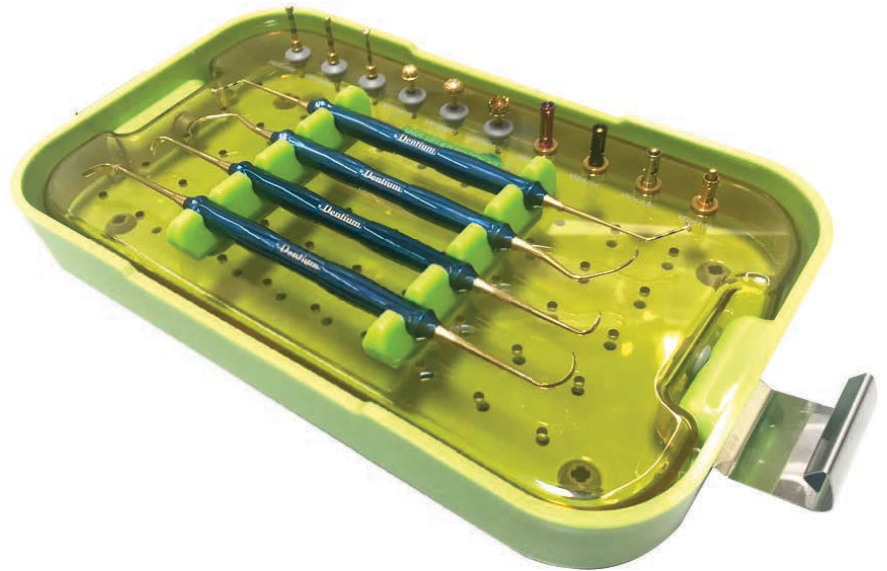


DASK

Dentium Advanced Sinus Kit

Catalog & Manual



DentiumUSA
Developed by Clinicians for Clinicians

DentiumUSA
Developed by Clinicians for Clinicians

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Dental Implant surgery involves complex dental procedures. Appropriate and adequate training in proper technique is mandatory prior to sinus surgery.

Improper technique and / or improper patient selection can result in implant failure and / or adverse effect including, but not limited to, infection, bleeding and loss of bone around the implant site.

The Dentium Implant Surgical Kit and Dentium Implant Systems are recommended to use in conjunction with DASK.

In the USA: Federal law restricts this device to sale by or on the order of a licensed dentist or physician.

All products are subject to change without notice.

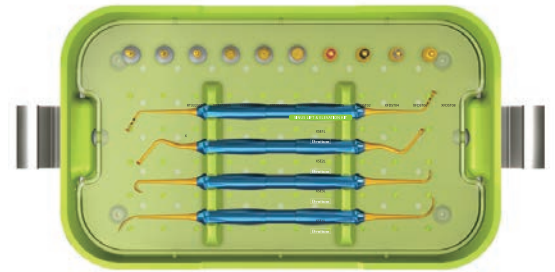
Dentium reserves the right to make any necessary alterations to the methods and procedures stated in this catalog & manual.

DASK Catalog

DASK (Dentium Advanced Sinus Kit)

REF	DASK
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- Simple access to sinus cavity for lifting | Sophisticated clinical application
- Designed to minimize the risk of sinus membrane perforation
- DASK contains Drills, Drill stops and Sinus membrane elevators

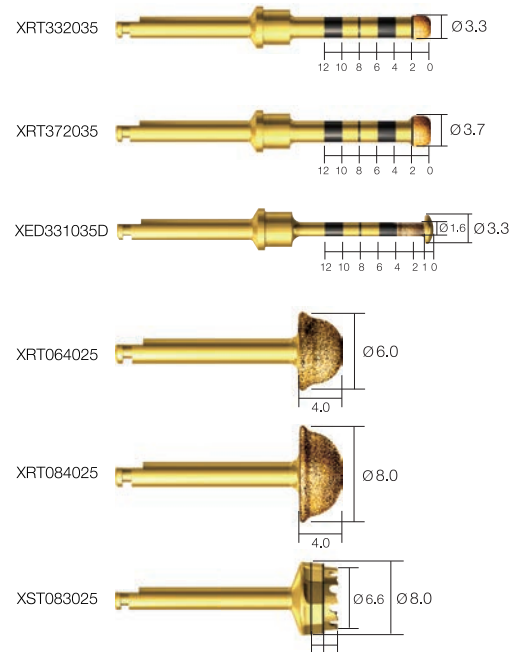


DASK Drill | Scale 1 : 1.2 / mm

Surgical Technique	DASK Drill No.	REF
Crestal Approach	DASK Drill #1	XRT 33 2035
	DASK Drill #2	XRT 37 2035
	DASK Drill #3	XED 33 1035D
Lateral Approach	DASK Drill #4	XRT 06 4025
	DASK Drill #5	XRT 08 4025
	DASK Drill #6	XST 08 3025

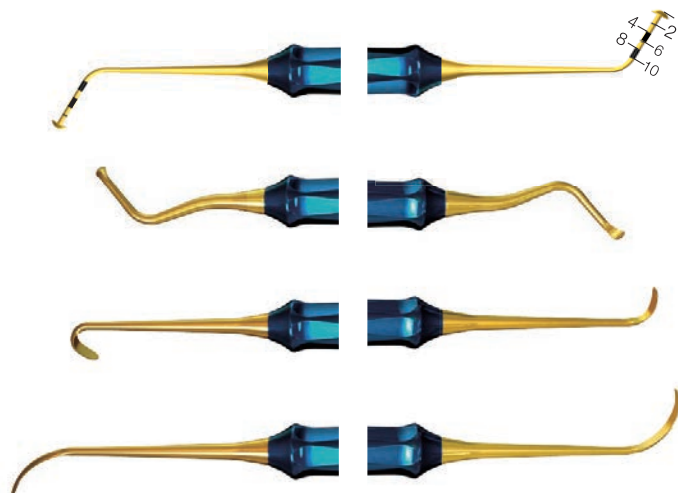
※ Note

DASK Drill #1~5 : Drill speed 800 to 1,200 rpm, 30~45 N.cm with internal irrigation
 DASK Drill #6 : Drill speed 800 to 1,200 rpm, 30~45 N.cm with external irrigation



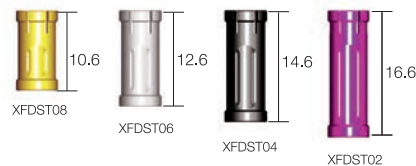
Sinus Membrane Elevator | Scale 1 : 0.6 / mm

REF	XSE1L
REF	XSE2L
REF	XSE3L
REF	XSE4L



Drill Stops | For XRT 332035, XRT 372035, XED 331035D | Scale 1 : 1 / mm

Drilling Depth*	L	REF
08 mm	10.6	XFDST 08
06 mm	12.6	XFDST 06
04 mm	14.6	XFDST 04
02 mm	16.6	XFDST 02



* Maximum available Drill depth - Drill stop guideline for residual bone height

Sinus Bur Kit

REF	SDK
-----	-----

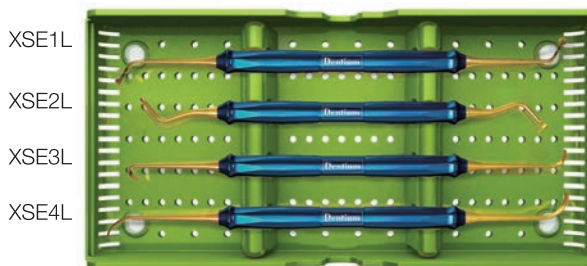
Sinus Bur Kit contains DASK Drills and Drill Stops



Sinus Membrane Elevator Kit

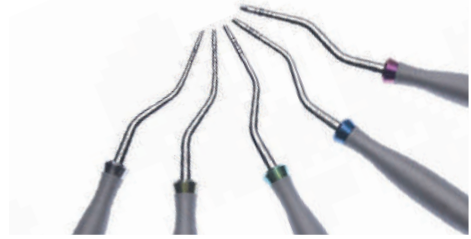
REF	XSKL
-----	------

XSKL contains Sinus Membrane Elevators



Dentium Osteotome Kit

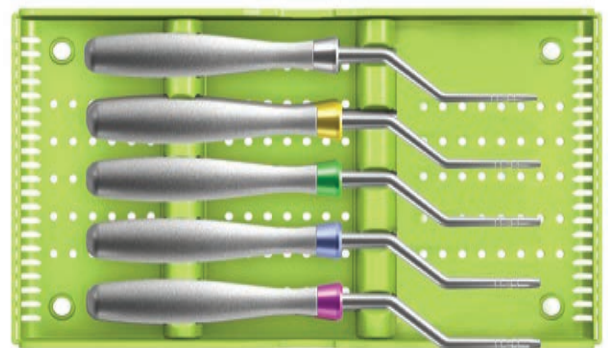
Osteotomes compress the bone laterally or move it apically, providing a denser bone interface and/or an apical protective “cushion.”



Osteotome | Final drill type | Scale 1 : 0.4 / mm

XOF 20 A1 XOF 20 B1		Type A 	Type B 	 Type A (Convex)
XOF 34 A1 XOF 34 B1				
XOF 38 A1 XOF 38 B1				
XOF 43 A1 XOF 43 B1				
XOF 48 A1 XOF 48 B1				

Type	REF	ØA	ØB
XOFK Type A (Convex)	XOF 20 A1	Ø1.7	Ø2.8
	XOF 34 A1	Ø2.3	Ø2.8
	XOF 38 A1	Ø2.7	Ø3.2
	XOF 43 A1	Ø2.8	Ø3.8
	XOF 48 A1	Ø3.0	Ø4.3
XOFBK Type B (Concave)	XOF 20 B1	Ø1.7	Ø2.8
	XOF 34 B1	Ø2.3	Ø2.8
	XOF 38 B1	Ø2.7	Ø3.2
	XOF 43 B1	Ø2.8	Ø3.8
	XOF 48 B1	Ø3.0	Ø4.3



XOFK (Type A)

XOFBK (Type B)

DASK Manual

Recommendations for using DASK Drills

Drills for Crestal Approach



The distance from the alveolar crest to the sinus floor should be measured on x-rays and/or CT scan prior to surgery. Site preparation is performed with twist drills in sequence up to 1mm short of the sinus floor. Depending on bone quality, drill with either **DASK Drill #1 (XRT332035)** or **#2 (XRT372035)** until the sinus floor is carefully approached with light apical pressure. When sinus floor yield is felt, stop drilling.

(800~1200 rpm, 30~40 N.cm with internal irrigation)

⚠ Excessive heat generated by drilling may lead to bone necrosis. Internal irrigation not only provides a cooling effect, but also adds hydraulic pressure to slightly lift the sinus membrane during initial entry of sinus.



****Option****
When the sinus cavity is accessed, you can use **DASK Drill #3 (XED331035D)** to lift the sinus membrane and facilitate detachment vertically with hydraulic pressure from the #3 drill's internal irrigation hole. DASK Drill #3 can also be used for a lateral window approach. Diamond coating beneath the disk can help enlarge the antrostomy.

(800~1200 rpm with internal irrigation)

Drills for Lateral Approach



To make a lateral window by a 'thin-out' technique:

(800~1200 rpm, 30~40 N.cm with internal irrigation)

DASK Drill #4 (XRT064025) or **#5 (XRT084025)** can be used to prepare a lateral sinus window using light pressure and rotating strokes. **The diamond-coated surface** of the burs (DASK Drill #4 and #5) is designed to minimize the risk of sinus membrane perforation.

⚠ Excessive heat generated by drilling may lead to bone necrosis. Internal irrigation not only provides a cooling effect, but also adds hydraulic pressure to slightly lift the sinus membrane during initial entry of sinus.

To make a lateral window through the wall-off technique:

(800~1200 rpm, 30~40 N.cm with external irrigation)

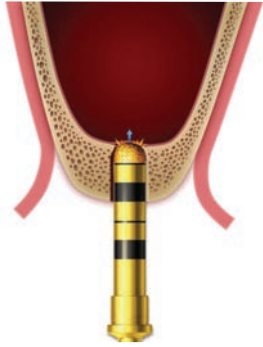
DASK Drill #6 (XST083025) is used to cut and detach the lateral bone window like a trephine bur.

⚠ Uncontrolled overdrilling may lead to sinus penetration and possible damage to the membrane. External irrigation is necessary when drilling.

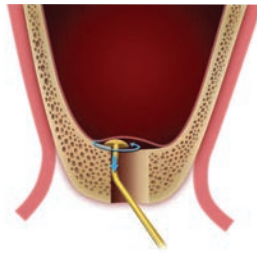


Crestal Approach (Sinus Lifting) with SuperLine + OSTEON™ II Lifting

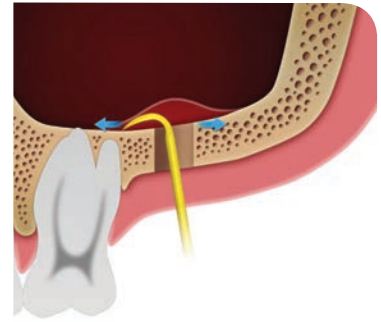
DASK Drills and Elevators



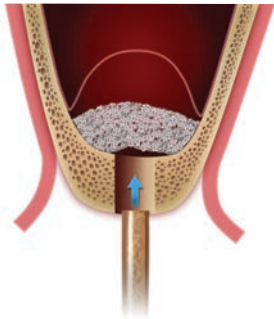
After final drilling with appropriate size drill for planned osteotomy site, eliminate the residual bone (1mm) using **DASK Drill #1 (XRT332035)** or **DASK Drill #2 (XRT372035)** until a slight drop is felt



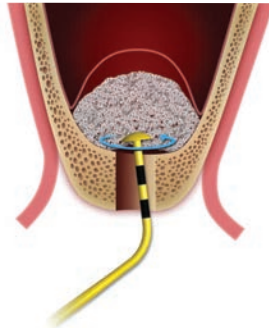
Use dome-shaped **Sinus Membrane Elevator (XSE1L)** to gently release and lift the sinus membrane



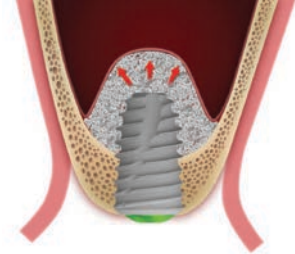
Detach the sinus membrane to create adequate space for bone grafting using **Sinus Membrane Elevator (XSE3L)**



Use appropriate volume of Bone grafting material (OSTEON II™ Lifting) to gently fill the created space through the osteotomy site. Excessive amount of bone grafting material within a small space can cause membrane rupture



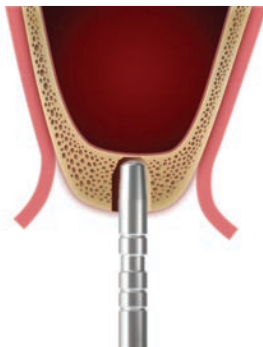
Fill and distribute OSTEON II™ Lifting material evenly into the created space using **Sinus Membrane Elevator (XSE1L)**



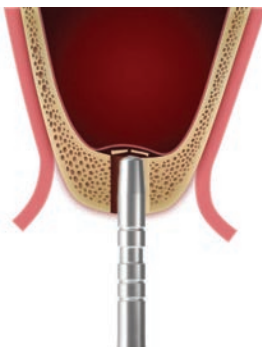
Place Dentium Implant (30~40 N.cm fixture insertion torque at 20 rpm, recommended) into the osteotomy

Refer to the implant manufacturer's guideline for more details

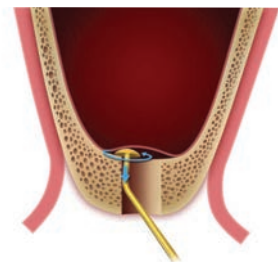
Osteotome Technique



After final drilling with appropriate size drill for planned osteotomy site, eliminate the residual bone (1mm) using an appropriate osteotome



Carefully use an appropriate osteotome to make a greenstick fracture



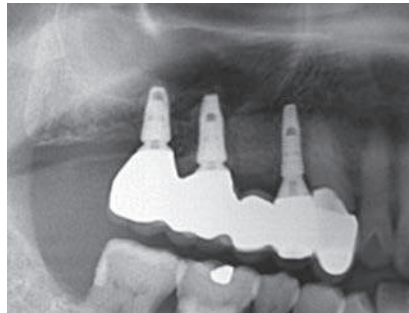
Use the dome-shaped sinus elevator to gently separate and lift the sinus membrane. Follow the rest of the procedure above from the 3rd step in 'DASK Drills and Elevator'

Crestal Approach (Sinus Lifting)

Crestal Approach



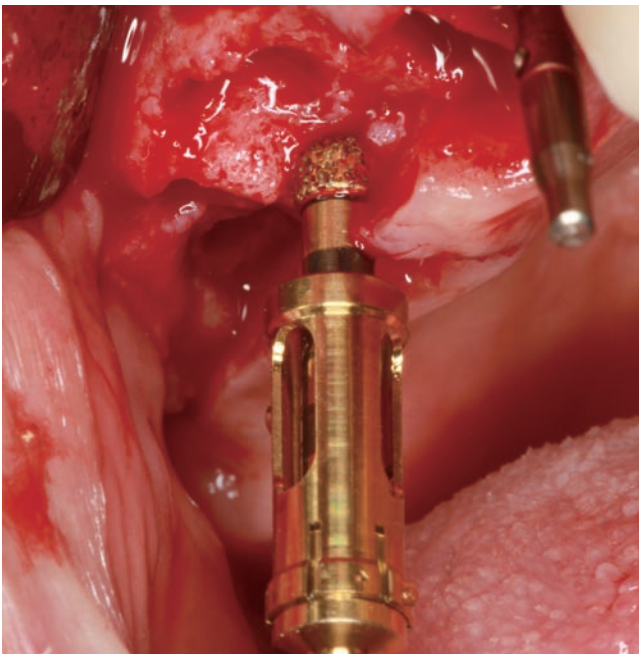
Preoperative panoramic view
Due to caries and bone loss, #3 and #4 need to be extracted.



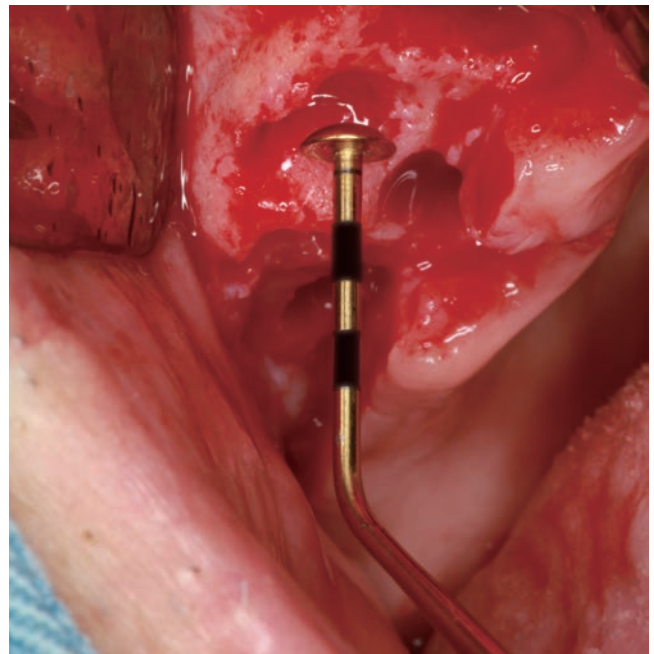
Postoperative panoramic view



Final prosthesis in situ (Zirconia ceramic bridge)



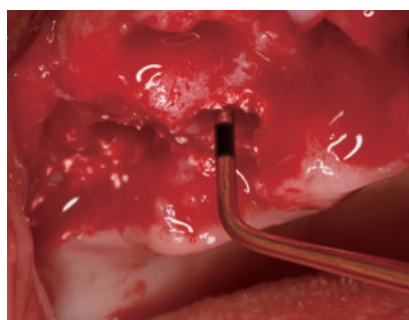
DASK Drill #1 (XRT332035) with a Drill stop to thin out the cortical bone of the sinus floor



The dome-shaped **Sinus Membrane Elevator (XSE1L)** is introduced to detach the Schneiderian membrane from the sinus floor



Dentium bone graft material (OSTEON™II Lifting) is filled into the space under the membrane



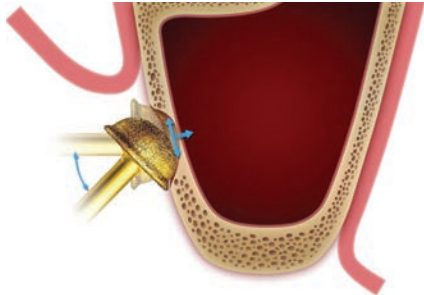
Evenly distribute graft material with the **Sinus Membrane Elevator (XSE1L)**



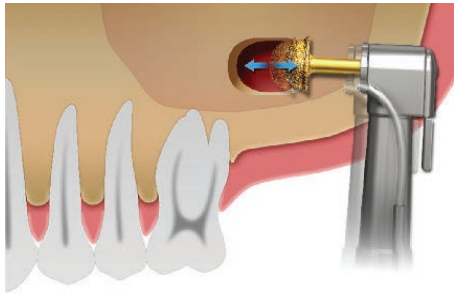
SuperLine Implant is placed into the osteotomy

Lateral Approach (Sinus Elevation)

Thin-out Technique

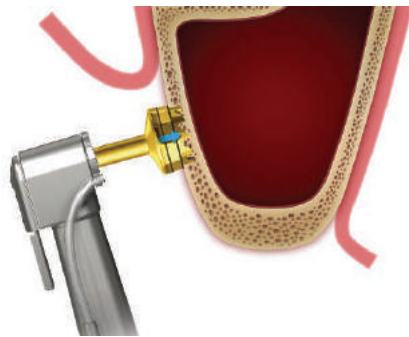


Thin down the lateral wall with **DASK Drill #4 or #5 (XRT064025 or XRT084025)** at a 45 degree angle to reach the sinus membrane.



Move the **DASK Drill #4 or #5 (XRT064025 or XRT084025)** mesio-distally with a gentle pressure until you get a proper size and shape of the window for bone augmentation.

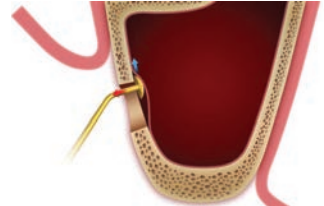
Wall-off Technique



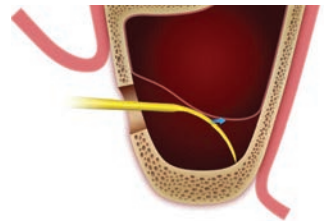
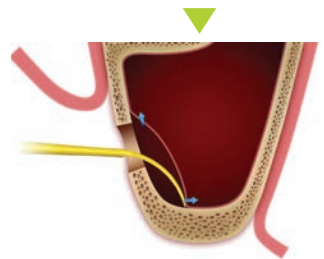
Use **DASK Drill #6 (XST083025)** to separate a round bony plate from the lateral wall as with a trephine bur. Start to drill at the desired location and proceed with drilling until you see the shadow of the sinus membrane. Separate and lift the bony plate up from the neighboring wall with a molt curette or a periosteal elevator. The bony plate may be repositioned back in its original position after the bone augmentation.

The distance of the first laser mark from the bur is 1.5mm and the second is 3.0mm.

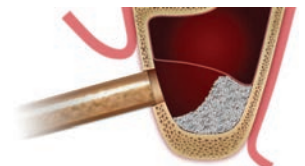
CAUTION: Overdrilling can cause sinus membrane perforation, Keep in mind that bone thickness may vary around the circumference of the trephine cut.



Detach the sinus membrane using the dome-shaped **Sinus Membrane Elevator (XSE1L)**



Use the **Sinus Membrane Elevator (XSE4L)** to elevate the sinus membrane to create adequate space for graft material



Fill bone graft material (**OSTEON II™ Sinus**) into the created space



In Wall-off Technique, reposition the bony plate after bone augmentation. Place **SuperLine™** implant

Lateral Approach (Sinus Elevation)

Clinical Case 1: Thin-out Technique (Small window)



Preoperative panoramic view



Postoperative panoramic view



DASK Drill #4 (XRT064025) is used to reduce the lateral wall of the sinus to create the antrostomy



The dome-shaped Sinus Membrane Elevator (XSE1L) is used to detach sinus membrane from the circumference of the bony window



Implants placed with bone graft filling

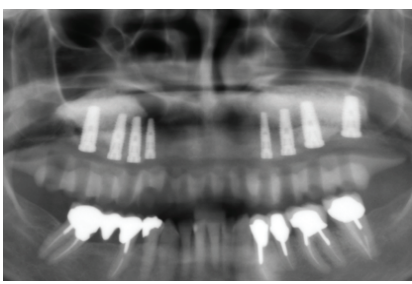


Flaps closed

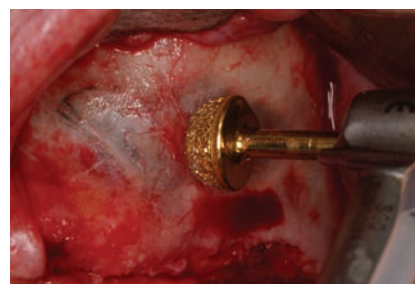
Clinical Case 2: Thin-out Technique (Large window)



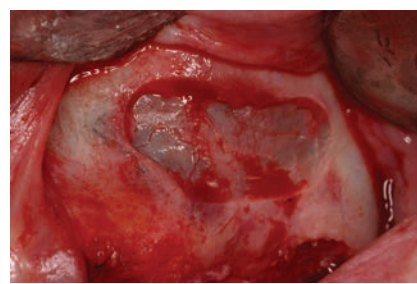
Preoperative panoramic view



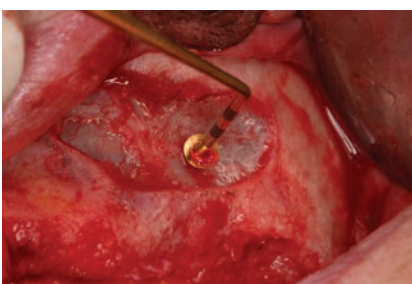
Postoperative panoramic view



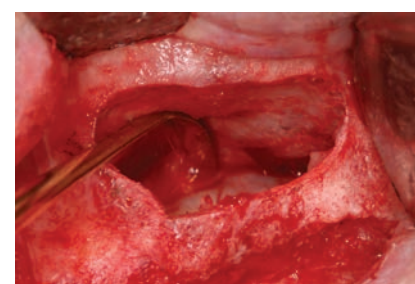
Thin down the lateral wall with DASK Drill #4 (XRT064025) mesio-distally with gentle pressure until you get the proper size and shape of the window



Make lateral window wide enough to perform bone augmentation

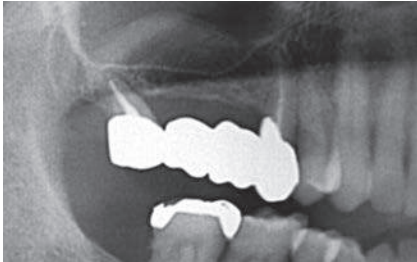


Use the dome-shaped Sinus Membrane Elevator (XSE1L) to separate sinus membrane from the lateral window



Use Sinus Membrane Elevator (XSE4L) to elevate the sinus membrane to create adequate space for graft material and elevate further to the medial wall in order to provide additional blood supply from that bone

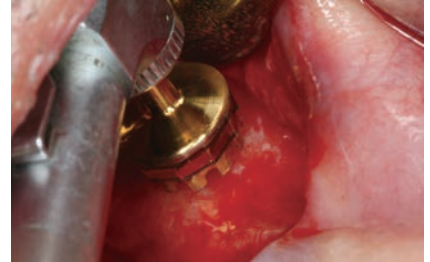
Clinical Case 3 : Wall-off Technique



Preoperative panoramic view

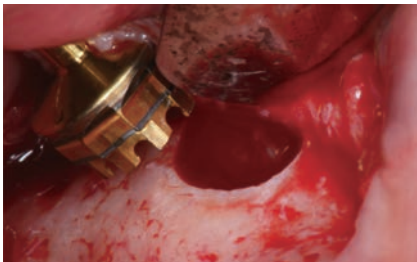


Postoperative panoramic view

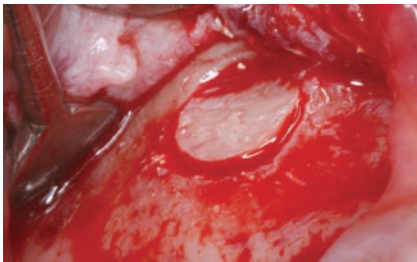


DASK Drill #6 (XST083025) is used to cut a round bone plate from the lateral wall as with a trephine bur.

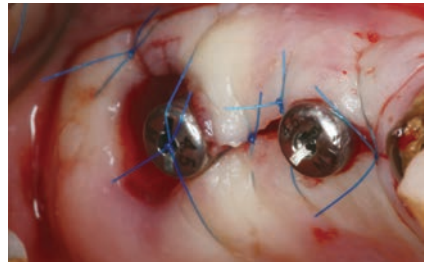
⚠ Uncontrolled overdrilling may lead to sinus penetration and possible damage to the membrane. External irrigation is necessary when drilling.



The maxillary sinus (lateral window) is opened



Repositioning the bony plate after bone augmentation



Flaps Closed

DASK Maintenance

Manual Cleaning and Sterilization Procedure

It is important to use protective clothing and face shield while cleaning contaminated instruments. Always wear protective glasses, masks, gloves, etc. for your safety.

- Please follow legal regulations as well as hygienic guidelines to prevent contamination and infection through prevention.
- Please remember that you are responsible for the maintenance and sterility of your medical products / device. It is important to use and follow proper cleaning, disinfection and sterilization procedures.
- It is also important to follow the manufacturer's recommendation on the usage of drills. Please keep a log as to how many times the drills are used.
- Drill usage is determined by the number of surgical sites, not by the number of patients. Bone density and usage determines the life of the drills.
- Drills should be considered for replacement after around 20 uses based on bone density. Check drills often for wear.

Cleaning

- 01 Rinse instruments immediately after use under running tap water (< 40°C) for a minimum of one (1) minute to remove all debris including extraneous body fluids, bone debris and tissue.
- 02 Soak all instruments immediately after rinsing in an enzymatic cleaning solution* for 10 to 20 minutes (Do not soak overnight).
 - * Follow manufacturer's instruction and recommended cleaning solution concentrations (enzymatic detergent with a pH level between 7-10 and temperature not to exceed 40°C). Do not use incompatible cleaning solutions to clean instruments.
- 03 For internal irrigation drills, use a 1mL syringe and a 25-gauge needle to clean the drill irrigation hole with a minimum of 0.2mL of the prepared cleaning solution. Repeat this step two (2) more times for a total of three (3) rinses.
- 04 Scrub with a soft brush for a minimum of one (1) minute to remove any debris from inside the drill.
- 05 Rinse instruments under running tap water (< 40°C) for a minimum of one (1) minute. Use a 1mL syringe and a 25-gauge needle with a minimum of 0.2 mL of tap water to forcefully flush inside the drill irrigation hole. Repeat flushing of drill irrigation hole two (2) more times for a total of three (3) flushes.
- 06 Place instruments into an ultrasonic cleaner with neutral detergent**. Keep instruments inside the ultrasonic bath for 15 minutes using a frequency of 25-50 kHz. Ensure multiple instruments placed within the bath remain separated.
 - ** Follow manufacturer's instructions and observe recommended neutral detergent solution concentrations (neutral detergent with a pH level between 7-10 and temperature not to exceed 40°C). Do not use incompatible neutral detergent solutions to clean instruments.
- 07 Rinse instruments thoroughly with running tap water (< 40°C) for a minimum of one (1) minute until all traces of neutral detergent solution are removed. Rinse inside drill irrigation hole using a 1mL syringe and a 25-gauge needle with a minimum of 0.2mL of tap water. Repeat rinsing drill irrigation hole two (2) more times for a total of (3) times.
- 08 Gently wipe instruments with a soft lint-free cloth or place the instruments in a drying cabinet (60°C for less than 10 hours) until fully dry. Blow residual water from drill irrigation hole using a 1mL syringe and a 25-gauge needle. Visually inspect instruments in a well-lit area to ensure they are clean, dry and free of residue.
- 09 Clean instruments trays with a germicidal cleaner prior to returning instruments into Kit.
- 10 Always check for damage or corrosion after rinsing and drying.

Sterilization

Dentium USA recommends either the Pre-vacuum or Gravity autoclave methods for sterilization under the conditions described below. However, autoclave performance can affect the efficacy of this process.

Healthcare facilities should validate their sterilization processes employing the actual equipment and operators that routinely sterilize instruments.

All autoclaves/sterilizers should be regularly validated, maintained and checked in accordance with EN 285/ EN 13060, EN ISO 17665, ANSI AAMI ST79 to ensure compliance with these and related standards.

Make sure packaging is suitable for steam sterilization.

Method-Moist Heat Sterilization	Pre-vacuum	Gravity
Set Point Temperature	132°C	132°C
Exposure time	4 minutes	30 minutes
Drying time	20 minutes	40 minutes

Maintenance Period for DASK Drills

All surgical drills should be replaced with new ones after approximately 20 uses, depending upon the bone density.

OSTEON™ II Sinus & Lifting

Synthetic Bone Grafting Material

Composition of OSTEON™ II | 100% Synthetic

HA Scaffold (30%) + β - TCP Coating (70%)

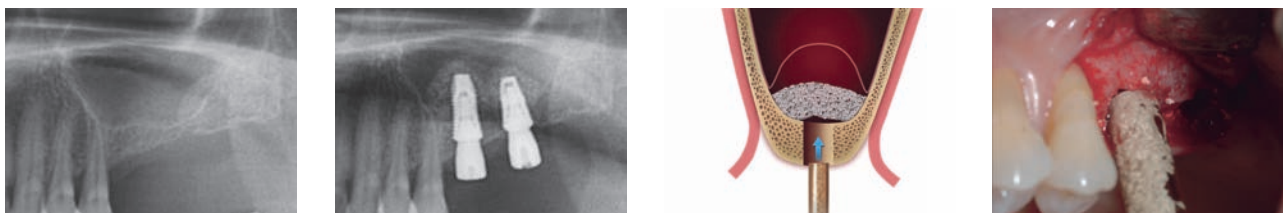
OSTEON™ II Sinus

- For sinus augmentation via lateral approach
- Fast and convenient with syringe container
- HA coated with β - TCP : excellent osteoconductivity for new bone formation



OSTEON™ II Lifting

- For sinus augmentation via crestal approach
- Smaller particle of OSTEON™ II within a narrow diameter syringe designed for the crestal approach



Products

Type	REF	Volume (cc)	Particle Size (mm)
OSTEON™ II Sinus	DT7G0510050SS	0.50	0.5 ~ 1.0
	DT7G1020050SS		1.0 ~ 2.0
OSTEON™ II Lifting	DT7G0205025LS	0.25	0.2 ~ 0.5
	DT7G0510050LS		0.5 ~ 1.0

DentiumUSA
Developed by Clinicians for Clinicians

DASK

Dentium Advanced Sinus Kit

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Developed by Clinicians for Clinicians

DentiumUSA

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Website / E-mail

www.dentiumusa.com, cs@dentiumusa.com

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