

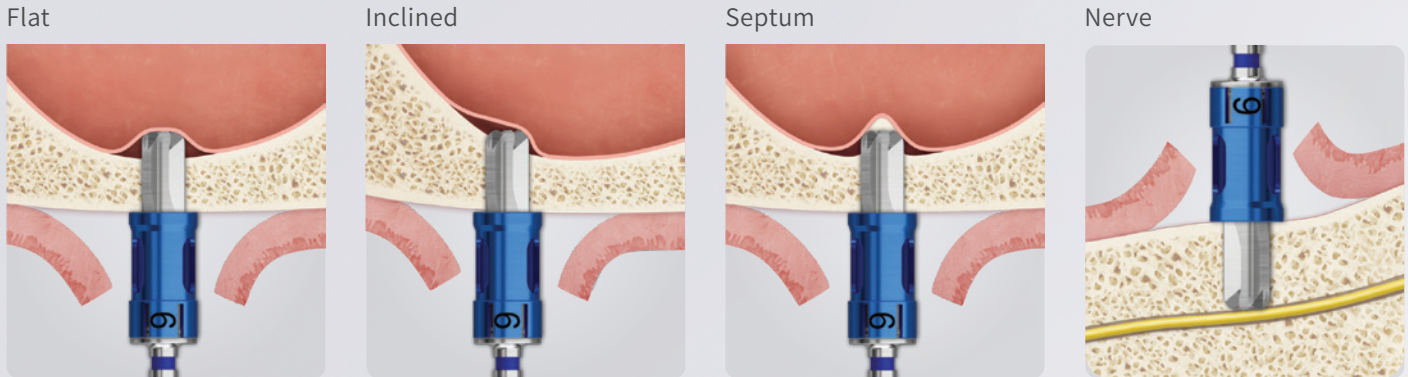
# CAS Kit

- Round-shaped cutting edge drill design minimizes membrane perforation
- Effectively lift membrane with hydraulic pressure
- Applicable to various sinus floor morphologies

**HIOSSEN**  
IMPLANT

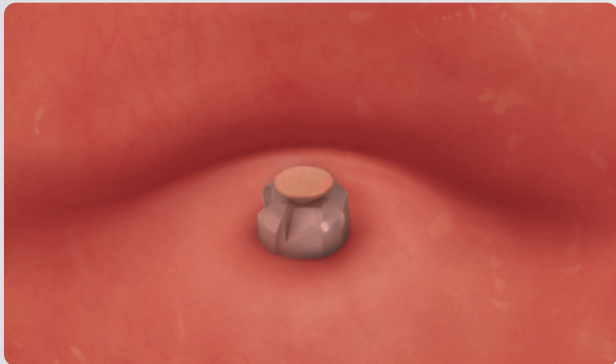
## Applicable to various cases

The inverse conical design of the drill tip allows users to perform sinus surgery, adapting to various sinus floor conditions (flat, inclined, or adjacent to septum). The drill design also accommodates for inferior alveolar nerve despite in proximity to the osteotomy.



## Minimizes risk of maxillary sinus membrane perforation

- The round-shaped cutting edge drill design minimizes the risk of sinus membrane perforation



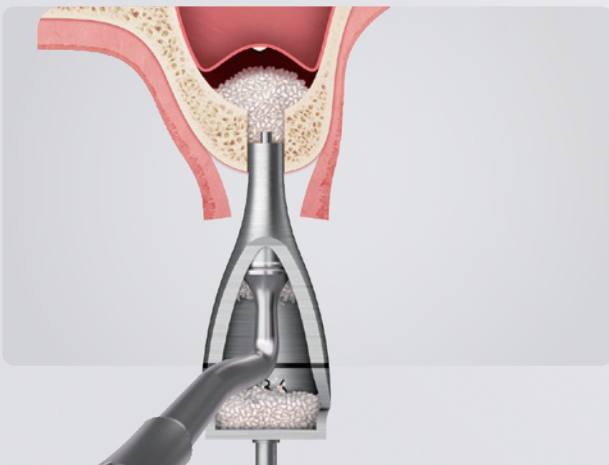
## Safely lifts membrane with hydraulic pressure

- Lifts maxillary sinus membrane via hydraulic pressure
- The unique design of the membrane lifter tip creates a tight seal in the osteotomy to lift the membrane with saline pressure



## Provides safer bone grafting and prevents secondary infection

- Funnel shaped bone carrier minimizes the risk of secondary infection from foreign substances
- Able to inject 0.15cc of bone graft material at a time leading to faster bone grafting



## Collection of Autogenous bone

- Autogenous bone is collected as bone chips are collected between the cutting blades



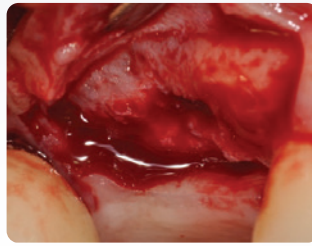
## Clinical indications & Case study

### Missing second molar case

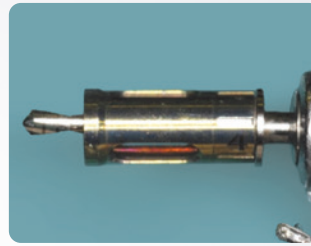
Data source : Apsun Dental Clinic. Dr. Y.S. Cho



Pre-operative



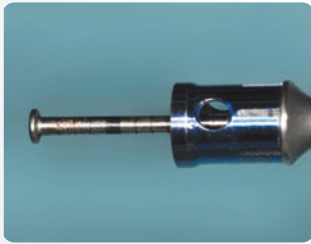
Flap elevated



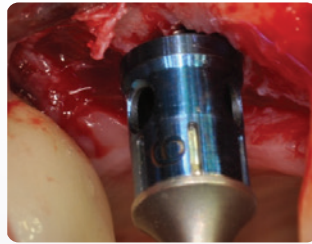
Ø2.2 Twist Drill  
with 4.0 mm stopper



Ø3.6 CAS Drill  
with 8.0 mm stopper



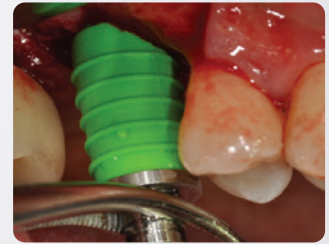
Depth gauge  
with 9.0 mm stopper



Gently release and lift the  
sinus membrane



Hydraulic membrane lifter



Detach the sinus membrane to create  
adequate space for bone grafting  
using Hydraulic membrane lifter



- \* **Bone Carrier:** Cone shaped with an extended tip that reaches the sinus cavity and prevents bone graft material from spilling out
- \* **Bone Condenser:** Safely pushes bone material through the bone carrier into the sinus cavity



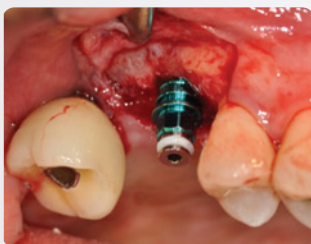
Fill and distribute bone graft material evenly  
into the created space using bone condenser



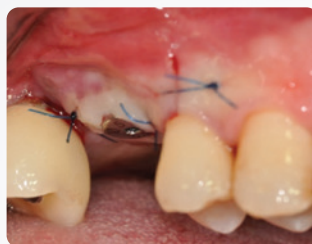
Bone grafting is completed



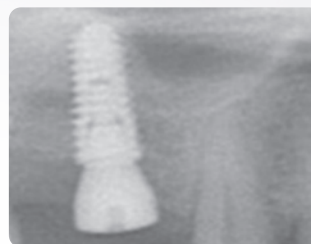
ETIII SA Ø4.5x10.0mm



Placed Hiossen ETIII SA  
(Ø4.5x10.0mm, insertion torque:  
14Ncm, ISQ:66/66) into the osteotomy



Ø5.0 Healing abutment connection



Post-operative X-ray

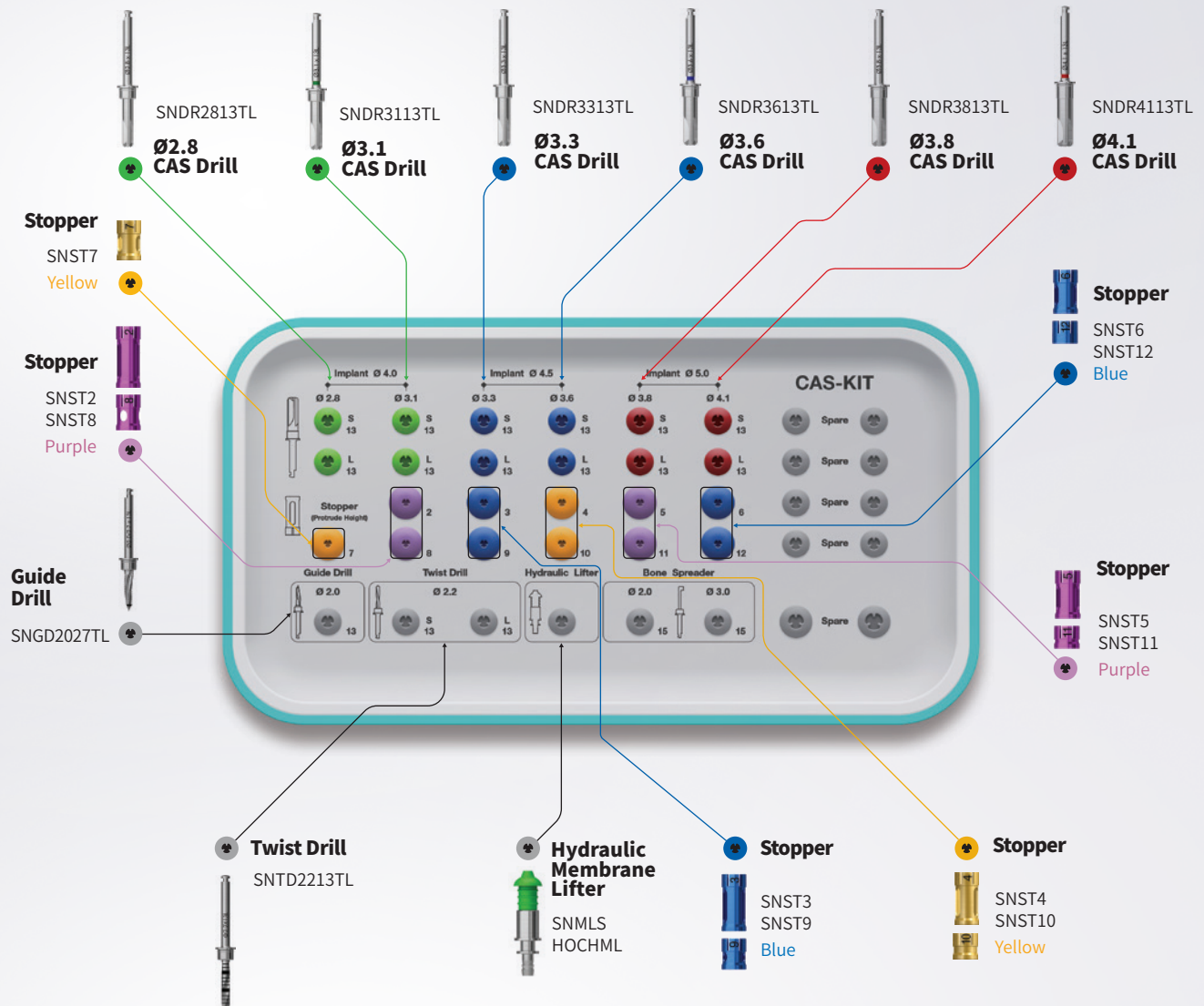


Post-operative CT view

The CAS Drill is designed to safely and conveniently lift the maxillary sinus membrane from a crestal approach. The CAS Drill can be used for either general-straight or tapered implants. It is recommended to use the Hiossen implant system to obtain the optimized insertion torque, initial fixation, and tactile feedback in placing the implant(s) in the sinus cavity with a CAS kit.

※ Refer to the implant manufacturer's guideline for more details.

# CAS Kit layout and components



► : Required    ► : Optional

Implant Selection		Guide Drill	Twist Drill	CAS Drill						Depth gauge	Hydraulic Memb. Lifter	Bone carrier	Bone condenser
F(Ø)	Bone Density	Ø2.0/2.7	Ø2.2	Ø2.8	Ø3.1	Ø3.3	Ø3.6	Ø3.8	Ø4.1				
Ø4.0	Soft	►	►	►						►	►	►	►
Ø4.5		►	►	►		►				►	►	►	►
Ø5.0		►	►	►					►	►	►	►	►
Ø4.0	Normal	►	►		►					►	►	►	►
Ø4.5		►	►		►		►			►	►	►	►
Ø5.0		►	►		►				►	►	►	►	►

Use the matrix above to prepare for surgery. There are several factors that require consideration: the diameter of the implant, the bone density of the sinus floor, and the optimized insertion torque and the initial fixation to stabilize the implant.