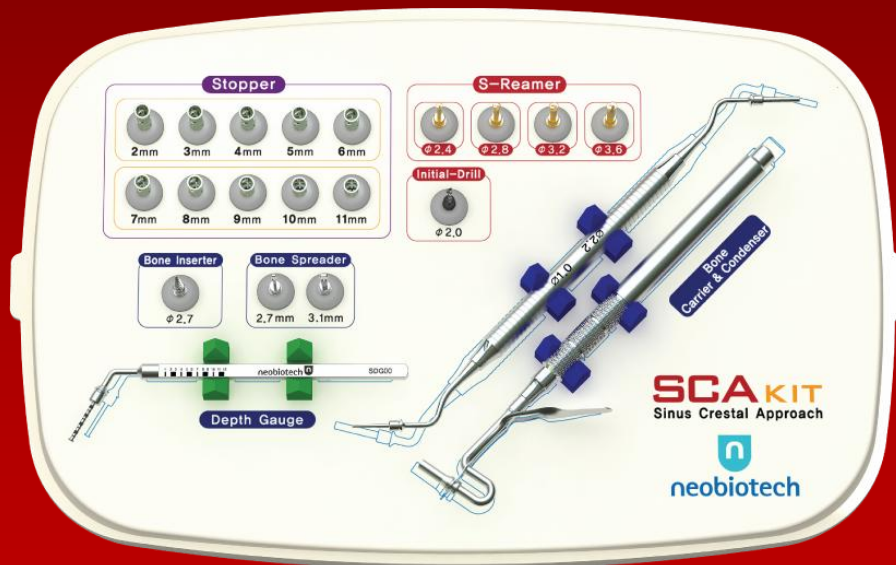


SCA Kit Sinus Crestal Approach Kit



Introduction

3S of SCA Kit

SCA Kit Composition

Component(I-drill)

Component(S-Reamer)

Component(Stopper)

Component(Depth Gauge)

Component(Bone carrier)

Component(Bone condenser)

Component(Bone inserter)

Component(Bone spreader)

User Guide

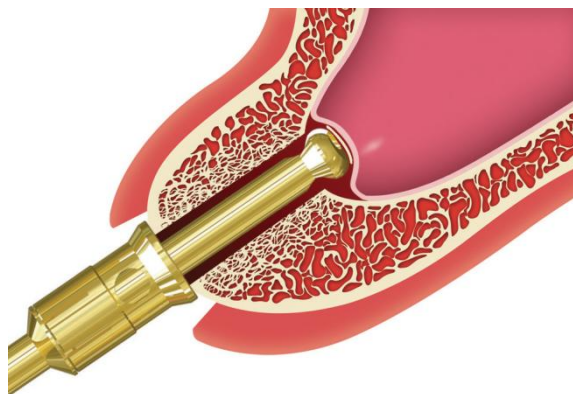
Case Report 01

Case Report 02

Introduction

SCA Kit SCA is a drilling tool on the inferior cortical bone without tearing the membrane and make a perforation on the inferior cortical bone without malleting osteotome technique.

Therefore User can get CMI fixation (Initial fixation in Crestal cortical bone, Middle cancellous bone and Inferior cortical bone)



Misaligned case



Septum case

3S of SCA Kit

Speedy

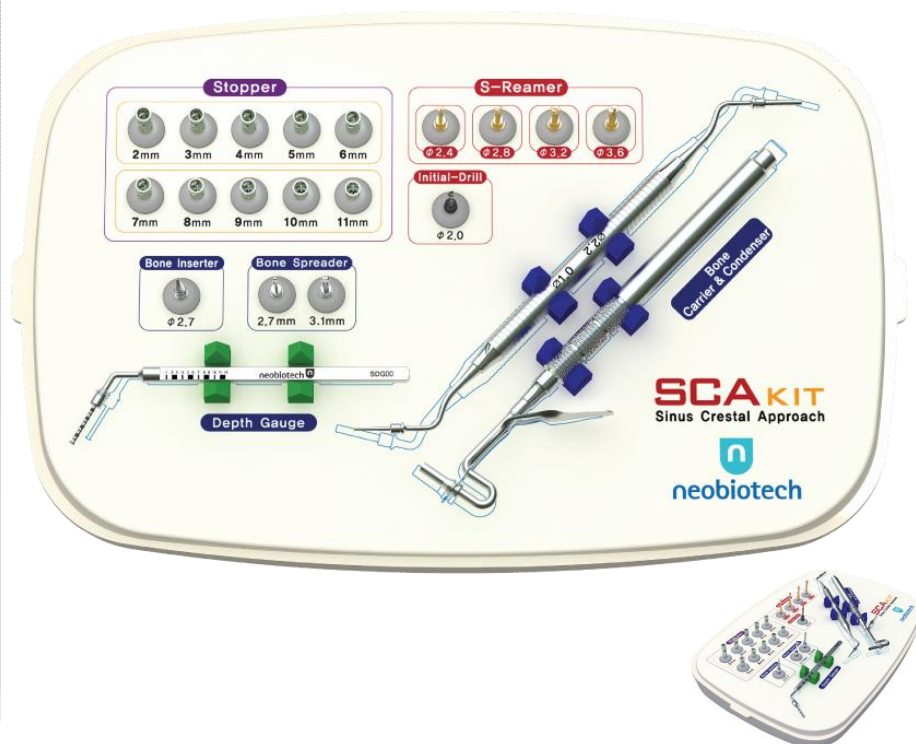
It can provide fast drilling procedure typically operated at 800~1,200RPM

Safer

The operation is simple and much comfortable process for patient and dentist.

Simpler

Using general drilling method



SCA Kit Composition

Spiral Bone inserter

Stopper

S-reamer

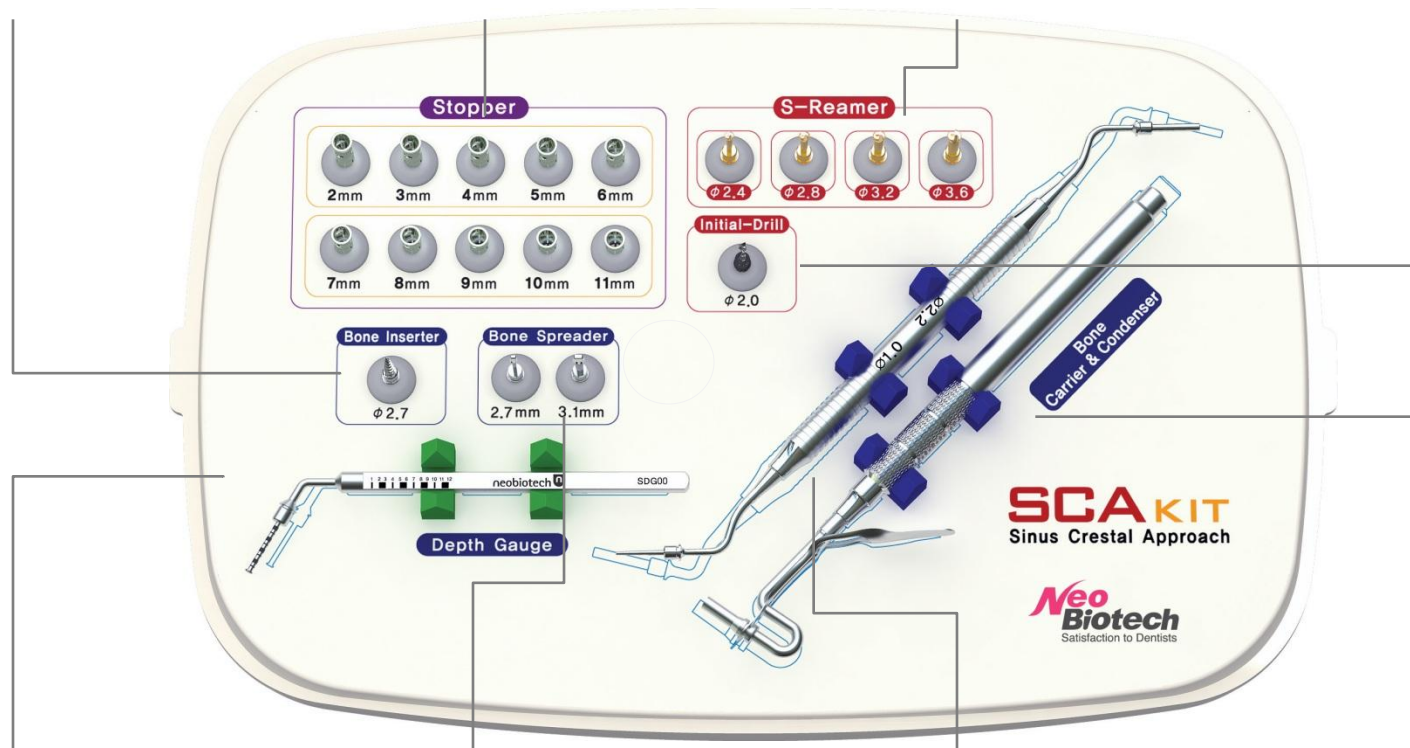
Initial Drill

Depth gauge

Bone spreader

Bone carrier

Bone condenser



SCA Kit components



1. Initial Drill

Drill for creating guide hole upon designating the precise point before using S-reamer.

Diameter(Φ)	product Name
2.0	SSD 20



2. S-reamer

Diameter(Φ)	product Name
2.4	ICR 24
2.8	ICR 28
3.2	ICR 32
3.6	ICR 36

* Speed : 1,200RPM



Φ 2.4

Φ 2.8

Φ 3.2

Φ 3.6



The reamer does not hurt the membrane because during drilling, the bone chip filled the reamer space so it makes more wide and safe side

1. S-reamer is the main instrument of SCA kit that creates desired size hole on the sinus inferior cortical wall without damaging Schneiderian membrane.

2. Even if reamer touched sinus membrane, membrane doesn't tear and perforate and S-reamer can be applicable to even in the misaligned septum cases

* S-reamer filled with bone chip and bone chip makes smooth surface.

3. S-Reamer is named after 'S' shaped blade design and drill for sinus elevation.

4. S-reamer provide high speed drilling at 800~1,200rpm there it can remove the bone effectively.

5. Bone chip makes flat blade surface and S-reamer doesn't tear sinus membrane Furthermore It is very safe in case of misaligned and septum case

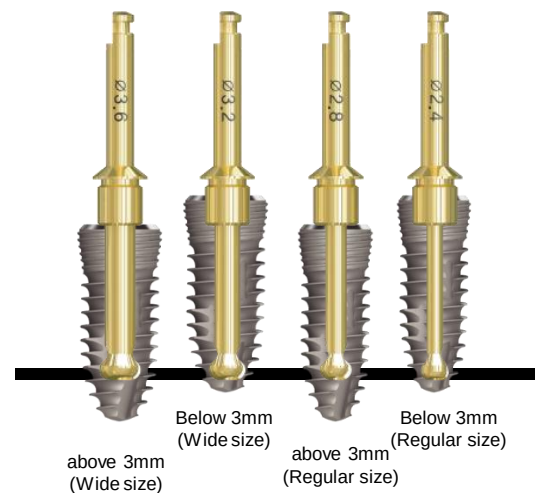
6. User can safely perforate the inferior cortical bone with Stopper

7. S-reamer's diameter is Ø2.4, Ø2.8, Ø3.2, Ø3.6. Choice of diameter is very important to CMI fixation So, user have to choose diameter carefully.

Choice of S-reamer's diameter is very important for gaining 'I' fixation.

S-reamer Diameter Selection (Based on implant insertion depth in sinus)

※ S-reamer must be chosen right diameter because it is very related with Neo CMI Implant diameter



► Neo CMI Implant Regular fixture

1mm~3mm insertion: Ø2.4mm

More than 4mm insertion: Ø2.8mm

► Neo CMI Implant Wide fixture

1mm~3mm insertion: Ø3.2mm

More than 4mm insertion: Ø3.6mm



SCA Kit components

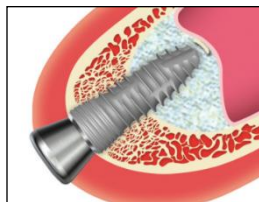
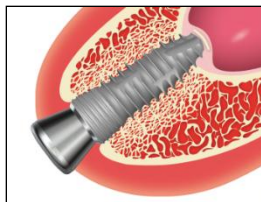
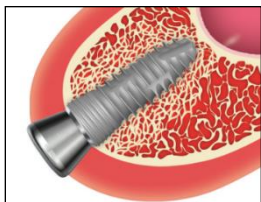
※ CMI Fixation

CMI Fixation is a new implantation technique which is presented by Dr. Young Ku, Heo. It is for effective initial fixation at mixed bone's each part such as hard-soft bone and an abbreviation for Crest cortical, Middle cancellous and Inferior cortical fixation; especially it is an important concept for effective fixation at Middle cancellous bone and Inferior cortical bone.

Fixation : "C" fixation is method which removes enough Crest cortical bone and then makes a final implantation; the fixture can be fixed passively without over-compression.

Fixation : "M" fixation is method which is clean and best getting the best fixation from soft bone.

Fixation : "I" fixation is method of gaining strong fixation inner sinus inferior cortical wall by making a small hole



3. Stopper



- ▶ The stopper is composed of 10 pieces, 2mm~11mm.
Each 1mm steps make the S-reamer stop to insert maximum 1mm in sinus. To prevent membrane rupture by physical pressure.

Diameter(Φ)	Product Name
2.0~11.0	SKS 02~SKS 11

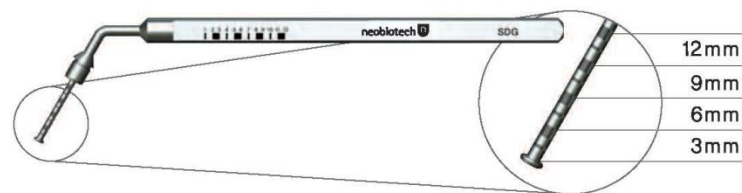
- ▶ Stopper is compatibility with S-reamer, bone spread and bone condenser.

When bone spreading or condensing, User have to use it for prevention of the membrane tearing

- ※ The written length is not length of stopper body but depth of drilling.



4. Depth gauge



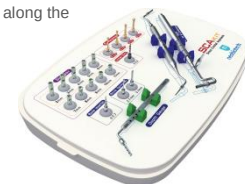
Depth gauge is an instrument for measuring the depth of the remaining bone after perforating with S-reamer. The end of depth gauge is plat, so it can be hung sinus wall inside and measure the depth.



Product Name

SDG 00

Insert and drag the depth gauge along the wall carefully



SCA Kit components

5. Bone Carrier

1. Bone carrier is used to carry the bone grafting materials into osteotome site.
2. One time insertion 0.05CC

product Name

Jumbo



6. Bone Condenser

1. Bone condenser is used to keep the graft materials in place on the floor of the sinus through the osteotome site.
2. The appropriate size of stopper mounted on the bone condenser should be selected same as the residual bone height.
3. When inserting hard or big particle bone, user would be better to use small diameter bone condenser.

Diameter(Φ)

1.0 / 2.2

Product Name

SBC 01



7. Spiral Bone Inserter

Spiral Bone Inserter is an instrument which is for bone graft to push the bone into sinus after inserting the bone into a hole with bone carrier.

Bone inserter can be safely used without any damages at membrane after combination with 1mm long Stopper

product Name

SBI 27

Speed : 80RPM



8. Bone Spreader

The bone inserted in the sinus floor can be spread out to a lateral direction (left and right side) by this tool thereafter the sinus membrane at the inferior aspect of the osteotomy its naturally detached from the floor of the maxillary sinus and elevated upward to create more space in the floor of the sinus for the bone-graft material. The minimum 0.3 cc amounts of (height 3mm) bone grafting material are recommended to be inserted into the space before use the bone spreader in sinus and then mount the same size stopper in length as residual bone height. Whenever insert the bone grafting material, 0.2~0.3cc, change the 1mm larger size stopper continuously.

Diameter(Φ)

2.7

3.1

product Name

SBS 20

SBS 30



User Guide

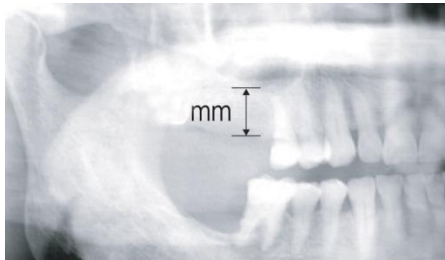
1. Get an accurate X-ray image of the posterior maxillary region to assess the residual bone height.
2. Drill 1mm shorter than the length of checking residual bone height and drill step by step.
Final diameter of drilling is determined by considering bone density in order to get "M(Middle cancellous bone)" fixation.
3. For safety use initial drill using 1mm longer stopper to set closer to inferior cortical bone.
4. Select S-reamer diameter considering the fixture diameter and insertion depth in sinus.
Diameter Selection (Based on implant insertion depth in sinus)
5. If the sinus inferior cortical wall does not perforate until the stopper reaches to the crestal bone, change 1mm longer size stopper and drilling continuously.
6. You can feel perforating in inferior cortical wall and then measure the residual bone height with depth gauge. When you hang on the end of depth gauge in sinus wall inside, you can check the detailed residual bone height.
(Caution: Do not insert the depth gauge maximum 1mm in sinus.)
7. When the inferior wall is perforated, close the patient's nose and then make them blow out to check the membrane status. The soft bone (such as DFDBA bone) should be inserted first. If a lot of bone insertion is required, you may use the hard bone as well as the soft bone.
8. Insert the bone with bone carrier and stopper mounted bone condenser.
9. Insert the bone volume based on membrane elevation height. if you want to elevate the Membrane about 1mm, you may need 0.1cc volume of bone grafting material. However, if Depends on how effectively you can transfer the graft to the osteotomy.
10. To elevate the membrane more laterally, after inserting at least 0.3cc volume of bone, start the bone spreading with stopper mounted bone spreader. Narrow one is for 2.4 x 2.8mm S-reamers and wide one is for 3.2 x 3.6mm S-reamers.

11. Spread out the bone with stopper at every 0.2cc ~ 0.3cc volume of bone insertion. It is not necessary to increase the stopper size even if additional bone is inserted.
12. When finish the insertion the bone in sinus, you can refresh the hole with a larger diameter drill.
13. Based on the crest cortical bone density, the countersink could be needed depending on the patient's the crest cortical bone density (except IT type) The counter sink should be used for the D1 and D2 bone.
14. Finally, place the fixture at the prepared hole.



Case reports

Case 1. CMI fixation without bone graft



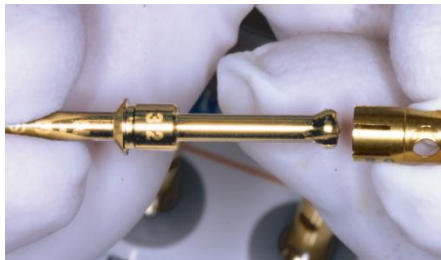
1. According to X-ray image, the residual bone height was 9.0mm on #16 and 17, the Ø5.0 in diameter x 10mm in length fixture will be placed.



2. Drill 1mm shorter than residual bone height. (Flapless surgery case)



3. For the 5mm wide body fixture, it is recommended to expand the hole by up to Ø3.8mm drill for D3 bone density.



4. As the residual bone height was 9.0mm, the 9.0mm stopper was required to mount on S-reamer. Considered the fixture diameter Ø5.0 x 10mm and selected Ø3.2mm S-reamer to make a hole with 9.0mm stopper.



5. Drilling with 9.0mm stopper



6. The inferior cortical bone was perforated with 11.0mm stopper. Even in case of the misreading of X-ray image, the stoppers provide you the safe surgery if you use the sinus approach step by step.



7. For implant placement, perform the final drilling. To obtain ideal initial fixation, use the 1.5mm longer length fixture as the residual bone height is 11mm. (Ø5.0 x 11.5mm.)



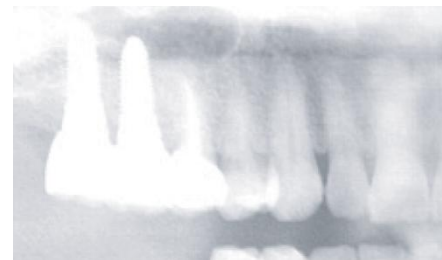
8. The fixture was placed without bone grafting.



9. Even the bone density was D3, D4, Neo CMI Implant fixture was obtained the idea initial fixation with 40Ncm torque.



10. After obtaining the ideal fixation, connect a healing abutment on fixture.



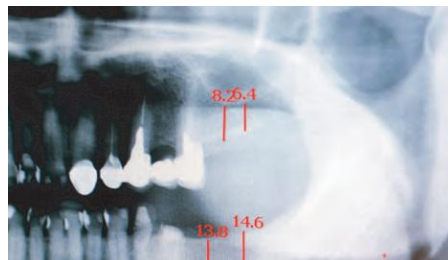
11. With wide implant and ideal initial fixation, anytime loading can be performed.



12. The prosthetic was completed 2 weeks later. This demonstration shows that the misreading of X-ray can be covered by 1mm difference of 12pcs stoppers with S-reamers.

Case reports

Case 2. Crestally Bone added CMI fixation case



1. The residual bone height of #26 and 27 were estimated as 8.2mm and 6.4mm respectively. It was required the membrane to lift up about 4~6mm and to place Ø5.0 x 11.5mm in length implant(wide body).



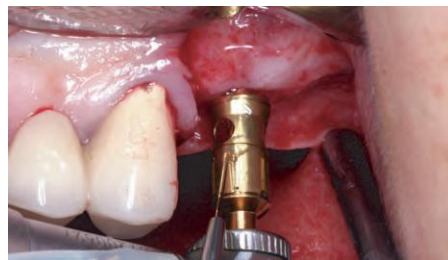
2. Drill 1mm shorter than residual bone height until 3.8mm drill in diameter.



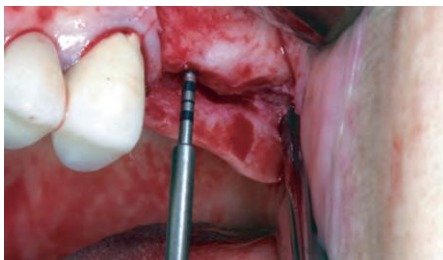
3. Mount 1mm longer stopper than the drilling length in step 2 on the 3.6mm S-reamer.



4. If the inferior cortical wall does not perforate until stopper reaches to crestal bone, drill again using the 1mm longer stopper mounted in S-reamer.



5. Use the drilling speed at 800~1,200rpm with copious irrigation. Stopper provides you the safe operation. It is possible to feel perforation while drilling. Drill comfortably with perpendicularity pressure.



6. Each of them were perforated at 9mm and 7mm. To confirm membrane of cortical wall, residual bone must be checked by depth gauge carefully and exactly. Do not feel membrane with Depth gauge.



7. As the sinus membrane is lifted up about 4 to 6mm to an apical direction, the fixture specification is 5.0 in diameter x 11.5mm in length. Make sure to use the correct bone volume and lift up the appropriate membrane height as planned.



8. Insert the bone material till height you want continually.



9. After inserting the suitable bone, insert the bone in the sinus with the bone condenser which combined with stopper.



10. Pack the bone in sinus with stopper mounted on bone condenser. The stopper size should be same as the residual bone height.



11. Recommend to use the bone spread with stopper in order to spread the inserted bone laterally at every 0.2 ~ 0.3cc bone packing.



12. More than 3mm membrane elevation is required at first bone spread using. At every 0.2cc ~ 0.3cc bone insertion, required to spread the bone in sinus.

Case reports

Case 2. Crestally Bone added CMI fixation case



13. If the crest cortical bone density is the D2 level, the countersink is needed. Even though the hole was drilled smaller than expectation, it is possible to countersink as this drill is pointed.



14. Implant insertion : Use the suitable S-reamer and place Neo CMI Implant fixture to obtain the initial fixation and self-compaction on D4.



15. Place a 5.0 x 11.5mm Neo CMI Implant to obtain the initial fixation and self-compaction on D4 bone.



16. Point of view on mouth and radiation (X-Ray) after rebuilding prosthetic dentistry.



17. The image of completed prosthetic dentistry.

