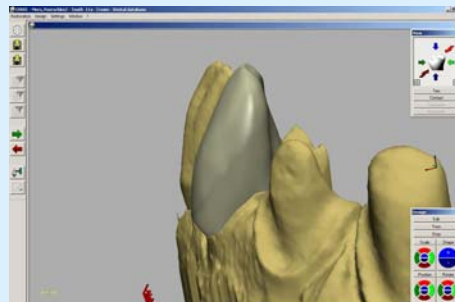


Fig. 8

Use your virtual design tools „Position“ and „Rotate“ to integrate the crown in the row of teeth with regard to alignment and size. From the lateral aspect, both the correct inclination as well as the correct position of the colour layering can be corrected by shifting in incisal or cervical direction. (Fig. 7 + 8)

During digital adaptation of artegral ImCrown the following working steps according to the view position are recommended:

Working process		View from
1	Align crown axis	labial
2	Shift crown in the axis mesio-distal, so that a physiological proximal contact can be created.	labial
3	Insert crown harmonically with its incisal edge into dental arch.	incisal
4	Turn the model from incisal view to labial view and place the crown with its labial „cervical area“ into the row of teeth. <b>Fig. 7</b>	incisal-labial
5	Check that thickness of incisal edge fits to the thickness of the neighbouring teeth. <b>Fig. 11</b>	lateral-incisal
6	Length control of crown. <b>Fig. 10</b>	labial
7	Isolation and finalizing the mesio-distal contacts. <b>Fig. 9 und 10</b>	approximal

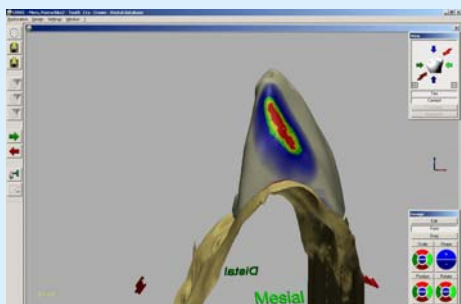


Fig. 9

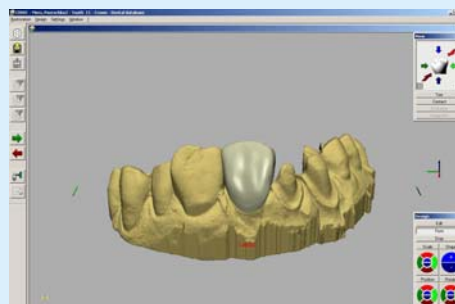


Fig. 10

In the menu **View** the neighbouring teeth can be faded out by clicking on **Trim**. By clicking on **Contact**, the contacts to the neighbouring tooth will be showed. (Fig. 9). By using the design tool **Form**, to intensive contacts can be reduced.



For checking and control purposes of the construction the neighbouring teeth can be interrupted and the displayed contacts can be switched on and off. (Fig. 10)

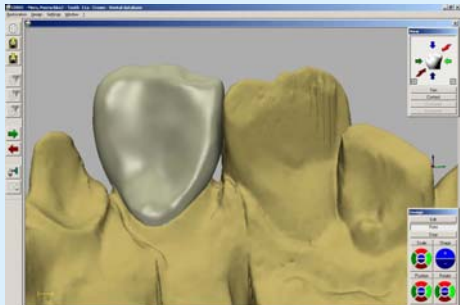


Fig. 11

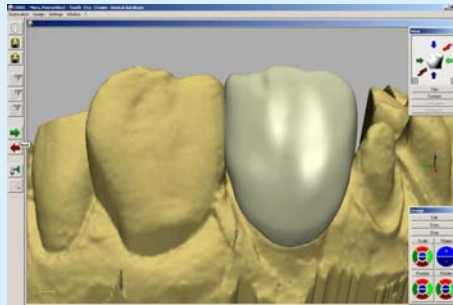


Fig. 12

Reduction of palatinal area is quickly and easily possible by moving the tooth equator with the design tool **Edit**. Further corrections are possible with the design tool **Form**. (Fig. 11)

By clicking on the icon **NEXT** (green arrow) you will reach the menu „milling preview“. Choose the **Endo milling mode** and click on the icon **Mill**.

You will be requested to place the chosen artegral® ImCrown into the milling unit. After confirming with a click on **OK**, the instruments and the milling head are getting in position so that the chosen artegral® ImCrown can be placed into the milling unit.

Make sure that the metal abutment pin of the artegral® ImCrown will fit with its groove into the metal pin of the milling head. Use the Allen key® to close the screw of the milling head carefully.

#### 4. Finishing touch

##### Adaptation after the milling process



Fig. 13



Fig. 14



Fig. 15



Fig. 16

Fig. 13 – 16, artegral® ImCrown directly after the milling process



artegral®  
ImCrown  
for CEREC and inLab



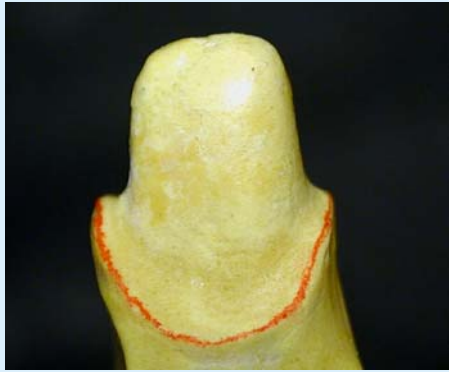
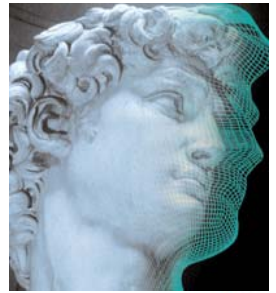


Fig. 17



Fig. 18

Mark the preparation margin (Fig. 17). Cut off the crown and make a try-fit-in with checking the approximal contacts. Control the fit.



Fig. 19



Fig. 20

The incisal edge length is corrected with a white silicone rubber wheel and if necessary characterization of the incisal ridge. (Fig. 19 + 20)  
The occlusion is checked with centric and excursion movements by using occlusion foil.



Fig. 21

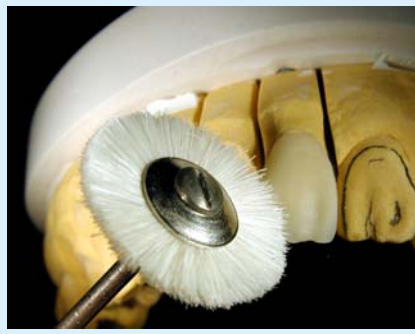


Fig. 22

The surface will be leveled with a plastic brush. (Fig. 21) Preliminary and high-glass polishing is performed best of all with a goat-hair brush and polishing paste (diameter: 21mm, Fig. 22)

