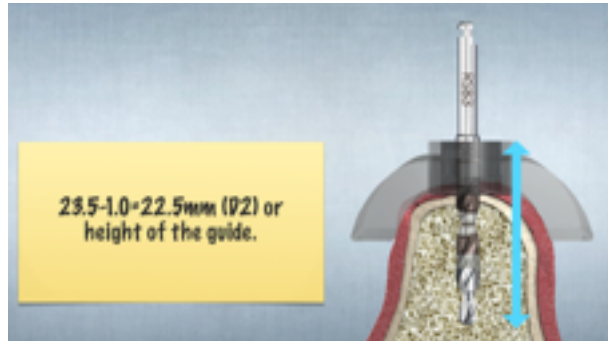


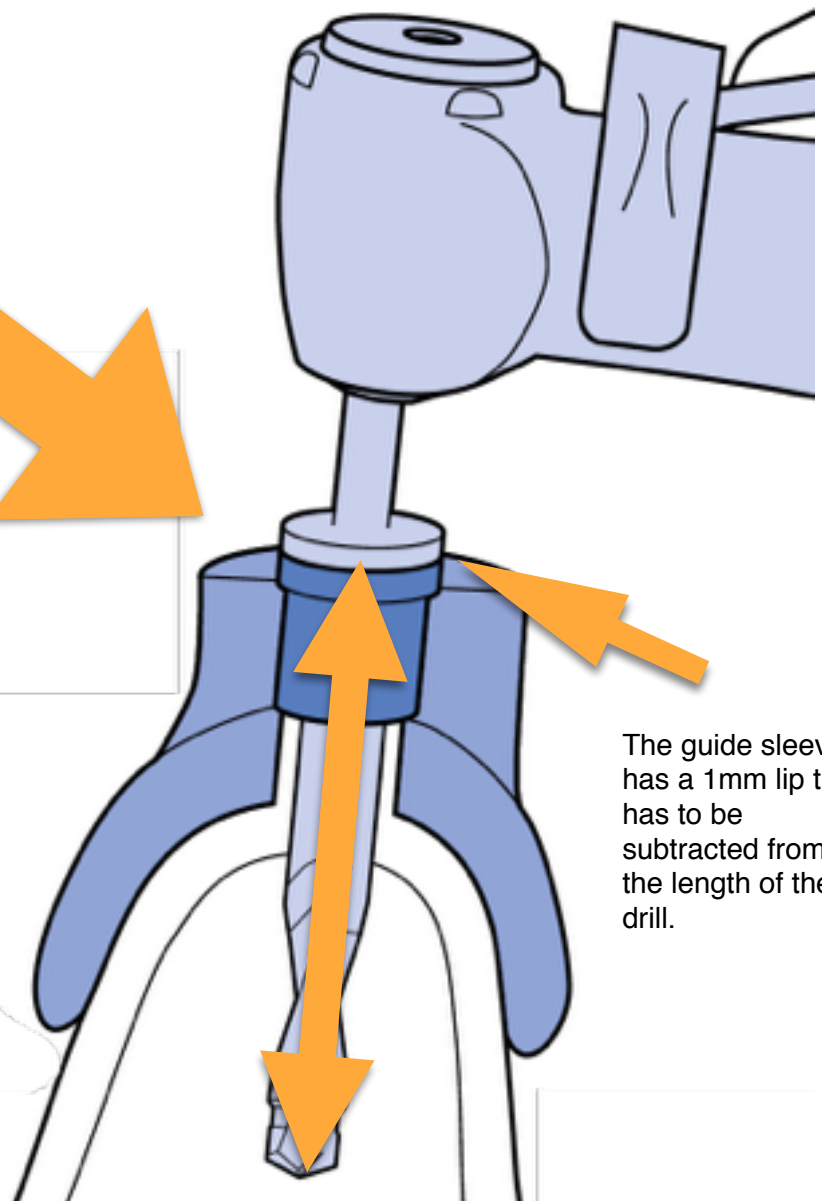
CEREC Guide 2 with Astra Sleeves

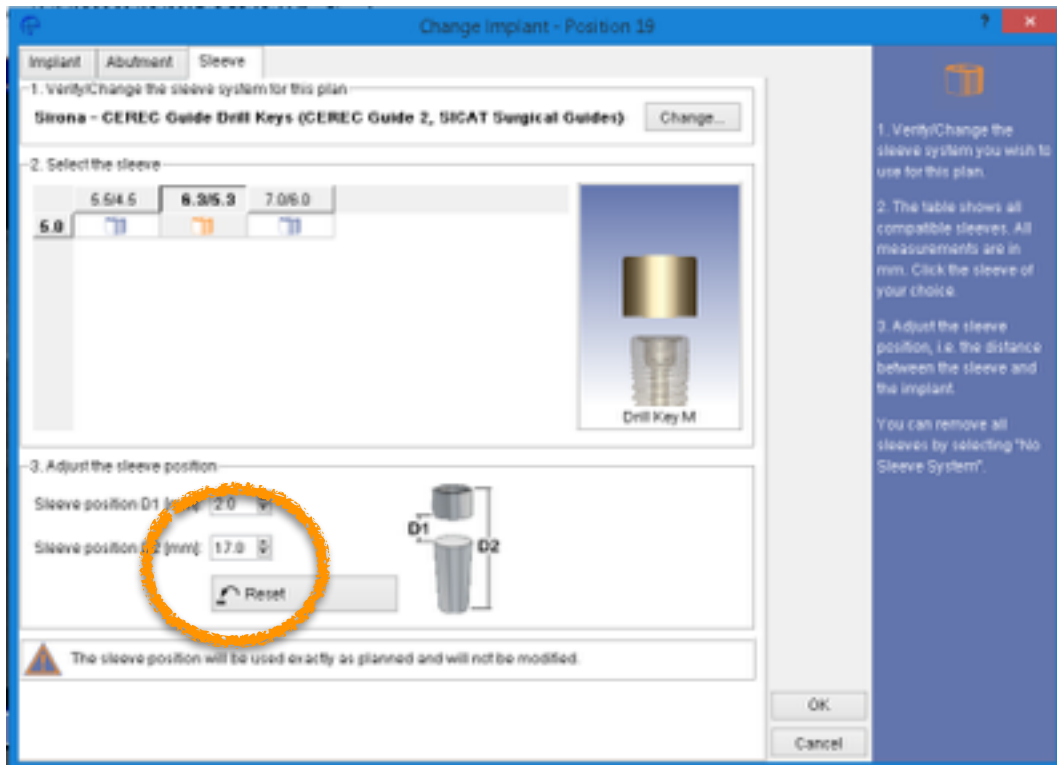


In Galileos and CEREC Guide 2 Terminology, the D2 value is the height of your surgical guide around the guide tube and the eventual placement of your implant. The concept is pretty easy but a lot of people get confused. In essence you take the length of the drill to a stop and subtract the thickness of the rim of the Astra guide sleeve, which is 1mm. This PDF will cover using the Astra EV Guide sleeves with CEREC Guide 2

The D2 value is literally the height of the CEREC guide 2 around where the guide sleeve is cemented.

First start by measuring the length of the drill to the stop. The Astra EV kit has 3 lengths of drills: The drill for 6-8mm implants is 18mm from the apex to the stop. The drill for implants 9-11mm in length is 21mm in length. And the drill for implants 13 to 15mm in length is 25mm in length.





If we use the calculation:

D2= Length of the drill to the stop - the 1mm lip of the guide sleeve we get 3 D2s, one for each set of drills. For the drills for 6-8mm implants our D2 is 17mm. For the 9-11 drills our D2 is 20mm and for the 13-15mm implants our D2 is 24mm. Enter that in the D2 box and hit enter. The D1 value will update automatically. Do not alter this. In this dialog box you need to select the guide sleeve diameter. We have 3 sizes. A medium sleeve for the 3.6 and 4.2mm implant (pink and yellow). A Large sleeve for the 3.6 and 4.2mm implants (pink and yellow). And a large sleeve for the 4.8mm and 5.2mm implant (blue). This will allow you to place all implants fully guided through the CEREC Guide 2 with the exception of the 5.2. You will be able to drill but will have to remove the guide to place.



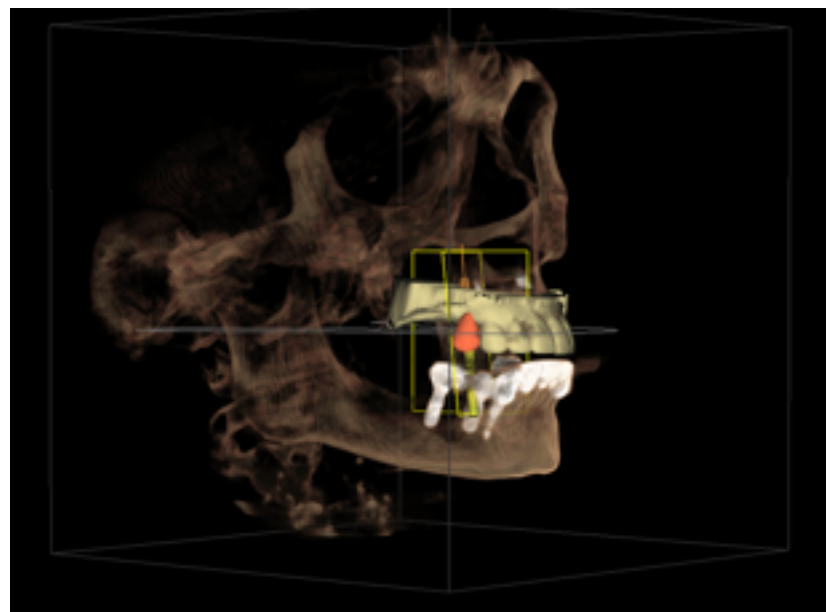


The sleeve is inserted into the CEREC Guide 2 and super glued to place. These fit passively so you must use super glue to put these in. Let go through and entire case.



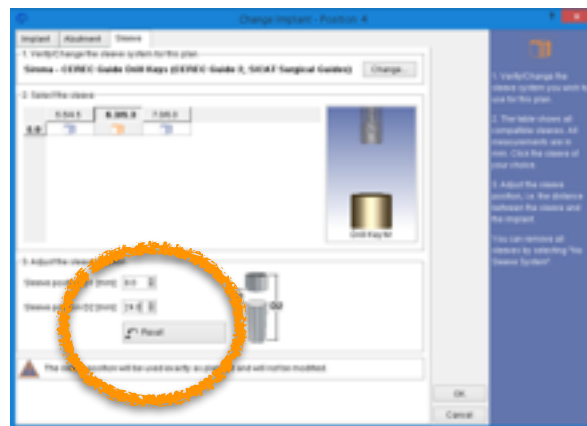
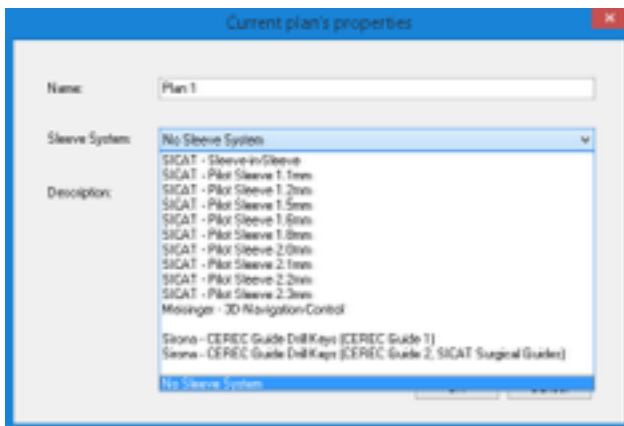
Lets walk through the entire CEREC Guide 2 process. First we start by generating a crown form in CEREC. We call this the .SSI file. At the mill preview go to the Export menu and select Galileos Files or .SSI

In Galileos incorporate the SSI file. If you do not know how to do this, you can look at my cases in Digital Enamel, read my book "Guided Implantology Made Easy", or ask your Sirona representative.

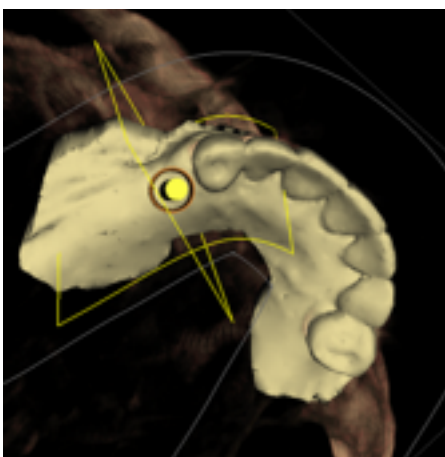




You have two choices of Astra EV implants the S for Straight or C for conical. Select the appropriate one that you use and click OK.



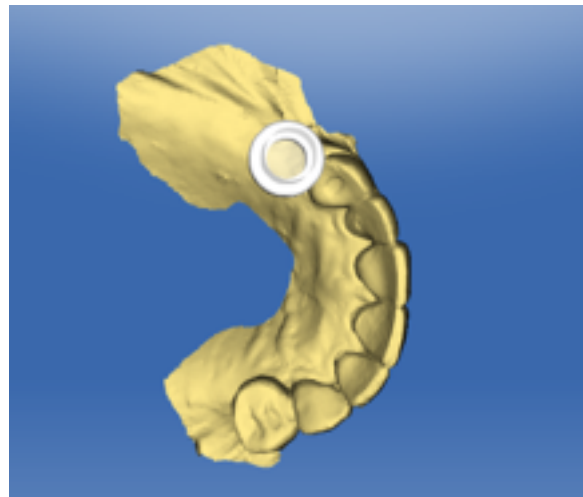
After placing the implant, right click it and select Edit Sleeve. The following dialog box will come up. Select CEREC Guide 2 as your guide sleeve. DO NOT select Astra as the guide sleeve. The next dialog box will come up asking you to select the sleeve and enter in the D2 value. You have only 3 choices. You can select a Medium sleeve (6.3) for a 3.6 and 4.2mm Implant. You can select a Large sleeve (7mm) for a 3.6/4.2 or you can select a large sleeve (7mm) for a 4.8 or 5.2mm implant. Enter the appropriate D2 value: For the drills for 6-8mm implants our D2 is 17mm. For the 9-11 drills our D2 is 20mm and for the 13-15mm implants our D2 is 24mm.



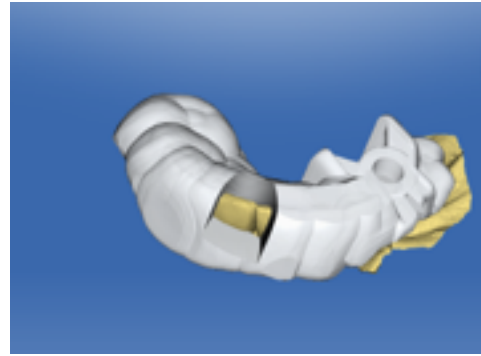
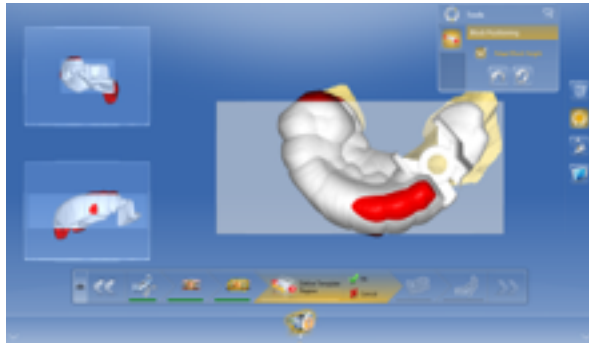
Check to see that your guide sleeve is placed properly and is not impinging on the gingiva. Once you are happy with the placement, click on the Surgery tab and select the icon of the guide.



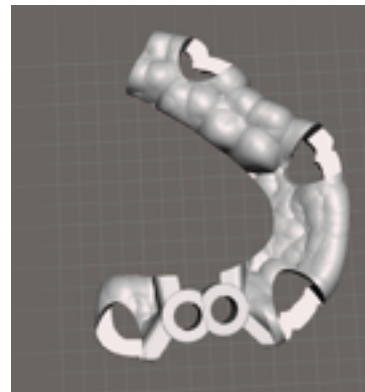
You will be presented with a number of options for guides. The first four involve sending a guide to SICAT. The Digital Guide option gives you the ability to 3D print your guide for about \$185. I prefer to send to an InLab provider to convert a CEREC Guide 2 file to STL. Most labs charge about \$20 for this service. But if you are going to mill select “Export file to 3rd party processing” this will take you to the next screen that lets you confirm your settings such as D2 and implant length, as well as the diameter of guide sleeve you selected. You can export to a file folder or to the desktop. I have a wireless network between my Galileos PC and my CEREC.



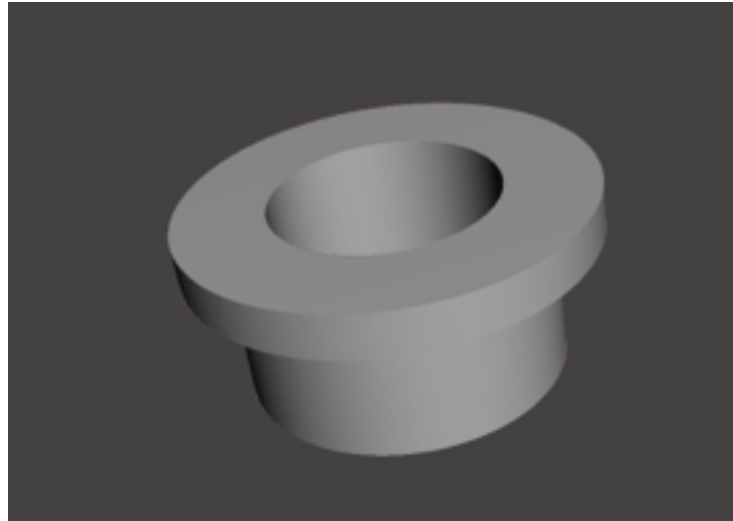
Import your file into CEREC. You can access the import function by going to the top of the screen. In the Administration phase you do not have really any choices except to select the milling chamber. When you click next you will be asked to confirm the drill platform size. I keep this small for a milled guide and make it really big for a printed guide as the SG resin is really brittle. Check to see if you are impinging on the gingiva and make the call if you want to leave support or grind it out. Again, if you are not familiar with this you can read all about in in Guided Implantology Made Easy.



The next screen shows how your guide is oriented relative to the block. If you have an MCXL or Practice Lab you have the Maxi block. If you have the MCX you will be presented with the Medi Block which is smaller. Use the right mouse button to Pan and the left to rotate the block so that you get enough coverage. I like to go to at least the contra lateral canine. The next screen will allow you to place a viewing window. Remember, guided surgery is only as accurate as you plan it, IF the guide is fully seated. I only place one anterior window.



In the mill preview you really can't do much more than just mill. You do have the option of changing the sprue position, but I never do that. You have a bunch of sprues anyway. You can email the RST file to a lab at this point, however its best to send the CMG.DXD to a lab straight out of galileos as CEREC will not let you design multiple guide sleeves.



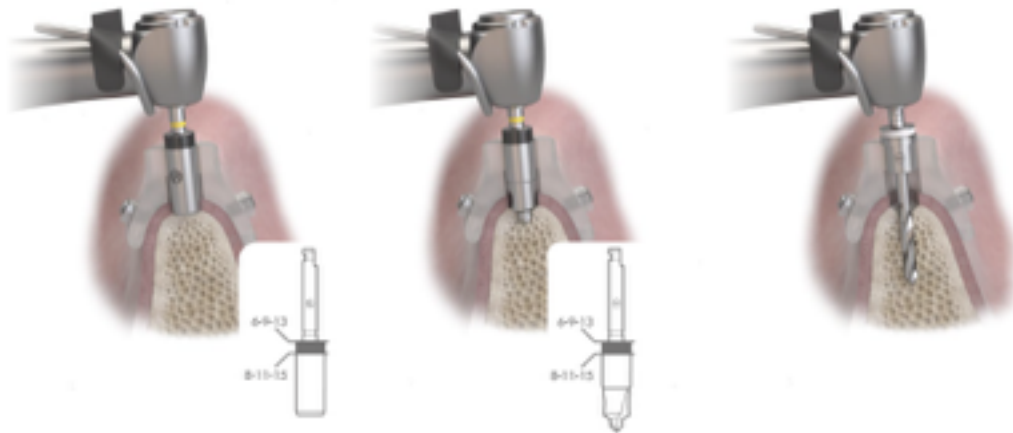
With thin acrylic burs remove the guide from the block. I designed the guide sleeve to have a lip that is 1mm thick and 1mm wide to make sure that the acrylic surrounding the neighboring teeth does not get in the way. If so remove with an acrylic bur.



Use Cyanoacrylate cement to lute the guide tube into the guide. If you do not use glue these will not stay in. The guide tubes are meant to be used once.



Place a guided drill into the guide sleeve to make sure it slides passively. We quality control each sleeve, but in case it does not fit or fits too tightly, take a carbide bur and run it along the inside, or try another sleeve and send it back to us and we will send you another.

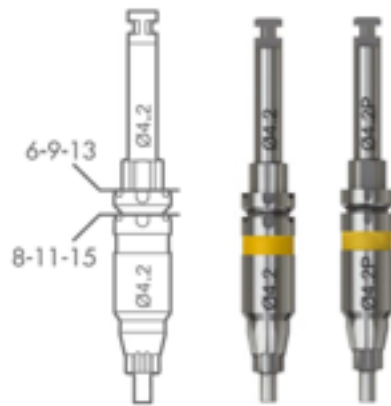


Start with the punch in the kit. There are two markings. If you are using a 6,9, or 13mm implant drill until the topmost markings are no longer in view. If you are using an 8, or 15 mm implant drill until you just see the bottom most marking. The next drill is called the Initial Drill, its more or less a crestal bone drill or counterbore. Same markings as the punches. Next use the initial drill. Engage the sliding element into the guide sleeve at the apex of the drill.

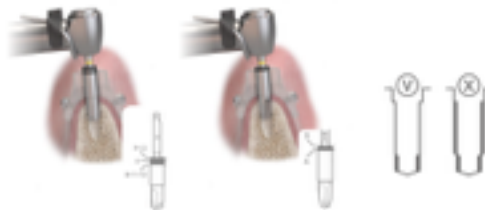


Proceed through the series of drills that corresponds to the diameter of your implant. The kit should have marking for you and are color coded. Pink is the 3.6, yellow is the 4.2 and Blue is 4.8 and above. White banded drills correspond to less dense bone.





The insertion tool also uses the same marking as the punches with the top mark for implants that are 6,9 and 13mm. The bottom mark is for 8,11, and 15mm implants.



When dealing with dense bone, start with the V drill. It will widen the apex a bit and uses the a little different banding pattern than the punches. The top notice is for 9 and 13mm, the middle for the 6 and the bottom for 8,11,15mm implants.. If you are still having a hard time getting the implant to length, use the X drill, which widens the body of the osteotomy and the apex.

