

CEREC Guide 2.0

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CEREC Guide 2.0: What's needed?

1) Key sleeves for one of the four supported implant systems:

NobelBiocare	set NB	#662-6055
AstraTech Facilitate (OsseoSpeed, not EV)	set AT	#662-6063
Biomet 3i Navigator (parallel-walled only)	set B	#662-6071
Straumann	set ST	#662-6030

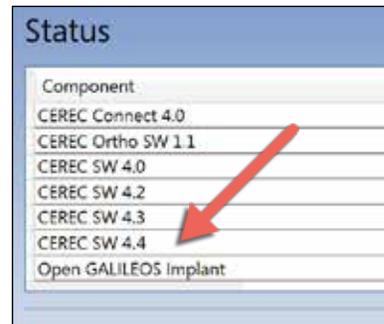


Pilot Drill Keys:

NobelBiocare, AstraTech, Biomet3i	2.0	#6462530
Straumann	2.2	#6462563

2) CEREC Bluecam or CEREC Omnicam with:

- Chairside SW 4.4 (with *Carbide Milling* activated)
- Open GALILEOS Implant license



3) Galileos, Orthophos SL 3D or XG 3D imaging system with:

- Galileos Implant 1.9.2
- Galaxis 1.9.2

4) One of the following milling units:

a) CEREC MC X mill with Carbide Kit: #6454487 which includes:

- Left carbide bur: Shaper 25 RZ
- Right carbide bur: Finisher 10
- New Torque Spanner (for left motor)

- CEREC Guide Blocs medi (½ arch) #044-1618



b) *CEREC MC XL / MC XL PL / inLab MC XL mill with the Carbide Kit: #6454487 which includes:

- Left carbide bur: Shaper 25 RZ
- Right carbide bur: Finisher 10
- New Torque Spanner for left motor

- CEREC Guide Blocs maxi (¾ arch) # 044-1626



*make sure these three mills also have:

- updated left motor (S1 stamp)
- red-painted bur wrench #6479849 for right motor
- screen-mesh milling chamber sieve #6299403
- manual block chuck (not auto-chuck)



5) Separate water tank for milling surgical guides:

- Consider using a dedicated water tank. Sirona currently recommends 75 ml of Dentatec oil and distilled water.



White MC X, MC XL (single filter) #6391879*

White MC X, MC XL (double filter) #6391895

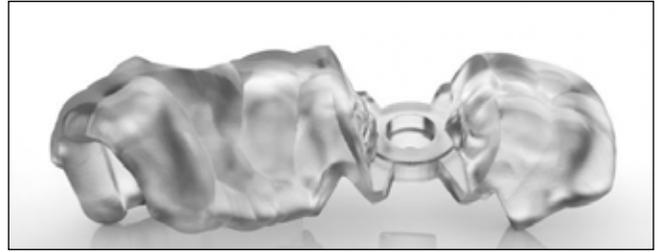
Beige MC XL (single filter) #6148600*

Beige MC XL (double filter) #6201706

MC XL PL or inLab MC XL (double filter) #6200898 (*denotes the most popular tank options)

CEREC Guide 2.0: The Process

This overview assumes that you are familiar with the basics of working with CEREC SW 4.4 and Galaxis 1.9.2. The focus is on the additional steps needed to integrate the two technologies and produce a milled, single-site, surgical guide known as CEREC Guide 2.0.



THE PROCESS:

A) Take a 3D scan of the patient, using one of Sirona's 3D imaging systems: Orthophos XG 3D, Orthophos SL 3D or Galileos series.

B) Using a Bluecam or Omnicam with CEREC SW 4.0.3 (or greater) and an Open GALILEOS Implant license, take a digital impression of the edentulous jaw ($\frac{1}{2}$ to $\frac{3}{4}$ arch). You only need to scan the one jaw (not the opposing or the buccal bite). Using the Manual Margin tool, draw a margin on the edentulous area. Draw it wider than you would a bridge pontic. Set the insertion Axis and move to the Design Phase.

Quickly complete the design and move to the Mill Phase. Note: This digital crown will only be used as a reference marker in the 3D software to help plan for ideal implant placement. The impression scan provides an accurate representation of the soft tissue and the restorative crown/implant relationship. *It will not be milled; we only care about its general shape/placement and the tissue profile.*

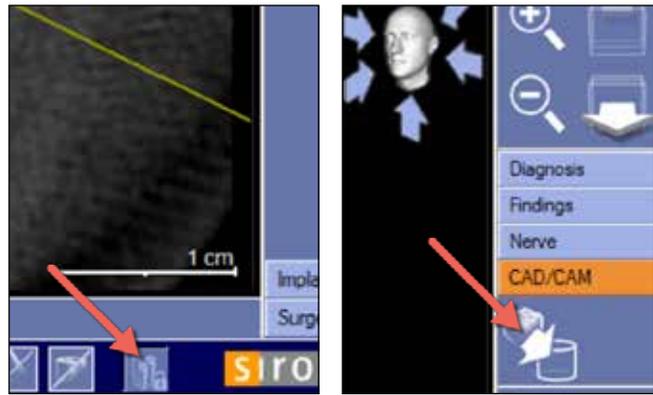
From the Mill Phase, move your cursor to the top left corner and click on the down arrow. From the drop-down menu, select *Export Case...* In the top left of the screen, click *Desktop*. Change the Save as Type to *Galileos Cases (*.ssi)*. Click *Save*.

C) Using a thumb drive, transfer the exported .ssi file to the desktop of the imaging computer running Galaxis Implant software (1.9.2 or greater).

D) From the 3D imaging computer, open the 3D scan of the patient in Galaxis Implant 1.9.2.

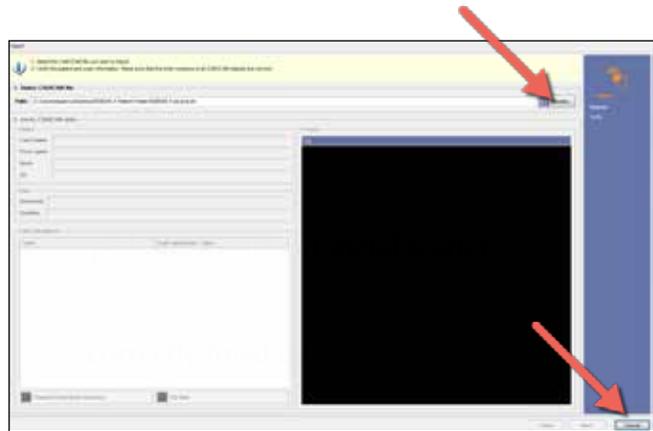
At the bottom right of the screen, click the far-right icon to retrieve the license key.

On the right-hand side of the screen, click the CAD/CAM tab. Click the Import icon.



In the pop-up window, click *Browse* to navigate to the .ssi file on the desktop. Double-click the file to import.

Under step #2, verify you have imported the correct patient information (name and site location). Click *Next* in the lower right part of the window.



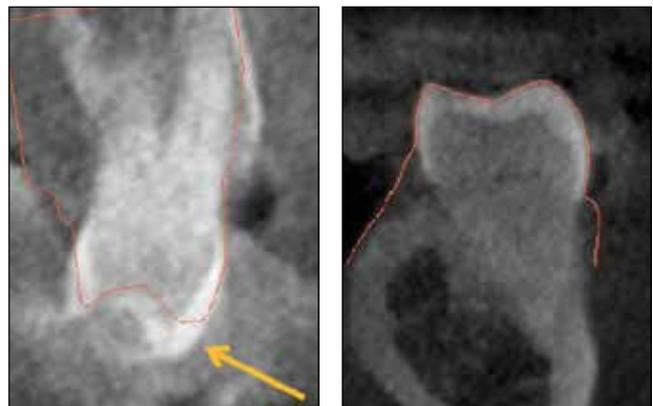
Correlate the 3D X-ray data on the right with the optical impression on the left by double-clicking on a tooth in panoramic image, and then double-click on the corresponding tooth on the model in the left window. Do this for a total of 2 times for a quadrant (5 times for an arch). Select well-visualized teeth (free from image scatter). Click *Next*.



Move through the image and look at the outline of the incisal edges of the digital impression and make sure they accurately correlate with the incisal edges of the teeth in the 3D X-ray volume. Once satisfied, click *Confirm*.

This correlation determines the accuracy of the final surgical guide.

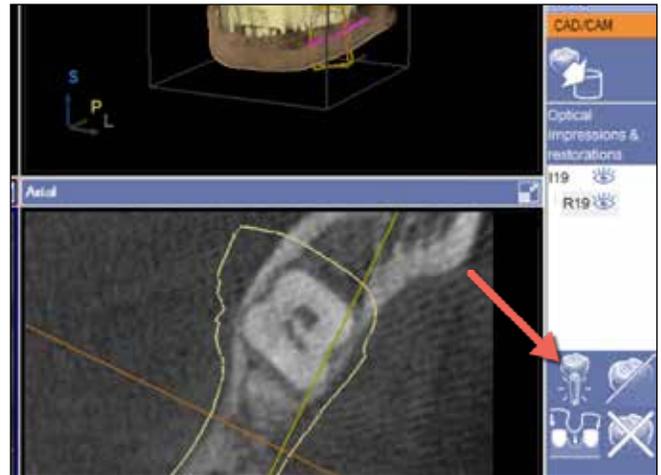
Using this correlation, you can accurately visualize the height of the soft tissue and appreciate how the angulation of the implant will affect the final restoration.



Incorrect incisal alignment.

Correct incisal alignment.

Under CAD/CAM, click the starburst implant icon “Insert implant(s) based on current restoration.”

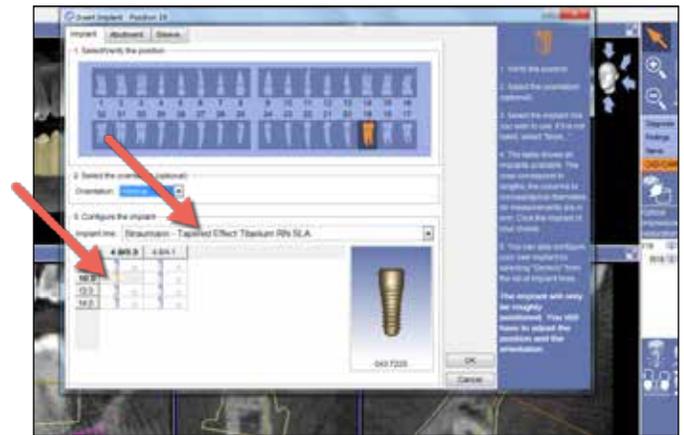


Under step #3, select one of the four supported implant lines:

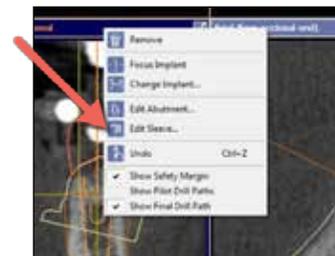
- NobelBiocare
- AstraTech Facilitate (OsseSpeed not EV)
- Biomet 3i Navigator (parallel walled only)
- Straumann

Select the desired size, and click OK.

In the implant-aligned screen, plan the implant case.



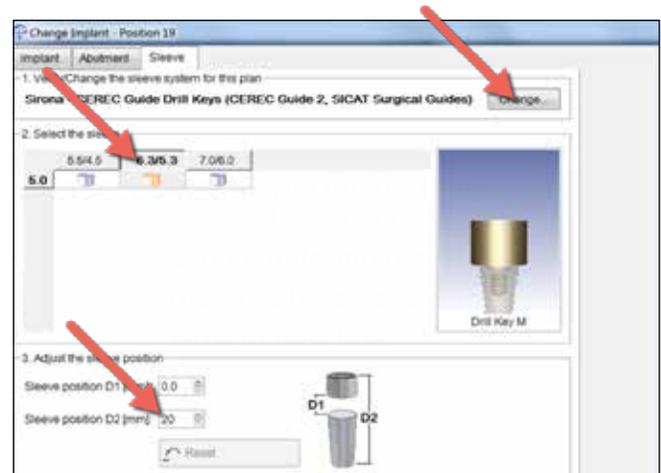
Once complete, right-click on the implant and select *Edit Sleeve...*



#1, Click *Change* and select *Sirona - CEREC Guide Drill Keys (CEREC Guide 2, SiCAT Surgical Guides)*. Click OK.

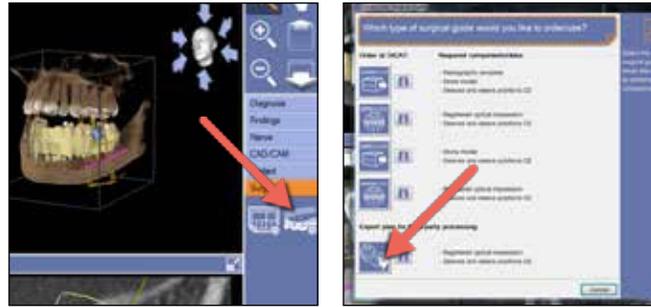
#2, Select the appropriate sleeve size for implant and interproximal spacing (verify the spacing in the Tangential window).

#3, Enter the D2 measurement, which is the length of your drill minus 1 mm. Verify in the Tangential window that at this value, the guide is not impinging on the tissue. Click OK.



E) Click the *Surgery* tab and select the surgical guide icon (looks like spurs).

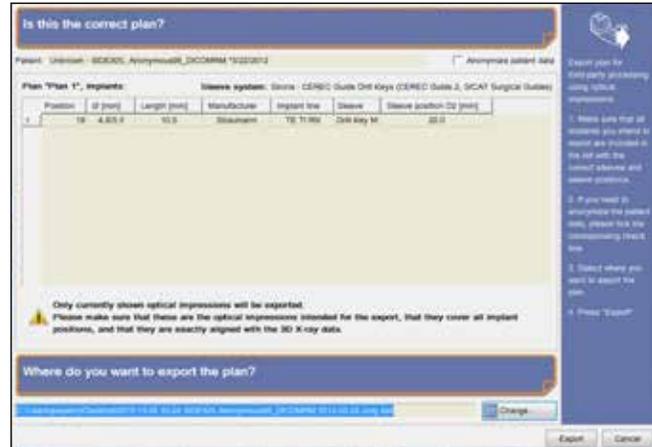
At the bottom of the new screen, select the icon under *Export plan for third-party processing*.



Review the details of the case. Click *Change* if you want to change where the exported file will be saved.

Click *Export*.

Click *OK* when the pop-up window says that the file has exported successfully.



F) Using a thumb drive, transfer the exported file to the desktop of a Bluecam or Omnicam with CEREC SW 4.4 (or greater), and an Open GALILEOS Implant license.

You'll also need either an MC X or MC XL capable of carbide milling. Make sure that carbide milling is activated and that the carbide burs are properly installed.

G) To import the file, drag and drop it on top of the CEREC SW 4 icon.

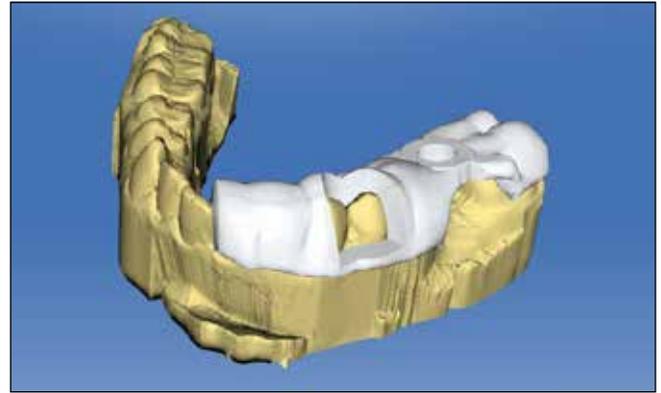
ADMINISTRATION PHASE:

No changes are needed. Click the double-chevron arrows.

MODEL PHASE:

Set Model Axis: Align (if necessary) and click *OK*.

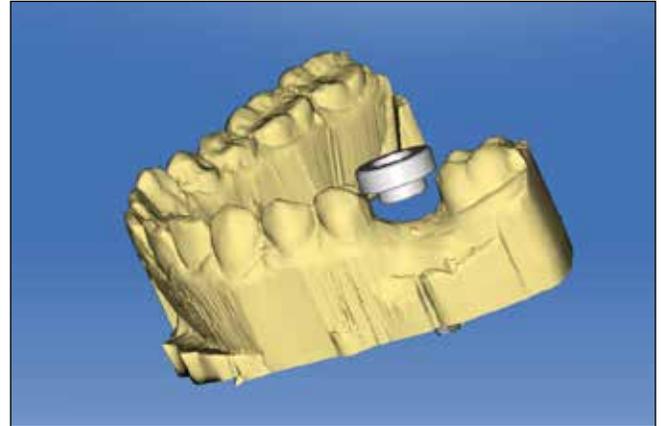
Define Seating Area: The goal is to define how large you want the guide (e.g., ½ arch if you're milling on a MC X, or ¾ arch if you're milling on a MC XL). The tool works like the trim tool. Cut away any rough borders at the base of the model that won't mill properly. Click *OK* and then click the double-chevron arrows.



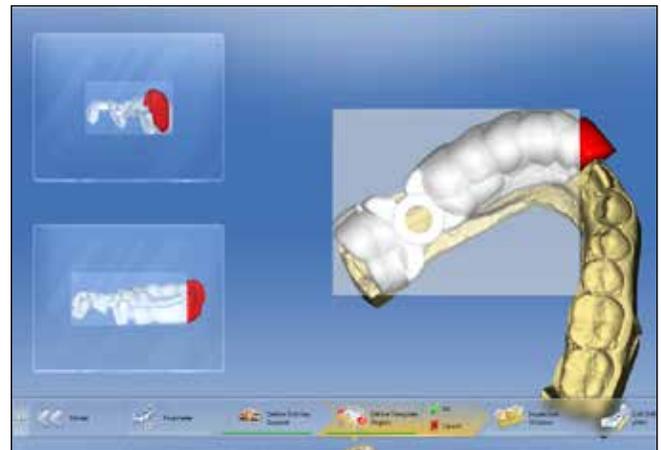
DESIGN PHASE:

Design Drill Key Support: Ideally, you won't see any red (tissue pressure) on the base of the key support.

However, if the key support is impinging on the tissue (i.e. it's set low because a short drill size was selected during implant planning), you'll be given the option to reduce the offending area (*Support the Grind Out*) or leave it as is (*Support and Leave*).



You can also place drill-access slots in the ring of the key support (either Back/Buccal or Front/Lingual).



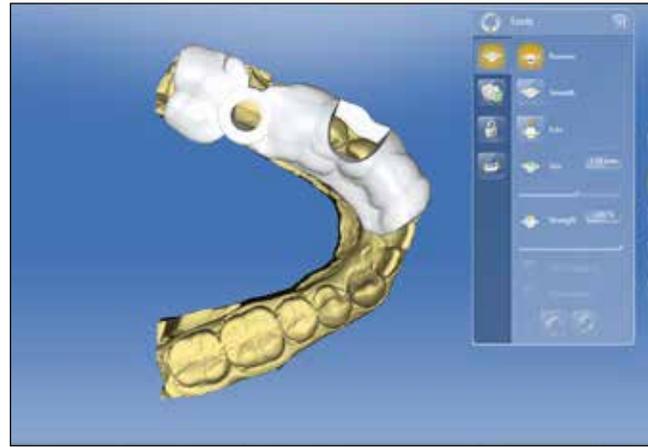
Calculate CEREC Guide: Click *OK*.

Define Template Region: Position the guide in the block. Only the part within the block will mill.



Inspection Window: Select where you'd like to place an inspection window to visually verify that the guide is fully seated on the teeth. Hover over the guide to see a preview of where an inspection window would be and then double-click to set. You can select multiple windows if there is room. When complete, click *OK*.

Edit Drill Template: Use the various tools to cut, smooth, and remove areas on the guide. Click the double-chevron arrows.

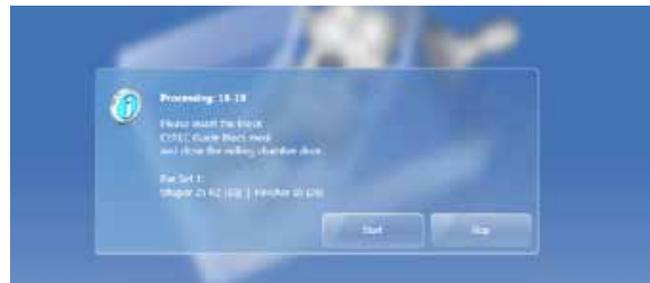


MILL PHASE:

Click *Start Milling*. Place a block in the milling unit and close the lid.



When prompted, click *Start* again. Click *OK* once milling is complete. *Note: A medi guide takes about 45 minutes to mill.*



These blocks are the milling equivalent of 3-4 crowns. You should be able to mill 3-4 guides before being prompted to replace the burs and change the water.

After milling each guide, put on a glove and remove the mass of shavings. Leave the sieve in place so that the rubber seal can stop the shavings from entering the drain or water tank.

If you want to clean out the milling chamber further, pull out the water tank and place a bowl under the drain. Remove the sieve. Hold the drain cover open from below with your finger. Pour tap water over the walls of the milling chamber and floor to wash away any remaining shavings. Empty the bowl out into the sink. Replace the sieve and primary water tank (if you use two tanks).

